CITY of CLOVIS

AGENDA • CITY COUNCIL MEETING

Council Chamber, 1033 Fifth Street, Clovis, CA 93612 (559) 324-2060
www.cityofclovis.com

March 18, 2024 6:00 PM Council Chamber

In compliance with the Americans with Disabilities Act, if you need special assistance to access the City Council Chamber to participate at this meeting, please contact the City Clerk or General Services Director at (559) 324-2060 (TTY – 711). Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to the Council Chamber.

The Clovis City Council meetings are open to the public at the physical address listed above. There are numerous ways to participate in the City Council meetings: you are able to attend in person; you may submit written comments as described below; and you may view the meeting which is webcast and accessed at www.cityofclovis.com/agendas.

Written Comments

- Members of the public are encouraged to submit written comments at: www.cityofclovis.com/agendas at least two (2) hours before the meeting (4:00 p.m.). You will be prompted to provide:
    - Council Meeting Date
    - Item Number
    - Name
    - Email
    - Comment

SCAN ME

- Please submit a separate form for each item you are commenting on.
- A copy of your written comment will be provided to the City Council noting the item number. If you wish to make a verbal comment, please see instructions below.
- Please be aware that any written comments received that do not specify a particular agenda item will be marked for the general public comment portion of the agenda.
- If a written comment is received after 4:00 p.m. on the day of the meeting, efforts will be made to provide the comment to the City Council during the meeting. However, staff cannot guarantee that written comments received after 4:00 p.m. will be provided to City Council during the meeting. All written comments received prior to the end of the meeting will be made part of the record of proceedings.

CALL TO ORDER

FLAG SALUTE - Councilmember Pearce

ROLL CALL

PUBLIC COMMENTS - This is an opportunity for the members of the public to address the City Council on any matter within the City Council's jurisdiction that is not listed on the Agenda. In order for everyone to be heard, please limit your comments to 5 minutes or less, or 10 minutes per topic. Anyone wishing to be placed on the Agenda for a specific topic should contact the City Manager's office and submit correspondence at least 10 days before the desired date of appearance.

ORDINANCES AND RESOLUTIONS - With respect to the approval of resolutions and ordinances, the reading of the title shall be deemed a motion to waive a reading of the complete resolution or ordinance and unless there is a request by a Councilmember that the resolution or ordinance be read in full, further reading of the resolution or ordinance shall be deemed waived by unanimous consent of the Council.

CONSENT CALENDAR - Items considered routine in nature are to be placed upon the Consent Calendar. They will all be considered and voted upon in one vote as one item unless a Councilmember requests individual consideration. A Councilmember's vote in favor of the Consent Calendar is considered and recorded as a separate affirmative vote in favor of each action listed. Motions in favor of adoption of the Consent Calendar are deemed to include a motion to waive the reading of any ordinance or resolution on the Consent Calendar. For adoption of ordinances, only those that have received a unanimous vote upon introduction are considered Consent items.

1. Administration - Approval - Minutes from the March 11, 2024, Council Meeting.
2. Planning and Development Services – Approval – Res. 24-___, A Resolution amending the 2023-2024 Community Investment Program Budget; and Approval - Bid Award for CIP 23-13 Bullard Avenue Street Improvements authorizing the City Manager to Execute the Contract on behalf of the City.
3. Public Utilities – Approval – Res. 24-___, A Resolution Initiating Proceedings for the Annual Levy of Assessments for Landscape Maintenance District No. 1.
4. Public Utilities – Approval – Waive Formal Bidding Requirements and Authorize the Purchase of One 2023 Workhorse W4CC Class 4 Battery-Powered Fully Electric Truck from Kingsburg Truck Sales in the Total Amount of $159,911.55.
5. Public Utilities – Approval – Award a Contract to Raftelis to Complete a Water Rate Study and Provide Consultation Services as Needed in an Amount Not to Exceed $76,320; and Authorize the City Manager to Execute a Consultant Services Agreement on Behalf of the City.

PUBLIC HEARINGS - A public hearing is an open consideration within a regular or special meeting of the City Council, for which special notice has been given and may be required. When a public hearing is continued, noticing of the adjourned item is required as per Government Code 54955.1.

6. Consider items associated with approximately 155 acres of land located on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues. Great Bigland, LP., owner/ applicant; Harbour and Associates, representative.

a. Consider Approval - Res. 24-___, A Resolution of the Clovis City Council: (1) Certifying the Final Environmental Impact Report for the Shepherd North Project; (2) Adopting CEQA Findings of Fact and a Statement of Overriding Consideration; and (3) Adopting a Mitigation Monitoring and Reporting Program.

b. Consider Approval – Res. 24-___, A Resolution of the Clovis City Council approving a request to expand the City's Sphere of Influence to include approximately 155 acres of land.

c. Consider Approval - Res. 24-___, GPA2021-006, A Resolution of the Clovis City Council approving a request to amend the circulation element of the General Plan to allow for the placement of a Shepherd Avenue access point on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues.

d. Consider Approval - Res. 24-___, GPA2021-005, A Resolution of the Clovis City Council approving a request to amend the land use element of the General Plan for the Development Area (approximately 77 acres) from the Rural Residential land use designation to the Medium-High Density Residential land use designation.

e. Consider Introduction - Ord. 24-___, R2021-009, An Ordinance of the Clovis City Council approving a request to prezone property within the Development Area (approximately 77 acres) of the Project site from the Fresno County AL20 Zone District to the Clovis R-1-PRD Zone District.

f. Consider Approval - Res. 24-___, TM6205, A Resolution of the Clovis City Council approving a request to approve a vesting tentative tract map for a 605-lot single-family planned residential development.

g. Consider Approval - Res. 24-___, PDP2021-004, A Resolution of the Clovis City Council approving a request to approve a planned development permit for a 605-lot single-family residential development.

h. Consider Approval - Res. 24-___, RO307, A Resolution of the Clovis City Council approving Application for the Annexation of the Territory known as the Shepherd-Sunnyside Northeast Reorganization for the Development Area (approximately 77 acres).

i. Consider Approval - Res. 24-___, A Resolution of the Clovis City Council approving an amendment to the 2017 Amended and Restated Memorandum of Understanding between the County of Fresno and City of Clovis regarding a Sphere of Influence Expansion to add approximately 155 acres and the Standards of Annexation to address the annexation of approximately 77 acres of property (Shepherd-Sunnyside Northeast Reorganization).

Staff: George González, Senior Planner
Recommendation: Approve

7. Consider Approval - Res. 24-___, A resolution accepting and authorizing the submission of the 2023 General Plan Annual Progress Report, including the 2023 Housing Element Annual Progress Report to the Governor's Office of Planning and Research and the California Department of Housing and Community Development.

Staff: Dave Merchen, City Planner/ Lily Cha, Senior Planner
Recommendation: Approve

COUNCIL ITEMS

8. Consider Approval – Change of Council Meeting Schedule.

Staff: John Holt, City Manager
Recommendation: Approve

CITY MANAGER COMMENTS

COUNCIL COMMENTS

ADJOURNMENT

FUTURE MEETINGS

Regular City Council Meetings are held at 6:00 P.M. in the Council Chamber. The following are future meeting dates:

Apr. 1, 2024 (Mon.) (To be Cancelled)
Apr. 8, 2024 (Mon.)
Apr. 15, 2024 (Mon.)
May 6, 2024 (Mon.)

PRELIMINARY - SUBJECT TO APPROVAL

AGENDA ITEM NO. 1.

CLOVIS CITY COUNCIL MEETING

March 11, 2024 **6:00 P.M.** **Council Chamber**

Meeting called to order by Mayor Ashbeck at 6:00
Flag Salute led by Councilmember Mouanoutoua

Roll Call: Present: Councilmembers, Basgall, Bessinger, Mouanoutoua, Pearce
Mayor Ashbeck

PRESENTATION – 6:02

6:02 – ITEM -1 - PRESENTATION OF PROCLAMATION RECOGNIZING RETIRING POLICE LIEUTENANT JIM KOCH FOR HIS 27 YEARS OF DEDICATED SERVICE TO THE CITY OF CLOVIS.

6:22 – ITEM -2 - PRESENTATION OF PROCLAMATION DECLARING MARCH AS AMERICAN RED CROSS MONTH.

PUBLIC COMMENTS – 6:28

A resident invited City Council to a Vietnam War veterans event March 29, 2024, at the Clovis Veterans Memorial Building.

Malcolm Gibson, resident, thanked staff for the assisted hearing system and commented on affordable housing issues.

Ivan Garcia, Clovis Community College student, invited City Council to an event for the debate team on March 13, 2024, and provided an update on the team’s success.

CONSENT CALENDAR – 6:42

Motion by Councilmember Bessinger, seconded by Councilmember Mouanoutoua, that the items on the Consent Calendar be approved. Motion carried by unanimous vote.

3. Administration - Approved - Minutes from the February 20, 2024, Council Meeting.
4. Administration - Approved – Award the Request for Proposals and approve the purchase of the Microsoft Enterprise Agreement to Dell Marketing, L.P., for $426,200.78 per year for three years.
5. Finance – Received and Filed – Investment Report for the Month of October 2023.
6. Finance – Received and Filed – Treasurer’s Report for the Month of October 2023.
7. Fire – Approved – Award Weed and Rubish Abatement Contract to Iron Cross Tractor Services, LLC, for discing, handwork, trash hauling, grading, tire disposal, and tree stump removal.

8. Planning and Development Services – Approved – Bid Award for CIP 24-03 ADA Curb Return Ramps 2024 – T2; and Authorize the City Manager to Execute the Contract on behalf of the City with Kroeker, Inc., in the amount of $269,716.00.
9. Planning and Development Services – Approved – Bid Award for CIP 24-04 ADA Curb Return Ramps 2024 – T3; and Authorize the City Manager to Execute the Contract on behalf of the City with Geometric Construction, Inc., in the amount of $211,156.00.
10. Planning and Development Services – Approved – Bid Award for CIP 22-05 Trail Pavement Maintenance 2022; and Authorize the City Manager to Execute the Contract on behalf of the City with Seal Rite Paving & Grading in the amount of $129,870.00.
11. Planning and Development Services – Approved – Final Acceptance for Final Map Tract 6050, located at the northwest corner of Shepherd and Clovis Avenues (6050 Enterprises, LP (Wilson Homes)).
12. Planning and Development Services - Approved – **Res. 24-22**, Final Map Tract 6340, located at the southeast corner of Ashlan Avenue and Thompson Avenue (KB Home South Bay, Inc., a California Corporation).
13. Planning and Development Services - Approved – **Res. 24-23**, Annexation of Proposed Tract 6340, located at the southeast corner of Ashlan Avenue and Thompson Avenue to the Landscape Maintenance District No. 1 of the City of Clovis (KB Home South Bay, Inc., A California Corporation).

PUBLIC HEARINGS – 6:42

6:42 ITEM 14 - APPROVED – **RES. 24-24**, A RESOLUTION APPROVING THE ANNUAL REVIEW AND UPDATE TO THE REGIONAL HOUSING NEEDS (RHN) OVERLAY DISTRICT MAP OF PARCELS AND ASSOCIATED LIST REFLECTING THOSE PARCELS THAT QUALIFY FOR DEVELOPMENT AS AN RHN OVERLAY PROJECT.

Motion for approval by Councilmember Mouanoutoua, seconded by Councilmember Bessinger. Motion carried by unanimous vote.

ADMINISTRATIVE ITEMS – 6:49

6:49 ITEM 15 - APPROVED – AWARD CONSULTING SERVICES CONTRACT TO APTIM IN THE TOTAL AMOUNT OF $100,000 AND AUTHORIZE THE CITY MANAGER TO EXECUTE THE CONTRACT ON BEHALF OF THE CITY; AND RECEIVE AND FILE – UPDATE ON SB 1383.

Motion for approval by Councilmember Mouanoutoua, seconded by Councilmember Basgall. Motion carried 4-1 with Councilmember Bessinger voting no.

7:18 ITEM 16 - RECEIVED AND FILED - 2024 FIVE-YEAR FINANCIAL FORECAST FOR THE CITY OF CLOVIS THROUGH 2028/29 AND DISCUSS OPTIONS FOR BUDGET PREPARATION FOR 2024/25.

David Rau, Clovis resident, spoke on the potential impact of the taxpayer protection act.

CITY MANAGER COMMENTS – 8:16

COUNCIL COMMENTS – 8:17

CLOSED SESSION – 8:28

ITEM 17 - GOVERNMENT CODE SECTION 54956.9(D)(2) CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION SIGNIFICANT EXPOSURE TO LITIGATION ONE POTENTIAL CASE

RECONVENE INTO OPEN SESSION AND REPORT FROM CLOSED SESSION – 8:45

No action taken.

ADJOURNMENT

Mayor Ashbeck adjourned the meeting of the Council to March 18, 2024

Meeting adjourned: 8:45 p.m.

Mayor

City Clerk

AGENDA ITEM NO. 2.

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Planning and Development Services Department

DATE: March 18, 2024

SUBJECT: Planning and Development Services – Approval – Res. 24-___, A Resolution amending the 2023-2024 Community Investment Program Budget; and Approval - Bid Award for CIP 23-13 Bullard Avenue Street Improvements authorizing the City Manager to Execute the Contract on behalf of the City.

ATTACHMENTS:
1. Resolution 24-___
2. Vicinity Map

CONFLICT OF INTEREST

Councilmembers should consider recusal if a campaign contribution exceeding $250 has been received from the project proponent (developer, applicant, agent, and/or participants) within the preceding 12 months (Government Code 84308).

RECOMMENDATION

1. For the City Council to approve a resolution amending the 2023-2024 Community Investment Program (CIP) Budget to include the Bullard Avenue Street Improvement Project and authorize expenditures from the SB-1 fund in the amount of $900,000.

2. For the City Council to award a contract for CIP 23-13, Bullard Avenue Street Improvements to Dave Christian Construction Co., Inc, in the amount of $834,302.36; and

3. For the City Council to authorize the City Manager to execute the contract on behalf of the City.

EXECUTIVE SUMMARY

Staff is recommending that the City Council authorize the City Manager to award and execute the contract to Dave Christian Construction Co., Inc., who was the lowest responsible bidder from a bid opening that took place on March 12, 2024. The project is currently funded for the 2024-2025 fiscal year. Staff is proposing to reallocate the funding for this project from the 2024-2025 fiscal year to the 2023-2024 fiscal year.

The project involves 0.25 miles of street improvements on Bullard Avenue from Villa Avenue to Minnewawa Avenue. Project improvements include removing and replacing existing AC pavement, replacement of curb returns, drive approaches, median island cap, adjustments of utility boxes, manholes, and utility valve boxes to finished grade, replacement of traffic striping, markings and signage, traffic signal modification, and reinstallation of traffic loop detectors.

BACKGROUND

The following is a summary of the bids received on March 12, 2024:

BIDDERS	BASE BID
Dave Christian Construction Co., Inc.	$834,302.36
Asphalt Design by Juan Gomez	$908,711.00
A.J. Excavation, Inc.	$982,827.00
Avison Construction, Inc.	$1,056,631.00
Cal Valley Construction, Inc.	$1,066,410.00
ENGINEER’S ESTIMATE	$783,997.00

FISCAL IMPACT

A budget amendment will add $900,000 to the 2023-2024 Community Investment Program. The project is supported by SB-1 through the City Community Investment Program.

REASON FOR RECOMMENDATION

Dave Christian Construction Co., Inc., is the lowest responsible bidder. There are sufficient funds available for the anticipated cost of this project.

ACTIONS FOLLOWING APPROVAL

1. The contract will be prepared and executed, subject to the Contractor providing performance security that is satisfactory to the City.

2. Construction will begin approximately two (2) weeks after contract execution and be completed in thirty (30) working days thereafter.

3. Funds will be appropriated and accounted for in the City of Clovis 2023-2024 CIP Budget as specified in the attached budget amendment.

Prepared by: Jacob Redelfs, Project Engineer

Reviewed by: City Manager AH

RESOLUTION 24-__

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING AN AMENDMENT TO THE FY 2023-2024 CIP BUDGET

WHEREAS, the City Council adopted the FY2023-2024 City budget on June 19, 2023; and

WHEREAS, the City Council approved the expenditure of funds for the 2023-2024 Community Investment Program – Street Fund; and

WHEREAS, the additional expenditures needed for the Bullard Avenue Street Improvement project were not included in the 2023-2024 Community Investment Program – Street Fund; and

WHEREAS, it has been determined that the funds for the costs can be allocated from the Street Fund in the amount of $900,000.

NOW, THEREFORE, BE IT RESOLVED, that the City of Clovis hereby approves the budget amendment as shown in the "Summary of Expenditures by Section" and the "Summary of Expenditures by Fund" as shown in Attachment A.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED:

Mayor

City Clerk

ATTACHMENT 1

SUMMARY OF EXPENDITURES BY SECTION

STREET FUND	<u>$900,000</u>
TOTAL SECTION	$900,000

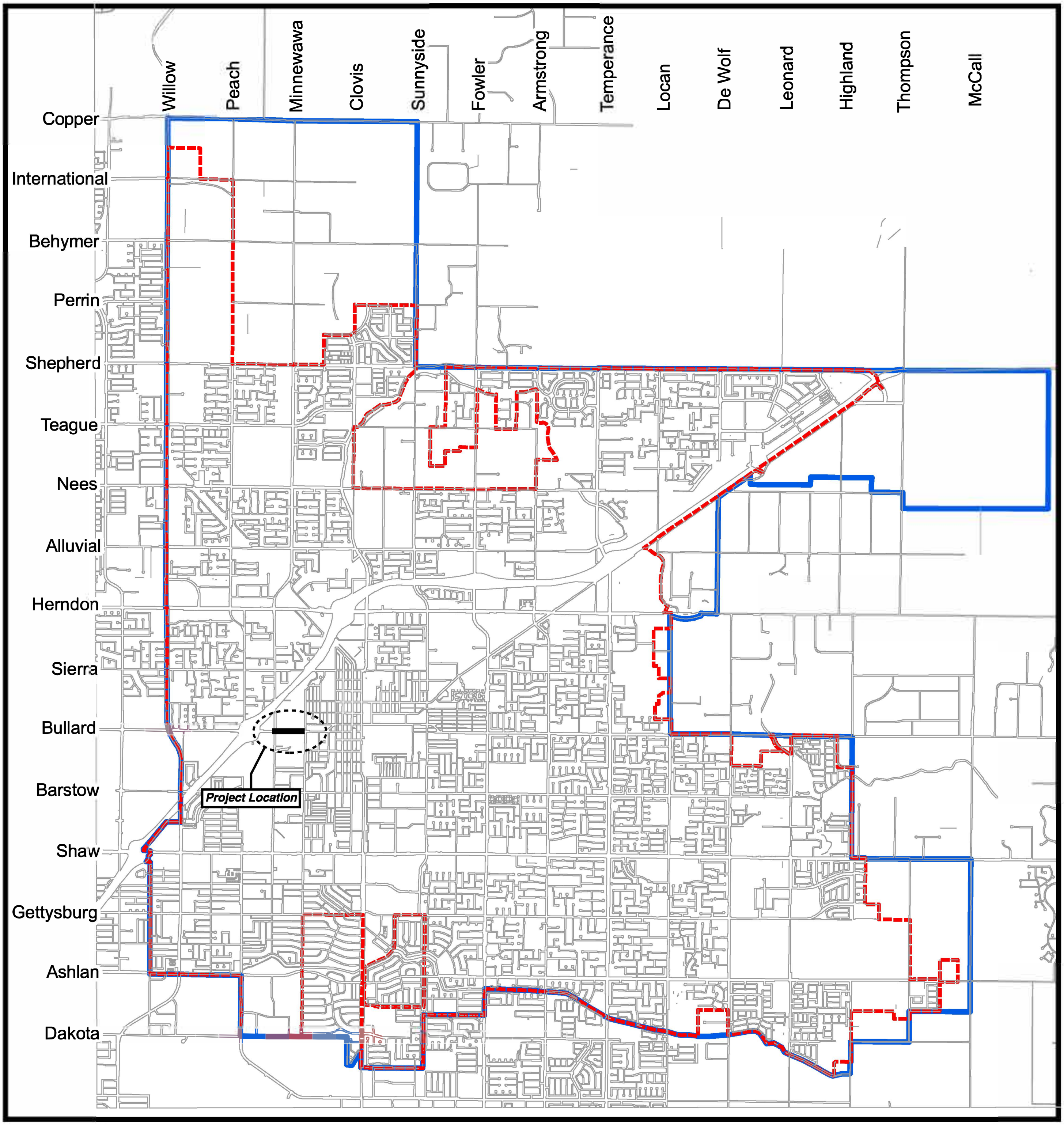
SUMMARY OF EXPENDITURES BY FUND

STREET FUND	<u>$900,000</u>
TOTAL FUND	$900,000

ATTACHMENT A

VICINITY MAP

CIP 23-13 Bullard Avenue Street Improvements



ATTACHMENT 2

🟥 CITY LIMITS 🟦 SPHERE OF INFLUENCE

0 0.5 1 2

Miles

Print Date: March 12th, 2024

Jacob Redelfs

AGENDA ITEM NO. 3.

CITY *of* CLOVIS

REPORT TO THE CITY COUNCIL

TO:	Mayor and City Council
FROM:	Public Utilities Department
DATE:	March 18, 2024
SUBJECT:	Public Utilities – Approval – Res. 24-___, A Resolution Initiating Proceedings for the Annual Levy of Assessments for Landscape Maintenance District No. 1.
ATTACHMENTS:	1. Resolution of Initiation

CONFLICT OF INTEREST

Councilmembers should consider recusal if a campaign contribution exceeding $250 has been received from the project proponent (developer, applicant, agent, and/or participants) within the preceding 12 months (Government Code 84308).

RECOMMENDATION

For the City Council to approve Resolution No. 24-___, which will initiate proceedings for the annual levy of assessments for Landscape Maintenance District No. 1.

EXECUTIVE SUMMARY

This resolution is to initiate proceedings for the annual levy of assessments for the Landscape Maintenance District (LMD) No. 1 as required by the Landscaping and Lighting Act of 1972. The assessments are necessary to fund the operations and maintenance of the benefit areas within the LMD. The Engineer’s Report detailing the assessments will be compiled and prepared by the City’s consultant, Francisco and Associates, Inc. Upon City Council approval of the Engineer’s Report on June 3, 2024, the assessments will be sent to Fresno County to be included in the property tax rolls.

BACKGROUND

The Landscaping and Lighting Act of 1972, a provision of the Streets and Highways Code of California, allows a legislative body to levy and collect assessments for specific areas that receive a special benefit. Within the City of Clovis, these specific areas are collectively known as Landscape Maintenance District (LMD) No.1. On July 15, 1985, Council adopted Resolution No. 85-78, forming the City of Clovis Landscape Maintenance District No. 1, which funds the operation and maintenance of landscaped areas and interior parks of development throughout the City.

Pursuant to the Landscape and Lighting Act of 1972 (the “Act”), City Council must annually approve an Engineer’s Report for the City’s LMD No. 1 to authorize the levy of assessments for the ensuing fiscal year. To initiate the Fiscal Year 2024-25 LMD No. 1 approval process, the Act requires City Council to adopt a resolution ordering the preparation and filing of the Engineer’s Report, which is the purpose for this agenda item. Following adoption of the attached resolution, the LMD No. 1 Engineer’s Report and proposed assessments for Fiscal Year 2024-25 will be brought to Council for preliminary approval at the May 13, 2024, City Council meeting. At that time, City staff will also recommend that Council adopt a resolution declaring its intent to levy and collect assessments and set a public hearing date related to the proposed LMD No. 1 assessments for Fiscal Year 2024-25, as required by the Act.

The yearly assessments established for all properties within the LMD provide funding for the City's costs for operation, maintenance, related services, and incidental expenses. The required operation and maintenance include mowing, edging, fertilizing, weed control, irrigation system, pruning, plant replacement, lighting, and a capital replacement fund to periodically replace landscape and park structures and associated equipment. The Act requires that a resolution be adopted that generally describes new improvements or substantial changes to existing improvements, and orders that a report be prepared and filed regarding the assessment district. A listing of new improvements or substantial changes to the existing improvements is attached to the resolution as Attachment A. Adoption of this resolution satisfies the requirement.

The final step in the process is to notify the Fresno County Auditor-Controller of the approved assessments so that they may be included on the property tax rolls. The tentative schedule for notification to the County is July 12, 2024.

FISCAL IMPACT

None.

REASON FOR RECOMMENDATION

This resolution is required by the Landscaping and Lighting Act of 1972 to levy assessments to fund the cost of operations and maintenance for benefit areas within LMD No. 1.

ACTIONS FOLLOWING APPROVAL

The Engineer’s Report will be prepared, and staff will present the final assessment costs for consideration by the City Council at the public hearing.

Prepared by: Paul Armendariz, Deputy Public Utilities Director

Reviewed by: City Manager AH

RESOLUTION 24-___

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS INITIATING PROCEEDINGS FOR THE ANNUAL LEVY OF ASSESSMENTS FOR LANDSCAPE MAINTENANCE DISTRICT NO. 1 OF THE CITY OF CLOVIS

WHEREAS, the Council has approved fifteen (15) annexations with new improvements to the Landscape Maintenance District No. 1 of the City of Clovis (herein “LMD No. 1”) since the Engineer’s Report dated May 15, 2023; and

WHEREAS, proceedings for the annual assessments for LMD No. 1 for the fiscal year 2024-25 need to be initiated.

NOW, THEREFORE, BE IT RESOLVED, that the City of Clovis is hereby found, determined, and ordered as follows:

1. The Council proposes to undertake proceedings for the levy of the annual assessments for LMD No. 1 under part 2 of Division 15 of the Streets and Highways Code of the State of California (Section 22500 et seq.), generally known as the Landscaping and Lighting Act of 1972 (herein the “Act”).

2. The new improvements being added by the above referred annexations to the existing maintained improvements are set forth in Attachment A.

3. The Public Utilities Director shall have a report prepared and filed in accordance with Article 4 (commencing with Section 22565) of the Act.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED:

Mayor	City Clerk

ATTACHMENT 1

THE NEW IMPROVEMENTS FOR THE LANDSCAPE MAINTENANCE DISTRICT NO. 1 ARE DESCRIBED AS FOLLOWS:

The proposed landscaping, irrigation, and lighting systems as described in the covenants appropriate to each of the following properties and other annexations to the LMD prior to June 30, 2024.

Tract 6413
BPN 1271-2016
BPN 22-03703
BPN 23-00712
BPN 5154-2015
BPN 3752-2016
BPN 2981-2015
BPN 3704-2015
BPN 3701-2015
PM 2022-003
BPN 22-02434
BPN 22-02281
SPR 1998-001A2
Tract 6125
Tract 6340

AGENDA ITEM NO. 4.

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Public Utilities Department

DATE: March 18, 2024

SUBJECT: Public Utilities – Approval – Waive Formal Bidding Requirements and Authorize the Purchase of One 2023 Workhorse W4CC Class 4 Battery-Powered Fully Electric Truck from Kingsburg Truck Sales in the Total Amount of $159,911.55.

ATTACHMENTS: None

CONFLICT OF INTEREST

Councilmembers should consider recusal if a campaign contribution exceeding $250 has been received from the project proponent (developer, applicant, agent, and/or participants) within the preceding 12 months (Government Code 84308).

RECOMMENDATION

For the City Council to waive formal bidding requirements and authorize the purchase of a new 2023 Workhorse W4CC Class 4 battery-powered fully electric truck from Kingsburg Truck Sales in the total amount of $159,911.55 – including tax, fees, and a voucher from California's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) – for the Public Utilities Department's Solid Waste Division.

EXECUTIVE SUMMARY

There are funds in this fiscal year's Fleet Renewal budget to purchase a Workhorse W4CC Class 4 battery-powered fully electric truck for the Public Utilities Department's Solid Waste Division. The existing equipment is scheduled to be replaced due to its age. Kingsburg Truck Sales's competitively bid price of $159,911.55 – including tax, fees, and an HVIP state voucher – has supplied the lowest bid and they can supply the specified custom cargo body upfit needed.

Staff recommends waiving the City's formal bidding requirements due to there being a lack of viable vendors (as authorized by Clovis Municipal Code Section 2.7.06(a) and section IV.C. of the City's purchasing manual) who can meet the required cargo body upfit specifications. Staff recommends purchasing one 2023 Workhorse W4CC with specified custom cargo body upfit from Kingsburg Truck Sales. No other vendor bids were able to be obtained matching the specific customized cargo body upfit the Public Utilities Department's Solid Waste Division requires.

BACKGROUND

The recommended vehicle is available from Kingsburg Truck Sales and meets the Department's needs. The vehicle is available to be ordered and will be built according to Public Utilities Department's Solid Waste Division's needs.

The Fleet Fund includes a vehicle and equipment replacement program where the different divisions within City departments budget for and contribute a set amount of money annually for the future scheduled replacement of a vehicle or piece of equipment. This allows each department and the divisions within the departments to financially plan for the large capital expense of purchasing new vehicles and equipment that need to be replaced due to age, wear and tear, or to meet regulatory requirements. Depending on the condition and need of the vehicle or equipment being replaced, it will be moved from front-line operation and may be kept as a back-up, or it will be auctioned off in the City's vehicle and equipment surplus program.

The California Air Resources Board (CARB) Advanced Clean Fleets (ACF) regulation requires that starting January 1, 2024, 50% of all non-emergency local government fleet vehicle purchases with an 8500 lb. Gross Vehicle Weight Rating (GVWR) or heavier be purchased as a zero-emissions vehicle (ZEV). Starting January 1, 2027, this will increase to 100% zero-emissions vehicles (ZEVs). To help offset some of the increased cost in transitioning to ZEVs, vouchers are available through the California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP). Vehicle vouchers are provided by the vendor and are indicated as a discount on the vehicle quote. This vehicle is approved for a $60,000 dollar discount through California HVIP, bringing the total cost to $159,911.55.

FISCAL IMPACT

Funds were included in the 2023-2024 Fleet Capital Acquisition budget, often referred to as the Fleet Renewal or Fleet Replacement budget. The Solid Waste Division in the Public Utilities Department has accumulated the necessary funds for replacement of the equipment.

REASON FOR RECOMMENDATION

Sufficient replacement funds have been collected and the existing truck is scheduled for replacement. Staff has evaluated the available equipment, and it meets the needs of the Public Utilities Department's Solid Waste Division.

ACTIONS FOLLOWING APPROVAL

Purchase orders will be prepared for the City Manager's approval and sent to the vendor.

Prepared by: Jim Stringfield, Fleet Manager

Reviewed by: City Manager AH

AGENDA ITEM NO. 5.

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Public Utilities Department

DATE: March 18, 2024

SUBJECT: Public Utilities – Approval – Award a Contract to Raftelis to Complete a Water Rate Study and Provide Consultation Services as Needed in an Amount Not to Exceed $76,320; and Authorize the City Manager to Execute a Consultant Services Agreement on Behalf of the City.

ATTACHMENTS: 1. Raftelis Scope of Work and Fee Estimate

CONFLICT OF INTEREST

Councilmembers should consider recusal if a campaign contribution exceeding $250 has been received from the project proponent (developer, applicant, agent, and/or participants) within the preceding 12 months (Government Code 84308).

RECOMMENDATION

1. For the City Council to award a contract to Raftelis to complete a Water Rate Study and consultation services as needed in an amount not to exceed $76,320; and

2. Authorize the City Manager to execute a Consultant Services Agreement on behalf of the City.

EXECUTIVE SUMMARY

Staff is recommending that City Council authorize the City Manager to award and execute a Consultant Services Agreement with Raftelis, who responded to a Request for Proposals on January 12, 2024, and was selected as the most qualified and responsive proposer. The base contract amount for the Water Rate Study is $55,400. Depending on the outcome of the Water Rate Study, optional tasks have been identified, totaling an additional $20,920. These tasks provide Proposition 218 support, including public meetings and presentations. This brings the total project cost to an amount not to exceed $76,320.

Rate structures should be established to recover all costs to produce, treat, store, and distribute safe and reliable water to customers. Rates should be fair and equitable, easy to understand, and be based on actual, accurate financial information and customer records. It is recommended that rate studies be completed approximately every five years to ensure revenues are sufficient to meet the operations and maintenance (O&M), debt service, and capital needs of the City's water utility. The last water rate study was completed in 2016.

This project will evaluate the City's existing water and recycled water user rates and fees and will provide recommendations for any adjustments that may be necessary to meet the rising costs to provide service and fund capital projects needed to sufficiently operate and maintain the utility system. This study may provide findings on the necessity for a Proposition 218 election and will provide recommendations on water and recycled water rates for a minimum of the next five years.

BACKGROUND

The water user rates and fees were last studied in 2016, and the study was completed by Bartle Wells and Associates. This study included an evaluation of the rates at that time, identified revenue requirements for the water utility, and presented rate design alternatives, including drought rates, to meet the needs of the City's water system. The recommendations from that report proposed adopting the rates within the Proposition 218 process and that the study be updated approximately every five years to meet the changing operational needs of the water system. Additionally, it was recommended that the recycled water system rates be studied further once the system had experienced more growth and connections.

Accordingly, staff initiated a Request for Proposals (RFP) on December 15, 2023, with five responding firms submitting proposals by the deadline of January 12, 2024. Proposals were evaluated by staff and scored in accordance with the criteria outlined in the RFP. Additionally, staff completed nine reference checks for all five responding firms. After consideration of the proposal scoring and reference checks, staff ranked the proposals.

Four respondents were selected to move forward with interviews based on the results of the rankings. A committee of four staff from the Public Utilities Department and the Finance Department completed interviews and subsequently ranked the interview presentations. In consideration of the proposals and corresponding interviews, staff found that Raftelis was the most qualified consultant.

FISCAL IMPACT

Sufficient funds are included in the 2023-2024 Water Enterprise budget.

REASON FOR RECOMMENDATION

Raftelis was found to be the most qualified responding consultant to the Request for Proposals and there are sufficient funds available for the anticipated cost of this project. Additionally, it is recommended that rate studies be completed approximately every five years.

ACTIONS FOLLOWING APPROVAL

A Consultant Services Agreement will be prepared and executed. The Water Rate Study is anticipated to be completed in fall 2024 based on the consultant's tentative schedule, at which time staff will return to Council with the results of the study and to seek Council direction should the consultant recommend adopting new rates and fees through the Proposition 218 process.

Prepared by: Paul Armendariz, Deputy Public Utilities Director

Reviewed by: City Manager AH

Project Understanding

The City has identified several goals and objectives in this study. Achieving these objectives will require following a standard to ensure a successful outcome.

The City has initiated an RFP to develop a framework for financial sustainability and equitable rates that will provide safe, c framework lean, and reliable water service to its customers at cost that strives to maintain both affordability and good service. To meet these needs, the City is requesting:

- A financial plan which shows the ability of rates and fees to fund operations, capital, any proposed debt service, reserves, and debt service coverage.
- A cost of service and rate analysis that demonstrates both an equitable distribution of costs between customer classes and rates that are set to recover those costs.
- Rate design alternatives that promote the City's specific pricing objectives, such as sustainability, wise water use and efficiency, and equitable cost recovery all while being Prop 218 compliant and meeting recent state laws such as SB 1157.
- A stress test of the rate alternatives through bill impact comparison among a variety of usage levels and a comparison of proposed bills and rates to that of peer utilities in the area
- Final recommendations that are easy to understand and implement, and will be durable over the next 5 to 10 years.

We have completed a cursory review of published data to help us tailor our approach to this project. Our findings show several externalities that may influence the study's outcome. We realize this is not a comprehensive list and more research as we dive into the study.

- **Regulatory requirements**. More stringent regulations will increase the cost to treat and deliver water. Specifically, additional treatment such as granulated activated carbon (GAC) may be needed in the near future to meet additional water quality standards associated with treating Per- and Polyfluoroalkyl Substances (PFAS) and 1,2,3 Trichlropropane.
- **Drought**. The uncertainty of drought may require additional reserves or adjustments to the drought rate structure in place.
- **Groundwater**. The City is working with North Kings Groundwater Sustainability Agency (NKGSA) to implement the Sustainable Groundwater Management Act (SGMA). This action has required the purchases of additional surface water supplies and recharge to meet sustainability requirements in the Groundwater Sustainability Plan (GSP).
- **Current and future bills and laws**. In addition to Prop 218, which requires rates to be cost based, other state initiatives such as SB 1157 lower the indoor residential per capita use from 52.5 gpcd to 47 gpcd between 2025 and 2030, and then to 42 gpcd after 2030. In addition, AB 755 was recently passed and goes into effect in 2024. This bill requires water agencies to conduct a water usage analysis prior to completing a cost of service analysis. It also requires that the cost of service rates for the highest users and the average volume delivered to high users be made publicly available among other requirements.

We incorporated these items and our experience with other Californian utilities of this size and complexity to design a project approach and scope that will ensure a successful study.

Scope of Work/Project Approach

Task 1.0 – Project Management, Data Management, and Project Initiation

This task highlights the project management tasks, data review process, and the contents of the project initiation or project kick-off meeting.

- **Project Initiation**: Finalize scope, milestones, and deliverables, set up regular project conference calls, and determine primary points of contact. Finalize project goals and objectives to establish guiding principles for the study against which we will measure results. Our project schedule can be found Schedule of Work section of this proposal. With every major milestone meeting or regular project meeting, we will produce and circulate an email summarizing the key points of the discussion.
- **Data Request**: Prior to the meeting we will submit a data request list for the information needed for this study. Gathering this information prior to the kick-off meeting will allow us to review and aggregate our list of questions and clarifications. Part of this information gathering will be the City's Ordinance 6.5 Water System and 6.8 Recycled Water Use, and other relevant municipal codes.
- **Project Initiation Meeting**. We will facilitate a one and one-half day meeting with City staff to review the key aspects of the study, current challenges and discuss the current political environment and how that may influence our strategic communications plan. We will also review data we have received to date, get clarification on certain items where needed and present our initial model populated with the validated data. This will give staff a perspective on how we are interpreting the data.

- **Rate Structure Pricing Objectives**: We will reserve part of the project kick-off meeting to review pricing objectives and rank them in order of importance. Many of these are 'standard' or 'must haves,' such as defensibility and revenue sufficiency, however others can be ranked in order of importance. We will also develop measurable criteria to benchmark the objectives against the alternatives.

  As part of the rate design task, we will analyze how well the existing rate structure meets those objectives and identify potential rate structure changes that align with those objectives.

- **Stakeholder Outreach/Communications Plan**: Raftelis' strategic communications team will meet with City staff, including the public information team. Our goal will be to understand the city's current environment, such as what stakeholders know or believe, how they behave with respect to the water utility, what issues are impacting them or the City right now, and who are the key stakeholders.

  Raftelis will develop a strategic communications and outreach plan using our research findings and input from City staff. We will address implementation issues, community concerns, and provide strategies to successfully communicate and adopt proposed rates and ensure these recommendations stay within the framework of Proposition 218 requirements.

TASK 1 DELIVERABLES:

- Data request list
- On-site Project Kickoff meeting
- Revised data request list (if needed)
- Memo summarizing project management items
- Listing of ranked pricing objectives by staff
- A draft and final communications plan

Task 2.0 – Financial Plan

The financial tasks detail the activities needed to develop the forecast of revenue adjustments for the water utility and recycled water. Many of the following activities are applicable to potable water (water) and recycled water. However, we have called out specific items that may only be applicable to recycled. *We will develop separate cash flows for the water utility financial activities and the recycled water financial activities*.

Task 2.1 – Customer Demand and Revenue Projections

Raftelis will develop customer characteristic profiles for the customer classes within each utility. The analysis will include:

- Analysis of annual and monthly billed water and recycled consumption of each customer class for the past three fiscal years.
- Development of bill frequencies for water customer classes and recycled water. For the classes with tiered structures, we will calculate the amount of volume billed in each tier and use that as the basis for demand projections. Volumes by tier will be adjusted if it is anticipated that demand will continue to decrease.
- Development of a use per account based on historical data and a projected use per account based on planning data from the City for water and recycled water.

Task 2.2 – Financial Plan (Revenue Requirement) Projections

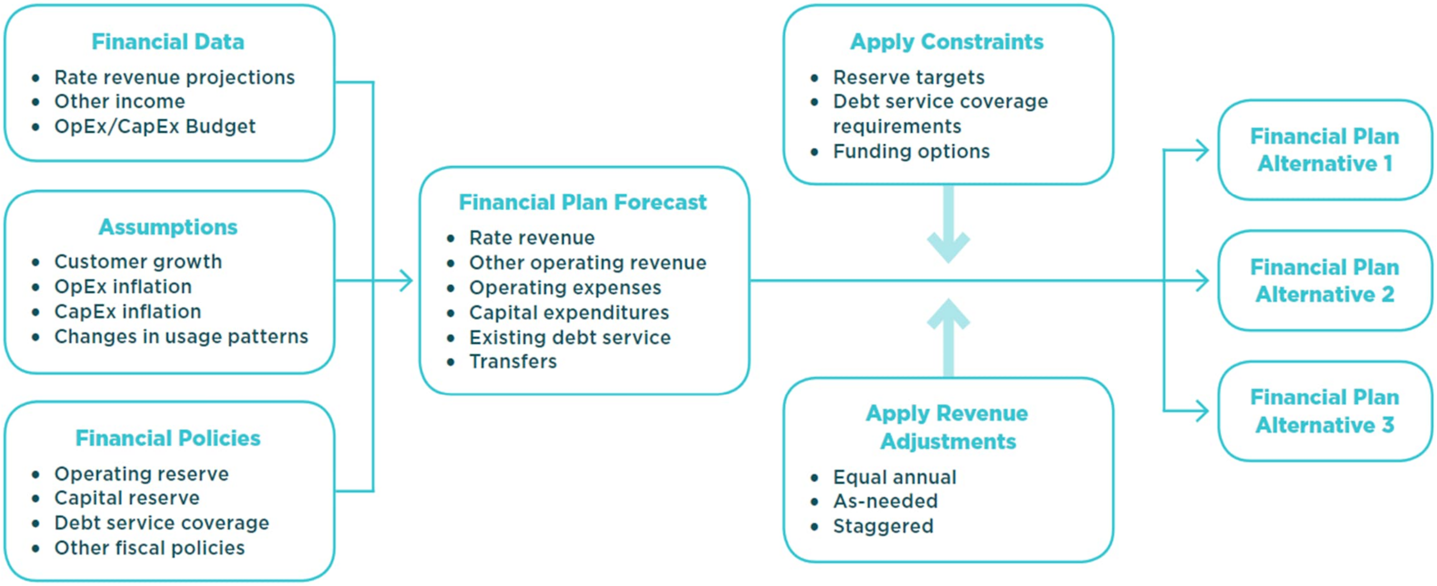
Raftelis will create a revenue requirements (or financial planning) module that will determine the level of revenue adjustments needed to meet annual revenue requirements.

A primary consideration in developing an 'optimal' financial plan is minimizing annual revenue increases through balancing the use of reserves, existing rate revenue, revenue bonds, grants, etc. This balance is subject to the constraints of meeting the City's target reserve policies, debt service coverage, and other financial policies requirements on any proposed debt.

This approach is an iterative process. For example, issuing debt to fund a capital project may keep revenue increases low; however, new debt payments may decrease the coverage below the target level. As a result, a revenue increase may be needed to meet to maintain compliance with the target. The revenue generated from the increase now may meet debt service coverage and produce an ending balance more than the target reserve. This excess can be used to partially fund the capital project which, in turn, could reduce the proposed loan amount.

The financial planning task will include the development of forecasted revenues, O&M, debt service, and capital expenditures along with project bond or loan issues with any rate increases required to meet these requirements and financial metrics through the study period. The graphic below illustrates the requirements needed to build a sound financial plan.

Financial Planning Process



Recycled costs are commingled with the wastewater utility financials. We will need to allocate those annual operating costs that are specific to recycled water and those costs that are shared between wastewater and recycled. Those allocated costs will serve as the basis the recycled revenue requirement projection.

TASK 4 DELIVERABLES:

- Two virtual meetings to present draft and draft-final results to all internal stakeholders. We anticipate regular communication (phone calls/emails, etc) during the development of the financial plan with staff on an as-needed basis
- Technical memorandum summarizing the results of the water and recycled water cost of service analysis
- On-site meeting to review preliminary financial plan results and develop various scenarios to meet revenue requirements

Task 3.0 – Cost of Service Analysis

Raftelis will start with industry-accepted cost-of-service principles and customize our analysis to account for the specific requirements of this study. The cost-of-service analysis will provide the City with a defensible justification explaining the reason why the costs are assigned in the manner they are. Raftelis needs this information to evaluate the level of the current and proposed rates.

The cost-of-service analysis is a multi-step process. It includes determining the revenue requirement, assigning the revenue requirement to various facilities (functional areas), and further allocating those costs based on their design criteria or function in the system. Those costs are then distributed to customer classes based on their water demands as well as accounts or equivalent meters. Raftelis will use the cost allocation process based on the industry standard methodologies published in the AWWA's *Manual M1, Principles of Water Rates, Fees, and Charges.*

Recycled water has one rate for all customers. If the pricing objective exercise yields the desire for more than one class, we will follow the steps below to develop the cost of service.

Task 3.1 – Test Year Revenue Requirement

Raftelis will develop a separate test-year revenue requirement as the basis for our cost-of-service analysis for each of the utilities. The test year revenue requirement will be based on the City's forecasted financial plans. The revenue requirement is the amount of revenue required from rates to meet annual expenditures such as operating, capital, debt service, and changes in reserves, and is net of other operating and non-operating revenue. Raftelis will develop a revenue requirement and a cos- of-service analysis for each utility.

Task 3.2 – Functionalize Revenue Requirements

As a first step in the water cost of service process, Raftelis will allocate the test-year revenue requirement to the appropriate functional cost categories. O&M expenses are often listed functionally in the budget and capital expenditures are typically organized based on the type of facility. Debt service can be functionalized based on the project the proceeds are intended to fund. During the initial phases of the study, Raftelis will work with District staff to determine the appropriate functional categories and factors to use in the analysis.

Task 3.3 – Allocate Functionalized Costs to Cost Components

After assigning the water utility revenue requirement to functional categories, Raftelis will allocate the costs according to the type of service they are incurred to provide. Cost allocation involves assigning the functionalized costs from Task 3.2 to the design parameter used to size and construct that facility.

For example, distribution mains are typically designed to meet maximum hour demands. Under the base extra-capacity methodology, those costs would be allocated to the base, maximum day, and maximum hour. This allocation is based on water production ratios of maximum day and hour demands to average day demands. Conversely, source of supply costs are associated with annual water supply requirements. Those costs would be allocated to the base or average day component. Some costs can be directly assigned such as billing or meter costs.

Task 3.4 – Customer Class Demand Factors and System Demand Factors (Units of Service)

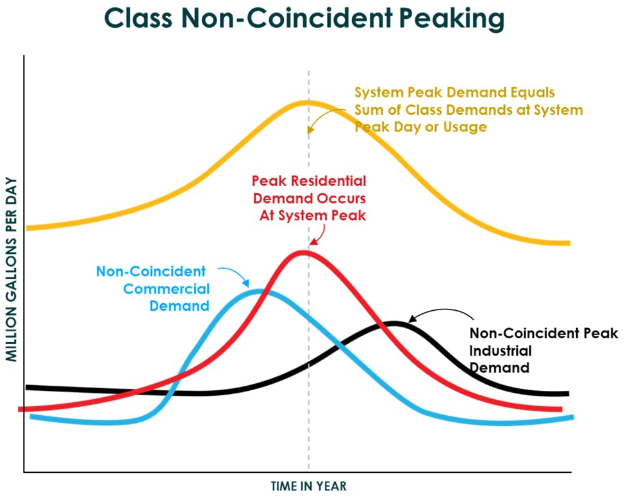
Raftelis will develop customer characteristic profiles for the customer classes within each utility. Building on the analysis in Task 2.1, this analysis will include:

- Development of peaking factors for each customer class. To the extent that the City had AMI meters, we can use a statistical sample to estimate peaking factors. We will examine multiple years to ensure the values used are representative of a typical year.
- Will we use the data from Task 2.1 to project the number of accounts, equivalent meters, and bills.

We will also evaluate system historical water production. We will develop a test-year value for peak day demand and peak hour ratios as well as anticipated strengths and flow.

We will use non-coincidental peaking factors for cost allocation. This is the preferred method used in industry. This ensures that all classes are paying their proportionate share of peaking costs regardless of when peaking occurs. Changes in class peaking factors can have a profound effect on the distribution of costs to customer classes.

Task 3.5 – Distribute Costs to Customer Classes
The distribution of allocated costs to customer classes is the final step in determining class cost of service. This essentially distributes the costs associated with average day, peak day and customer costs based on each class's proportionate contribution based on their specific demands..



Raftelis will allocate costs from Tasks 3.3 and the units of service from Table 3.4 to each customer class based on their proportionate share of demand characteristics or units of service. For example, if the residential class's maximum day demands represent 50% of the total demand, we would allocate 50% of the maximum day costs to the residential class. In a similar manner, if the commercial class represents 10% of total bill, Raftelis would allocate 10% of the billing costs to the commercial class.

TASK 3 DELIVERABLES:

- Four virtual meetings to present draft and draft-final results to all internal stakeholders
- Technical memorandum summarizing the results of the water cost of service analysis

Task 4.0 – Rate Design

The rate design task will identify the volume- (variable) and customer-related (fixed) costs to be recovered through rates. Water and reclaimed water volume-related costs cover the costs to treat, store, and distribute water to customers.

In today's rate-setting environment, it is imperative to show the nexus between the cost to provide water in each tier and the rate in each tier. For tiered rate structures, Raftelis will calculate and demonstrate the nexus between costs and tiers by tabulating the tiered rates to show each individual unit cost component. The unit cost components will likely include water supply costs differentiated by source, base system costs (delivery costs), peaking (extra-capacity) costs, and conservation costs, among others. This rate derivation will communicate to customers the cost drivers behind the rate for each tier in each class. An example of our build-up of "rate components" to final commodity rates is shown in the table below. The five rate components, derived from the cost of service, are summed to yield the final commodity rates. Our analysis will examine how the current tier breaks and structures serve the utility's needs and the community. Raftelis may recommend adjustments to the tier structures to meet City policy objectives, to better reflect industry standard approaches, or after consultation with the City's legal counsel and any defensibility concerns.

Building on the billing analysis from Task 2.1, Raftelis will develop bill distributions for the water rate structure to determine the number of bills and the volume billed in each tier. The pricing objectives from Task 1 will serve as the basis for any recommended changes to water and recycled water rates.

- Using the selected pricing objectives and evaluation metric identified in Task 1.0, determine the alignment the existing rate structure has with the objectives. Assess the ability of proposed rate structures to align with the evaluation metrics. Rank the existing structure against the alternatives and select 2 or 3 structures to determine test year rates.
- Update the current water and recycled rates with the test year revenue requirement increase. This serves as the baseline for comparison against other rate structures
- Based on the rate structure ranking results, develop test year rates for each alternative. Compare results from proposed rates under each structure against the ability to meet ranked pricing objectives
- Develop a bill impact table for each customer class which compares typical monthly bills under existing and proposed rate structures, annual bills for typical customers, and an annual bill comparison under the rate alternative and existing rates for each customer in a class summarized to show the number of customers that will annual bill increase or decrease
- Compare how each rate design alternative meets the objectives
- Develop a water utility bill comparison under the City's existing and proposed rate alternatives compared against up to 10 peer utilities. If needed, develop a recycled water peer utility comparison

TASK 4 DELIVERABLES:

- Two virtual meetings to present draft and draft-final results to all internal stakeholders. We anticipate regular communication (phone calls/emails, etc) during the development of the financial plan with staff on an as needed basis
- On-site meeting to review cost of service results
- Technical memorandum summarizing the results of the rate design alternatives

OPTIONAL Task 5.0 – Proposition 218 Outreach and Support

Task 5.1 – Proposition 218 Notification Development

Raftelis can develop graphics and narrative content needed for the City's Proposition 218 Notification, which must be postmarked to all property owners in the City's service area no less than 45 days prior to the public hearing to adopt rates. Content will include all statutorily required elements, along with strategic communications messages to ensure it properly communicates the need and justification for rate increases and the public is given tools to understand the impacts on their individual bills. Beyond satisfying legal requirements, the goal of the piece will be to describe the public process that went into the recommendations and make the case for why adoption is critical.

Once the content is approved by the City's legal counsel, Raftelis' Creative Services group will integrate the content into an attractive design that will encourage District ratepayers to read the information and have a broader understanding of the issues. Our pricing includes the development of a press-ready PDF in English. For additional languages, such as Spanish and Chinese, it is anticipated that the City will provide translation services in order for us to produce the Notice in multiple languages. It is anticipated that District staff will liaise with the printer and mail house, and contract directly with them for payment. If desired, we can provide liaison services at our standard hourly rates.

Task 5.2 – Public Hearing

Raftelis will present the results and proposed rates to the City Council and ratepayers during a public hearing. The presentation will review the rationale behind the rates including the overall revenue needs, any rate structure changes, and estimated customer impacts. We will be available to address any questions from the Board or the public.

TASK 5 DELIVERABLES:

- Draft and final Proposition 218 notice content, graphic design, facilitation services, and presentation materials
- Attend the related public hearing and be available to address comments and questions

Task 6.0 – Public Meetings/Presentations and Reports

Task 6.1 – Public Hearing (OPTIONAL TASK)

Raftelis will present the results and proposed rates to the City Council and ratepayers during public hearings. Raftelis will attend up to three Council meetings. The presentation will review the rationale behind the rates including the overall revenue needs, any rate structure changes, and estimated customer impacts. We will be available to address any questions from the City or the public.

Task 6.2 - Reporting

Raftelis will prepare a report documenting the Rate Study to serve as a part of the City's administrative record. This report's purpose is to document the methodology used to calculate the City's water rates and to show alignment with cost-of-service principles and Proposition 218 requirements. The report will walk the reader through the numbers from budgeted costs to final rates to tell the rate story, consistent with the requirements for an administrative record, and to defend the proposed rates should there be a subsequent legal challenge.

The report will include an executive summary highlighting decisions reached during the development of rates. The main body of the report will summarize the underlying model assumptions, the long-term financial plans, the cost-of-service analyses, proposed revisions to rate structures, proposed rate derivation, and customer impacts. The report will detail rate structure selection, rate design assumptions, and methodologies used to develop the proposed rates. The cost of service and rate calculations will be described in detail so that the nexus between costs and rates is clearly demonstrated.

Raftelis will provide a draft report to City staff and the City's attorney for review and comment. We will then incorporate any revisions into the final report. The final report will be completed before the noticing period to ensure District customers have public access during the protest period and before the Public Hearing for rate adoption.

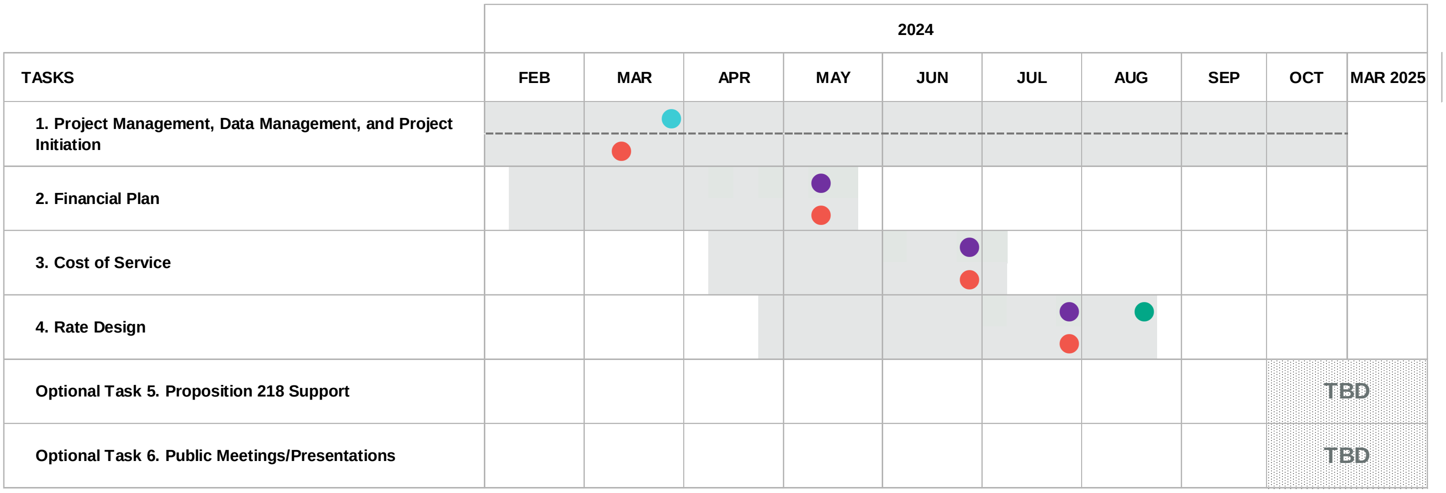
TASK 6 DELIVERABLES:

- Preparation of presentation material and attendance at up to three City Council meetings. (Optional Task)
- Draft and final reports

SCHEDULE OF WORK

Schedule of Work

Raftelis will complete the scope of services within the timeframe shown in the schedule below. The proposed schedule assumes a notice-to-proceed by the beginning of February 2024 and that Raftelis will receive the needed data in a timely manner and be able to schedule meetings as necessary. We anticipate the technical portion (financial plan, cost of service, and rate design) will be completed by June 2024. Based on our experience, the Proposition 218 and Council approval process may take up to four months which would put final completion of the study in October 2024.



● Project Initiation/Kick-off Meeting
● Draft and Final Reports
● On-Site Project Meetings
● City Council Meetings
● Deliverables/Tech Memos/PPT
● Prop 218 Notification Document
● Virtual Meetings

COST PROPOSAL

Cost Proposal

The following table provides a breakdown of our proposed fee for this project. This table includes the estimated level of effort required for completing each task and the hourly billing rates for our project team members. Expenses include costs associated with travel and a $10 per hour technology charge covering computers, networks, telephones, postage, etc.

Tasks	Web Meetings	In-person Project Meetings	Hours								Total Expenses	Total Fees & Expenses
			KK	TC	JW	GD	LR	NB	CS	Total Labor		
1. Project Management, Data Management, and Project Initiation		1	2	16			2	2		22	$1,950	**$9,160**
2. Financial Plan	2		1	8	2		22	12		45	$450	**$11,350**
3. Cost of Service	2		1	8	2		24	8		43	$430	**$11,030**
4. Rate Design	2	1	1	12	2		24	8		47	$1,400	**$13,440**
6.2 Rate Study Report			2	8			16	16		42	$420	**$10,420**
OPTIONAL TASKS												
5. Proposition 218 Support	2		2	2		12			8	24	$240	**$5,520**
6.1 Public Meetings/Presentations	2	3		24	1		8	8		41	$3,200	**$15,400**
Total Meetings / Hours	**10**	**5**	**9**	**78**	**7**	**12**	**96**	**54**	**8**	**264**		
Hourly Billing Rate			**$320**	**$360**	**$320**	**$220**	**$220**	**$185**	**$160**			
Total Professional Fees			**$2,880**	**$28,080**	**$2,240**	**$2,640**	**$21,120**	**$9,990**	**$1,280**	**$68,230**		

KK - Kevin Kostiuk
TC - Todd Cristiano
JW - John Wright
GD - Gina DePinto
LR - Lindsay Roth
NB - Nicki Bartak
CS - Creative Services

Total Fees	**$68,230**
Total Expenses	**$8,090**
Total Fees & Expenses Including Optional Tasks	**$76,320**
Total Fees & Expenses Excluding Optional Tasks	**$55,400**

HOURLY BILLING RATES

POSITION	HOURLY BILLING RATE**
Vice President	$360
Senior Manager	$320
Manager	$285
Consultant	$220
Associate	$185
Graphic Designer	$160
Administration	$100
Technology Charge*	$10

**Technology/Communications Charge: This is an hourly fee charged monthly for each hour worked on the project to recover telephone, facsimile, computer, postage/overnight delivery, conference calls, electronic/computer webinars, photocopies, etc.*

***For services related to the preparation for and participation in deposition and trials/hearings, the standard billing rates listed above will be increased by an amount up to 50 percent.*

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Planning and Development Services

DATE: March 18, 2024

SUBJECT: Consider items associated with approximately 155 acres of land located on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues. Great Bigland, LP., owner/ applicant; Harbour and Associates, representative.

a. Consider Approval - Res. 24-___, A Resolution of the Clovis City Council: (1) Certifying the Final Environmental Impact Report for the Shepherd North Project; (2) Adopting CEQA Findings of Fact and a Statement of Overriding Consideration; and (3) Adopting a Mitigation Monitoring and Reporting Program.

b. Consider Approval – Res. 24-___, A Resolution of the Clovis City Council approving a request to expand the City’s Sphere of Influence to include approximately 155 acres of land.

c. Consider Approval - Res. 24-___, GPA2021-006, A Resolution of the Clovis City Council approving a request to amend the circulation element of the General Plan to allow for the placement of a Shepherd Avenue access point on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues.

d. Consider Approval - Res. 24-___, GPA2021-005, A Resolution of the Clovis City Council approving a request to amend the land use element of the General Plan for the Development Area (approximately 77 acres) from the Rural Residential land use designation to the Medium-High Density Residential land use designation.

e. Consider Introduction - Ord. 24-___, R2021-009, An Ordinance of the Clovis City Council approving a request to prezone property within the Development Area (approximately 77 acres) of the Project site from the Fresno County AL20 Zone District to the Clovis R-1-PRD Zone District.

f. Consider Approval - Res. 24-___, TM6205, A Resolution of the Clovis City Council approving a request to approve a vesting tentative tract map for a 605-lot single-family planned residential development.

g. Consider Approval - Res. 24-___, PDP2021-004, A Resolution of the Clovis City Council approving a request to approve a planned development permit for a 605-lot single-family residential development.

h. Consider Approval - Res. 24-___, RO307, A Resolution of the Clovis City Council approving Application for the Annexation of the Territory known as the Shepherd-Sunnyside Northeast Reorganization for the Development Area (approximately 77 acres).

i. Consider Approval - Res. 24-___, A Resolution of the Clovis City Council approving an amendment to the 2017 Amended and Restated Memorandum of Understanding between the County of Fresno and City of Clovis regarding a Sphere of Influence Expansion to add approximately 155 acres and the Standards of Annexation to address the annexation of approximately 77 acres of property (Shepherd-Sunnyside Northeast Reorganization).

Staff: George González, Senior Planner
Recommendation: Approve

ATTACHMENTS:

1. Draft Resolution CEQA
2. Draft Resolution GPA2021-006
3. Draft Resolution GPA2021-005
4. Draft Ordinance R2021-009
5. Draft Resolution TM6205
6. Draft Resolution PDP2021-004
7. Draft Resolution RO307
8. Draft Resolution Fourth Amendment to MOU
9. Applicant’s Justification for GPA2021-005 & GPA2021-006
10. Applicant’s Development Standards – Citrea
11. Applicant’s Development Standards – Elev8ions
12. Applicant’s Development Standards – Regent Park
13. Floor & Elevation Plans – Citrea
14. Floor & Elevation Plans – Elev8ions
15. Floor & Elevation Plans – Regent Park
16. Open Space & Park Exhibit
17. Draft Project EIR – Volume I
18. Draft Project EIR – Volume II
19. Revised Final EIR, including Comment Letters, Responses to Comment Letters and Text Revisions to the Draft EIR
20. Correspondence from Commenting Agencies
21. Findings in Support of Project Applications

22. SOI Expansion & Annexation Area Map
23. Specific Service Plan
24. 2017 Amended and Restated Memorandum of Understanding between the County of Fresno and City of Clovis
25. Letter from Martine Borges
26. Existing and Proposed Shepherd Avenue Improvements

CONFLICT OF INTEREST

Councilmembers should consider recusal if a campaign contribution exceeding $250 has been received from the project proponent (developer, applicant, agent, and/or participants) within the preceding 12 months (Government Code 84308).

RECOMMENDATION

Staff recommends that the City Council take action to approve each component of the proposed Project as outlined in the subject title of this item.

EXECUTIVE SUMMARY

The applicant is requesting to amend the Clovis General Plan Land Use Designation for approximately 77 acres (Development Area) of property located at the northeast corner of Shepherd and N. Sunnyside Avenues from the Rural Residential (1 DU/2 AC) land use designation to the Medium-High Density Residential (7.1 to 15.0 DU/AC) land use designation. Additionally, the applicant is requesting to amend the Clovis General Plan Circulation Element to allow for the placement of a Shepherd Avenue access point on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues. The applicant is proposing to prezone the Development Area (approximately 77 acres) from the Fresno County AL20 Zone District to the Clovis R-1-PRD Zone District. The applicant is requesting a vesting tentative tract map approval for a 605-lot gated and non-gated single-family planned residential development with private and public streets, increased lot coverage, and reduced building setbacks.

The proposed Project is not located within the City's existing SOI and will require an SOI expansion and annexation into the City before development can proceed. Therefore, the applicant is requesting that the City Council approve a Resolution of Application for the Annexation of the development area and approve the Fourth Amendment to the Memorandum of Understanding between the County of Fresno and City of Clovis. The applicant is proposing a Homeowner's Association (HOA) with this project. Approval of this Project would allow the developer to continue processing a residential site plan review entitlement and development drawings.

BACKGROUND

- General Plan Designation: Rural Residential (1 DU/2 AC)
- Existing Zoning: Fresno County AL20 Zone District
- Lot Size: Approximately 77 Acres
- Current Land Use: Agricultural
- Adjacent Land Uses:
  - North: Rural Residential
  - South: Rural Residential and Single-Family Residential
  - East: Rural Residential
  - West: Single-Family Residential and Rural Residential

A brief history of the proposed Project related to the requested Sphere of Influence (SOI) expansion is presented as follows:

- **June 2016:** Staff received a request from the applicant to allow for the urbanization of the subject property at the northeast corner of Shepherd and N. Sunnyside Avenues. Staff began an internal cursory evaluation of the request to identify potential challenges and issues that would require a more detailed evaluation to assess the feasibility of the SOI amendment.

- **June and September 2018:** The applicant's representative submitted a request for the City Council to consider direction and to allow for staff to proceed with the SOI amendment process. Staff presented the request to the City Council for consideration and sought direction. The City Council ultimately directed staff to continue exploring the feasibility and to report back to City Council with an update; however, no direction was given to formally proceed at this hearing.

- **March 2020:** Staff received direction from the City Council to move forward and prepare environmental studies related to approximately 77 acres of land at the northeast corner of Shepherd and N. Sunnyside Avenues and to include the neighborhood at the corner of Perrin Road and Sunnyside Avenue as part of the environmental review.

- **April 2020:** Following the City Council's direction at the March 2, 2020 public hearing, the applicant requested via email on April 20, 2020 that the project be placed on hold due to economic uncertainty in the housing industry as a result of COVID-19.

- **July and August 2020:** The applicant requested staff to continue the process and staff released a request for proposal (RFP) for preparation of an Environmental Impact Report and related studies. Following release of the RFP, the applicant requested a revision to the SOI boundary to include an additional 750 acres, for a total SOI expansion of approximately 825 acres.

- **September 2020:** Staff received direction from the City Council to move forward with the process of amending the Clovis SOI and conduct a neighborhood outreach meeting with property owners within the expanded SOI of ±1,050 acres located on the north side of Shepherd Avenue to Behymer Avenue and generally between N. Sunnyside Avenue and the Dry Creek Reservoir.

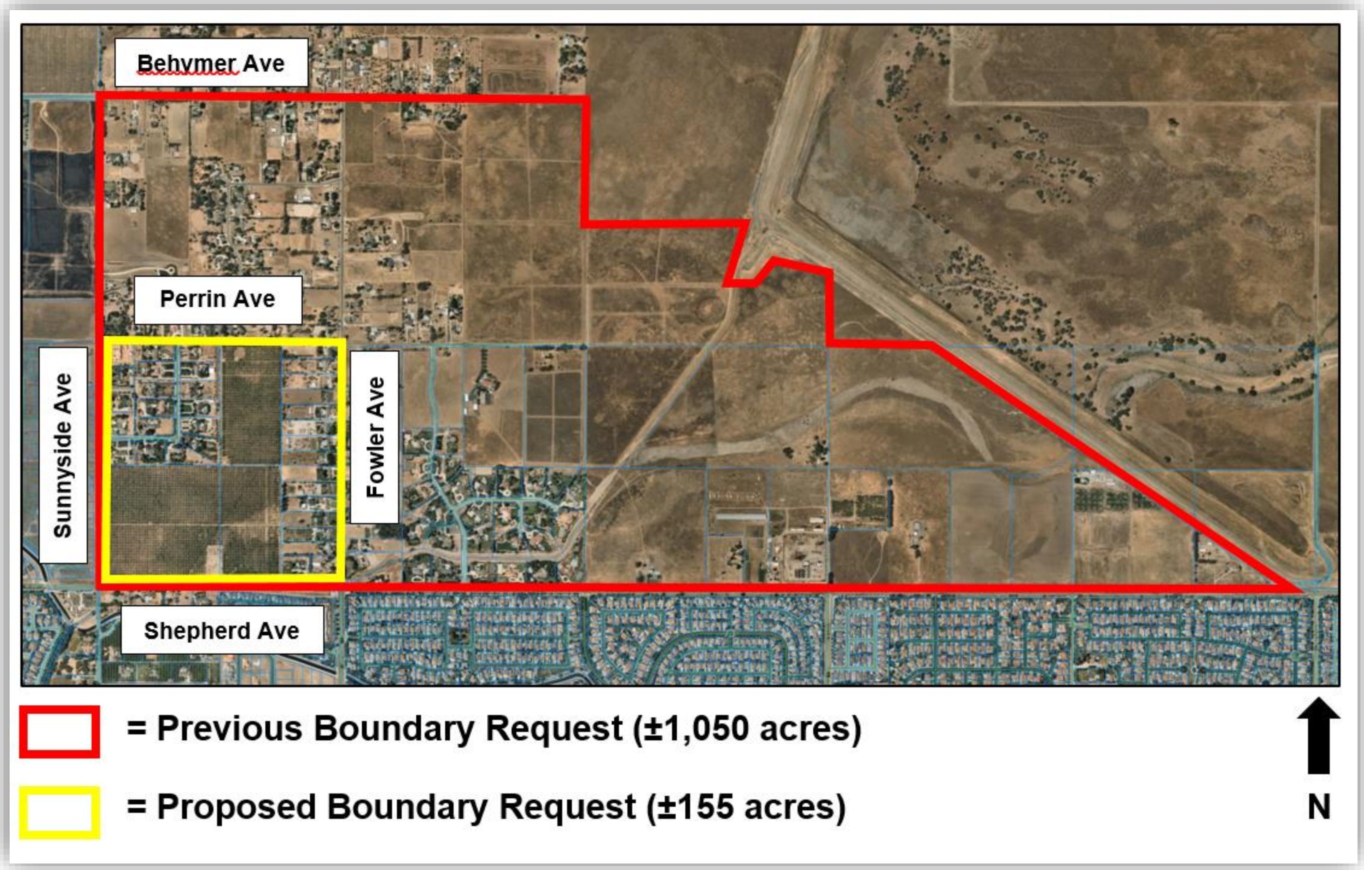
- **November 2020:** City staff held a neighborhood meeting with property owners in and around the proposed SOI amendment.

- **March 2021:** City Council considered and approved the requests for the City to enter into a consultant agreement with De Novo for preparation of an EIR for amending the City's SOI by approximately ±1,050 acres and for preparation and submittal of an application to the Fresno Local Agency Formation Commission (LAFCo).

- **March 2021 to October 2021:** Following the City Council direction, staff entered into a consultant agreement with De Novo in April of 2021 and received deposits for payment from the applicant to begin work on the EIR. The applicant submitted a proposed modification request to reduce the proposed amendment to the SOI from ±1,050 acres to ±155 acres.

- **<u>November 2021</u>:** City Council approved and authorized a reduction in acreage related to an amendment to the City's SOI from ±1,050 acres to ±155 acres (as shown below in **Figure 1**) and allow for the preparation and submittal of an updated application to LAFCo. Additionally, the City Council allowed the City Manager to execute a modified consultant agreement between the City of Clovis and De Novo Planning Group (De Novo) for the preparation of an Environmental Impact Report (EIR) and related services for the revised SOI boundary.

FIGURE 1



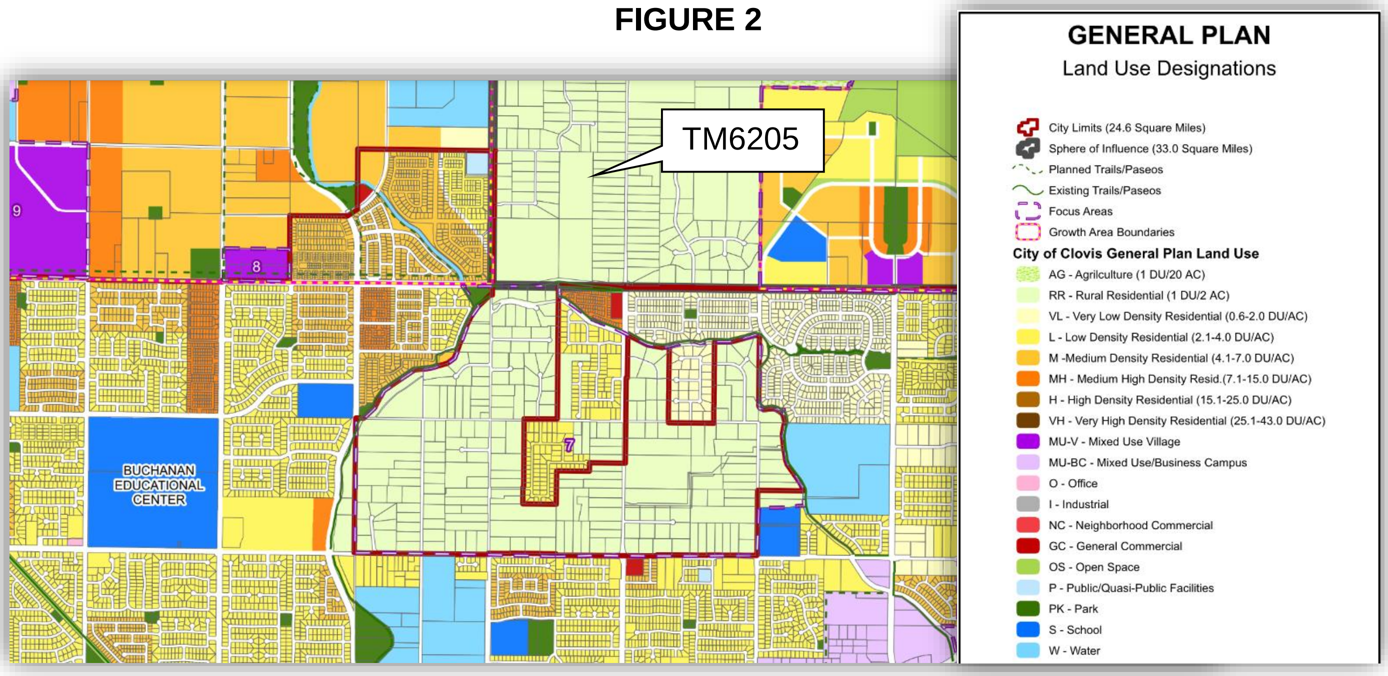
PROPOSAL AND ANALYSIS

Two (2) General Plan Amendments

Proposal

The first general plan amendment is requesting to amend the General Plan Circulation Element to allow for the placement of a Shepherd Avenue access point on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues. The second general plan amendment is requesting to amend the General Plan Land Use Designation for approximately 77 acres (Development Area) of property located at the northeast corner of Shepherd and N. Sunnyside Avenues from the Rural Residential (1 DU/2 AC) land use designation to the Medium-High Density Residential (7.1 to 15.0 DU/AC) land use designation. A general plan amendment is a change in City policy and requires a compelling reason for change. The applicant has provided a justification for both proposed general plan amendments (see **Attachment 9**).

FIGURE 2



Analysis

The proposal to re-designate the Project site (Development Area) from Rural Residential to Medium-High Density Residential represents a request to establish a compatible land use with the existing single-family planned residential development directly south of the Project site near the southwest corner of Shepherd and N. Fowler Avenues. Staff's analysis of the proposed Medium-High Density Residential land use considered the location of the site, its surroundings, and the environmental impacts associated.

The subject property is situated between Medium Density Residential developments and Rural Residential to the west and north, Rural Residential developments to the east, and Medium Density Residential and Rural Residential to the south. The applicant is requesting to construct a single-family detached planned residential development at a density of 7.77 units per acre with access from Shepherd and N. Sunnyside Avenue. The proposed residential development will not have direct vehicle access to the rural residential properties to the east of the Project site.

Due to the Project location and surroundings, the proposed change in land use is consistent with the intent of the General Plan to create a consistent design theme and mixture of housing types. Staff recommends the amendment to the Land Use Element as a package in conjunction with the prezoning, tract map, and planned development permit applications described below, which establish project-specific development standards and design components for the Project.

Shepherd Avenue Access

Shepherd Avenue is currently designated an expressway from Clovis Avenue to State Route 168. West of Clovis Avenue, Shepherd Avenue is designated as an arterial. Arterial streets generally permit access at eighth-mile points, typically for project-specific access. Likewise, expressways are limited access streets designed to carry regional traffic. Access points are generally limited to half-mile points (major streets).

The 1993 General Plan included a beltway street (expressway), that extended from the City of Fresno's Plan at Copper and Willow Avenues, turned south at the Clovis Avenue alignment, then east at Shepherd Avenue eventually looping into McCall Avenue. This specific beltway was removed with adoption of the 2014 General Plan Update. The 2014 General Plan kept the expressway designation east of Clovis Avenue, as most of the segment was developed on the south side.

The only existing entry and exit access point to the proposed Project site is from N. Sunnyside Avenue at the existing roundabout. The applicant is proposing an access point on Shepherd Avenue approximately 1,000 feet east of N. Sunnyside Avenue to serve as a second primary point of access for the proposed residential development. The proposed access would permit vehicles to turn right-in, right-out, and left-in only. The applicant states that this modification is necessary due to the constraint of limited access to N. Sunnyside Avenue for the proposed Project. The Shepherd Avenue access will provide added circulation for residents and emergency services. Additionally, there is no access to N. Fowler Avenue to the east of the Project site, without accessing the rural residential/ County roads (Stanford Avenue and Ticonderoga Avenue), north of Perrin Road.

In reviewing the Shepherd Avenue access point, staff has determined that traffic on Fowler Avenue (south of Shepherd Avenue) traveling north to the Project site would travel westbound via Shepherd Avenue to northbound N. Sunnyside Avenue or the proposed Shepherd access point. Generally, traffic leaving the site would travel southbound on N. Sunnyside Avenue. The additional Shepherd access does not change this traffic as all travel will continue along westbound or eastbound Shepherd Avenue. However, the Shepherd Avenue access point improves porosity of the southern half of the Project site and also improves the ability for emergency services to respond.

In light of this information, staff has evaluated the applicant's proposal and agrees with the request for the mid-block connection as it will improve porosity. The Fire Department has also reviewed the proposed mid-block connection and has expressed its support for the additional Shepherd Avenue point of access as it will improve emergency response times and circulation through the Project site. Staff has included a condition of approval to this effect and will further define the specific entry details through the review process for the civil improvement plans.

Shepherd Avenue Improvements

Shepherd Avenue is currently improved with a 2-lane roadway between N. Sunnyside and N. Fowler Avenues. If approved by Council, the Project is conditioned to improve Shepherd Avenue for full build out on both the north and south sides of the median to a 4-lane divided street. Additionally, the Project will be conditioned to construct the community trail along the south side of Shepherd Avenue, which will connect to the existing Enterprise trail to the east. Please see **Attachment 26** for an exhibit showing the current conditions of Shepherd Avenue and the proposed full build out improvements.

Traffic Study

A Transportation Impact Analysis (TIA) was prepared by LSA in July 2023 for the proposed Project, which examined traffic operations in the vicinity of the proposed Project under the following scenarios:

- Existing Conditions
- Existing Plus Project Conditions
- Near-Term Plus Project Conditions
- Cumulative without Project Conditions
- Cumulative Plus Project Conditions

The traffic analysis concluded that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term Plus Project conditions and under Cumulative Plus Project Conditions with identified improvements. The TIA identified necessary improvements where an operational deficiency has been identified and concluded that impacts to LOS would be considered Less Than Significant.

It's important to note that Level of Service (LOS) may no longer be used as a CEQA metric to identify significant transportation impacts in CEQA documents for land use projects. However, the traffic study includes a LOS analysis to determine if the proposed Project would result in deficient intersection operations per City of Clovis standards.

Per current CEQA Guidelines, transportation impacts are to be evaluated based on a project's effect on Vehicle Miles Traveled (VMT). Based on the detailed VMT analysis performed for the proposed Project, the implementation of Project design features may possibly reduce the Project's VMT impacts, but these reductions will not reduce the impact to a Less Than Significant level. Therefore, resulting in a Significant and Unavoidable impact relative to VMT. This is primarily due to the City of Clovis being a suburban community with land uses that are more spread out when compared to dense urban communities.

Prezone and Planned Development Permit

The applicant is requesting to prezone the Project site from the Fresno County AL20 Zone District to the Clovis R-1-PRD (Planned Residential Development) Zone District. The Project area's proposed re-designation to Medium-High Density Residential (7.1 – 15.0 DU/AC) in the General Plan Land Use Element would be consistent with the proposed prezone. Within the PRD Zone District, the Municipal Code permits the applicant to propose their own project-specific setbacks and lot coverage standards. The applicant has provided a list of standards as outlined below (see detailed standards in **Attachments 10, 11 and 12**). These standards are incorporated into the Project's planned development permit (PDP).

Development Standards

The applicant is requesting approval of a gated and non-gated, detached, single-family planned residential development with private and public streets. The private streets are proposed to have no interior sidewalks, while the public streets are proposed to include standard City sidewalks. In addition, the request includes reduced setbacks and increased lot coverage. The applicant is proposing a Homeowner's Association with this Project. Three different housing products are envisioned within the Project site, each generally characterized by the minimum lot size. The proposed development standards for all three products are outlined below in **Table 1**.

TABLE 1 – DEVELOPMENT STANDARDS

Standard	**Housing Products**		
	Citrea	**Elev8ions**	**Regent**
Minimum Lot Size (Square Feet)	3,700	1,980	4,500
Front (Garage) Setback	18 feet	5 feet	18 feet
Front (house) Setback	10 feet	5 feet	10 feet
Garage Side Setback	5 feet	5 feet	5 feet
Corner Street Sides Setbacks	5 feet	3 feet	8 feet
Rear Setback	5 feet	4 feet	8 feet
Lot Coverage	60% Max	65%	60%
Maximum Height	2-stories not to exceed 35 feet		
Minimum Parcel Width	50 feet	36 feet	50 feet
Minimum Curved Parcel Width	25 feet	36 feet	25 feet
Minimum Corner Parcel Width	53 feet	50 feet	53 feet
Minimum Parcel Depth	74 feet	50 feet	90 feet
Reversed Corner Street Side Setback	5 feet	3 feet	8 feet
Corner Street Side Fence Setback	3 feet	3 feet	3 feet
Interior Side Yard Setback (opposite from garage)	3 feet	3 feet	3 feet
Setback to Projections and/or Porch/ Patio	9 feet	4 feet	9 feet
Garages	• 20'x20' interior dimension (2-car)	• 20'x20' interior dimension (2-car) • 10'x20' interior dimension (1-car)	• 20'x20' interior dimension (2-car) • 20'x20' minimum with 9'x15.5' minimum tandem (3-car)

Per the PRD standards, 2-car garages shall have a minimum inside dimension of 20’x20’ and 1-car garages shall have a minimum inside dimension of 10’x20’. The applicant may request reduced parking standards with the planned residential development process. In this case, standards for tandem garages are included for the Regent product and reduced inside dimensions are proposed for 1-car tandem garages. The Code allows the Planning Commission and City Council to reduce standards if the proposed parking meets the intent of the Code.

Staff has reviewed the proposed development standards mentioned above for the proposed single-family residential development and found them to be compatible with similar projects recently approved through the planned development permit process. It’s important to note that in order to ensure adequate side yard access and proper toter storage, the Project proposes that all garage-side setbacks provide a minimum five (5’) foot setback. Additionally, the Project is conditioned to provide an all-weather surface for the placement and storage of trash receptacles leading from the 5-foot side yard (garage side) to the front of the property.

Models and Lot Sizes

The applicant is proposing four (4) one-story models and one (1) two-story model with three exterior options for the proposed Citrea home product. Additionally, the applicant is proposing four (4) two-story models with three exterior options for the Elev8ions home product. The applicant is proposing three (3) one-story models and two (2) two-story models with five exterior options for the proposed Regent home product. The lot sizes within TM6205 range from 1,980 square feet to 15,943 square feet. The average lot size within TM6205 is 3,363 square feet.

Homeowners Association

The Project includes private streets within three (3) gated communities, which two are located along the Shepherd Avenue street frontage and one located on the northern half of the proposed development. The Homeowners Association (HOA) is proposed to maintain the open space/ common areas and provide enforcement for illegally parked vehicles within the gated communities.

Proposed Amenities

Chapter 9.66 of the Clovis Municipal Code (Planned Development Permits) provides for flexibility in development standards as a mechanism to accommodate new types of projects that may not otherwise comply with strict adherence to typical development standards. As part of that request, planned residential developments are required to provide a program of public amenities commiserate to the deviations being requested.

In return for the reduced lot sizes, reduced setbacks, increased lot coverage, reduction in lot width and lot depth requirements, and non-standard garages, the applicant is proposing a combination of in-project amenities that are targeted towards homeowners and off-site amenities that will provide a general public benefit. In-project amenities include two community areas, each with a recreation building and community pool, a paseo along the northern-most gated neighborhood, and embellished landscaping on internal streets. With regard to off-site amenities, the applicant has agreed to contribute a dollar amount totaling $150,000 to the City for utilization in future open space and/or park improvements in areas of the community that have a need.

After consultation with the Engineering Division and Public Utilities Staff, the following projects were identified as examples of improvements that can be funded with the contribution:

- Restoration of the San Gabriel Restroom Facility within the San Gabriel Park located at the southeast corner of Willow and San Gabriel Avenues.
- Construction of a community trail along the Gould Canal in the southern part of Clovis.
- Installation of playground equipment, shade structure over playground equipment and playground soft foam flooring at an existing neighborhood park located within the Helm Ranch Community Area or Old Town Area.

It is important to note that amongst the findings that must be made to approve a planned development permit, which include a public amenity, the proposed project must also produce a comprehensive development of superior quality than which might otherwise occur from more traditional development on the site. This could include an enhanced entry point, an embellished block wall on street frontages, and superior exterior elevation design. These features are commonly incorporated into the planned development projects proposed by the applicant, and all will be reviewed and approved with the civil plan review process and residential site plan review for individual lots.

Vesting Tentative Map

The Project includes a Vesting Tentative Tract Map 6205 (see **Attachment 5A**). The map includes 605 lots and is consistent with the requirements of the Subdivision Map Act.

Circulation

The Project is accessible from two main entries, one entry along the Shepherd Avenue frontage and the second entry along the N. Sunnyside Avenue frontage. As noted above, a general plan amendment is required to allow the Shepherd Avenue access. If the general plan amendment is not approved, the Project will need to be redesigned. These vehicular entry points will allow residents to enter and exit the planned residential development at Shepherd Avenue and at the existing roundabout on N. Sunnyside Avenue. The Project is also proposing a gated entry along the northern border of the development adjacent to Perrin Road for emergency vehicles only. The Project includes 37-foot wide private streets with no sidewalks for the three (3) gated communities. For the non-gated portion of the Project, 40-foot wide public streets with City-standard sidewalks are proposed.

Thematic Elements

The proposed development will be able to design its own unique thematic elements for the entire Project. Since the property is located outside the boundaries of the Heritage Grove Urban Center, it is not required to adhere to design standards outlined in the Heritage Grove Desing Guidelines. However, although the Project will not follow the Heritage Grove Design Guidelines, staff recommends that the Project's thematic elements (lighting, benches, trash receptacles, trails, walkway treatment, architecture) complement and cohesively link the established themes by the existing single-family development to the west of the Project site and the Dry Creek Trailhead at the southwest corner of Shepherd and N. Sunnyside Avenues.

Sewer and Water Impact

The Project's impacts to water and sewer facilities were analyzed during the California Environmental Quality Act (CEQA) review. Provost and Pritchard, the City's water system consultant, provided a summary of water system impacts and concluded that the City has capacity to serve, and that infrastructure can accommodate the Project upon completion of the recommended connections. The City Engineer completed a sewer analysis and concluded that the City has capacity to accommodate the Project.

The Project lies outside of the Fresno Irrigation District (FID) boundary and therefore, is not eligible to utilize entitled surface water from the Kings River. To help address water impacts associated with projects outside of the FID boundary, the Water Supply Fee was established in 2013 to provide a mechanism for developing properties to pay their share of the cost for the City to acquire additional water supply. This applies to project sites that are outside the boundaries of FID or if they exceed their current allocation from FID. This Project will pay fees to acquire water supplies necessary for the Project demands.

Open Space, Trails, and Neighborhood Park

In addition to the in-project amenities to be constructed by the applicant in conjunction with the planned development permit, the project will include open space and trail features that fall under the categories of "neighborhood benefit" and "community benefit" facilities. Amenities provided in conjunction with the planned development permit and the "neighborhood benefit" facilities are at the applicant's cost, while "community benefit" facilities are eligible for reimbursement based on the existing fee program.

For the category of "neighborhood benefit" facilities, the Project proposes to construct a neighborhood park in the center of the Project site on the south side of Heirloom Avenue. As shown in **Figure 3** below, the park will include shade structures, playground equipment, seating areas, picnic tables, and open play turf area. As an additional "neighborhood benefit" facility, the Project will also construct a trail along the west side of Fordham Avenue and a second trail on the north side of Heirloom Avenue (see **Figure 5** below).

For the category of "community benefit" facilities, the Project will construct two community trails (see **Figure 4** below) on the north and south sides of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues. These trails will allow residents to bike or walk to the existing neighborhood commercial center at the southwest corner of Shepherd and N. Fowler Avenues. These community trails will also provide connectivity to the existing Enterprise trail within the Lennar development to the west and the Dry Creek Trailhead at the southwest corner of Shepherd and N. Sunnyside Avenues.

FIGURE 3
Neighborhood Park Concept

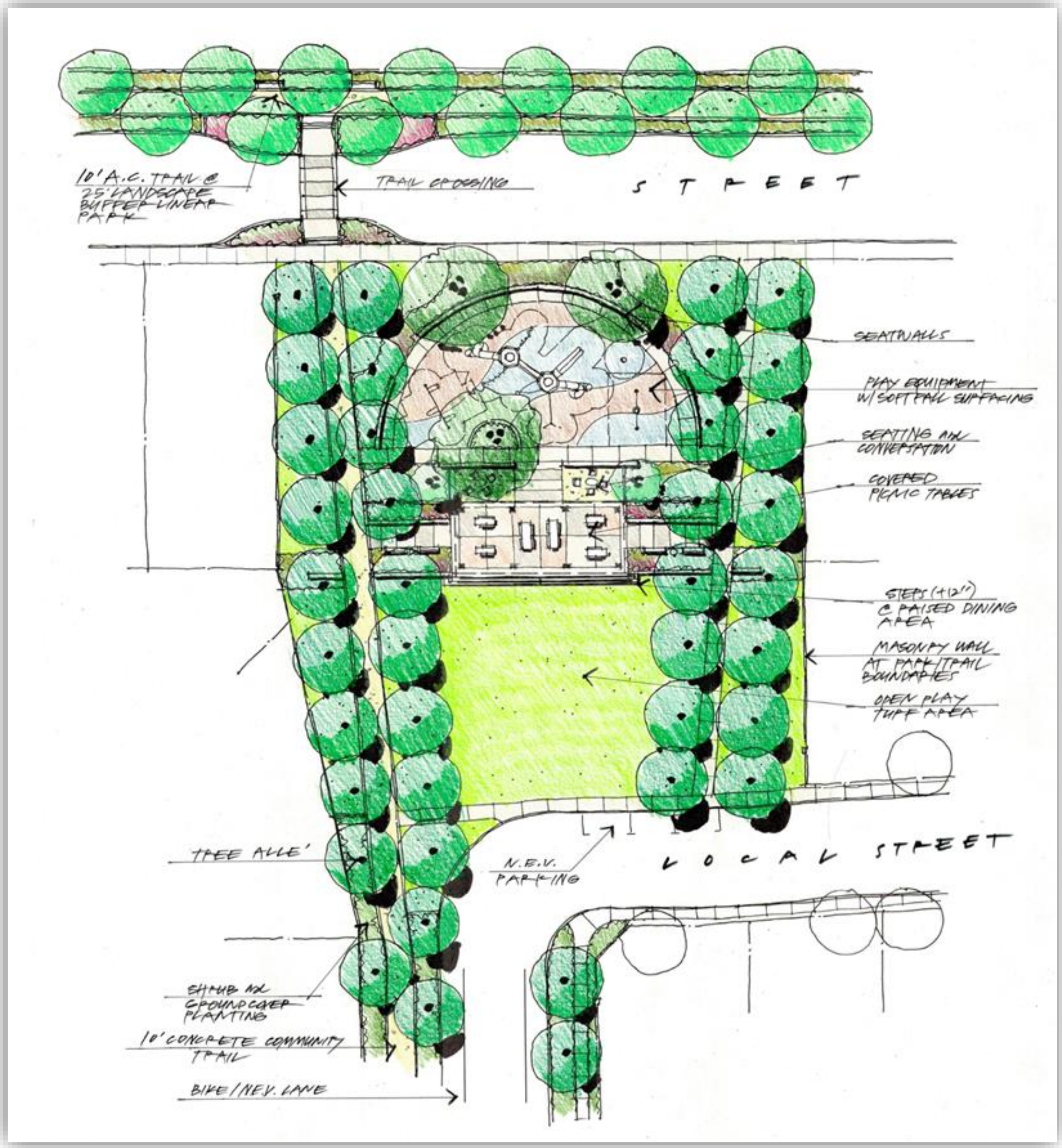
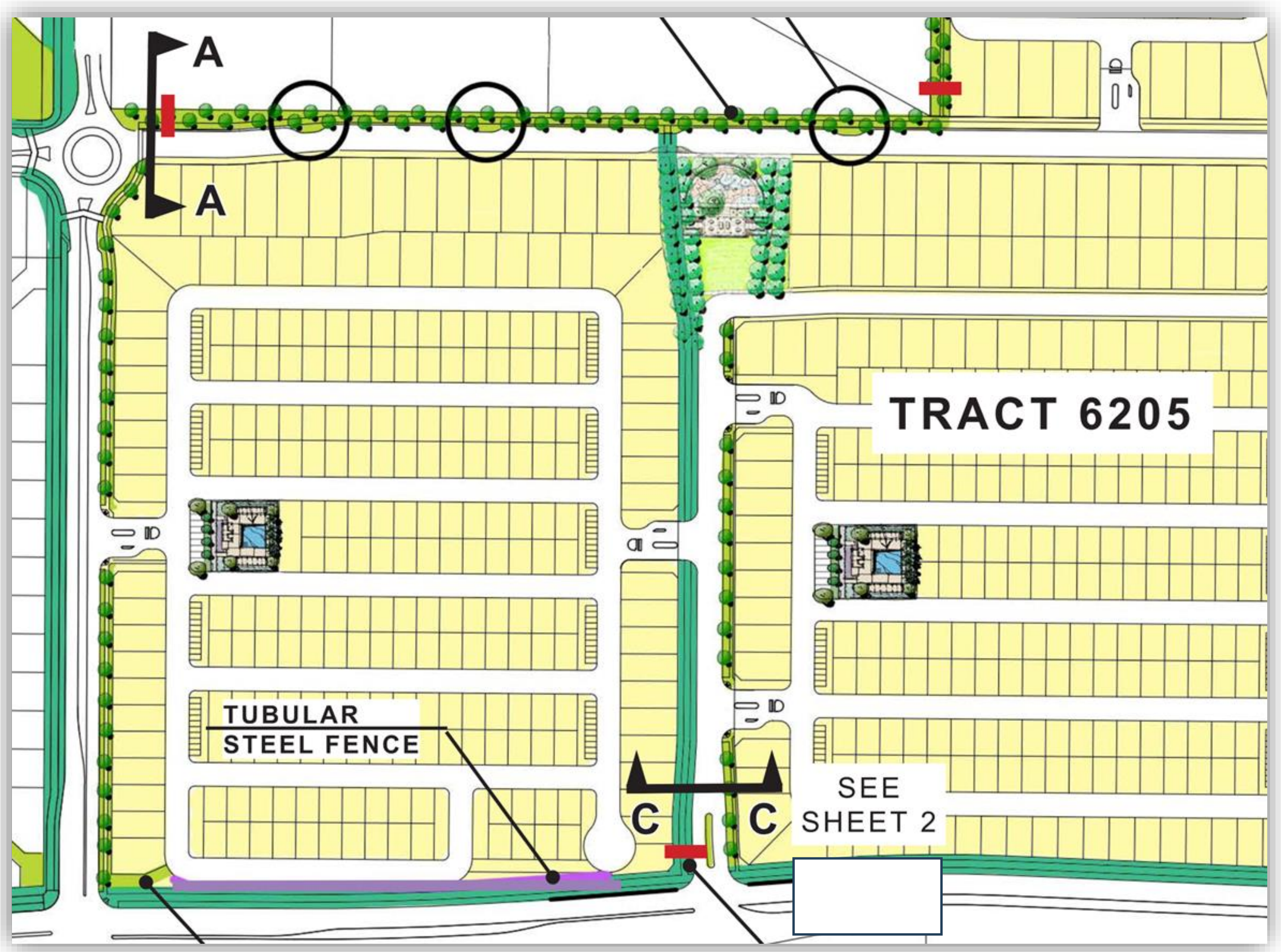


FIGURE 4
Shepherd Avenue Trail Concept

As mentioned above, the Project will be constructing additional trails and open space within the proposed development. A focal point leading to the neighborhood park will be a neighborhood trail connecting the Shepherd Avenue community trail to the south side of the park, along the Fordham Avenue frontage (see **Figure 5** below). The north side of Heirloom Avenue will also have a neighborhood trail that will provide a connection to the neighborhood park and the roundabout on N. Sunnyside Avenue. Please see **Attachment 16** for more detailed information of the proposed open space and trail connections associated with Vesting Tentative Tract Map 6205.

FIGURE 5



Residential Site Plan Review

The applicant will be required to submit a Residential Site Plan Review to allow staff to review lot-specific development standards. Specific colors and materials of the models, walls, amenities, landscaping, and fencing will be evaluated through the civil plans.

Neighborhood Meetings

Per City policy, the applicant held a neighborhood meeting on Wednesday, August 30, 2023, at the Clovis Memorial Building. Approximately twenty-six (26) residents were in attendance along with the Project team and City staff. Generally, residents expressed concerns with the proposed project and asked questions pertaining to, but not limited to, project design, CEQA, traffic, noise, groundwater, product, agricultural land, and water. Neighborhood comments at the August 30, 2023, meeting primarily repeated comments made in response to the Project's EIR. The Revised Final EIR (**Attachment 19**) provides a response to all the comments received by the City.

On Monday, November 27, 2023, the applicant held a second neighborhood meeting in compliance with City policy at the Clovis Memorial District to discuss the proposed Shepherd North Project and answer questions from residents who attended the meeting. Approximately 16 people attended the neighborhood meeting, along with the project representatives and City staff. After the conclusion of the Project presentation by the developer's representative, residents discussed concerns associated with the proposed single-family residential development. The concerns discussed at the meeting were similar to the comments on the EIR, comments at the first neighborhood meeting and comments made at the Planning Commission hearing. Comments focused on the following topics:

- Traffic Impacts to the surrounding area and Shepherd Avenue (between N. Sunnyside and N. Fowler Avenues)
- Impact to County roads
- Proposed density of the Project
- Project EIR findings
- Signalization of Shepherd and proposed Shepherd Access (Fordham Avenue) to allow vehicles to exit left on to east Fowler Avenue.

It's important to note that a critical topic that dominated part of the discussion involved Sunnyside Avenue, between Shepherd and Nees Avenues. There were concerns associated with the increased traffic speeds and volumes that Sunnyside is currently experiencing and what the proposed Project may cause to this roadway if the residential development is approved.

Planning Commission Hearing - November 16, 2023
The Planning Commission considered the Project on Thursday, November 16, 2023. Planning and Engineering staff (including the EIR consultant) presented the proposed Shepherd North Project to the Planning Commission, discussing topics such as the additional late comments, history of the Project, proposed single-family development, and project opposition/ concerns. Approximately 10 project representatives attended the hearing and 15 people provided in-person testimony in opposition of the Project. Many more people were present at the Planning Commission hearing but did not speak. Throughout the discussion, a wide variety of topics were discussed, including but not limited to:

- Sunnyside Avenue (south of Shepherd)
- Traffic Impacts
- Privacy
- Project Density
- Exit gate on Perrin Road
- Impacts to County roads
- Project design
- Water & Ag wells
- Sunnyside Roundabout
- Sewer and Water Capacity
- Shepherd Avenue
- Dry Creek Preserve
- Project EIR
- Noise and Lighting Impacts

After 4 hours of presentations and discussions, the Planning Commission voted on each of the 6 action items and provided a consistent recommendation to the City Council. The Planning Commission recommended denial of each item by means of a consistent 3-2 vote. The general concerns expressed by the Planning Commission were related to traffic, density increase, compatibility of homes, and the absence of specific responses to several comment letters that were received after the comment period had closed.

Public Comments

A public notice was sent to area residents within 800 feet of the property boundaries, including the Dry Creek Preserve Area. Staff has received one comment letter from Mr. Martine Borges, which is attached to this staff report for the Council's review and consideration (see **Attachment 25**).

Review and Comments from Agencies

The Project was distributed to all City Divisions as well as outside agencies, including Caltrans, Clovis Unified School District, Fresno Irrigation District, Fresno Metropolitan Flood Control District, AT&T, PG&E, San Joaquin Valley Air Pollution Control District, State Department of Fish and Wildlife, County of Fresno, and Fresno Local Agency Formation Commission (LAFCo).

Comments received are attached only if the agency has provided concerns, conditions, or mitigation measures. Routine responses and comment letters are placed in the administrative record and provided to the applicant for their records.

Community Facilities District

The fiscal analysis of the Loma Vista Specific Plan identified possible long-term funding shortfalls in the Clovis city-wide operating and maintenance costs. To address this issue the City of Clovis implemented a Community Facilities District. Community Facilities Districts (CFDs) are a means of providing additional funding for the provision of public facilities and services for public safety in newly developing areas of the community where the City would not otherwise be able to afford to continue to provide an adequate level of service as the City continues to grow. The use of CFDs is fairly common among cities in California experiencing high rates of growth, such as Clovis, due to significant losses of local revenue from tax shifts authorized by the State of California and the need to continue to provide an adequate level of service as growth occurs.

A condition of approval has been added to this tentative map requiring participation of this vesting tentative map in the CFD.

Consistency with General Plan Goals and Policies

Staff has evaluated the Project in light of the General Plan Land Use and Circulation goals and policies. The following goals and policies reflect Clovis' desire to maintain Clovis' tradition of responsible planning and well managed growth to preserve the quality of life in existing neighborhoods and ensure the development of new neighborhoods with an equal quality of life. The goals and policies seek to foster more compact development patterns that can reduce the number, length, and duration of auto trips.

Goal 3: Orderly and sustainable outward growth into three Urban Centers with neighborhoods that provide a balanced mix of land uses and development types to support a community lifestyle and small-town character.

Policy 3.2 Individual development project. When projects are proposed in an Urban Center, require a conceptual master plan to show how a proposed project could relate to possible future development of adjacent and nearby properties. The conceptual master plan should generally cover about 160 acres, or the adjacent area bounded by major arterials, canals, or other major geographical features. The conceptual master plan should address:

A. Compliance with the comprehensive design document
B. A consistent design theme
C. A mix of housing types
D. Adequate supply and distribution of neighborhood parks
E. Safe and direct pedestrian and bicycle linkages between residential areas and school sites, parks, and community activity centers

Policy 3.5 Fiscal sustainability. The City shall require establishment of community facility districts, lighting and landscaping maintenance districts, special districts, and other special funding or financing tools in conjunction with or as a condition of development, building or permit approval, or annexation or sphere of influence amendments when necessary to ensure that new development is fiscally neutral or beneficial.

Goal 5: A city with housing, employment, and lifestyle opportunities for all ages and incomes of residents.

Policy 5.1: Housing variety in developments. The Clovis General Plan has been planned to provide a variety of housing product types suitable to each stage of a person’s life. Each development should contribute to a diversity of housing sizes and types within the standards appropriate to the land use designation. This policy does not apply to projects smaller than five acres.

Goal 6: A city that grows and develops in a manner that implements its vision, sustains the integrity of its guiding principles, and requires few and infrequent amendments to the General Plan.

Policy 6.1: Amendment criteria. The City Council may approve amendments to the General Plan when the City Council is satisfied that the following conditions are met:

- The proposed change is and will be fiscally neutral or positive.
- The proposed change can be adequately served by public facilities and would not negatively impact service on existing development or the ability to service future development.

Policy 6.2: Smart growth. The City is committed to the following smart growth goals.

- Create a range of housing opportunities and choices.
- Create walkable neighborhoods.
- Foster distinctive, attractive communities with a strong sense of place.
- Mix land uses.
- Strengthen and direct development toward existing communities.
- Take advantage of compact building design.

California Environmental Quality Act (CEQA)

The City determined that the proposed Project required the preparation of an environmental impact report (EIR). A Draft EIR (see **Attachments 17 and 18**) was completed in July 2023 and was made available for review by affected agencies and the public between July 21st and September 5th, 2023. The City received a total of twenty-four (24) comment letters on the Draft EIR, from public agencies (Caltrans, Fresno Metropolitan Flood Control District) and property owners. The City prepared a Final EIR in compliance with State CEQA Guidelines that was provided and reviewed by the Planning Commission on November 16, 2023. After the Planning Commission hearing, City staff responded to all comment letters that came in after the comment period, and together with some additional errata content, prepared a Revised Final EIR in March 2024 and is the subject of certification. The comment letters, as well as the required responses to each comment, are included in the Revised Final EIR (see **Attachment 19**).

The Revised Final EIR for the proposed Project has been prepared in accordance with the State CEQA Guidelines. State CEQA Guidelines Section 15132 requires that a Final EIR consist of the following:

- The Draft EIR or a revision of the draft;
- Comments and recommendations received on the Draft EIR, either verbatim or in summary;
- A list of persons, organizations and public agencies commenting on the Draft EIR;
- The responses of the lead agency to significant environmental concerns raised in the review and consultation process; and
- Any other information added by the lead agency.

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed Project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

The City circulated a Notice of Preparation (NOP) of an EIR for the proposed Project on May 6, 2022, to the State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, Organizations and Interested Persons. A public scoping meeting was held on May 25, 2022, to present the Project Description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR.

Additionally, the City published a public Notice of Availability (NOA) for the Draft EIR on July 21, 2023, inviting comment from the general public, agencies, organizations, and other interested parties. The NOA was filed with the State Clearinghouse (SCH # 2022050180) and the County Clerk and was published in a local newspaper pursuant to the public noticing requirements of CEQA. The Draft EIR was available for public review and comment from July 21, 2023, through September 5, 2023.

In accordance with CEQA Guidelines Section 15088, this Revised Final EIR responds to the written comments received on the Draft EIR, as required by CEQA. This Revised Final EIR also contains minor edits to the Draft EIR. This document (see **Attachment 19**), as well as the Draft EIR as amended herein, constitute the Revised Final EIR.

The Project EIR determined that most potential impacts associated with the proposed Project were less than significant. However, the analysis identified that implementation of the proposed Project will result in VMT metrics that are greater than the applicable thresholds despite the application of feasible mitigation measures, resulting in significant and unavoidable impacts. Mitigation measures are outlined in a Mitigation Monitoring and Reporting Program (see **Attachment 1B**). The identification of significant and unavoidable impacts does not mean that the Project cannot be approved. The City Council will consider the adoption of a statement of overriding considerations in conjunction with its consideration of the Project. A statement of overriding considerations is a determination that specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, allowing the adverse environmental effects to be considered acceptable.

The City published notice of this public hearing in *The Business Journal* on Wednesday, March 6, 2024.

Responses to Late Comments

As indicated above, the City received twenty-four (24) comment letters on the Draft EIR (DEIR) during the DEIR 45-day public review period. Acting as lead agency, the City has prepared responses to the DEIR comments, which were included in a Final EIR that was made public prior to a hearing by the Planning Commission. After the release of the Final EIR, there were sixteen comments provided to the City of Clovis after public review closed for the DEIR. During the Planning Commission meeting, City staff indicated that the City would provide a response to those comments. It is important to note that City responses to the comments received after public review do not involve any new significant impacts or “significant new information” that would require recirculation of the DEIR pursuant to CEQA Guidelines Section 15088.5.

Furthermore, it is noted that the CEQA Guidelines do not specifically address the need to respond to comments that are received after the public review period for the Draft EIR. However, City staff did incorporate these comments and the City responses to these comments, into the Revised Final EIR that is presented to the City Council for certification (see **Attachment 19**).

Sphere of Influence Expansion (SOI) Request

As adopted by LAFCo, a City's Sphere of Influence is an established and approved boundary, which identifies and designates the near-term and future growth development boundaries for the City. The proposed Project being considered by the City Council is in conjunction with a proposed expansion to the City's current SOI, comprising approximately 155 acres, and an annexation proposal of the Development Area, comprising approximately 77 acres (see **Attachment 22**). The proposed SOI boundary encompasses the applicant's proposed Development Area, plus the neighboring 78-acre rural residential subdivisions. As a result of the proposed Project being considered, the City's current SOI boundaries need to be expanded in order to consider the annexation of the proposed single-family residential development area into the City of Clovis.

The SOI area was established in consultation with the County of Fresno and the Fresno Local Agency Formation Commission (LAFCo) and will allow for the existing rural residential subdivision to potentially request annexation into the City in the future.

An application for SOI expansion and annexation has been submitted and identified as the Shepherd-Sunnyside Northeast Reorganization (RO307). If the SOI expansion and annexation requests are supported by the City Council, the Council will take proponency action to apply to LAFCo as the applicant.

Proposed Annexation of Development Area

The total area of the annexation is approximately 77 acres (Development Area) located at the northeast corner of Shepherd and N. Sunnyside Avenues. The proposed annexation boundary area includes Vesting Tentative Tract Map 6205, for a 605-lot gated and non-gated single-family planned residential development (see **Attachment 8A**).

Property Owners:	1 Great Bigland, LP.
Owners Consenting to Annexation:	1 (100%)
Registered Voters:	0
Acreage:	Approximately 77 acres

Standard Conditions of Annexation:

The City Council has established standard conditions which the City considers a baseline for most annexation projects that it considers. The City's standard conditions for annexation are incorporated into the draft resolution, which reflect and are consistent with the requirements agreed to by the tax sharing agreement and to the timing of public services to the site. The conditions are satisfied by the development approvals granted separately for the site, and through LAFCo's standard processing policies and guidelines. City staff has prepared the specific service plan (see **Attachment 23**) for the subject change of organization for the Council's review and approval.

Fourth Amendment to MOU

The 2017 Amended and Restated Memorandum of Understanding (MOU) between the County of Fresno and the City of Clovis was executed in June 2017, prior to the expiration of the 1990 City/County Memorandum of Understanding. Included in the MOU are the "Standards of Annexation" (see **Attachment 24**). Standards of Annexation establish criteria to determine compliance with the City, County and the Fresno Local Agency Formation Commission (LAFCo).

A Fourth Amendment to the 2017 Amended and Restated Memorandum of Understanding between the County of Fresno and City of Clovis is necessary to accommodate the sphere of influence expansion area and the annexation of the Shepherd-Sunnyside Northeast Reorganization to the City of Clovis.

City staff worked with the County of Fresno to draft the Fourth Amendment to the Memorandum of Understanding (see **Attachment 8B**). Through this agreement, the City and County memorialized specific conditions associated with this sphere of influence expansion and annexation request by Great Bigland, LP. The attached Fourth Amendment has been reviewed and approved by the City Attorney and the County of Fresno staff. The principal features of the Fourth Amendment are as follows:

- The annexation area known as the Shepherd-Sunnyside Northeast Reorganization will include the full public right-of-way of Shepherd Avenue along the project's frontage.

- When development activity requires the construction of municipal utilities in County road rights-of-way adjacent to the annexed area, the City shall require reconstruction of affected sections of such roads to City standard cross-section specifications.

- As a part of its City's development process, developers shall obtain a County encroachment permit prior to constructing municipal utilities in County road rights-of-way adjacent to the annexed area. City agrees to the timely maintenance and repair of the County's roadway at City's expense for any repairs created by or related to the Shepherd-Sunnyside NE Reorganization Project annexation.

- All existing storm drainage patterns and all storm drainage generated as a result of development activity in the annexed area shall be accommodated by existing or project-installed Master Planned Storm Drainage infrastructure and shall not contribute to surface flows or ponding within the unincorporated areas. All new storm drainage shall conform to the Fresno Metropolitan Flood Control District's master plan for the area.

FISCAL IMPACT

None.

REASON FOR RECOMMENDATION

The proposal will provide a diversity in housing types and a quality residential environment for this area, adjacent to the Heritage Grove growth area. The Project does not substantially impact sewer, water and other public services and will contribute to their proportionate share of infrastructure and open space. The proposed vesting tentative tract map is consistent with the goals and policies of the General Plan and Development Code. Each component of the Project meets the findings that must be considered when making a decision on a project, as outlined in detail in **Attachment 21**. The proposed annexation is intended for urban development, as is evidenced by Vesting Tentative Tract Map 6205, covering 100 percent of the developable area. Staff therefore recommends that the City Council approve GPA2021-006, GPA2021-005, R2021-009, TM6205, PDP2021-004, Reorganization RO307, Sphere of Influence Expansion, and the fourth amendment to the MOU, subject to the conditions of approval attached as **Attachment 5B** and **Attachment 6A** of this staff report.

ACTIONS FOLLOWING APPROVAL

The annexation application will be prepared and submitted to LAFCo after all materials have been submitted by the applicant, sufficient to meet the conditions for the application. The approved resolution for the Fourth Amendment to the MOU will be forwarded to the County Board of Supervisors for consideration and approval.

Prepared by: George González, MPA, Senior Planner

Reviewed by: City Manager JH

RESOLUTION 24-___

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE SHEPHERD NORTH PROJECT; ADOPTING THE CEQA FINDINGS OF FACT AND A STATEMENT OF OVERRIDING CONSIDERATIONS, AND ADOPTING A MITIGATION MONITORING AND REPORTING PROGRAM

WHEREAS, Great Bigland, LP., 7550 N. Palm Avenue, Suite 102, Fresno, CA 93711, initiated the applications for (i) General Plan Amendment 2021-006 to amend the Circulation Element of the 2014 Clovis General Plan to allow for placement of an access point on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues; (ii) General Plan Amendment 2021-005 to amend the Land Use Element of the 2014 Clovis General Plan to re-designate land from the Rural Residential (1 DU/2 Ac) land use designation to the Medium-High Density Residential (7.1 to 15.0 DU/AC) land use designation; (iii) Prezone 2021-009 to prezone approximately 77 acres from the Fresno County AL20 Zone District to the Clovis R-1-PRD (Single Family Planned Residential Development) Zone District; (iv) Vesting Tentative Tract Map 6205 for a 605-lot single-family subdivision; (v) Planned Development Permit 2021-004 to deviate from the R-1 Zone District development standards associated with Vesting Tentative Tract Map 6205; (vi) SOI expansion of 155 acres; (vii) Annexation of 77 acres; (viii) and the Fourth Amendment to the MOU; and

WHEREAS, the City caused to be prepared a Draft Environmental Impact Report (“Draft EIR”) for the Project in April of 2021 to evaluate potentially significant adverse environmental impacts; and

WHEREAS, the Draft EIR was made available for a 45-day public review period beginning on July 21, 2023 and ending on September 5, 2023, during which time all interested parties were invited to submit written comments on the Draft EIR for consideration by the Planning Commission and City Council; and

WHEREAS, the City caused to be prepared a Final EIR in compliance with State CEQA Guidelines that was provided and reviewed by the Planning Commission on November 16, 2023. After the Planning Commission hearing, City staff responded to all comment letters that came in after the comment period, and together with some additional errata content, prepared a Revised Final Environmental Impact Report (“Revised Final EIR”) for the Project, dated March 2024. The Revised Final EIR contains comments upon the Draft EIR and responses thereto, as well as changes and additions to the Draft EIR text and a mitigation monitoring and reporting program; and

WHEREAS, the Draft EIR and the Revised Final EIR collectively make up the Environmental Impact Report (“EIR”) for the Shepherd North Project; and

WHEREAS, the Draft EIR and Revised Final EIR were prepared, circulated, and made available for public comment in accordance with the California Environmental Quality Act (“CEQA”), Public Resources Code, Sections 21000 et seq., and the Guidelines for

ATTACHMENT 1

Implementation of CEQA, 14 California Code of Regulations, Sections 15000 et seq. (the "CEQA Guidelines"); and

WHEREAS, the City Council has had an opportunity to independently review, evaluate and consider the entire Administrative Record relating to the Project and the EIR, which is on file with the City's Department of Planning and Development Services ("Department"), and reviewed and considered those portions of the Administrative Record determined to be necessary to make an informed decision, including, but not necessarily limited to, the staff report, the written materials submitted with the requests, and the verbal and written testimony and other evidence presented during the public hearing; and

WHEREAS, the City Council has independently reviewed and considered the Revised Final EIR; and

WHEREAS, the City Council has evaluated and considered all comments, written and oral, received from persons who reviewed the Draft EIR or the Revised Final EIR, or otherwise commented on the Project; and

WHEREAS, the City Council has independently reviewed and considered the CEQA Statement of Facts and Findings (**Attachment A**), the proposed form of Statement of Overriding Considerations (**Attachment A**), and Mitigation Monitoring and Reporting Program (**Attachment B**).

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. Finds that the EIR for the Project is adequate and has been completed in compliance with CEQA and the CEQA Guidelines.

2. Finds and declares that the EIR was presented to the City Council and that the City Council has independently reviewed and considered the information contained in the EIR prior to recommending approval of the Project.

3. Based upon its review of the EIR, finds that the EIR is an adequate assessment of the potentially significant environmental impacts of the Project as described in the EIR, sets forth a reasonable range of alternatives to the Project, and represents the independent judgment of the City Council.

4. Finds that the Revised Final EIR additions, clarifications, amplifications, modifications and other information in response to comments on the Draft EIR are not significant new information as that term is defined under the provisions of CEQA or the CEQA Guidelines because such changes and additional information do not indicate that (i) any new significant environmental impacts not already evaluated would result from the Project (ii) there is any substantial increase in the severity of any environmental impact from the Project, (iii) any feasible mitigation measures considerably different from those previously analyzed in the Draft EIR have been proposed that would lessen significant environmental impacts of the

Project, or (iv) any feasible alternatives considerably different from those analyzed in the Draft EIR have been proposed that would lessen the significant environmental impacts of the Project. Accordingly, the City Council hereby finds and determines that recirculation of the Revised Final EIR for further public review and comment is not warranted.

5. The City Council has balanced the benefits of the Project against the significant and unavoidable impacts associated with the Project, has considered all feasible mitigation measures, and has examined potentially feasible alternatives to the Project.

6. Finds that none of the project alternatives analyzed in the EIR meet the Project objectives to the same degree as the Project and none of the alternatives are environmentally preferable to the proposed Project.

7. Finds that, after considering all feasible mitigation measures and weighing the advantages and disadvantages of the Project, as proposed, with the Project alternatives, including the significant and unavoidable impacts, the feasibility of project alternatives, and the "no project" alternative, the Project as proposed and described in the EIR may be approved.

8. The City Council does certify the EIR as adequate and completed in compliance with CEQA and the CEQA Guidelines.

9. The City Council does adopt the CEQA Statement of Facts and Findings set forth in **Attachment A**.

10. The City Council does adopt a Statement of Overriding Considerations substantially in the form set forth in **Attachment A**, with such modifications, additions or deletions as the City Council deems appropriate.

11. The City Council does adopt the Mitigation Monitoring and Reporting Program set forth in **Attachment B**, including the mitigation measures identified therein and as described in the EIR.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: March 18, 2024

Mayor	City Clerk

Attachment A
CEQA Statement of Facts and Findings & Statement of Overriding Considerations

FINDINGS FOR THE
SHEPHERD NORTH PROJECT

REQUIRED UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT
(Public Resources Code, § 21000 et seq.)

I. INTRODUCTION

The California Environmental Quality Act (CEQA) (Public Resources Code, § 21000 et seq.) requires the City of Clovis (City), as the CEQA lead agency, to: 1) make written findings when it approves a project for which an environmental impact report (EIR) was certified, and 2) identify overriding considerations for significant and unavoidable impacts identified in the EIR. (Pub. Resources Code, § 21081.)

This document explains the City's findings regarding the significant and potentially significant impacts identified in the EIR prepared for the Shepherd North Project (Project) and the City decision-makers' ultimate determinations of the feasibility of the Project alternatives considered in the EIR. The statement of overriding considerations in Section VII, below, identifies the economic, social, technical, and other benefits of the Project that the City decision-makers have determined should override any significant environmental impacts that would result from the Project.

As required under CEQA, the Revised Final EIR describes the Project, adverse environmental impacts of the Project, and mitigation measures and alternatives that would substantially reduce or avoid those impacts. The information and conclusions contained in the Revised Final EIR reflect the City's independent judgment.

The Revised Final EIR (which includes the Draft EIR, comments, responses to comments, and revisions to the Draft EIR) for the Project, examined the proposed Project and four alternatives to the Project including: (1) No Project (No Build) Alternative; (2) Increased Density Mixed Use Alternative; (3) Reduced Density Alternative; and (4) Reduced Sphere of Influence Alternative.

The Findings and Statement of Overriding Considerations are presented for adoption by the City Council, as the City's findings under CEQA and the CEQA Guidelines (Cal. Code Regs., title 14, § 15000 et seq.) relating to the Project. The Findings provide the written analysis, substantial evidence, and conclusions of this City Council regarding the Project's environmental impacts, mitigation measures, and alternatives to the Project, as well as the overriding considerations, which in this City Council's view, justify approval of the Project, despite its environmental effects.

II. GENERAL FINDINGS AND OVERVIEW

Project Overview

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 in Chapter 2.0 of the Draft EIR show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM).

The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Development Area will accommodate up to 605 residential units. Specifically, the northern portion of the Development Area is planned to include the development of up to 101 single-family residences with lot sizes ranging from approximately 5,400 square feet to 15,900 square feet. The southern portion of the Development Area is planned for smaller lot single-family residences, with lot sizes ranging from approximately 1,980 to 3,800 square feet, and with larger corner lots that are approximately 4,200 to 7,500 square feet.

The proposed Project includes open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the trail at Dry Creek and Clovis Old Town to the south.

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.[1]
  - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.
  - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The Project site is designated as Rural Residential (RR) under the City of Clovis General Plan. The Project site is currently located outside of the Clovis city limits, and therefore does not have City-

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[1] It should be noted that the term 'Project Area' is used interchangeably with 'Project Site', throughout the EIR.

designated zoning. The proposed Project includes a request for Development Area pre-zoning (which is consistent with the proposed General Plan Land Uses) of Single-Family Planned Residential Development Zoning (R-1-PRD).

The proposed Project includes an amendment of the City's SOI to include the entirety of the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno Local Agency Formation Commission (LAFCO) and the County of Fresno.

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.

The City has established five additional project goals and objectives of the proposed development that more fully inform the Project purpose. These goals and objectives are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice* to modestly increase urban density.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

The Project goals and objectives, presented above, were developed by the City in response to the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and the City's desire to facilitate the construction of new housing in the face of the housing crisis. The City staff has responded with adequate attention to the economic, environmental, and social costs of reduced housing density by establishing a quantified target density that provided the City with significant flexibility to evaluate different scenarios for residential projects on the Project site.

Refer to Chapter 2.0, Project Description, of the Draft EIR for a more complete description of the details of the proposed Project.

PROCEDURAL BACKGROUND

Notice of Preparation Public Circulation: The City of Clovis circulated a Notice of Preparation (NOP) of an EIR for the proposed Project on May 9, 2022 to the State Clearinghouse, State Responsible

Agencies, State Trustee Agencies, Other Public Agencies, Organizations and Interested Persons. A public scoping meeting was held on May 25, 2022 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and comments received on the NOP by interested parties are presented in Appendix A. The commenters are provided below.

- Native American Heritage Commission (May 10, 2022)
- Department of Toxic Substances Control (May 18, 2022)
- Robert Shuman (May 25, 2022)
- Jared Callister (May 25, 2022)
- State Water Resources Control Board (June 6, 2022)
- California Department of Conservation (May 26, 2022)
- County of Fresno (June 2, 2022)
- Fresno Irrigation District (June 7, 2022)
- Fresno Metropolitan Flood Control District (June 10, 2022)
- California Department of Transportation (June 10, 2022)
- San Joaquin Valley Air Pollution Control District (June 10, 2022)

Notice of Availability and Draft EIR: The City published a public Notice of Availability (NOA) for the Draft EIR on July 21, 2023, inviting comment from the general public, agencies, organizations, and other interested parties. The NOA was filed with the State Clearinghouse (SCH # 2022050180) and the County Clerk, and was published in a local newspaper pursuant to the public noticing requirements of CEQA. The Draft EIR was available for public review and comment from July 21, 2023 through September 6, 2023, for a total of 47 days. It is noted that the original closure of the 45-day review was September 4, 2023, but the City extended the review by two extra days beyond the 45-day period. Comments dated through September 6, 2023 were accepted and addressed in a Final EIR.

The Draft EIR contains a description of the Project, description of the environmental setting, identification of Project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The Draft EIR identifies issues determined to have no impact or a less-than-significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in the Draft EIR.

Final EIR: The City of Clovis received 24 comment letters on the Draft EIR during the public review period, which was extended through September 6, 2023 for a 47-day review period. A Final Environmental Impact Report (Final EIR) was prepared in accordance with CEQA Guidelines Section 15088, and circulated in November 2023 prior to a Planning Commission hearing.

After the release of the Final EIR (November 2023), there were an additional sixteen comments provided to the City of Clovis. City staff makes every attempt to respond to public comment in writing, however, given that twelve of the comments were provided on the day of, or in the days after, the Planning Commission hearing, and the other four comments were provided just days before the hearing, it was not possible for City staff to adequately address the comments in writing in time for the hearing. The City staff did review the comments prior to the Planning Commission hearing, and indicated that they were not able to provide a written response at that time, but that they would make every attempt to provide a written response prior to a hearing by the City Council. As such, the City staff prepared a Revised Final EIR to provide a written response to each of the sixteen additional comments, and to make text revisions necessary to clarify or correct Draft EIR text in response to the comments. The Revised Final EIR includes supplemental information (i.e. additional written responses, and additional text revisions), and is intended to supersede the Final EIR published in November 2023.

The comments received did not provide evidence of any new significant impacts or "significant new information" that would require recirculation of the Draft EIR pursuant to CEQA Guidelines Section 15088.5.

RECORD OF PROCEEDINGS AND CUSTODIAN OF RECORD

For purposes of CEQA and the findings set forth herein, the record of proceedings for the City's findings and determinations consists of the following documents and testimony, at a minimum:

- The NOP, comments received on the NOP, and all other public notices issued by the City in relation to the Project (e.g., NOA).
- The Draft EIR and Revised Final EIR, including comment letters, and technical materials cited in the documents.
- All non-draft and/or non-confidential reports and memoranda prepared by the City and consultants in relation to the EIR.
- Minutes and transcripts of the discussions regarding the Project and/or Project components at public hearings held by the City.
- Staff reports associated with City Council meetings on the Project.
- Those categories of materials identified in Public Resources Code § 21167.6(e).

The City Clerk is the custodian of the administrative record. The documents and materials that constitute the administrative record are available for review at the City of Clovis Planning Division, 1033 Fifth Street, Clovis, CA 93612 or online at:

https://cityofclovis.com/planning-and-development/planning/planning-projects/shepherd-north-soi/

FINDINGS REQUIRED UNDER CEQA

Public Resources Code § 21002 provides that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects[.]" Further, the procedures required by CEQA "are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects." (*Id*.) Section 21002 also provides that "in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof."

The mandate and principles established by the Legislature in Public Resources Code § 21002 are implemented, in part, through the requirement in Public Resources Code § 21081 that agencies must adopt findings before approving projects for which an EIR is required.

CEQA Guidelines § 15091 provides the following direction regarding findings:

> (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
>
> > (1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
> >
> > (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
> >
> > (3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

(See also Public Resources Code, § 21081, subd. (a)(1)-(3).)

As defined by CEQA, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, legal, and technological factors. (Pub. Resources Code, § 21061.1; see also CEQA Guidelines, § 15126.6(f)(1) [determining the feasibility of alternatives].) The concept of "feasibility" also encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project. (See *Association of Irritated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1400 [court upholds findings rejecting a "reduced herd" alternative to a proposed dairy as infeasible because the alternative failed to meet the "fundamental objective" of the project to produce milk]; *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490, 1506-1508 [agency decision-makers, in rejecting alternatives as infeasible, appropriately relied on project objective articulated by project applicant].) Moreover, "'feasibility' under CEQA encompasses 'desirability' to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors." (*City of Del Mar v. City of San Diego* (1982)

133 Cal.App.3d 410, 417; *see also California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1001-1002.)

With respect to a project for which significant impacts cannot be feasibly avoided or substantially lessened, a public agency may nevertheless approve the project if the agency first adopts a statement of overriding considerations setting forth the specific reasons that the project's benefits outweigh its significant unavoidable adverse environmental effects. (Pub. Resources Code, §§ 21001, 21002.1(c), 21081(b).)

CEQA Guidelines § 15093 provides the following direction regarding a statement of overriding considerations:

> (a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."
>
> (b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.
>
> (c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to § 15091.

MITIGATION MONITORING PROGRAM

A Mitigation Monitoring Program has been prepared for the Project and, if the Project is approved, will be adopted concurrently with these Findings. (See Pub. Resources Code, § 21081.6, subd. (a)(1).) The City will use the Mitigation Monitoring Program to track compliance with Project mitigation measures.

CONSIDERATION OF THE ENVIRONMENTAL IMPACT REPORT

In adopting these Findings, this City Council finds that the Revised Final EIR was presented to this City Council, the decision-making body of the lead agency, which reviewed and considered the information in the Revised Final EIR prior to approving the Project. By these findings, this City Council ratifies, adopts, and incorporates the analysis, explanation, findings, responses to comments, and conclusions of the Revised Final EIR. The City Council finds that the Revised Final EIR was completed in compliance with CEQA. The Revised Final EIR represents the independent judgment of the City.

SEVERABILITY

If any term, provision, or portion of these Findings or the application of these Findings to a particular situation is held by a court to be invalid, void, or unenforceable, the remaining provisions of these Findings, or their application to other actions related to the Project, shall continue in full force and effect unless amended or modified by the City.

III. FINDINGS AND RECOMMENDATIONS REGARDING SIGNIFICANT AND UNAVOIDABLE IMPACTS

A. TRANSPORTATION AND CIRCULATION

1. IMPACT 3.13-1: PROJECT IMPLEMENTATION WOULD RESULT IN VMT INCREASES THAT ARE GREATER THAN 87 PERCENT OF BASELINE CONDITIONS.

(a) Potential Impact. The potential for the Project to result in VMT increases that are greater than 87 percent of Baseline conditions is discussed on pages 3.13-18 through 3.13-23 of the Draft EIR.

(b) Mitigation Measure. No feasible mitigation measures were identified.

(c) Findings. Based upon the EIR and the entire record before this City Council, this City Council finds that:

(1) Remaining Impacts. The proposed development was evaluated against the screening criteria in OPR's Technical Advisory. A detailed VMT analysis was conducted using methodology discussed in Appendix I of the Draft EIR. The proposed residential development would result in a significant transportation impact if it would 1). generate vehicle travel exceeding 87 percent of the established baseline VMT under existing (baseline) or cumulative conditions, or 2). result in an increase in total VMT in the model area.

Table 3.13-2 in Section 3.13 of the Draft EIR summarizes the regional threshold and Project VMT per capita. As shown in Table 3.13-5, the Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact.

Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. A combination of measures from several VMT reduction strategies were incorporated into the Project design to achieve this VMT reduction as outlined above. This included strategies that are aimed at reducing the number of automobile trips generated by the Project, shift more trips from automobile to non-automobile modes, and/or reduce the distances that people drive.

Ultimately, however, the City of Clovis is a suburban community with land use characteristics that are more spread out when compared to dense urban communities. The land use and transportation characteristics of suburban communities such as Clovis, can make it difficult, or impossible in some instances to achieve VMT reductions to levels that the City has established as a goal, and ultimately, as a threshold of significance for CEQA analysis. The Project design features are estimated to offset some of the VMT impacts of the Project by reducing VMT by up to 1.18 percent, but this reduction will not reduce the impact to a less than significant level.

Based on the above, the impact would remain significant and unavoidable.

(2) Changes or alterations have been required in, or incorporated into, the proposed project that avoid or substantially lessen the significant environmental effect, as identified in the Final EIR. To the extent that this significant adverse impact will not be substantially lessened or avoided, the City Council finds that specific economic, social, policy-based, and other considerations identified in the Statement of Overriding Considerations support approval of the project.

(3) Overriding Considerations. The environmental, economic, social and other benefits of the Project override any remaining significant adverse impact of the Project associated with impacts related to VMT increases that are greater than 87 percent of Baseline conditions, as more fully stated in the Statement of Overriding Considerations in Section VII, below.

2. IMPACT 4.20: UNDER CUMULATIVE CONDITIONS, PROJECT DEVELOPMENT WOULD RESULT IN VMT INCREASES THAT ARE GREATER THAN 87 PERCENT OF BASELINE CONDITIONS.

(a) Potential Impact. The potential for the Project to result in VMT increases that are greater than 87 percent of Baseline conditions is discussed on page 4.0-19 of the Draft EIR.

(b) Mitigation Measure. No feasible mitigation measures were identified.

(c) Findings. Based upon the EIR and the entire record before this City Council, this City Council finds that:

(1) Remaining Impacts. The Project VMT per capita is 20.7 percent higher than the City’s VMT per capita threshold. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project’s VMT. The Project design features can help offset some of the VMT impacts of the Project.

Because the development would generate vehicle travel exceeding 13 percent below the established city-wide average under Existing and Cumulative Conditions, even with implementation of Project Design measures that provide mitigating effects, development of the proposed Project would have a cumulatively considerable contribution and a significant and unavoidable impact.

(2) Changes or alterations have been required in, or incorporated into, the proposed project that avoid or substantially lessen the significant environmental effect, as identified in the Final EIR. To the extent that this significant adverse impact will not be substantially lessened or avoided, the City Council finds that specific economic, social, policy-based, and other considerations identified in the Statement of Overriding Considerations support approval of the project.

(3) Overriding Considerations. The environmental, economic, social and other benefits of the Project override any remaining significant adverse impact of the Project associated with cumulative impacts related to VMT increases that are greater than 87 percent of Baseline conditions, as more fully stated in the Statement of Overriding Considerations in Section VII, below.

IV. FINDINGS AND RECOMMENDATIONS REGARDING SIGNIFICANT IMPACTS WHICH ARE MITIGATED TO A LESS THAN SIGNIFICANT LEVEL

A. BIOLOGICAL RESOURCES

1. IMPACT 3.4-3: THE PROPOSED PROJECT HAS THE POTENTIAL TO HAVE DIRECT OR INDIRECT EFFECTS ON SPECIAL-STATUS BIRD SPECIES.

(a) Potential Impact. The potential for the Project to have direct or indirect effects on special-status bird species is discussed on page 3.4-22 through 3.4-28 of the Draft EIR.

(b) Mitigation Measures. The following mitigation measure is hereby adopted and will be implemented as provided by the Mitigation Monitoring Program: Mitigation Measure 3.4-1.

(c) Findings. According to the California Natural Diversity Database (CNDDB), there are thirteen (13) special-status bird species that are documented within the nine-quadrangle region for the Project site, including: black-crowned night heron (*Nycticorax nycticorax*), burrowing owl (*Athene cunicularia*), California horned lark (*Eremophila alpestris actia*), double-crested cormorant (*Nannopterum auritum*), great egret (*Ardea alba*), least Bell's vireo (*Vireo bellii pusillus*), snowy egret (*Egretta thula*), Swainson’s hawk (*Buteo swainsoni*), tricolored blackbird (*Agelaius tricolor*), and Western yellow-billed cuckoo (*Coccyzus americanus Occidentalis*). The Project site may provide suitable foraging habitat for a variety of potentially occurring special-status birds, including some of those listed above. Potential nesting habitat is present in a variety of trees located within the Project site and in the vicinity. There is also the potential for other special-status birds that do not nest in this region and represent migrants or winter visitants to forage on the Project site.

Several bird species discussed above are protected under federal, state, or local regulations. The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site, or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a less than significant level.

In accordance with Public Resources Code, § 21081, Mitigation Measure 3.4-1 is an appropriate change or alteration that has been required in, or incorporated into, the Project which avoids or substantially lessens the significant environmental effect as identified in the EIR. Based upon the EIR and the entire record before this City Council, this City Council finds that the potential to have direct or indirect effects on special-status bird species will be mitigated to a less than significant level.

2. IMPACT 3.4-4: THE PROPOSED PROJECT HAS THE POTENTIAL TO RESULT IN DIRECT OR INDIRECT EFFECTS ON SPECIAL-STATUS MAMMAL SPECIES.

   (a) Potential Impact. The potential for the Project to result in direct or indirect effects on special-status mammal species is discussed on pages 3.4-28 and 3.4-29 of the Draft EIR.

   (b) Mitigation Measures. The following mitigation measure is hereby adopted and will be implemented as provided by the Mitigation Monitoring Program: Mitigation Measure 3.4-2.

   (c) Findings. According to the CNDDB, there are eight special-status mammal species that are documented within the nine-quadrangle region for the Project site, including: American badger (*Taxidea taxus*), Fresno kangaroo rat (*Dipodomys nitratoides exilis*), hoary bat (Lasiurus cinereus), pallid bat (*Antrozous pallidus*), San Joaquin kit fox (*Vulpes macrotis mutica*), San Joaquin pocket mouse (*Perognathus inornatus*), spotted bat (*Euderma maculatum*), and western mastiff bat (*Eumops perotis californicus*).

   The Project site is frequently disturbed from active agricultural activities. As a result, the Project site does not contain high quality habitat for the American badger or Fresno kangaroo rat. American badger, Fresno kangaroo rat, San Joaquin kit fox, or San Joaquin pocket mouse have not been documented within nine miles of the Project site. It is unlikely that the Project site is used by American badger, Fresno kangaroo rat, San Joaquin kit fox, or San Joaquin pocket mouse and these species have not been observed during recent or previous field surveys. Therefore, the proposed Project would have a less than significant impact on these species.

   Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4-2, would ensure that potential impacts to special status bat species are reduced to a less than significant impact.

In accordance with Public Resources Code, § 21081, Mitigation Measure 3.4-2 is an appropriate change or alteration that has been required in, or incorporated into, the Project which avoids or substantially lessens the significant environmental effect as identified in the EIR. Based upon the EIR and the entire record before this City Council, this City Council finds that the potential to have direct or indirect effects on special-status mammal species will be mitigated to a less than significant level.

B. CULTURAL AND TRIBAL RESOURCES

1. IMPACT 3.5-1: PROJECT IMPLEMENTATION HAS THE POTENTIAL TO CAUSE A SUBSTANTIAL ADVERSE CHANGE TO A SIGNIFICANT HISTORICAL OR ARCHAEOLOGICAL RESOURCE, AS DEFINED IN CEQA GUIDELINES §15064.5.

(a) Potential Impact. The potential for the Project to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5, is discussed on pages 3.5-14 through 3.5-17 of the Draft EIR.

(b) Mitigation Measures. The following mitigation measure is hereby adopted and will be implemented as provided by the Mitigation Monitoring Program: Mitigation Measure 3.5-1.

(c) Findings. The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use. The Non-Development Area is located within the City of Clovis' Planning Area but is outside of the City's existing Sphere of Influence and contains existing single-family residences.

The Project site is not located in an area known to have historical and archaeological resources. However, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation of Mitigation Measure 3.5-1 would ensure that this potential impact is less than significant.

In accordance with Public Resources Code, § 21081, Mitigation Measure 3.5-1 is an appropriate change or alteration that has been required in, or incorporated into, the Project which avoids or substantially lessens the significant environmental effect as identified in the EIR. Based upon the EIR and the entire record before this City Council, this City Council finds that the potential to cause a substantial adverse change to a significant historical or archaeological resource will be mitigated to a less than significant level.

2. IMPACT 3.5-2: PROJECT IMPLEMENTATION HAS THE POTENTIAL TO DISTURB HUMAN REMAINS, INCLUDING THOSE INTERRED OUTSIDE OF FORMAL CEMETERIES.

   (a) Potential Impact. The potential for the Project to disturb human remains, including those interred outside of formal cemeteries is discussed on page 3.5-17 of the Draft EIR.

   (b) Mitigation Measures. The following mitigation measure is hereby adopted and will be implemented as provided by the Mitigation Monitoring Program: Mitigation Measure 3.5-1.

   (c) Findings. While no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Mitigation Measure 3.5-1 provides the appropriate procedures if subsurface deposits believed to be human in origin are discovered during construction and/or ground disturbance. This would include all work being halted within a 100-foot radius of the discovery in order for the appropriately qualified professionals to evaluate the find and provide recommendations on how to proceed. If the appropriately qualified professional determines that the find is not human remains, work may resume immediately and no agency notifications are required. However, if the appropriately qualified professional determines that the find is human remains, procedures are outlined in Mitigation Measure 3.5-1 on how to proceed to ensure that the County Coroner is contacted for an evaluation, and appropriate mitigation or treatment measures are developed based on the findings of the coroner. Implementation of Mitigation Measure 3.5-1 would ensure that the potential to disturb human remains, including those interred outside of formal cemeteries, would be reduced to a less than significant level.

       In accordance with Public Resources Code, § 21081, Mitigation Measure 3.5-1 is an appropriate change or alteration that has been required in, or incorporated into, the Project which avoids or substantially lessens the significant environmental effect as identified in the EIR. Based upon the EIR and the entire record before this City Council, this City Council finds that the potential to disturb human remains, including those interred outside of formal cemeteries, will be mitigated to a less than significant level.

3. IMPACT 3.5-3: CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A TRIBAL CULTURAL RESOURCE, DEFINED IN PUBLIC RESOURCES CODE SECTION 21074, AND THAT IS: LISTED OR ELIGIBLE FOR LISTING IN THE CALIFORNIA REGISTER OF HISTORICAL RESOURCES,

OR IN A LOCAL REGISTER OF HISTORICAL RESOURCES AS DEFINED IN PUBLIC RESOURCES CODE SECTION 5020.1(K), OR A RESOURCE DETERMINED BY THE LEAD AGENCY.

(a) Potential Impact. The potential for the Project to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or a resource determined by the lead agency, is discussed on page 3.5-18 of the Draft EIR.

(b) Mitigation Measures. The following mitigation measure is hereby adopted and will be implemented as provided by the Mitigation Monitoring Program: Mitigation Measure 3.5-1.

(c) Findings. While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Mitigation Measure 3.5-1 has been incorporated to provide the appropriate procedures if subsurface deposits believed to be tribal resources, and/or human in origin are discovered during construction and/or ground disturbance. This would include all work being halted within a 100-foot radius of the discovery in order for the appropriately qualified professionals to evaluate the find and provide recommendations on how to proceed. If the appropriately qualified professional determines that the find does not represent a resource that might qualify as a tribal resource, work may resume immediately and no agency notifications are required. However, if the appropriately qualified professional determines that the find does represent a resource that might qualify as a tribal resource, procedures are outlined in Mitigation Measure 3.5-1 on how to proceed to ensure that the resource is evaluated, and appropriate mitigation or treatment measures are developed.

As discussed under Impacts 3.5-1 and 3.5-2, development of the proposed project could impact unknown archaeological resources including Native American Tribal artifacts and human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources, including human remains, would be reduced to a less than significant level.

In accordance with Public Resources Code, § 21081, Mitigation Measure 3.5-1 is an appropriate change or alteration that has been required in, or incorporated into, the Project which avoids or substantially lessens the significant environmental effect as identified in the EIR. Based upon the EIR and the entire record before this City Council, this City Council finds that the potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: Listed or eligible for listing in the California Register of Historical

Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or a resource determined by the lead agency will be mitigated to a less than significant level.

C. GEOLOGY AND SOILS

1. IMPACT 3.6-6: THE PROPOSED PROJECT HAS THE POTENTIAL TO DIRECTLY OR INDIRECTLY DESTROY A UNIQUE PALEONTOLOGICAL RESOURCE OR SITE OR UNIQUE GEOLOGIC FEATURE.

(a) Potential Impact. The potential for the Project to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature is discussed on page 3.6-23 of the Draft EIR.

(b) Mitigation Measures. The following mitigation measure is hereby adopted and will be implemented as provided by the Mitigation Monitoring Program: Mitigation Measure 3.6-1.

(c) Findings. Although the Project site is not expected to contain subsurface paleontological resources, the Project site is in an area known to have these resources and it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a less than significant level.

In accordance with Public Resources Code, § 21081, Mitigation Measure 3.6-1 is an appropriate change or alteration that has been required in, or incorporated into, the Project which avoids or substantially lessens the significant environmental effect as identified in the EIR. Based upon the EIR and the entire record before this City Council, this City Council finds that the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature will be mitigated to a less than significant level.

D. HAZARDS AND HAZARDOUS MATERIALS

1. IMPACT 3.8-1: POTENTIAL TO CREATE A SIGNIFICANT HAZARD THROUGH THE ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS OR THROUGH THE REASONABLY FORESEEABLE UPSET AND ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT.

(a) Potential Impact. The potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment is discussed on pages 3.8-20 through 3.8-24 of the Draft EIR.

(b) Mitigation Measures. The following mitigation measures are hereby adopted and will be implemented as provided by the Mitigation Monitoring Program: Mitigation Measures 3.8-1 and 3.8-2.

(c) Findings. Based on the review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that potential areas of concern (PAOCs) exist in connection with the historical uses of the Development Area. During the course of the Phase I Environmental Site Assessment (ESA), no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following PAOCs are presented:

- Adjacent to the north of the on-site warehouse[2] and lined against its back wall, three approximately 250-gallon aboveground storage (AST) tanks were observed. Two ASTs contained diesel fuel and the third contained gasoline. Additionally, four 55-gallon drums containing motor oil were observed to be located to the west of the ASTs, which exhibited minimis staining. The site reconnaissance was completed a day following a heavy rain event and it was not clear if the ground surface below the ASTs and/or drums exhibited any significant petroleum product staining because the ground remained saturated with rainwater precluding visual observations. Consequently, the specific condition of the ground surface underlying the ASTs and drums is unknown. The ASTs and drums are shown in Figure 3.8-1.
- The review of aerial photographs indicates that the Development Area was utilized for agricultural purposes from at least 1937 to the present and that residential structures and associated outbuildings occupied the property from at least 1937, 1979 and 1987 to the present. No records of USTs for the Development Area are on file with the local regulatory agencies; however, USTs on rural or agricultural properties historically have been exempt from requirements for registration with regulatory agencies. Furthermore, Kazan's (the Phase I ESA author) experience with such properties has shown that it was not uncommon for property owners/operators to install USTs for their convenience, especially in the vicinity of structures, which are undocumented and whose presence would remain unknown in spite of the standard data research conducted in the course of this Phase I ESA. It is therefore possible that subsurface features such as unregistered fuel USTs may exist within the structure-related portions of the Development Area, which remain unknown based on the absence of any regulatory, municipality, and/or interview data, or other evidence indicating their presence or location. Consequently, despite

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[2] Note – this warehouse was removed in 2020.

an absence of data suggesting their presence, the presence or absence of USTs associated with on-site structures in a historical agricultural setting on the Development Area is unknown.

Additionally, two domestic water wells and five agricultural water wells were observed to be associated with the Development Area. If the on-site water wells are not to be used in the future, they should be properly abandoned/destroyed in accordance with state and local guidelines. The wells are shown in Figure 3.8-1 of the Draft EIR.

Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat, and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities.

Mitigation Measure 3.8-1 was developed to ensure that a well abandonment permit is obtained from Fresno County Department of Public Health Environmental Health Division, and that all on-site wells are properly abandoned. Mitigation Measure 3.8-2 was developed to ensure that additional testing is performed prior to the issuance of grading permits for construction activities in several areas that have been deemed to have potentially hazardous conditions present. The additional testing will investigate whether any of these areas contain hazardous materials that need special treatments. Mitigation Measure 3.8-2 also specifies that all construction or demolition activities comply with Cal/OSHA asbestos and lead worker construction standards, and offsite disposal requirements. This measure also provides specifications for additional soil sampling in stained areas prior to soil disturbance activities. Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that potential impacts are reduced to a less than significant level.

In accordance with Public Resources Code, § 21081, Measures 3.8-1 and 3.8-2 are appropriate changes or alterations that have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the EIR. Based upon the EIR and the entire record before this City Council, this City Council finds that the potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment will be mitigated to a less than significant level.

E. NOISE

1. IMPACT 3.11-1: OPERATIONAL NOISE - THE PROPOSED PROJECT HAS THE POTENTIAL TO GENERATE A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES.

(a) Potential Impact. The potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during operation is discussed on pages 3.11-15 through 3.11-19 of the Draft EIR.

(b) Mitigation Measures. The following mitigation measures are hereby adopted and will be implemented as provided by the Mitigation Monitoring Program: Mitigation Measures 3.11-1 and 3.11-2.

(c) Findings. Tables 3.11-9 and 3.11-10 in Section 3.11 of the Draft EIR compare the existing and existing plus project noise scenario. A change of 3 decibels (dB) or more is required to have a perceptible difference in noise levels. When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB.

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 A-weighted dB (dBA) community noise equivalent level (CNEL) contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan. To meet the exterior residential standards of 65 dBA CNEL, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls.

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan. To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls as required by Mitigation Measure 3.11-1. The noise calculations show that along Shepherd Avenue a 6’ soundwall placed at 70 feet from the centerline (along all unshielded residential private yards within 100 ft of the centerline of Sunnyside and Shepherd Avenues) would result in noise attenuation from 69.1 dBA CNEL down to a range of 62.7 to 63.1 dBA CNEL depending on the precise location along Shepherd Avenue. This range is below the 65 dBA CNEL noise standards with the 6’ soundwall installed along all unshielded residential private yards within 100 ft of the centerline of Sunnyside and Shepherd Avenues.

The noise calculations also show that along Sunnyside Avenue a 6’ soundwall placed at 47 feet from the centerline (along all unshielded residential private yards within 100 ft of the centerline of Sunnyside and Shepherd Avenues) would result in noise attenuation from 69.9 dBA CNEL down to a range of 63.7 dBA CNEL. This is below the 65 dBA CNEL noise standards with the 6’ soundwall installed along all unshielded residential private yards within 100 ft of the centerline of Sunnyside and Shepherd Avenues. Furthermore, as required by Mitigation Measure 3.11-2, any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6-foot sound walls. Implementation of the following mitigation measures will ensure that these potential impacts are reduced to a less than significant level.

In accordance with Public Resources Code, § 21081, Mitigation Measures 3.11-1 and 3.11-2 are appropriate changes or alterations that have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the EIR. Based upon the EIR and the entire record before this City Council, this City Council finds that the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during operation will be mitigated to a less than significant level.

2. IMPACT 3.11-2: CONSTRUCTION NOISE - THE PROPOSED PROJECT HAS THE POTENTIAL TO GENERATE A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES.

   (a) Potential Impact. The potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction is discussed on pages 3.11-19 and 3.11-20 of the Draft EIR.

(b) Mitigation Measures. The following mitigation measures are hereby adopted and will be implemented as provided by the Mitigation Monitoring Program: Mitigation Measures 3.11-3 and 3.11-4.

(c) Findings. During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise. Mitigation Measure 3.11-3 embodies a preexisting legal requirement from City of Clovis Municipal Code Section 5.27.604 that ensures that construction activities are performed within specific hours. Mitigation Measure 3.11-4 provides specific requirements for attenuating noise during construction. With implementation of the Mitigation Measure 3.11-3 and 3.11-4, the potential impacts are reduced to a less than significant level.

In accordance with Public Resources Code, § 21081, Mitigation Measures 3.11-3 and 3.11-4 are appropriate changes or alterations that have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the EIR. Based upon the EIR and the entire record before this City Council, this City Council finds that the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies during construction will be mitigated to a less than significant level.

V. FINDINGS AND RECOMMENDATIONS REGARDING THOSE IMPACTS WHICH ARE LESS THAN SIGNIFICANT OR LESS THAN CUMULATIVELY CONSIDERABLE

Specific impacts within the following categories of environmental effects were found to be less than significant as set forth in more detail in the Draft EIR.

Aesthetics and Visual Resources: The following specific impacts were found to be less than significant: 3.1-1, 3.1-2, and 3.1-3.

Agricultural Resources: The following specific impacts were found to be less than significant: 3.2-1, 3.2-2, and 3.2-3.

Air Quality: The following specific impacts were found to be less than significant: 3.3-1, 3.3-2, 3.3-3, 3.3-4, and 3.3-5.

Biological Resources: The following specific impacts were found to be less than significant: 3.4-1, 3.4-2, 3.4-5, 3.4-6, 3.4-7, 3.4-8, 3.4-9, and 3.4-10.

Geology and Soils: The following specific impacts were found to be less than significant: 3.6-1, 3.6-2, 3.6-3, 3.6-4, 3.6-5, and 3.6-7.

Greenhouse Gases, Climate Change, and Energy: The following specific impacts were found to be less than significant: 3.7-1 and 3.7-2.

Hazards and Hazardous Materials: The following specific impacts were found to be less than significant: 3.8-2, 3.8-3, 3.8-4, 3.8-5, and 3.8-6.

Hydrology and Water Quality: The following specific impacts were found to be less than significant: 3.9-1, 3.9-2, 3.9-3, 3.9-4, 3.9-5, and 3.9-6.

Land Use and Population: The following specific impacts were found to be less than significant: 3.10-1, 3.10-2, 3.10-3, and 3.10-4.

Noise: The following specific impacts were found to be less than significant: 3.11-3, 3.11-4, and 3.11-5.

Public Services and Recreation: The following specific impacts were found to be less than significant: 3.12-1, 3.12-2, 3.12-3, 3.12-4, 3.12-5, and 3.12-6.

Transportation and Circulation: The following specific impacts were found to be less than significant: 3.13-2 and 3.13-3.

Utilities: The following specific impacts were found to be less than significant: 3.14-1, 3.14-2, 3.14-3, 3.14-4, 3.14-5, and 3.14-6, 3-14.7.

The Project was found to have a less than cumulatively considerable contribution to specific impacts within the following categories of environmental effects as set forth in more detail in the Draft EIR.

Aesthetics and Visual Resources: The following specific impact was found to be less than cumulatively considerable: 4.1, 4.2, and 4.3.

Agricultural Resources: The following specific impact was found to be less than cumulatively considerable: 4.4.

Air Quality: The following specific impact was found to be less than cumulatively considerable 4.5.

Biological Resources: The following specific impact was found to be less than cumulatively considerable: 4.6.

Cultural and Tribal Resources: The following specific impact was found to be less than cumulatively considerable: 4.7.

Geology and Soils: The following specific impact was found to be less than cumulatively considerable: 4.8.

Greenhouse Gases, Climate Change, and Energy: The following specific impact was found to be less than cumulatively considerable: 4.9 and 4.10.

Hazards and Hazardous Materials: The following specific impact was found to be less than cumulatively considerable: 4.11.

Hydrology and Water Quality: The following specific impacts were found to be less than cumulatively considerable: 4.12, 4.13, 4.14, and 4.15.

Land Use and Population: The following specific impact was found to be less than cumulatively considerable: 4.16 and 4.17.

Noise: The following specific impact was found to be less than cumulatively considerable: 4.18.

Public Services and Recreation: The following specific impact was found to be less than cumulatively considerable: 4.19.

Transportation and Circulation: The following specific impact was found to be less than cumulatively considerable: 4.21.

Utilities: The following specific impacts were found to be less than cumulatively considerable: 4.22, 4.23, 4.24, 4.25, and 4.26.

The above impacts are less than significant or less than cumulatively considerable for one of the following reasons:

- The EIR determined that the impact is less than significant for the Project;
- The EIR determined that the Project would have a less than cumulatively considerable contribution to the cumulative impact; or
- The EIR determined that the impact is beneficial (would be reduced) for the Project.

VI. PROJECT ALTERNATIVES

A. IDENTIFICATION OF PROJECT OBJECTIVES

An EIR is required to identify a range of reasonable alternatives to the project. The "range of potential alternatives to the project shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one of more of the significant effects." (CEQA Guidelines Section 15126.6(c).) "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)." (CEQA Guidelines Section 15126.6(f)(1).)

The project objectives include a collection of goals and objectives, which clearly define the purpose of the Project. In developing the project objectives, it is notable that the City considered the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and it is clearly within a city's exercise of its legislative discretion to facilitate the construction of new housing, which is defined by the Project Description after thorough evaluation of the development potential. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects."

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.

The City has established five additional project goals and objectives of the proposed development that more fully inform the Project purpose. These goals and objectives are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice to modestly increase urban density*.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.

- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

The Project goals and objectives, presented above, were developed by the City in response to the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and the City's desire to facilitate the construction of new housing in the face of the housing crisis. The City staff has responded with adequate attention to the economic, environmental, and social costs of reduced housing density by establishing a quantified target density that provided the City with significant flexibility to evaluate different scenarios for residential projects on the Project site.

B. ALTERNATIVES ANALYSIS IN EIR

The alternatives analysis provides a summary of the relative impact levels of significance associated with each alternative for each of the environmental issue areas analyzed in the Draft EIR. The environmental analysis for each of the alternatives is included in Chapter 5.0.

1. NO PROJECT (NO BUILD) ALTERNATIVE:

The **No Project (No Build) Alternative** is discussed on pages 5.0-3, and 5.0-4 through 5.0-21 of the Draft EIR. Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives.

Findings: Environmental benefits of this alternative over the proposed Project include the reduction of impacts to Aesthetics and Visual Resources, Agricultural Resources, Air Quality, Biological Resources, Cultural and Tribal Resources, Geology and Soils, Greenhouse Gases, Climate Change and Energy, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Population, Noise, Public Services and Recreation, Transportation and Circulation, and Utilities.

While the City recognizes the environmental benefits of the No Project (No Build) Alternative, this alternative would not achieve any of the Project objectives. Specifically, this alternative would not: provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in A *Landscape of Choice* to modestly increase urban density; establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City Requirements as stated in the latest Regional Housing Needs Analysis (RHNA); provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections; establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards; or expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

Senate Bill 330 was enacted in 2019 and is known as the “Housing Crisis Act of 2019.” In passing SB 330, the Legislature declared “a statewide housing emergency, to be in effect until January 1, 2025.” (Stats. 2019, ch. 654, § 2(b).) By increasing the housing supply in the City, the Project would help to ameliorate some of the conditions described by the Legislature.

The No Project would represent an undesirable policy outcome that fails to meet what the City considers to be key project objectives. The alternative is therefore infeasible. Stated another way, specific economic, legal, social, technological, or other considerations make infeasible the No Project Alternative identified in the Revised Final EIR.

For all of these foregoing reasons and any one of them individually, this alternative is determined to be infeasible and rejected.

2. INCREASED DENSITY MIXED USE ALTERNATIVE:

The **Increased Density Mixed Use Alternative** is discussed on pages 5.0-3, and 5.0-21 through 5.0-38 of the Draft EIR. Under the Increased Density Mixed Use Alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 80 percent of the Development Area (62 acres) would be developed with 605 residential units (9.75 du/ac). This would still fall under the Medium-High Density (MH) 7.1–15.0 du/ac land use category. The remaining 15 acres of the Development Area would be developed with a mix of commercial and higher density residential. The mixed-use area would have 10 acres for High Density (H) 15.1–25.0 du/ac. The alternative assumes 195 apartments constructed at a density of 19.5 du/ac. There would also be 5 acres of Neighborhood Commercial (NC) (Max FAR 0.50). This area would be developed as a neighborhood-scale shopping facility. The FAR would allow for 108,000 square feet of commercial. It is anticipated that the commercial would include an anchor store such as a small supermarket with a wide range of ancillary uses including banks, restaurants, service businesses, and other related activities are generally found in these planned commercial centers.

Findings: This alternative would not reduce any impacts compared to the Project. Impacts related to Aesthetics and Visual Resources, Agricultural Resources, Biological Resources, Cultural and Tribal Resources, Geology and Soils, Hazards and Hazardous Materials, and Hydrology and Water Quality would be equal to the Project. The remaining resources areas (Air Quality, Greenhouse Gases, Climate Change, and Energy, Land Use and Population, Noise, Public Services and Recreation, Transportation and Circulation, and Utilities) would have greater impacts to the Project.

The alternative is not environmentally superior to the Project with respect to any category of environmental impact for which the Project has significant unavoidable effects, and the alternative would not substantially lessen or avoid any of the significant unavoidable effects of the Project. (See also DEIR, p. 5.0-73 [Table 5.0-1: Comparison of Alternative Project Impacts to the Proposed Project.)

Reducing the physical area to construct the same number of dwelling units would require increasing the building height to accommodate the necessary square footage for a dwelling unit. The remaining area would also have development, but of a different use. This increased massing at the Project's locations is not as compatible with the adjoining neighborhoods of existing one- and two-story single-family homes. Historically, the City Council generally prefers the greater number of one- and two-story homes that will be built under the Project as compared with this alternative which may require three story homes. Public comments have shown a preference for one story housing over multi-story housing. Under the circumstances, this one alternative is less compatible with existing City development patterns and adjacent neighborhoods.

Additionally, there is not a proven market demand for the increased density at this site. The higher density housing would be more aligned with metropolitan urban centers, but not as much in suburban areas. The site is located within an area of the City which consists of traditional one- and two-story single-family homes. In this particular location, meeting market demand is strongly associated with compatibility with the scale of the existing residential neighborhoods. The lower density housing is more compatible with the market and the neighborhood, whereas an higher density with taller residential buildings would not be as compatible.

Moreover, in the absence of any need under CEQA to decrease the proposed development footprint of the Project by opting instead to approve this alternative, the City is inclined to give weight to the Project applicants' professional judgment regarding the housing mix to propose on the subject properties. The Project applicants have not sought approval of this alternative. Rather, the applicants proposed a mix of housing units in a configuration that reflected the professional judgment of their planners, architects, engineers, consultants, attorneys, and other development experts. The City sees no reason to impose on the applicants a development mix and configuration at odds with what they proposed, particularly when such a configuration is not necessary in order to reduce the severity of any of the significant unavoidable impacts of the Project. A local agency decision-making body "may approve a developer's choice of a project once its significant adverse environmental effects have been reduced to an acceptable level that is, all avoidable significant damage to the environment has been eliminated and that which remains is otherwise acceptable." (Laurel Hills v. City Council (1978), 83 Cal.App.3d 515, 521.)

For all of these foregoing reasons and any one of them individually, this alternative is determined to be infeasible and rejected.

3. REDUCED DENSITY ALTERNATIVE:

The **Reduced Density Alternative** is discussed on pages 5.0-3, and 5.0-38 through 5.0-55 of the Draft EIR. Under the Reduced Density Alternative, the proposed Project would have a reduced density in the Development Area that would fall under the Very Low Density (VL) 0.6–2.0 du/ac land use. The alternative assumes 150 residential units at approximately 2 du/ac. This use is described as large lot single-family residences and appurtenant structures within an identifiable residential neighborhood. This alternative would include neighborhood parks and all the infrastructure necessary to connect to City services.

Findings: Environmental benefits of this alternative over the proposed Project include the reduction or slight reduction of impacts Air Quality, Greenhouse Gases, Climate Change and Energy, Land Use and Population, Noise, Public Services and Recreation, Transportation and Circulation, and Utilities. The remaining resources areas (Aesthetics and Visual Resources, Agricultural Resources, Biological Resources, Cultural and Tribal Resources, Geology and Soils, Hazardous and Hazardous Materials, and Hydrology and Water Quality) would have equal or similar impacts to the Project.

The alternative is less desirable than the Project and does not provide the same level of benefits as the proposed Project. While the City recognizes the environmental benefits of this alternative, this alternative would not achieve all of the Project objectives. The following two project objectives are not fully met:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice* to modestly increase urban density.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City Requirements as stated in the latest Regional Housing Needs Analysis (RHNA).

The Reduced Density Alternative would provide housing (150 units), but it would be 455 units less then what is proposed. The first objective listed above references "*A Landscape of Choice*" which is a regional document that provides direction for the region to utilize urban land as efficiently as possible while providing an adequate supply of a broad range of housing types and densities to meet market demand. One of the guiding principles recommends measures to facilitate and encourage compact growth to all urban land uses including commercial, industrial and institutional uses. The Reduced Density Alternative is not consistent with this guidance for the region.

The second objective listed above references establishing a mix of housing to provide for local and regional housing demand, and consistent with the City requirements in the latest Regional Housing Needs Analysis (RHNA). In light of the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, State has provided the City with good reason to exercise its legislative discretion to facilitate the construction of new housing. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects." The Reduced Density Alternative would result in 455 fewer units then the proposed Project, which is not consistent with Legislature's guidance for solving California statewide housing crisis.

This alternative would also reduce the property tax revenue compared to the Project.

For all of these foregoing reasons and any one of them individually, this alternative is determined to be infeasible and rejected.

4. REDUCED SPHERE OF INFLUENCE ALTERNATIVE:

The **Reduced Sphere of Influence Alternative** is discussed on pages 5.0-3, and 5.0-55 through 5.0-72 of the Draft EIR. Under the Reduced Sphere of Influence Alternative, the proposed Project would only expand the Sphere of Influence and annex the Developed Area and would exclude the 78-acre Sphere of Influence (SOI) expansion to the north and east of the Development Area. Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate that possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

Findings: All environmental topics would have equal impacts compared to the Project.

On balance, the alternative is less desirable than the Project and does not provide benefits to the community when compared to the proposed Project. This alternative would not achieve all of the Project objectives. For example, the Reduced Sphere of Influence Alternative would not meet the fifth Project objective because it would not expand the SOI to the north and east of the Development Area in alignment with the long-term growth plans for the City of Clovis. Also, the expansion of the SOI is intended to provide a future possibility for the Non-Development Area to connect to City services at some point in the future, if desired by those residents, however, that possibility would be eliminated under this alternative.

For all of these foregoing reasons and any one of them individually, this alternative is determined to be infeasible and rejected.

5. ENVIRONMENTALLY SUPERIOR ALTERNATIVE:

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed project.

As shown on Table 5.0-1 of the Draft EIR (on page 5.0-73), a comparison of alternatives is presented. The No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified.

Therefore, the Reduced Density Alternative would be the environmentally superior alternative because all environmental issues would have reduced impacts compared to the proposed Project. It is noted that the Reduced Density Alternative does not fully meet all of the Project objectives. The following two project objectives are not fully met:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice* to modestly increase urban density.

- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City Requirements as stated in the latest Regional Housing Needs Analysis (RHNA).

The Reduced Density Alternative would provide housing (150 units), but it would be 455 units less then what is proposed. The first objective listed above references "*A Landscape of Choice*" which is a regional document that provides direction for the region to utilize urban land as efficiently as possible while providing an adequate supply of a broad range of housing types and densities to meet market demand. One of the guiding principles recommends measures to facilitate and encourage compact growth to all urban land uses including commercial, industrial and institutional uses. The Reduced Density Alternative is not consistent with this guidance for the region.

The second objective listed above references establishing a mix of housing to provide for local and regional housing demand, and consistent with the City requirements in the latest Regional Housing Needs Analysis (RHNA). In light of the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, State has provided the City with good reason to exercise its legislative discretion to facilitate the construction of new housing. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects." The Reduced Density Alternative would result in 455 fewer units then the proposed Project, which is not consistent with Legislature's guidance for solving California statewide housing crisis.

For the reasons provided above, this alternative is determined to be infeasible and rejected.

VII. STATEMENTS OF OVERRIDING CONSIDERATIONS RELATED TO THE SHEPHERD NORTH FINDINGS

As described in detail in Section III of these Findings, the following significant and unavoidable impacts could occur with implementation of the Project:

- Impact 3.13-1: Project development would result in VMT increases that are greater than 87 percent of Baseline conditions;

- Impact 4.20: Under Cumulative conditions, Project development would result in VMT increases that are greater than 87 percent of Baseline conditions.

The following statements identify the reasons why, in the City Council's judgment, the benefits of the Project outweigh the significant and unavoidable effects. The substantial evidence supporting the enumerated benefits of the Project can be found in the preceding findings, in the Project itself, and in the record of proceedings as defined herein. Each of the overriding considerations set forth below constitutes a separate and independent ground for finding that the benefits of the Project outweigh its significant adverse environmental effects and is an overriding consideration warranting approval. Thus, if a court were to find that any particular benefit is not supported by substantial evidence, the City Council would rely on whatever benefit(s) that the court did find were supported by substantial evidence.

The City finds that the Project would have the following economic, social, technological, and environmental benefits:

1. **Expansion of the City's Housing Stock**. One objective of the Project references establishing a mix of housing to provide for local and regional housing demand, and consistent with the City requirements in the latest Regional Housing Needs Analysis (RHNA). In light of the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, State has provided the City with good reason to exercise its legislative discretion to facilitate the construction of new housing. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects." The Project will provide housing resources to meet the demands of a growing population of the region, thereby helping to lessen upward pressure on housing costs. By adding new residential units in the City, the Project directly addresses the crisis, thereby furthering state housing policy while providing additional places for Clovis residents to live.
2. **Consistency with A Landscape of Choice**. One objective of Project references "*A Landscape of Choice*" which is a regional document that provides direction for the region to utilize urban land as efficiently as possible while providing an adequate supply of a broad range of housing types and densities to meet market demand. One of the guiding principles recommends measures to facilitate and encourage compact growth to all urban land uses including commercial, industrial and institutional uses. The Project is generally consistent with the guiding principles. The Project is located adjacent to existing uses, and in the context of surrounding uses would be considered infill because it would develop a mostly vacant property surrounded by existing and/or planned development. The Project is located on existing community streets and includes new public streets to serve the new residences.

3. **Create Employment Opportunities for Local Residents.** The Project will have a positive impact on employment levels in the City by generating diversity in employment opportunities, including near-term construction, home sales, and materials sales jobs. In the longer-term, employment opportunities will include maintenance, contracting/renovation, landscaping, home resales, and other services. The Project population will also generate demand for local goods and services, increasing economic activity in the City. Consequently, it is reasonably expected that the City and its residents will enjoy the economic and social benefits from added employment opportunities and economic activity created by the Project.

4. **Contribute to and Fund Needed Infrastructure Improvements**. The Project consists of new development that will be required to contribute to needed infrastructure improvements by paying its fair share towards infrastructure improvements. The Project will also construct or contribute to funding other infrastructure improvements that will benefit additional development projects and City residents and visitors.

5. **Increase Customer Base for Retail Activity**. The Project will provide additional residents to the City who will have disposable income to support the City's retailers and increase retail activity.

6. **Generate Economic Benefits from Taxes**. The Project will provide increased property tax revenue to the City, local schools, and other agencies. Additionally, residents will purchase items that will generate additional sales tax revenue. These revenues will benefit the City and other local governmental agencies, and their residents and constituencies, by providing needed revenue for the provision of required services and amenities. Specific to the City of Clovis, these revenues will go to the City's General Fund, which is the primary source of funding for the construction, operation and maintenance of a number of essential City services, programs and facilities, including fire and police services, recreation programs, transit operations and administrative functions, among other things.

CONCLUSION

The City Council has balanced these benefits and considerations against the potentially significant unavoidable environmental effects of the Project and has concluded that the impacts are outweighed by these benefits, among others. After balancing environmental impacts against Project benefits, the City Council has concluded that the benefits the City will derive from the Project, as compared to existing and planned future conditions, outweigh the risks. The City Council believes the Project benefits outlined above override the significant and unavoidable environmental costs associated with the Project.

In sum, the City Council adopts the mitigation measures in the Revised FEIR, adopts the final Mitigation Monitoring and Reporting Plan, and approves the Project, after finding that any residual or remaining effects on the environment resulting from the Project, identified as significant and unavoidable in the preceding Findings of Fact, are acceptable due to the benefits set forth in the preceding Statement of Overriding Considerations.

Attachment B
Mitigation Monitoring and Reporting Program

FINAL MITIGATION MONITORING AND REPORTING PROGRAM 5.0

This document is the Final Mitigation Monitoring and Reporting Program (FMMRP) for the Shepherd North (Project). This FMMRP has been prepared pursuant to Section 21081.6 of the California Public Resources Code, which requires public agencies to "adopt a reporting and monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment." A FMMRP is required for the proposed Project because the EIR has identified significant adverse impacts, and measures have been identified to mitigate those impacts.

The numbering of the individual mitigation measures follows the numbering sequence as found in the Draft EIR.

5.1 MITIGATION MONITORING AND REPORTING PROGRAM

The FMMRP, as outlined in the following table, describes mitigation timing, monitoring responsibilities, and compliance verification responsibility for all mitigation measures identified in this Revised Final EIR.

The City of Clovis will be the primary agency responsible for implementing the mitigation measures and will continue to monitor mitigation measures that are required to be implemented during the operation of the proposed Project.

The FMMRP is presented in tabular form on the following pages. The components of the FMMRP are described briefly below:

- **Mitigation Measures**: The mitigation measures are taken from the Draft EIR in the same order that they appear in that document.
- **Mitigation Timing**: Identifies at which stage of the project mitigation must be completed.
- **Monitoring Responsibility**: Identifies the agency that is responsible for mitigation monitoring.
- **Compliance Verification**: This is a space that is available for the monitor to date and initial when the monitoring or mitigation implementation took place.

TABLE 5.0-1: MITIGATION MONITORING AND REPORTING PROGRAM

ENVIRONMENTAL IMPACT	MITIGATION MEASURE	MONITORING RESPONSIBILITY	TIMING	VERIFICATION (DATE/INITIALS)
BIOLOGICAL RESOURCES				
Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species.	***Mitigation Measure 3.4-1**: The Project applicant shall implement the following measure to avoid or minimize impacts on other protected bird species that may occur on the sit:* • *Preconstruction surveys for active nests of special-status birds shall be conducted by a qualified biologist in all areas of suitable habitat within 500 feet of project disturbance. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 15 to August 31) in a given area.* • *If any active nests, or behaviors indicating that active nests are present, are observed, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. The size of the buffer shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines, based on these same considerations, that a change in buffer size would not be likely to adversely affect the nest. If buffers are adjusted, monitoring will be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist has determined that the young have fledged or the nest site is otherwise no longer in use.*	City of Clovis Planning and Development Services Department, Engineering Division Qualified Biologist	Prior to construction activities	
Impact 3.4-4: The proposed Project has the potential to result in direct or indirect effects on special-status mammal species.	***Mitigation Measure 3.4-2:** Prior to grading of each Project development phase, the Project applicant shall conduct a survey of the area to be graded for bat roosts, and if present, the Project applicant shall implement the following measures to avoid or minimize impacts on special-status bats:* • *If removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31), surveys for active maternity roosts shall be*	City of Clovis Planning and Development Services Department, Engineering Division	Prior to any grading activities	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	conducted by a qualified biologist. The surveys shall be conducted from dusk until dark. - *If a special-status bat maternity roost is located, appropriate buffers around the roost sites shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from habitat removal or other project activities. The size of the buffer shall depend on the species, roost location, and specific construction activities to be performed in the vicinity. No project activity shall commence within the buffer areas until the end of the pupping season (August 1) or until a qualified biologist conforms the maternity roost is no longer active.* - *If a non-maternal roost is located, eviction and exclusion techniques shall be conducted as recommended by the qualified biologist. Methods may include opening the roosting area to change the air flow and lighting, installing one-way doors, or other appropriate methods that allow the bats to exit and find a new roost. After eviction is believed to be completed, acoustic monitoring, and an evening emergence survey shall be performed by the qualified biologist to ensure eviction is complete. For tree removal, a two-step tree removal process involving removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree.*	Qualified Biologist		
CULTURAL AND TRIBAL RESOURCES				
Impact 3.5-1: Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5	**Mitigation Measure 3.5-1:** If subsurface deposits believed to be cultural, historical, archaeological, tribal, and/or human in origin are discovered during construction and/or ground disturbance, all work must halt within a 100-foot radius of the discovery. A Native American Representative from traditionally and culturally affiliated Native American Tribes that requested consultation shall be immediately contacted and invited to assess the significance of the find and make recommendations for further evaluation and treatment, as necessary. If deemed necessary by the City, a qualified cultural resources specialist meeting the Secretary of Interior's Professional Qualifications Standards for Archaeology, may also assess the	City of Clovis Planning and Development Services Department, Engineering Division Qualified	If any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources are	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	significance of the find in joint consultation with Native American Representatives to ensure that Tribal values are considered. Work at the discovery location cannot resume until it is determined by the City, in consultation with culturally affiliated tribes, that the find is not a tribal cultural resource, or that the find is a tribal cultural resource and all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied. The qualified cultural resources specialist shall have the authority to modify the no-work radius as appropriate, using professional judgement. The following notifications and measures shall apply to potential unique archaeological resources and potential historical resources of an archaeological nature (as opposed to tribal cultural resources), depending on the nature of the find: • If the professional archaeologist determines that the find does not represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature, work may resume immediately and no agency notifications are required. • If the professional archaeologist determines that the find does represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature from any time period or cultural affiliation, he or she shall immediately notify the City and applicable landowner. The professional archaeologist and a representative from the City shall consult to determine whether any unique archaeological resources or historical resources of an archaeological nature are present, in part based on a finding of eligibility for inclusion in the NRHP or CRHR. If it is determined that unique archaeological resources or historical resources of an archaeological nature are present, the qualified archaeologist shall develop mitigation or treatment measures for consideration and approval by the City. Mitigation shall be developed and implemented in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section	Archaeologist	found during grading and construction activities	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If approved by the City, such measures shall be implemented and completed prior to commencing further work for which grading or building permits were issued, unless otherwise directed by the City. Avoidance or preservation of unique archaeological resources or historical resources of an archaeological nature shall not be required where such avoidance or preservation in place would preclude the construction of important structures or infrastructure or require exorbitant expenditures, as determined by the City. Where avoidance or preservation are not appropriate for these reasons, the professional archaeologist, in consultation with the City, shall prepare a detailed recommended a treatment plan for consideration and approval by the City, which may include data recovery. If employed, data recovery strategies for unique archaeological resources that do not also qualify as historical resources of an archaeological nature shall follow the applicable requirements and limitations set forth in Public Resources Code Section 21083.2. Data recovery will normally consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of recovering important scientific data contained within the unique archaeological resource or historical resource of an archaeological nature. The data recovery plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. If data recovery is determined by the City to not be appropriate, then an equally effective treatment shall be proposed and implemented. Work may not resume within the no-work radius until the City, in consultation with the professional archaeologist, determines that the site either: 1) does not contain unique archaeological resources or historical resources of an archaeological nature; or			

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	2) that the preservation and/or treatment measures have been completed to the satisfaction of the City. • If the find includes human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (§5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.			
Impact 3.5-2: Project Implementation has the potential to disturb human remains, including those interred outside of formal cemeteries.	**Reference is Made to Mitigation Measure 3-5.1**	City of Clovis Planning and Development Services Department,	If any cultural resources, including prehistoric or historic	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
		Engineering Division Qualified Archeologist	artifacts, or other indications of archaeological resources are found during grading and construction activities	
Impact 3.5.3: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1 (k), or a resource determined by the lead agency.	**Reference is Made to Mitigation Measure 3-5.1**	City of Clovis Planning and Development Services Department, Engineering Division Qualified Archeologist	If any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources are found during grading and construction activities	
GEOLOGY, SOILS, AND MINERAL RESOURCES				
Impact 3.6-6: The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	***Mitigation Measure 3.6-1:*** *Prior to approval of a grading permit, the Project proponent shall ensure that grading and improvement plans include the following note: "If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in*	City of Clovis Planning and Development Services Department, Engineering Division Qualified	Prior to issuance of grading permit	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	place or relocating on the Project site, *if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology."*	Paleontologist		
HAZARDS AND HAZARDOUS MATERIALS				
Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	***Mitigation Measure 3.8-1:*** *Prior to the acceptance of improvements, the Project proponent shall hire a licensed well contractor to obtain a well abandonment permit from Fresno County Department of Public Health Environmental Health Division, and properly abandon the on-site wells, pursuant to review and approval of the City Engineer and the Fresno County Department of Public Health Environmental Health Division.*	Fresno County Department of Public Health Environmental Health Division	Prior to approval of improvements plans	
	Mitigation Measure 3.8-2: *The Project proponent shall hire a qualified consultant to perform additional testing prior to the issuance of grading permits for construction activities in the following areas that have been deemed to have potentially hazardous conditions present:* • *The area near the three ASTs and four 55-gallon drums (see Figure 3.8-1 of the Draft EIR).* • *The areas where USTs may exist, including near the former warehouse and former residences.* • *The soils in the area where farming equipment and above ground tanks have been used, and near the former warehouse and former residences (see Figure 3.8-1 of the Draft EIR).* • *The area near the four pole-mounted transformers (see Figure 3.8-1 of the Draft EIR).* *The intent of the additional testing is to investigate whether any of the areas, facilities, or soils contain hazardous materials. All activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The ACBM and lead shall be disposed of properly at an appropriate offsite disposal facility. If surface staining is found on the Project site, a hazardous waste specialist shall be*	Fresno County Department of Public Health Environmental Health Division.	Prior to issuance of grading permit	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	engaged to further assess the stained area. *Should further soil sampling be required in any stained areas, evenly distributed soil samples shall be conducted for analysis of pesticides and heavy metals. The samples shall be submitted for laboratory analysis of pesticides and heavy metals per DTSC and EPA protocols. The results of the soil sampling shall be submitted to the Fresno County Department of Public Health Environmental Health Division. If elevated levels of pesticides or heavy metals are detected during the laboratory analysis of the soils, a soil cleanup and remediation plan shall be prepared and implemented prior to the commencement of grading activities.* *Further, in the event of a future release/leak of insulating fluids from any of the four pole-mounted transformers, PG&E shall be contacted regarding the testing of the transformers for PCB fluids or for their removal/replacement.*			
NOISE				
Impact 3.11-1: Operational Noise - The Proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	***Mitigation Measure 3.11-1:*** *A 6-foot-tall barrier shall be constructed along the boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue (along all unshielded residential private yards within 100 ft of the centerline of Sunnyside and Shepherd Avenues), in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department.* ***Mitigation Measure 3.11-2:*** *The Project developer will ensure that any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows, which would not be shielded by the 6- foot sound walls.*	City of Clovis Public Utilities Department	Prior to approval of improvements plans	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
Impact 3.11-2: Construction Noise - The Proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	***Mitigation Measure 3.11-3:*** *Construction activities shall adhere to the requirements of the City of Clovis Municipal Code with respect to hours of operation. This requirement shall be noted in the improvements plans prior to approval by the City's Public Utilities Department.* *As soon as practicable (after grading operations), install permanent fencing along the boundary of the area being Developed and the adjacent Non-Development Area. Fencing should be a minimum of 6 feet tall and continuous between the source of noise and adjacent residences.* ***Mitigation Measure 3.11-4****: The contractor shall ensure that the following noise attenuating strategies are implemented during project construction:* • *During construction, the contractor shall ensure mufflers are properly installed on all construction equipment capable of being outfitted with mufflers.* • *Idling equipment shall be turned off when not in use.* • *Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.*	City of Clovis Public Utilities Department	During project construction	

RESOLUTION 24-__

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING GENERAL PLAN AMENDMENT GPA2021-006 AMENDING THE CIRCULATION ELEMENT TO ALLOW AN ACCESS POINT ON THE NORTH SIDE OF SHEPHERD AVENUE, BETWEEN N. SUNNYSIDE AND N. FOWLER AVENUES

WHEREAS, Great Bigland, LP., 7550 N. Palm Avenue, Suite 102, Fresno, CA 93711, has applied for a General Plan Amendment 2021-006; and

WHEREAS, the Applicant submitted an application for a general plan amendment (GPA 2021-006) to amend the Circulation Element of the 2014 Clovis General Plan to allow for placement of an access point on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues, in the County of Fresno, California; and

WHEREAS, the proposed GPA 2021-006, was assessed under the provisions of the California Environmental Quality Act (CEQA) and the potential effects on the environment were considered by the Planning Commission, together with comments received and public comments, and the entire public record was reviewed; and

WHEREAS, the City Council does certify the Revised Final Project Environmental Impact Report for the Shepherd North Project, inclusive of GPA 2021-006; Adopt the CEQA Findings of Fact and a Statement of Overriding Consideration; and Adopt a Mitigation Monitoring and Reporting Program; and

WHEREAS, a duly noticed hearing was held on March 18, 2024, at which time the City Council considered GPA 2021-006; and

WHEREAS, the Planning Commission’s recommendations were forwarded to the City Council for consideration; and

WHEREAS, a public notice was sent out to area residents within 800 feet of said property boundaries, including the Dry Creek Preserve Area, ten (10) days prior to said hearing; and

WHEREAS, the City Council has had an opportunity to review and consider the entire Administrative Record relating to the Project, which is on file with the City of Clovis Department of Planning and Development Services (“Department”), and reviewed and considered those portions of the Administrative Record determined to be necessary to make an informed decision, including, but not necessarily limited to, the staff report, the written materials submitted with the request, and the verbal and written testimony and other evidence presented during the public hearing.

ATTACHMENT 2

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. The City Council hereby approves GPA 2021-006.

2. The Project satisfies the required findings for approval of a general plan amendment, as follows:

   a) GPA 2021-006 is internally consistent with the goals, policies, and actions of the General Plan.

   b) GPA 2021-006 would not be detrimental to the public interest, health, safety, convenience, or general welfare of the City.

   c) There is a compelling reason for the amendment, as the proposal will provide a diversity in housing types and a quality residential environment for this area, adjacent to the Heritage Grove growth area.

3. The basis for the findings is detailed in the March 18, 2024, staff report, which is hereby incorporated by reference, the entire Administrative Record, as well as the evidence and comments presented during the public hearing.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: March 18, 2024

Mayor

City Clerk

RESOLUTION 24-__

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING GENERAL PLAN AMENDMENT GPA2021-005 AMENDING THE LAND USE ELEMENT FOR APPROXIMATELY 77 ACRES LOCATED AT THE NORTHEAST CORNER OF SHEPHERD AND N. SUNNYSIDE AVENUES

WHEREAS, Great Bigland, LP., 7550 N. Palm Avenue, Suite 102, Fresno, CA 93711, has applied for a General Plan Amendment 2021-005; and

WHEREAS, the Applicant submitted an application for a General Plan Amendment (GPA 2021-005) to amend the General Plan to re-designate land from the Rural Residential (1 DU/2 Ac) land use designation to the Medium-High Density Residential (7.1 to 15.0 DU/AC) land use designation to allow for the construction of 605 single-family homes within the Project site, in the County of Fresno, California; and

WHEREAS, the proposed GPA 2021-005, was assessed under the provisions of the California Environmental Quality Act (CEQA) and the potential effects on the environment were considered by the City Council, together with comments received and public comments, and the entire public record was reviewed; and

WHEREAS, the City Council does certify the Revised Final Project Environmental Impact Report for the Shepherd North Project, inclusive of GPA2021-005; Adopt the CEQA Findings of Fact and a Statement of Overriding Consideration; and Adopt a Mitigation Monitoring and Reporting Program; and

WHEREAS, a duly noticed hearing was held on March 18, 2024, at which time the City Council considered GPA 2021-005; and

WHEREAS, the Planning Commission's recommendations were forwarded to the City Council for consideration; and

WHEREAS, a public notice was sent out to area residents within 800 feet of said property boundaries, including the Dry Creek Preserve Area, ten (10) days prior to said hearing; and

WHEREAS, the City Council has had an opportunity to review and consider the entire Administrative Record relating to the Project, which is on file with the City of Clovis Department of Planning and Development Services ("Department"), and reviewed and considered those portions of the Administrative Record determined to be necessary to make an informed decision, including, but not limited to, the staff report, the written materials submitted with the request, and the verbal and written testimony and other evidence presented during the public hearing.

ATTACHMENT 3

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. The City Council hereby approves GPA 2021-005.

2. The Project satisfies the required findings for approval of a general plan amendment, as follows:

    a) GPA 2021-005 is internally consistent with the goals, policies, and actions of the General Plan.

    b) GPA 2021-005 would not be detrimental to the public interest, health, safety, convenience, or general welfare of the City.

    c) There is a compelling reason for the amendment, as the proposal will provide a diversity in housing types and a quality residential environment for this area, adjacent to the Heritage Grove growth area.

3. The basis for the findings is detailed in the March 18, 2024, staff report, which is hereby incorporated by reference, the entire Administrative Record, as well as the evidence and comments presented during the public hearing.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: March 18, 2024

Mayor

City Clerk

ORDINANCE 24-___

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CLOVIS AMENDING AND CHANGING THE OFFICIAL ZONE MAP OF THE CITY OF CLOVIS IN ACCORDANCE WITH SECTION 9.080.020 OF THE CLOVIS MUNICIPAL CODE TO PREZONE APPROXIMATELY 77 ACRES FROM THE FRESNO COUNTY AL20 ZONE DISTRICT TO THE CLOVIS R-1-PRD (SINGLE FAMILY PLANNED RESIDENTIAL DEVELOPMENT) ZONE DISTRICT FOR PROPERTY LOCATED AT THE NORTHEAST CORNER OF SHEPHERD AND N. SUNNYSIDE AVENUES

LEGAL DESCRIPTION:

See Attachment A

WHEREAS, Great Bigland, LP., 7550 N. Palm Avenue, Suite 102, Fresno, CA 93711, has applied for a Prezone 2021-009; and

WHEREAS, the request is to prezone approximately 77 acres from the Fresno County AL20 Zone District to the Clovis R-1-PRD (Single Family Planned Residential Development) Zone District for property located at the northeast corner of Shepherd and N. Sunnyside Avenues ("Prezone"); and

WHEREAS, the Planning Commission held a duly noticed public hearing on November 16, 2023, to consider the Project, at which time interested persons were given opportunity to comment on the Project; and

WHEREAS, the Planning Commission voted and recommended that the City Council deny Prezone R2021-009; and

WHEREAS, the Planning Commission's recommendations were forwarded to the City Council for consideration; and

WHEREAS, the City published notice of the public hearing in the Fresno Business Journal on March 6, 2024, mailed public notices to property owners within 800 feet of the Property ten (10) days prior to the City Council hearing, and otherwise posted notice of the public hearing according to applicable law; and

WHEREAS, the City Council held a duly noticed public hearing on March 18, 2024, to consider approval of Prezone R2021-009; and

WHEREAS, the City Council has had an opportunity to review and consider the entire Administrative Record relating to the Prezone, which is on file with the City of Clovis Department of Planning and Development Services, and reviewed and considered those portions of the Administrative Record determined to be necessary to make an informed decision, including, but not necessarily limited to, the staff report, the written materials submitted with the request, and the verbal and written testimony and other evidence presented during the public hearing; and

WHEREAS, the City Council considered the CEQA analysis outlined in the staff report, which is incorporated by reference herein, and elsewhere in the Administrative Record which determines that the Prezone meets the requirements pursuant to CEQA Guidelines and recommends that the City Council certify the Revised Final Project Environmental Impact Report for the Shepherd North Project; adopt the CEQA Findings of Fact and a Statement of Overriding Consideration; and adopt a Mitigation Monitoring and Reporting Program; and

WHEREAS, the Prezone is in keeping with the intent and purpose of the Zoning Ordinance; and

WHEREAS, after hearing evidence presented by City staff and other verbal and written testimony presented during the public hearing, and after making the following findings:

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL FINDS AS FOLLOWS:

1. The proposed prezone is consistent with the goals, policies, and actions of the adopted General Plan.

2. The proposed prezone would not be detrimental to the public interest, health, safety, convenience, or general welfare of the City.

3. The Property is physically suitable (including absence of physical constraints, access, compatibility with adjoining land uses, and provision of utilities) for the requested zoning designation and development of the Project.

4. The City Council does certify the Revised Final Project Environmental Impact Report for the Shepherd North Project; adopt the CEQA Findings of Fact and a Statement of Overriding Consideration; and adopt a Mitigation Monitoring and Reporting Program.

5. The basis and evidence for the findings are detailed in the March 18, 2024, staff report and staff presentation addressing the Project during the March 18, 2024, public hearing, both of which are hereby incorporated by reference, the entire Administrative Record, as well as the evidence and comments presented during the public hearing.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CLOVIS DOES ORDAIN AS FOLLOWS:

<u>Section 1</u> The official map of the city is amended in accordance with Section 9.08.020 and Chapter 9.86 of the Clovis Municipal Code by rezoning certain land in the City of Clovis, County of Fresno, State of California, to wit:

LEGAL DESCRIPTION:

See the attached **Attachment A**.

From the Fresno County AL20 Zone District to the Clovis R-1-PRD (single family planned residential development) Zone District.

Section 2 This Ordinance shall go into effect and be in full force from and after thirty (30) days after its final passage and adoption.

APPROVED: March 18, 2024

Mayor

City Clerk

* * * * * * * * * *

The foregoing Ordinance was introduced and read at a regular meeting of the City Council held on March 18, 2024, and was adopted at a regular meeting of said Council held on Date Adopted, by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: Date Adopted

City Clerk

ATTACHMENT A
LEGAL DESCRIPTION

Legal Description:

The land referred to is situated in the unincorporated area of the County of Fresno, State of California, and is described as follows:

PARCEL ONE:

The South half of the West half of the East half of the Southwest quarter of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian, in the County of Fresno, State of California, according to the Official Plat thereof.

APN: 557-021-20

PARCEL TWO:

The Southwest quarter of the Southwest quarter of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian, in the County of Fresno, State of California, according to the Official Plat thereof.

EXCEPTING THEREFROM that portion thereof described as follows:

Commencing at the Southeast corner of the Southwest quarter of the Southwest quarter of Section 21; thence North 89° 49′ 50″ West, 567.24 feet, along the Southerly line of the Southwest quarter of the Southwest quarter of Section 21, to a point in the centerline of Shepard Avenue, which is South 89° 49′ 50″ East, 752.46 feet from the Southwest corner of Section 21; thence Easterly along the centerline of Shepard Avenue as follows:

Along a curve to the left, having a radius of 850 feet, through a center angle of 11° 39′ 10″, an arc distance of 173.00 feet, North 78° 31′ 00″ East, 334.79 feet; thence along a curve to the right, having a radius of 940 feet through a central angle of 3° 33′ 20″, an arc distance of 58.33 feet to a point on the Easterly line of the Southwest quarter of the Southwest quarter of Section 21; thence leaving the centerline of Shepard Avenue, South 0° 02′ 20″ East, 97.6 feet along the Easterly line of the Southwest quarter of the Southwest quarter of Section 21, to the point of commencement.

APN: 557-021-19

PARCEL THREE:

The North ½ of the West ½ of the East ½ of the Southwest ¼ of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian, in the County of Fresno, State of California, according to the Official Plat thereof.

APN: 557-021-21

RESOLUTION 24-__

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING A VESTING TENTATIVE TRACT MAP FOR A 605-LOT SINGLE-FAMILY SUBDIVISION ON APPROXIMATELY 77 ACRES OF PROPERTY LOCATED AT THE NORTHEAST CORNER OF SHEPHERD AND N. SUNNYSIDE AVENUES SUBJECT TO THE CITY COUNCIL'S APPROVAL OF AN ANNEXATION AND SPHERE OF INFLUENCE EXPANSION

WHEREAS, Great Bigland, LP., 7550 N. Palm Avenue, Suite 102, Fresno, CA 93711, submitted an application for Vesting Tentative Tract Map 6205 for a 605-lot single-family subdivision ("Tract Map") on approximately 77 acres of property located at the northeast corner of Shepherd and N. Sunnyside Avenues ("Property"); and

WHEREAS, the City published notice of the public hearing in the Fresno Business Journal on February 9, 2024, mailed public notices to property owners within 800 feet of the Property, including the Dry Creek Preserve Area, ten (10) days prior to said City Council hearing, and otherwise posted notice of the Public Hearing according to applicable law; and

WHEREAS, Vesting Tentative Tract Map 6205, was filed on November 12, 2021, and was presented to the City Council for approval in accordance with the Subdivision Map Act of the Government of the State of California and Title 9, Chapter 2, of the Municipal Code and the City of Clovis; and

WHEREAS, the Planning Commission considered said map on November 16, 2023, denying said map; and

WHEREAS, a duly noticed hearing was held on March 18, 2024, at which time the City Council considered Vesting Tentative Tract Map 6205; and

WHEREAS, the City Council has given careful consideration to this map on March 18, 2024, and considered the CEQA analysis outlined in the staff report and elsewhere in the Administrative Record which determines that the Tract Map meets the requirements pursuant to CEQA Guidelines and does certify the Revised Final Project Environmental Impact Report for the Shepherd North Project; adopt the CEQA Findings of Fact and a Statement of Overriding Considerations; and adopt a Mitigation Monitoring and Reporting Program; and

WHEREAS, the City Council has reviewed and considered the entire Administrative Record relating to the Tract Map, which is on file with the City of Clovis Department of Planning and Development Services, and reviewed and considered those portions of the Administrative Record determined to be necessary to make an informed decision, including, but not limited to, the staff report, the written materials submitted with the request, and the verbal and written testimony and other evidence presented during the public hearing, and the conditions of approval attached as **Attachment B** to this Resolution, which are incorporated herein by this reference.

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. The City Council hereby approves Vesting Tentative Tract Map 6205 as shown in **Attachment A,** subject to the City's Council's approval of a sphere of influence expansion and annexation, and subject to the conditions of approval set forth in **Attachment B** to this Resolution.

2. The Project satisfies the required findings for approval of a tentative tract map, as follows:

    a. The proposed map, subdivision design, and improvements are consistent with the General Plan and any applicable specific plan.

    b. The site is physically suitable for the type and proposed density of development.

    c. The design of the subdivision and the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

    d. The design of the subdivision or type of improvements is not likely to cause serious public health or safety problems.

    e. The design of the subdivision or the type of improvements will not conflict with easements acquired by the public at large for access through or use of property within the proposed subdivision. This finding may also be made if the review authority finds that alternate easements for access or use will be provided, and that they will be substantially equivalent to ones previously acquired by the public. This finding shall apply only to easements of record, or to easements established by judgment of a court of competent jurisdiction, and no authority is hereby granted to the review authority to determine that the public at large has acquired easements of access through or use of property within the proposed subdivision.

    f. The discharge of sewage from the proposed subdivision into the community sewer system will not result in violation of existing requirements prescribed by the California Regional Water Quality Control Board.

    g. The design of the subdivision provides, to the extent feasible, passive or natural heating and cooling opportunities.

    h. The proposed subdivision, its design, density, and type of development and improvements conform to the regulations of this Development Code and the regulations of any public agency having jurisdiction by law.

3. Without the conditions of approval (**Attachment B** of this resolution), the City Council could not make the findings necessary for approval of vesting tentative tract map TM6205 (attached and labeled **Attachment A**).

4. The basis for the findings is detailed in the March 18, 2024, staff report, which is hereby incorporated by reference, the entire Administrative Record, as well as the evidence and comments presented during the Public Hearing.

* * * * *

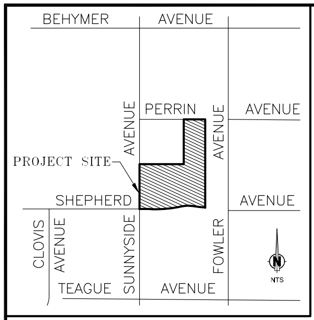
The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: March 18, 2024

Mayor

City Clerk

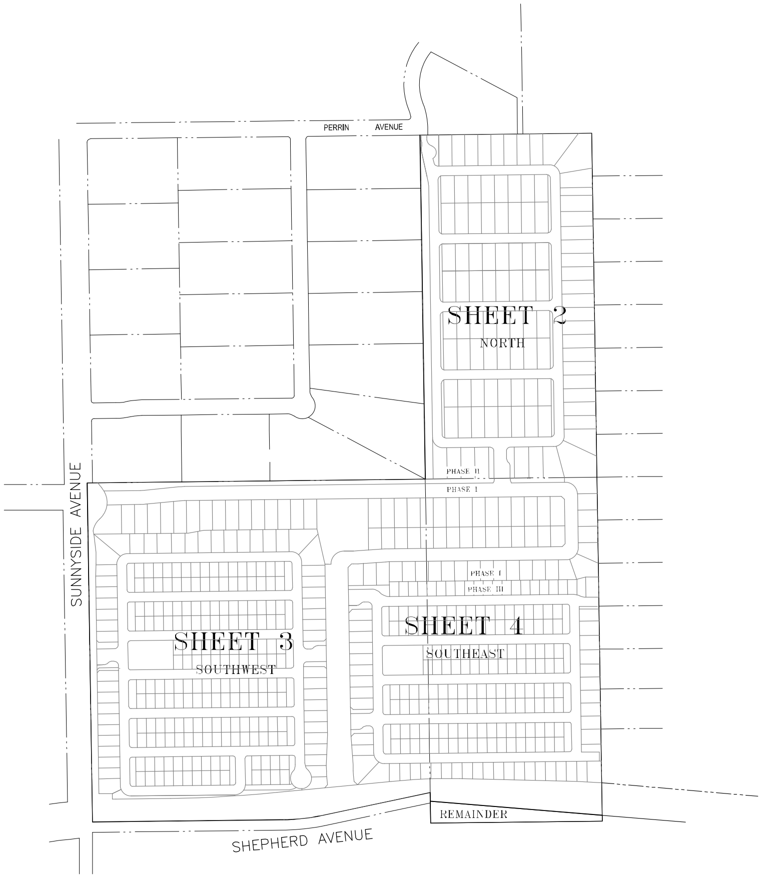


VICINITY MAP
N.T.S.

VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



KEY MAP
N.T.S.

LEGAL DESCRIPTION:

APN: 557–021–20

THE SOUTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

APN: 557–021–19

THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21, EAST MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF

EXCEPTING THEREFROM THAT PORTION THEREOF DESCRIBED AS FOLLOWS

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, THENCE NORTH 89°49'50" WEST, 567.24 FEET, ALONG THE SOUTHERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TO A POINT IN THE CENTERLINE OF SHEPHERD AVENUE WHICH IS SOUTH 89°49'50" EAST, 752.46 FEET FROM THE SOUTHWEST CORNER OF SECTION 21, THENCE EASTERLY ALONG THE CENTERLINE OF SHEPHERD AVENUE AS FOLLOWS

ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 850 FEET, THROUGH A CENTER ANGLE OF 11°39'10", AN ARC DISTANCE OF 173 00 FEET THROUGH 78°31'00" EAST, 334.79 FEET, THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 940 FEET, THROUGH A CENTRAL ANGLE OF 3°33'20", AN ARC DISTANCE OF 58.33 FEET TO A POINT ON THE EASTERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, THENCE LEAVING THE CENTERLINE OF SHEPHERD AVENUE, SOUTH 0°02'20" EAST, 97.60 FEET ALONG THE EASTERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TO THE POINT OF COMMENCEMENT.

APN: 557–021–21

THE NORTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

TOGETHER WITH AN EASEMENT FOR ROAD PURPOSES OVER AND ACROSS THE EAST 30 FEET OF THE SOUTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE RIGHT–OF–WAY DEEDED TO THE CITY OF CLOVIS PER DEED DOCUMENT NUMBER 2022–0112539 RECORDED ON SEPTEMBER 8, 2022.

NOTES:

1. THIS AREA IS SUBJECT TO FLOODZONE X (UNSHADED) AND FLOODZONE AH (SHADED).
2. ALL IMPROVEMENTS SHALL BE AS REQUIRED BY THE CITY OF CLOVIS TO CITY STANDARDS, AND SHALL INCLUDE SANITARY SEWER, DOMESTIC WATER, UNDERGROUND POWER, TELEPHONE, GAS, CONCRETE CURBS, GUTTERS, SIDEWALKS, PERMANENT STREET PAVEMENT STREET LIGHTS, ETC.
3. THERE SHALL BE NO GRADE DIFFERENTIALS OF GREATER THAN 6" WITHIN 200 FEET OF THE SITE UNLESS APPROVED BY THE CITY OF CLOVIS DEVELOPMENT DEPARTMENT.

EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AL–20

PROPOSED ZONING
R–1 & R–1–PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.63 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557–021–19, 557–021–20 & 557–021–21

SITE AREA
77.89 AC (GROSS)
72.37 AC (NET)

NUMBER OF LOTS
605 LOTS & 52 OUTLOTS

DENSITY
7.77 DU/AC

AVERAGE LOT SIZE
3,363 SF

OUTLOT SCHEDULE

- OUTLOTS A, B, & C ARE FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES
- OUTLOTS D, E, F, G, H, I, J, K, L, M, N, R, T, II, JJ, KK, LL, MM, NN, RR, SS, UU & ZZ ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS O, Q, U, & GG ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN & PUBLIC UTILITY PURPOSES
- OUTLOTS V, W, X, Y, AA, BB, CC, DD, EE, FF, HH, OO, QQ, TT, VV, WW, XX, & YY ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS S, Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES
- OUTLOT P IS FOR FMFCD DRAINAGE CHANNEL PURPOSES

TENTATIVE SUBDIVISION MAP

OWNER/SUBDIVIDER
Great Bigland, L.P.
7550 NORTH PALM AVENUE SUITE 102
FRESNO, CA 93711
559-224-7550

Harbour & Associates
Civil Engineers
389 Clovis Avenue, Suite 300 • Clovis, California 93612
(559) 325-7676 • Fax (559) 325-7699 • e-mail lorrens@harbour-engineering.com

DATE: 4–14–23
DRAWN BY: SDH

REVISIONS

SHEET NO.
1
OF
4

W.O. #11–002
D–857

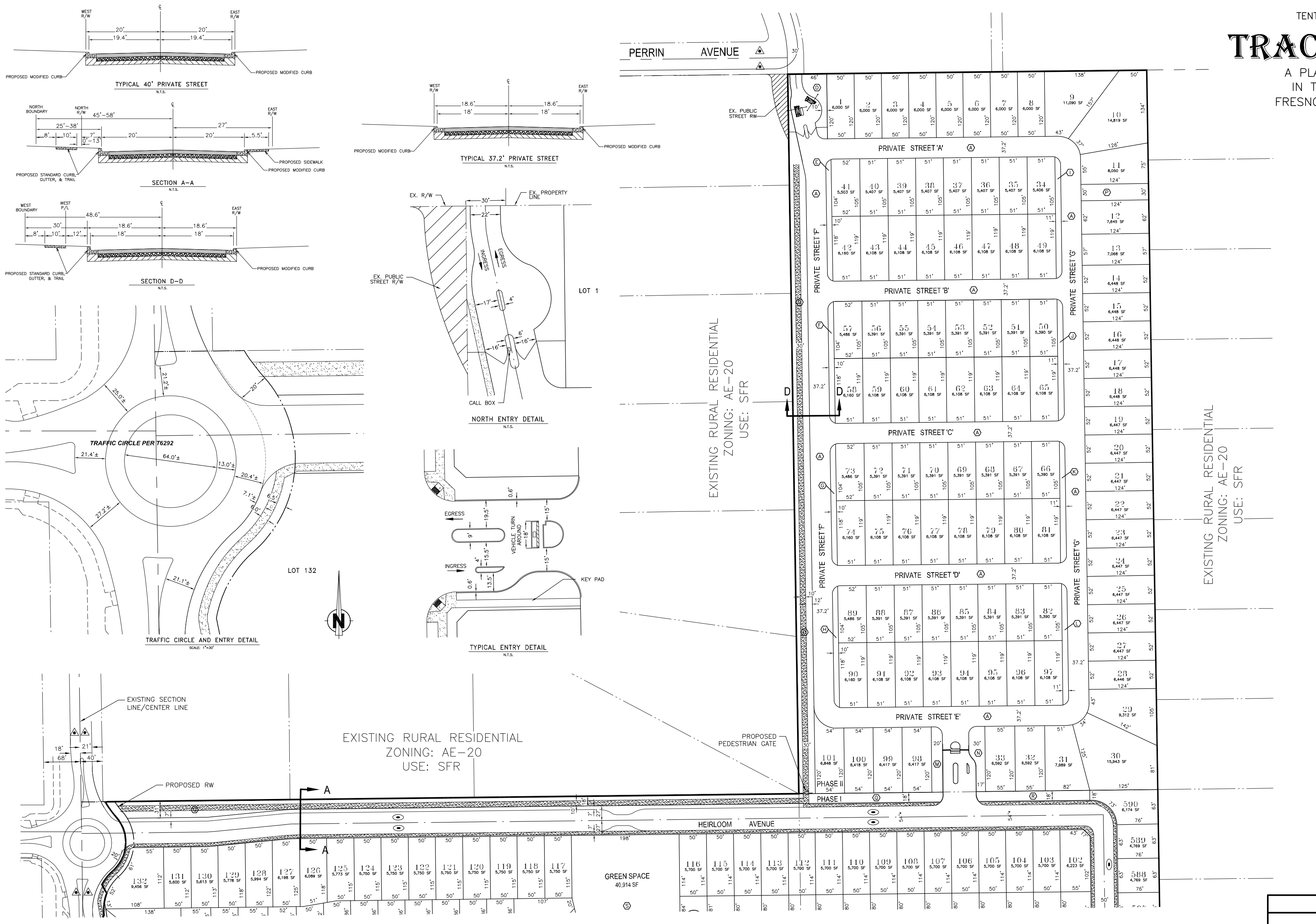
ATTACHMENT A

J:\2011 w.o.s\11002–Wilson–TR6205–Spensely–Sunnyside & Shepherd\Tentative Map\Current\Layout TM 6205 4–14–23.dwg Plotted By: lorrens 04/14/23 – 10:20 AM

VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AL–20

PROPOSED ZONING
R–1 & R–1–PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.63 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557–021–19, 557–021–20 & 557–021–21

SITE AREA
77.89 AC (GROSS)
72.37 AC (NET)

NUMBER OF LOTS
605 LOTS & 52 OUTLOTS

DENSITY
7.77 DU/AC

AVERAGE LOT SIZE
3,363 SF

OUTLOT SCHEDULE

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- OUTLOTS D, E, F, G, H, I, J, K, L, M, N, R, T, II, JJ, KK, LL, MM, NN, RR, SS, UU & ZZ ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
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- OUTLOTS S, Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES
- OUTLOT P IS FOR FMFCD DRAINAGE CHANNEL PURPOSES

LEGEND:

▲	INDICATES STREETS PREVIOUSLY DEDICATED FOR PUBLIC USE
⦿	PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
PUE	PUBLIC UTILITY EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
Ⓐ	OUTLOT IDENTIFIER
☐	FLOODZONE 'AH'
*	CITY STD. 54' STREET SECTION

SCALE: 1" = 80'
GRAPHIC SCALE
0 40' 80' 160'

TM6205 - NORTH

OWNER/SUBDIVIDER
Great Bigland, L.P.
7550 NORTH PALM AVENUE SUITE 102
FRESNO, CA. 93711
559-224-7550

Harbour & Associates
Civil Engineers
389 Clovis Avenue, Suite 300 • Clovis, California 93612
(559) 325-7676 • Fax (559) 325-7699 • e-mail lorrens@harbour-engineering.com

DATE: 4–14–23	SCALE: 1"=80'	DRAWN BY: SDH	REVISIONS	SHEET NO. 2 OF 4

W.O. #11–002
D–857

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AGENDA ITEM NO. 6.

VESTING
TENTATIVE SUBDIVISION MAP
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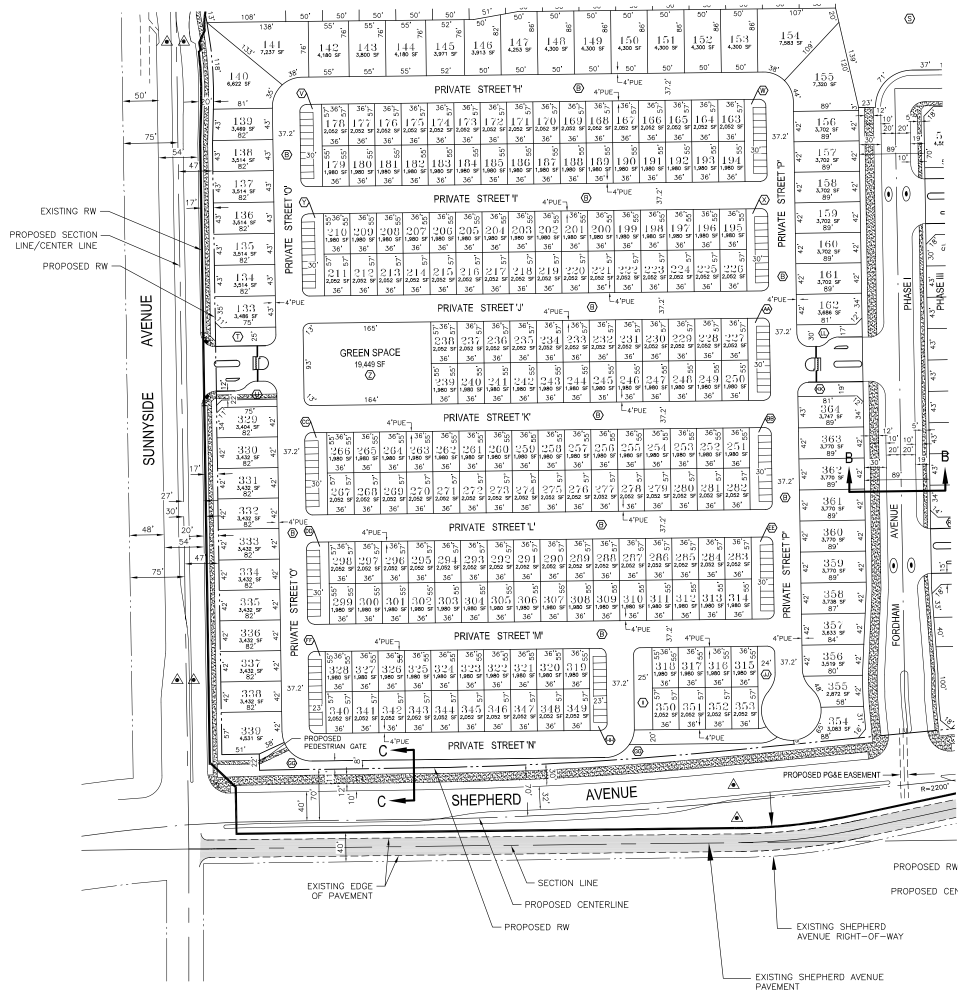
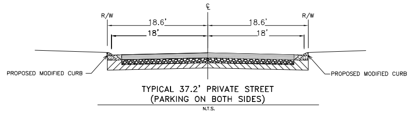
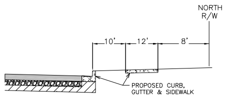
TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA

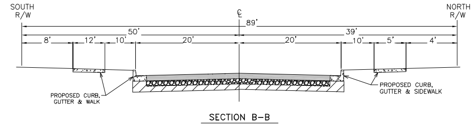




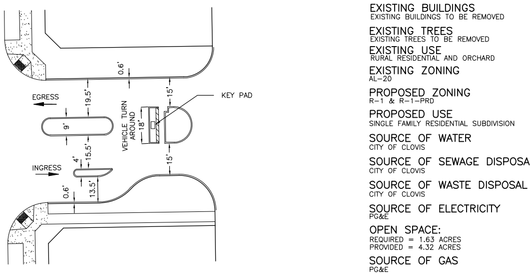
TYPICAL 37.2' PRIVATE STREET
(PARKING ON BOTH SIDES)
N.T.S.



SECTION C–C
N.T.S.



SECTION B–B
N.T.S.



TYPICAL ENTRY DETAIL
N.T.S.

EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AL–20

PROPOSED ZONING
R–1 & R–1–PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.63 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557–021–19, 557–021–20 & 557–021–21

SITE AREA
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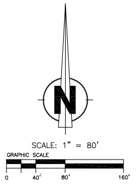
LEGEND:

▲	INDICATES STREETS PREVIOUSLY DEDICATED FOR PUBLIC USE
⊙	PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
PUE	PUBLIC UTILITY EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
⬡A	OUTLOT IDENTIFIER
▭	FLOODZONE 'AH'



SCALE: 1" = 80'

TM6205 - SOUTHWEST

OWNER/SUBDIVIDER
Great Bigland, L.P.
7550 NORTH PALM AVENUE SUITE 102
FRESNO, CA. 93711
559-224-7550

Harbour & Associates
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DATE: 4–14–23	SCALE: 1"=80'	DRAWN BY: SDH	REVISIONS	SHEET NO. 3 OF 4

W.O. #11–002

D–857

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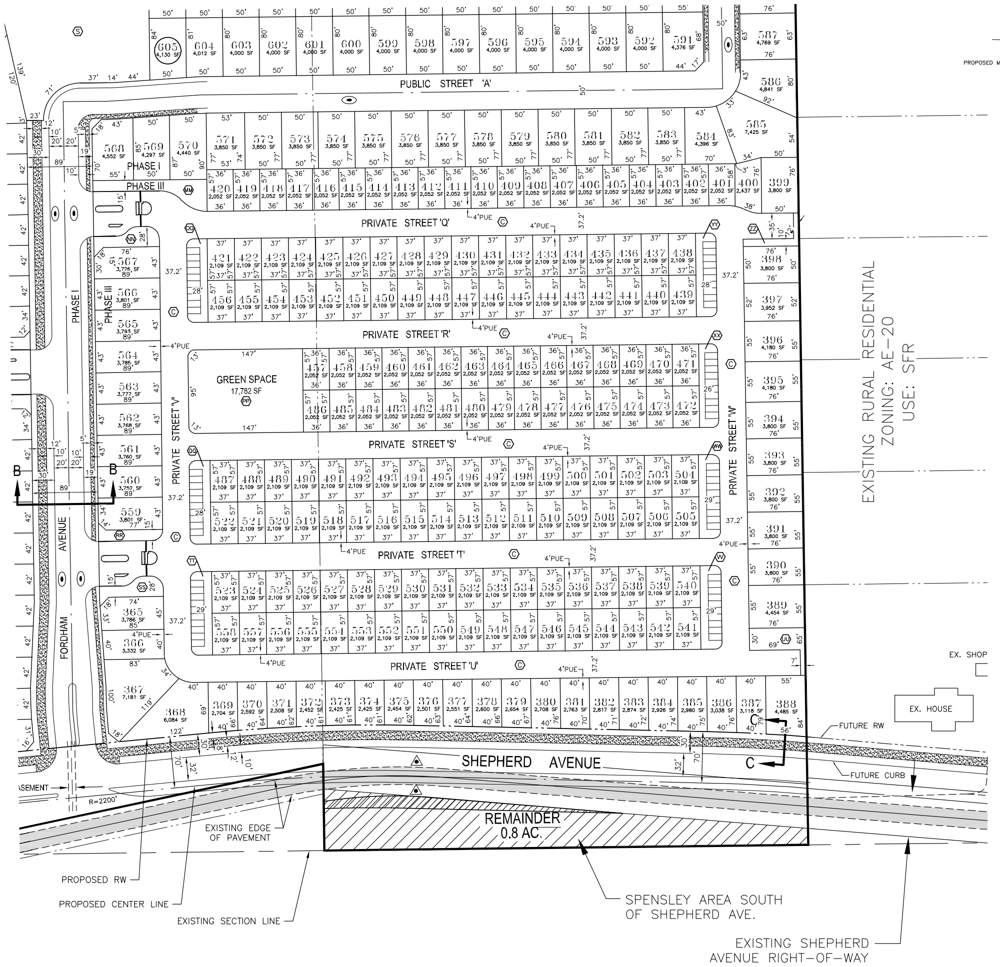
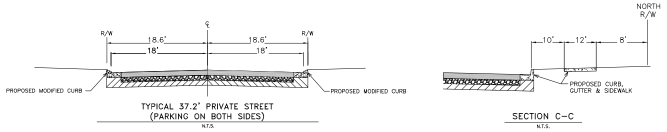
VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

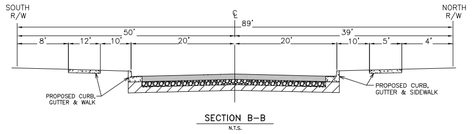
A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



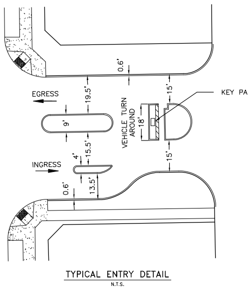


TYPICAL 37.2' PRIVATE STREET
(PARKING ON BOTH SIDES)
N.T.S.

SECTION C-C
N.T.S.



SECTION B-B
N.T.S.



TYPICAL ENTRY DETAIL
N.T.S.

EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AL-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.63 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.89 AC (GROSS)
72.37 AC (NET)

NUMBER OF LOTS
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DENSITY
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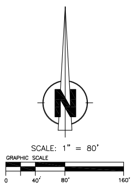

TM6205 - SOUTHEAST

OWNER/SUBDIVIDER
Great Bigland, L.P.
7550 NORTH PALM AVENUE SUITE 102
FRESNO, CA. 93711
559-224-7550

Harbour & Associates
Civil Engineers
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REVISIONS

SHEET NO.
4
OF
4

DATE: 4-14-23
SCALE: 1"=80'
DRAWN BY: SDH

W.O. #11-002
D-857

J:\2011 w.o.s\11002-Wilson-TR6205-Spensely-Sunnyside & Shepherd\Tentative Map\Current\Layout TM 6205 4-14-23.dwg Plotted By: lorrens 04/14/23 - 10:10 AM

Attachment B

Conditions of Approval - TM6205

Planning Division Comments

(George González, Senior Planner - (559) 324-2383)

1. The applicant shall obtain City approval in advance of temporary and permanent subdivision signs through separate sign review, consistent with the development criteria of the Clovis Municipal Code Sign Ordinance.

2. The developer shall repair and or replace any broken or damaged irrigation lines, valves, and other equipment on their properties which are intended to serve adjacent or downstream properties.

3. Prezone 2021-009 approves an R-1-PRD (Planned Residential Development) Zone District for the Project site (Development Area). Density shall be consistent with the Medium-High Density Land Use Designation of the Clovis General Plan and not exceed 15.0 dwelling units per acre.

4. No more than two of the same unit type (floor layout and exterior materials package) shall be repeated side by side. When two of the same units are repeated side by side, they shall be different colors. These identical provisions may be waived by the City Planner on a specific lot basis within the project when the size or configuration of a lot would otherwise prevent compliance with the above requirements of any other siting or setback/yard requirements established under this application. If such a waiver is requested, the developer and City Planner shall work together to ensure that any sitings of units not in compliance with the above requirements shall be of different materials and elevations in order to minimize any adverse visual impacts that may result.

5. TM6205 is subject to the development standards of the R-1-PRD Zone District and Planned Development Standards and Guidelines.

6. The developer shall construct a neighborhood park with associated amenities, additional landscaping areas, open space areas, and community trails per **Attachment 16** of this report.

7. The proposed project must also produce a comprehensive development of superior quality than which might otherwise occur from more traditional development on the site. This could include an enhanced entry point, an embellished block wall on both street frontages, and superior exterior elevation design, all of which will be reviewed and approved through the civil plan review process and residential site plan review.

8. TM6205 is subject to the development standards of Planned Development Permit 2021-004**.** Any development standards not expressed within PDP2021-004 shall be subject to the underlying Zone District R-1-PRD Standards and Guidelines.

9. Setbacks shall be measured to the exterior face of the framing of the structure. Exceptions to the setbacks are identified in §9.24.100, of the Clovis Municipal Code.

10. Maximum lot coverage for the Citrea lots/ homes of TM6205 is 60% unless specifically approved through a residential site plan review or variance.

11. Maximum lot coverage for the Elev8ions lots/ homes of TM6205 is 65% unless specifically approved through a residential site plan review or variance.

12. Maximum lot coverage for the Regent lots/ homes of TM6205 is 60% unless specifically approved through a residential site plan review or variance.

13. The developer shall construct a fence along the property line of adjacent rural residential properties that will not impact the existing and/or permitted animals.

14. The developer shall utilize thematic street lights along local and private streets within the development area that complement the Heritage Grove Design Guidelines and a model that will shield the light from up lighting.

15. The developer shall construct a minimum six-foot high solid masonry wall along the northern property line of Heirloom Avenue and the western property line of Private Street "F" frontage.

16. The developer shall construct a minimum six-foot high solid masonry wall along property lines adjacent to the Fordham Avenue frontage.

17. The developer shall record a Covenant regarding a "right to farm," for adjacent property owners. Such agreement shall be disclosed to all future home buyers.

18. Maximum building (main structure) height shall not exceed thirty-five (35) feet.

19. Setbacks for the Citrea lots/ homes of TM6205 shall be as follows:

Setbacks	Front (Garage)	Front (house)	Garage Side	Corner Street Sides	Rear
Plan 1334 (one-story)	18’	10’	5’	5’	5’
Plan 1482 (one-story)	18’	10’	5’	5’	5’
Plan 1612 (one-story)	18’	10’	5’	5’	5’
Plan 1782 (one-story)	18’	10’	5’	5’	5’
Plan 2741 (two-story)	18’	10’	5’	5’	5’

Lot Coverage:	60% Max
Maximum Height:	2-stories not to exceed 35 feet
Minimum Lot Size:	3,700 square feet
Minimum Parcel Width:	50 feet
Minimum Curved Parcel Width:	25 feet
Minimum Corner Parcel Width:	53 feet

Minimum Parcel Depth:	74 feet
Reversed Corner Street Side Setback:	5 feet
Corner Street Side Fence Setback:	3 feet
Interior Side Yard Setback (opposite from garage):	3 feet
Setback to Projections and/or Porch/ Patio:	9 feet
Garages:	20’x20’ interior dimension (**2-car**)

20. Setbacks for the Elev8ions lots/ homes of TM6205 shall be as follows:

Setbacks	Front (Garage)	Front (house)	Garage Side	Corner Street Sides	Rear
Plan 1212 (two-story)	5’	5’	5’	3’	4’
Plan 1390 (two-story)	5’	5’	5’	3’	4’
Plan 1648 (two-story)	5’	5’	5’	3’	4’
Plan 1660 (two-story)	5’	5’	5’	3’	4’

Lot Coverage:	65% Max
Maximum Height:	2-stories not to exceed 35 feet
Minimum Lot Size:	1,980 square feet
Minimum Parcel Width:	36 feet
Minimum Curved Parcel Width:	36 feet
Minimum Corner Parcel Width:	50 feet
Minimum Parcel Depth:	50 feet
Reversed Corner Street Side Setback:	3 feet
Corner Street Side Fence Setback:	3 feet
Interior Side Yard Setback (opposite from garage):	3 feet
Setback to Projections and/or Porch/ Patio:	4 feet
Garages:	20’x20’ interior dimension (**2-car**) 10’x20’ interior dimension (**1-car**)

21. Setbacks for the Regent lots/ homes of TM6205 shall be as follows:

Setbacks	Front (Garage)	Front (house)	Garage Side	Corner Street Sides	Rear
Plan 1887 (one-story)	18’	10’	5’	8’	8’
Plan 2007 (one-story)	18’	10’	5’	8’	8’
Plan 2162 (one-story)	18’	10’	5’	8’	8’
Plan 2432 (two-story)	18’	10’	5’	8’	8’
Plan 3056 (two-story)	18’	10’	5’	8’	8’

Lot Coverage:	60% Max
Maximum Height:	2-stories not to exceed 35 feet
Minimum Lot Size:	4,500 square feet
Minimum Parcel Width:	50 feet
Minimum Curved Parcel Width:	25 feet
Minimum Corner Parcel Width:	53 feet

Minimum Parcel Depth:	90 feet
Reversed Corner Street Side Setback:	8 feet
Corner Street Side Fence Setback:	3 feet
Interior Side Yard Setback (opposite from garage):	3 feet
Setback to Projections and/or Porch/ Patio:	9 feet
Garages:	20’x20’ interior dimension (**2-car**) 20’x20’ minimum with 9’x15.5’ minimum tandem (**3-car**)

22. Landscape plans shall be reviewed and approved separately by the landscape review committee for tree and landscape type and location.

23. Shepherd Avenue shall have a 30-foot landscape/pedestrian setback, with a 10-foot parkway, 12-foot trail, and 8-foot landscape buffer setback.

24. Sunnyside Avenue shall have a 20-foot landscape/pedestrian setback, with a 10-foot landscape, 6-foot walk, and 4-foot landscape buffer setback.

25. Upon final recordation of this vesting tentative tract map, it shall be the applicant’s responsibility to furnish to the Planning Department an electronic (PDF) copy of the original map obtained from the Fresno County Recorder’s Office.

26. The applicant shall relay all conditions of approval for Vesting Tentative Tract Map 6205 to all subsequent purchasers of individual lots, if applicable, and/or to subsequent purchasers of this entire tract map development.

27. The applicant shall record a Notice of Nonconformance dealing with any structure used for model homes where the garage is converted for the use as a sales office.

28. All lighting shall be screened from direct view from the public right-of-way and adjacent residential properties.

29. All landscaping (open space and private yards) shall conform to the City of Clovis Water Efficient Landscape Ordinance.

30. This Project requires the submittal and approval of a residential site plan review entitlement for lot-specific development standards within TM6205. Specific color and materials of the models, walls, amenities, landscaping, and fencing will be evaluated through the civil plans.

31. The applicant shall provide an all-weather surface for the placement and storage of trash receptacles leading from the 5-foot side yard to the front of the property.

32. The developer shall comply with all mitigation measures identified in the Mitigation Monitoring and Reporting Program prepared for the Project, included as **Attachment 1B** to the staff report.

33. This vesting tentative tract map is approved per **Attachment 5A** of this report.

34. The developer shall construct a minimum six-foot high solid split face masonry wall along the Shepherd and N. Sunnyside Avenue frontages. The masonry wall along Shepherd Avenue shall incorporate tubular steel fencing with pedestrian gates. The masonry walls shall incorporate angled corners at entries, and columns at the corners and ends.

35. The developer shall install pedestrian bollard lighting along the community trail on Shepherd Avenue, consistent with TM6200 to the west. Bollard light spacing will be every 100 linear feet.

36. The developer shall provide trail furniture, including benches and trash receptacles, along Shepherd Avenue, Heirloom Avenue and Private Street "F."

37. As a public amenity for the Project, the developer shall contribute a dollar amount totaling $150,000 to the City for utilization in future open space and/or park improvements.

38. As a private amenity for the Project, the developer shall contribute the construction of a recreational area within two gated communities, which includes a pool, restroom facility, outdoor shower, cabana/ pergola, and lawn chairs. Specific amenity details will be reviewed during the civil plan review process.

39. The developer shall incorporate the Corner Gateway at the northeast corner of Shepherd and N. Sunnyside Avenues to complement the Corner Gateway at the northwest corner of intersection.

40. A minimum 6-foot high wood fence shall be placed along the northern (near Perrin Road alignment) and eastern property lines. If one is existing, it shall be of a condition to the satisfactory of the Planning Division and in compliance with fence standards.

Police Department Conditions

(Sean O'Brien, Department Representative - 324-3468)

41. Construction work shall be limited to the hours set forth in the Clovis Municipal Code. (CMC § 5.18.15.)

42. It shall be the responsibility of the property owner to maintain the structures and adjoining fences to the project free of graffiti. All forms of graffiti shall be removed within 72 hours. (CMC §§ 5.18.02(r), 5.18.06 (b).)

43. Emergency phone numbers for responsible parties shall be kept current during the building phase of the project.

44. All construction materials shall be located within a secured area or monitored by security staff during non-construction hours.

Fire Department Conditions

(Rick Fultz, Fire Department Representative – (559) 324-2214)

Roads / Access

45. ***Two Points of Access:*** Any development to this parcel will require a minimum of two (2) points of access to be reviewed and approved by the Clovis Fire Department. All required access drives shall remain accessible during all phases of construction which includes paving, concrete work, underground work, landscaping, perimeter walls. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads. 2022 CMC 4.4 Section D107

46. ***Maximum Travel Distance to a Residence on Local Streets from an Expressway, Arterial, or Collector Street:*** In order to provide first due emergency response and effective response force (ERF), the Fire Department adopted response times include 4:00 minutes for travel. It takes approximately 3 minutes to drive 1.9 miles based on the average speeds of arterial and collector streets. It then takes an additional 1 minute to drive 2,000 feet on a local street based on reduced speed of 25mph. Once fire department apparatus has entered a local street from an arterial or a collector street, the maximum travel distance to a residence shall be 2,000 feet. This distance is based on travel times for apparatus covering a 2 ½ mile by 2 ½ mile area of the city which is the standard insurance service organization (ISO) individual station response area.

47. ***Street Width:*** Fire apparatus access width shall be determined by measuring from “base of curb” to “base of curb” for roadways that have curbs. When roadways do not have curbs, the measurements shall be from the edge of the roadway surface (approved all weather surface). Clovis Fire Standard #1.1

48. ***Street Width for Single Family Residences:*** Minimum Access Road Width of 36 feet for Single Family Residences. Roads 36 feet or wider allow for Parking on both sides of street. Access roads near fire department access gates shall be a minimum of 20’ in width and marked as fire lanes.

49. ***Streets with Median Islands*****:** Streets with median islands shall comply with Clovis Fire Department Standard 1.1. Based on the street width, no trees will be allowed to be planted in the median island.

50. ***Fire Lane Marking Requirement for Single Family Residences*****:** Based on the street width, fire lane markings will be required along the length of the street from the entry point off Shepherd until the street direction changes heading east. Fire lane markings will also be required on both sides of the median along the entire length of the street. The fire lanes shall be posted with signs and/or the curbs shall be painted red as per Clovis Fire Department Standard #1.1 and identified on site plan. Clovis Fire Standard #1.1

51. ***Turning Radius:*** All access way roads constructed shall be designed with a minimum outside turning radius of forty-five feet (45’) Clovis Fire Standard #1.1

52. ***Temporary Street Signs:*** The applicant shall install temporary street signs that meet City Temporary Street Sign Standard #1.9 prior to issuance of building permits within a subdivision.

53. ***All Weather Access &Water Supply:*** The applicant shall provide all weather access to the site during all phases of construction to the satisfaction of the approved Clovis Fire Department Standard #1.2 or #1.3.

54. ***Security Gates:*** All security gates shall comply with Clovis Fire Department Gates Standard #1.5. Plans shall be submitted for review and permits issued by Fire Department prior to installation. Gates shall be inspected and tested for operation prior to any occupancy.

    1. All vehicle gates for developments containing dwellings or as required by the Fire Chief shall be equipped with an approved “Class II” modulated light detection system capable of receiving a modulated frequency of 14.035 Hz. plus or minus 0.250 Hz. The detection system shall be installed according to the manufacturer’s specifications. The light detection shall be installed to operate from any angle of approach by Clovis Fire Department Emergency Vehicles. Multiple light detection sensors may be required to be installed to allow access from different angles of approach. All light sensors are required to be tested by Clovis Fire Department Emergency Vehicles for approval.

    2. For separate entrance and exit gates when opened, gates shall provide a clear width of not less than **14** feet. A single gate providing entrance and exiting shall provide a clear width of not less than **20 feet.**

       Exception to Clovis Fire Department Gates Standard #1.5 specific to this project for the north gate only: Due to conflicts and concerns from homes owners of existing homes, this gate may be used for emergency ingress and egress only. The developer shall provide written documentation of monthly testing of the gate by a third party contractor to the Clovis Fire Department.

Water Systems

55. ***Residential Fire Hydrant:*** The applicant shall install 4 ½” x 2 ½” approved Residential Type fire hydrant(s) and “Blue Dot” hydrant locators, paint fire hydrant(s) yellow with blue top and caps, and paint the curb red as specified by the adopted Clovis Fire Department Standard #1.4. Plans shall be submitted to the Clovis Fire Department for review and approval prior to installation. The hydrant(s) shall be charged and in operation prior to any framing or combustible material being brought onto the site. Clovis Fire Standard #1.4. The locations shown on the current tract meet Clovis Fire Department Standard #1.4.

56. ***Looped Water Main:*** The applicant shall install approved looped water main capable of the necessary flow of water for adequate fire protection and approved by the Clovis Fire Department.

General Plan: Circulation Element

57. ***Policy 1.5*:** Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses). The proposed layout does not provide connectivity from Shepherd to any future development to the north.

58. ***Policy 1.6*:** Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet. Both Sheet 3 and Sheet 4 have streets in excess of 600'.

59. ***Policy 1.8*:** Network completion. New development shall complete the extension of stub streets planned to connect to adjacent streets, where appropriate. Fordham should be constructed to extend to the north and provide access for through traffic.

Engineering / Utilities / Solid Waste Division Conditions

(Sean Smith, Engineering Division Representative – 324-2363)
(Paul Armendariz, Department Representative – 324-2649)

Maps and Plans

60. The conditions of this tract map are written under the assumption that all dedications and improvements have been completed by the adjacent TM 6200 development, and that these dedications and improvements have been accepted by the City. Additional conditions shall be required at the discretion of the City Engineer if the improvements and dedications by TM 6200 have not been accepted by the City.

61. The applicant shall have a final tract map prepared, in the form prescribed by the Subdivision Map Act and City of Clovis Municipal Code. The final tract map shall be submitted to the City of Clovis Engineering Division, and should include, but not be limited to, final tract map, the current filing fee, closure calculations, current preliminary title report, legal descriptions and drawings of required dedications.

62. The applicant shall submit separately to the City of Clovis Engineering Division, a set of construction plans on 24" x 36" sheets with City standard title block for all required improvements and a current preliminary title report. These plans shall be prepared by a registered civil engineer, and shall include a grading plan, landscape plan, a site plan showing trash enclosure locations and an overall site utility plan showing locations and sizes of sewer, water, storm drain, and irrigation mains, laterals, manholes, meters, valves, hydrants, fire sprinkler services, other facilities, etc. Plan check and inspection fees per City of Clovis Resolution No. 23-34 shall be paid with the first submittal of said plans. All

plans shall be submitted at or before the time the building plans are submitted to the Building Division and shall be approved by the City and all other involved agencies prior to the release of any development permits.

63. Prior to the initial submittal of the improvement plans, the applicant shall contact Sean Smith at (559) 324-2363 to setup a coordination meeting (Pre-submittal Meeting).

64. Upon approval of improvement plans, the applicant shall provide the City with the appropriate number of copies. After all improvements have been constructed and accepted by the City, the applicant shall submit to the City of Clovis Engineering Division (1) digital copy to the City in PDF format of the approved set of construction plans revised to accurately reflect all field conditions and revisions and marked "AS-BUILT" for review and approval. Upon approval of the AS-BUILTs by the City, and prior to granting of final occupancy or final acceptance, the applicant shall provide to the City (1) digital copy in PDF format and two (2) bond copies.

65. The applicant shall comply with reporting requirements in accordance with Government Code 65940.1, which requires the City to, “request from a development proponent, upon issuance of a certificate of occupancy or the final inspection, whichever occurs last, the total amount of fees and exactions associated with the project for which the certificate was issued. The City shall post this information on its internet website, and update it at least twice per year.”

General Provisions

66. The applicant shall pay all applicable development fees at the rate in effect at the time of payment and prior to final map approval by Council or have the fees payable directly to the City through a separate escrow account at the time of recordation of the map.

67. The applicant is advised that, pursuant to California Government Code, Section 66020, any party may protest the imposition of fees, dedications, reservations, or other exactions imposed on a development project by a local agency. Protests shall be filed in accordance with the provisions of the California Government Code and shall be filed within 90 days after conditional approval of this application is granted. The 90-day protest period for this project shall begin on the “date of approval” as indicated on the “Acknowledgment of Acceptance of Conditions” form.

68. All reimbursement requests shall be prepared and submitted in accordance with the requirements of the current version of the “Developer Reimbursement Procedures” a copy of which may be obtained at the City Engineer’s Office.

69. The applicant shall install all improvements within public right-of-way and easements in accordance with the City of Clovis standards, specifications, master plans, and record drawings in effect at the time of improvement plan approval.

70. The applicant shall address all conditions, and be responsible for obtaining encroachment permits from the City of Clovis for all work performed within the City's right-of-way and easements.

71. The applicant shall submit a soils report or a waiver of soils report to the City of Clovis Engineering Division for approval by the City Engineer.

72. The applicant shall provide and pay for all geotechnical services per City policy.

73. The applicant shall comply with the requirements of the local utility, telephone, and cable companies. It shall be the responsibility of the applicant to notify the local utility, telephone, and cable companies for the removal or relocation of utility poles where necessary. The City shall not accept first submittals without proof that the applicant has provided the improvement plans and documents showing all proposed work to the utility, telephone, and cable companies. All utility vaults in which lids cannot be sloped to match proposed finished grading, local utilities have 5% max slope, shall be located in sidewalk areas with pedestrian lids so the lid slope matches sidewalk cross slope.

74. All existing overhead and new utility facilities located on-site or within the street right-of-way along the streets adjacent to this tract shall be undergrounded unless otherwise approved by the City Engineer.

75. The applicant shall contact and address all requirements of the United States Postal Service Clovis Office for the location and type of mailboxes to be installed. The location of the facilities shall be approved by the City Engineer prior to approval of improvement plans or any construction.

76. The applicant shall contact and address Caltrans requirements. The applicant shall be required to mitigate impacts to State Highway facilities as determined by the City Engineer.

Dedications and Street Improvements

77. The applicant shall provide right-of-way acquisition or dedicate free and clear of all encumbrances and/or improve the following streets to City standards. The street improvements shall be in accordance with the City’s specific plans and shall match existing improvements. The applicant’s engineer shall be responsible for verifying the type, location, and grades of existing improvements.

    a. Shepherd Avenue – Along frontage, dedicate to provide right-of-way acquisition for 70' (existing 0' due to a change in the ultimate street centerline alignment) north of centerline and 60’ (existing varies) south of centerline, and improve with curb, gutter and sidewalk on both sides of the street, drive approaches, curb return ramps, street lights, fiber optic conduit, median island, median island landscaping and irrigation, landscape strip, 60' (30’ north + 30’ south) of permanent paving, and transitional paving as needed.

b. Shepherd Avenue – For orderly development, between the eastern limit of the development and North Fowler Avenue, dedicate to provide right-of-way acquisition for 70' (existing varies) north of centerline and 60’ (existing varies) south of centerline, and improve with curb, gutter and sidewalk on both sides of the street, drive approaches, curb return ramps, street lights, fiber optic conduit, median island, median island landscaping and irrigation, landscape strip, 60' (30’ north + 30’ south) of permanent paving, and transitional paving as needed.

c. North Sunnyside Avenue – Along frontage, dedicate to provide right-of-way acquisition for 47' (existing varies) east centerline, and improve with sidewalk, curb return ramps and landscape strip.

d. North Sunnyside Avenue Round-A-Bout – At Heirloom Avenue, dedicate and improve to Federal Highway Administration guidelines and approval of the City Engineer.

e. Heirloom Avenue –According to the approved Vesting Tentative Tract Map, dedicate to provide for 72’ to 85’ of right-of-way and improve with curb, gutter, sidewalk on the south side and pathway on the north side, drive approaches, curb return ramps, streetlights, landscaping and irrigation, permanent paving, and all transitional paving as needed.

f. North Fordham Avenue – Between Shepherd Avenue and Public Street "A” according to the approved Vesting Tentative Tract Map, dedicate to provide for 89’ of right-of-way and improve with curb, gutter, sidewalk on the east side and pathway on the west side, curb return ramps, streetlights, landscaping and irrigation, permanent paving, and all transitional paving as needed.

g. Private Street “F” – Between Heirloom Avenue and Perrin Avenue, according to the approved Vesting Tentative Tract Map, dedicate to provide for 67.2’ of right-of-way and improve with curb, gutter, pathway on the east side, curb return ramps, streetlights, landscape strip, permanent paving, and all transitional paving as needed.

h. Gated Developments – Provide ample vehicle stacking area outside the travel lanes of the public street that will allow vehicles to wait as vehicles are accessing the control panel to open the security gates. Design a turn-a-round to allow vehicles that cannot enter the complex to return to the street without backing the vehicle up. Provide the Solid Waste Division with remote controls that will allow access for all solid waste and recycling vehicles.

i. Public Interior Streets – Dedicate to provide for 50’ or 54’ of right-of-way in conformance with the City policy on street widths, and improve with curb, gutter, 5’ sidewalk adjacent to the curb, drive approaches, curb return ramps, streetlights, permanent paving, and all transitional paving as needed.

j. Private Interior Streets – For two-way traffic with no parking on both sides, the minimum travel width shall be 25’ with a clear width of 30’. For two-way traffic with parking on one side, the minimum travel width shall be 32’. For two-way traffic with parking on both sides, the minimum travel width shall be 36’.

k. Entry feature streets with median islands shall have a minimum of 22’ wide travel lanes in each direction with parking or without parking.

l. Cul-De-Sacs - dedicate to provide for 52' radius and improve with curb, gutter, sidewalk, streetlights, 43' permanent paving and all transitional paving as needed.

m. The applicant shall relinquish all vehicular access for all lots backing or siding onto Shepherd and North Sunnyside Avenues.

n. Shepherd Avenue – At the proposed local street, construct a 200-foot eastbound dedicated left-turn pocket and a 100-foot westbound dedicated right-turn lane.

78. The applicant shall provide a dedication for a 10' public utility easement, where applicable, along all frontages or alternate widths approved by the utilities companies.

79. For new onsite ADA paths of travel that connect to the City sidewalk, the applicant shall replace enough sidewalk to provide a compliant landing with appropriate transitions to existing sidewalk grades.

80. The applicant shall remove and repair all damaged or broken concrete improvements. The City Engineer may require the repair of additional improvements if they are damaged prior to occupancy.

81. The applicant shall not install any fences, temporary or permanent in public right-of-way.

82. The applicant shall provide preliminary title report, legal description and drawings for all dedications required which are not on the site. All contact with owners, appraisers, etc. of the adjacent properties where dedication is needed shall be made only by the City. The City will prepare an estimate of acquisition costs including but not limited to appraised value, appraisal costs, negotiation costs, and administrative costs. The applicant shall pay such estimated costs as soon as they are determined by the City.

83. The sideyard side of all corner lots shall have full width sidewalk except where planter strips or meandering sidewalk is proposed.

84. The applicant shall obtain "R Value" tests in quantity sufficient to represent all street areas, and have street structural sections designed by a registered civil engineer based on these "R Value" tests.

85. The applicant shall, at the ends of any permanent pavement abutting undeveloped property, install 2" x 6" redwood header boards that shall be placed prior to the street surfacing.

86. Standard barricades with reflectors shall be installed at ends of streets abutting undeveloped property and any other locations to be specified by the City Engineer.

Sewer

87. The applicant shall identify and abandon all septic systems to City standards.

88. The applicant shall install sanitary sewer mains of the size and in the locations indicated below, prior to occupancy. The sewer improvements shall be in accordance with the City's master plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and shall be supported by appropriate calculations.

    a. Shepherd Avenue – Install 15" main between North Sunnyside Avenue and North Fowler Avenue.
    b. Shepherd Avenue – Install 16" force main between North Sunnyside Avenue and North Fowler Avenue.
    c. Shepherd Avenue – Install 8" force main between North Sunnyside Avenue and North Fowler Avenue.
    d. Interior Streets – Install 8" mains.

89. The applicant shall install one (1) 4" sewer service house branch to each lot within the tentative tract.

90. The applicant shall notify all property owners annexed to the City and along streets where a new sewer main will be constructed to determine if they wish to be connected to City sewer. Property owners shall work directly with the applicant regarding costs and location. The applicant shall notify property owners that sewer connection fees are required if they choose to connect.

91. The City cannot guarantee at this time that sewer capacity will be available for this development when site construction occurs. The applicant, therefore, waives any claim or demand against the City for any delay in availability of sewer capacity for this subdivision.

92. Applicant acknowledges that sewage collection and treatment capacity for the area within which the proposed subdivision is located is extremely limited, and that capacity may not be available to provide service for the proposed subdivision at such time as applicant is ready to seek approval of a final map. Applicant acknowledges, understands, and agrees that if such sewage collection and treatment capacity is not available to serve the proposed subdivision, as determined in the sole and absolute discretion of the City of Clovis, the final map may not be approved. Notwithstanding the

foregoing, applicant has freely and voluntarily chosen to proceed with the submittal and processing of the tentative map, intends to expend money, time and effort in connection therewith, and accepts the risks that the final map approval may be delayed until sufficient capacity is available as determined in the sole and absolute discretion of the City of Clovis. Applicant agrees to hold harmless and indemnify the City of Clovis from any and all claims, costs, expenses, and damages incurred or suffered by applicant, its principals, officers, employees, agents, or contractors, caused by, in connection with, or arising out of the unavailability of sewage collection or treatment capacity to serve the proposed subdivision, or the City's refusal or failure to approve a final map for the proposed subdivision because of the unavailability of sewage collection or treatment.

Water

93. The applicant shall identify and abandon all water wells to City standards.

94. The applicant shall install water mains of the sizes and in the locations indicated below and provide an adequately looped and redundant water system prior to occupancy. The water improvements shall be in accordance with the City's master plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and shall be supported by appropriate calculations.

    a. Shepherd Avenue – Relocate the 16" main so the centerline of the entire length between North Sunnyside Avenue and North Fowler Avenue is 33' south of the street centerline.
    b. North Sunnyside Avenue – Install 24" main along the PG&E substation frontage to Perrin Avenue.
    c. Perrin Avenue – Install 24" main between North Sunnyside Avenue and North Marion Avenue.
    d. Interior Streets – Install 8" mains.
    e. Interior Private Streets – Install 8" mains.
    f. Provide appropriately sized off-site water mains for a redundant water system as approved by the City Engineer.

95. The applicant shall provide dedication of 15-foot-wide utility easements for all on-site water mains, hydrants, blow-offs, and water meters not located in otherwise dedicated rights-of-way.

96. The applicant shall install a City standard water service to each lot of the proposed subdivision. Water services shall be grouped at property lines to accommodate automatic meter reading system, including installation of connecting conduit. The water meter shall be placed in the sidewalk and not in planters or driveways.

97. The applicant shall notify all property owners' annexed to the City and along streets where a new water main will be constructed to determine if they wish to be connected

to City water. Property owners shall work directly with the applicant regarding costs and location. The applicant shall notify property owners that water connection fees are required if they choose to connect.

98. Prior to recording a final map of any phase, the applicant shall demonstrate to the satisfaction of the City Fire Chief and City Engineer that there is adequate water pressure to serve the units to be constructed. The applicant shall work with the City Engineer to determine the adequacy of water supply/pressure for the proposed development.

99. Applicant acknowledges that water distribution and treatment capacity for the area within which the proposed subdivision is located is extremely limited, and that distribution may not be available to provide service for the proposed subdivision at such time as applicant is ready to seek approval of a final map. Applicant acknowledges, understands, and agrees that if such water distribution and treatment capacity is not available to serve the proposed subdivision, as determined in the sole and absolute discretion of the City of Clovis, the final map may not be approved. Notwithstanding the foregoing, applicant has freely and voluntarily chosen to proceed with the submittal and processing of the tentative map, intends to expend money, time and effort in connection therewith, and accepts the risks that the final map approval may be delayed until sufficient distribution is available as determined in the sole and absolute discretion of the City of Clovis. Applicant agrees to hold harmless and indemnify the City of Clovis from any and all claims, costs, expenses, and damages incurred or suffered by applicant, its principals, officers, employees, agents, or contractors, caused by, in connection with, or arising out of the unavailability of water distribution or treatment capacity to serve the proposed subdivision, or the City's refusal or failure to approve a final map for the proposed subdivision because of the unavailability of water distribution or treatment capacity.

<u>Recycled Water</u>

100. The applicant shall install recycled water mains of the sizes and in the locations indicated below. The recycled water improvements shall be in accordance with the City's master plans and shall match existing improvements. All areas utilizing recycle water for irrigation shall be clearly marked on the improvement plans. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and may require appropriate calculations.
    a. Shepherd Avenue – Install 24" main between North Sunnyside Avenue and North Fowler Avenue.
    b. Paseos, Trails, and Neighborhood Parks – Install mains as necessary to serve the paseos, trails, and the neighborhood parks.

Grading and Drainage

101. The applicant shall contact the Fresno Metropolitan Flood Control District (FMFCD) and address all requirements, pay all applicable fees required, obtain any required NPDES permit, and implement Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology to reduce or eliminate storm water pollution. Plans for these requirements shall be included in the previously required set of construction plans, and shall be submitted to and approved by FMFCD prior to the release of any development permits.

102. Portions of the project appear to lie within a flood zone. The applicant shall comply with the requirements of the City's Municipal Code.

103. In the event permanent storm drainage facilities are not available, the applicant shall provide temporary on-site retention basins for storm water disposal and provide a cash deposit for each basin to offset the City's cost of maintaining the basins. The size and design shall be in accordance with the requirements of the City Engineer and may change based on design calculations and access requirements for maintenance. The temporary pond maintenance deposit shall be based on size, depth, expected maintenance schedule, etc. However, the property owner shall be responsible for periodic cleaning of toxic material. The temporary basin is solely for the convenience of the subdivision.

104. The owner of the property on which the temporary basin(s) are located shall backfilled said basin(s) within ninety (90) days after notice is given by the City that the basin(s) are no longer needed. In the event the owner fails to backfill said basin(s) within said 90 days, the City may cause the basin to be backfilled. A lien to cover the cost of the work will be placed on the property, including the costs to prepare and enforce the lien. A covenant shall be prepared and recorded on the lot on which the basin(s) is/are located.

105. Grade differentials between lots and adjacent properties shall be adequately shown on the grading plan and shall be treated in a manner in conformance with City of Clovis Standard Drawing No. M-4 as modified by the City Council. Any retaining walls required on-site or in public right of way shall be masonry construction. All retaining walls shall be designed by a registered civil engineer.

Irrigation and Landscaping Facilities

106. The applicant, as a portion of the required tract improvements, shall provide landscaping and irrigation as required herein. The landscaping and irrigation shall be installed in public right-of-way and the area reserved for landscaping. The irrigation and landscape improvements shall be in accordance with the City's master plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Plans for the required landscaping and irrigation systems shall be prepared by an appropriately registered professional at the applicant's expense and shall be approved by the City of Clovis

Planning and Development Services Department and Public Utilities Department prior to the beginning of construction or the recording of the final tract map, whichever occurs first. Landscape and irrigation facilities that the City Landscape Maintenance District shall maintain: landscape strips along North Sunnyside Avenue and Shepherd Avenue, and the median islands in Shepherd Avenue. The landscape strips around the planned unit developments in the interior streets may be maintained by a perpetual maintenance covenant.

107. The owner shall request annexation to and provide a covenant for the Landscape Maintenance District. The property owner acknowledges and agrees that such request serves as a petition pursuant to California State Proposition 218 and no further election shall be required for the establishment of the initial assessment. The assessment for each lot shall be obtained from the City for the tax year following the recordation of the final map. The estimated annual assessment per average sized lot is $524.53, which is subject to change prior to issuance of building permit or final tract map approval and is subject to an annual change in the range of the assessment in the amount of the Consumer Price Index, U.S. City Average, All Urban Consumers (CPI Index), plus two percent (2%). The additional landscaping enhancements that exceed the City norms and are specific benefit to the property, such as the entry feature, columns, monuments, interior median islands, round-a-bouts, special streetlights, etc, if determined to be maintained by the Landscape Maintenance District, shall be maintained by an additional landscape maintenance assessment. The applicant shall provide construction costs and deposit with the City an amount equal to 50% of the value of the enhanced landscaping hardscape features, or an alternate amount approved by the City Engineer, such as columns, monuments, and special street lights, that exceeds the City norms. The applicant shall provide the City with an estimate of the annual maintenance for the special lighting and landscaping enhancements that exceeds the City norms. The owner/developer shall notify all potential lot buyers before they actually purchase a lot that this tract is a part of a Landscape Maintenance District and shall inform potential buyers of the assessment amount. Said notification shall be in a manner approved by the City. The owner/developer shall supply all pertinent materials for the Landscape Maintenance District.

108. The applicant shall comply with the City of Clovis Water Efficient Landscape Requirements Ordinance.

109. All existing agricultural irrigation systems either on-site or in public right of way, shall be identified prior to any construction activity on the site. Service to all downstream users of irrigation water shall be maintained at all times through preservation of existing facilities or, if the existing facilities are required to be relocated, the relocation and replacement of the existing facilities. It is the intent that downstream users not bear any burden as a result of development of the site. Therefore, the applicant shall pay all costs related to modification, relocation, or repair of any existing irrigation facilities resulting from or necessitated by the development of the site. The applicant shall identify on site plans and construction plans, all existing irrigation systems and their disposition (abandonment, repair, relocation, and/or piping). The applicant shall provide waivers

from all users in order to abandon or modify any irrigation pipelines or for any service interruptions resulting from development activities.

110. The applicant shall provide a landscape and irrigation perpetual maintenance covenant recorded for landscaping installed in the public right-of-way behind the curb including easements that will not be maintained by the Clovis Landscape Maintenance District. A recordable covenant shall be submitted to and approved by the City of Clovis City Engineer prior to final map approval.

111. The applicant shall provide a perimeter wall perpetual maintenance covenant on all properties that have a perimeter wall that is installed on private property. A recordable covenant shall be submitted to and approved by the City of Clovis City Engineer prior to final map approval.

Miscellaneous

112. The applicant shall install streetlights per the attached street light exhibit. Streetlights along the major streets shall be installed on metal poles to local utility provider’s standards at the locations designated by the City Engineer. Street light locations shall be shown on the utility plans submitted with the final map for approval. Streetlights at future traffic signal locations shall be installed on approved traffic signal poles, including all conduits and pull boxes. Streetlights along the major streets shall be owned and maintained by local utility providers. Proof of local utility provider’s approval shall be provided. The applicant may install thematic lighting, as approved by the City Engineer. If the applicant chooses to install thematic lighting, the applicant shall provide a conceptual lighting plan identifying adjacent properties that may be incorporated with thematic lights to create a neighborhood effect. Thematic lighting owned by the City shall be maintained by an additional landscape maintenance assessment.

113. The applicant shall install all major street monumentation and section corner monumentation within the limits of the project work in accordance with City Standard ST-32 prior to final acceptance of the project. Monumentation shall include all section corners, all street centerline intersection points, angle points and beginning and end of curves (E.C.'s & B.C.'s). The applicant/contractor shall furnish brass caps. Any existing section corner or property corner monuments damaged by this development shall be reset to the satisfaction of the City Engineer. A licensed land surveyor or civil engineer licensed to perform land surveying shall certify the placement of all required monumentation prior to final acceptance. Brass caps required for installation of new monuments or replacement of existing monuments shall be provided by the contractor/the applicant and approved by City prior to installation. Within five days after the final setting of all monuments has been completed, the engineer or surveyor shall give written notice to the City Engineer that the final monuments have been set. Upon payment to the engineer or surveyor for setting the final monuments, the applicant shall present to the City Engineer evidence of the payment and receipt thereof by the engineer or surveyor.

114. A deferment, modification, or waiver of any engineering conditions shall require the express written approval of the City Engineer.

115. The conditions given herein are for the entire development. Additional requirements for individual phases may be necessary pending review by the City Engineer.

Fresno Metropolitan Flood Control District (FMFCD) Comments

(Robert Villalobos, Department Representative – 559-456-3292)

116. The applicant shall refer to the attached FMFCD correspondence. If the list is not attached, please contact the Fresno Metropolitan Flood Control District for the requirements.

Fresno Irrigation District (FID) Conditions

(Laurence Kimura, Department Representative – 559-233-8227)

117. The applicant shall refer to the attached Fresno Irrigation District correspondence. If the list is not attached, please contact the FID for the list of requirements.

County of Fresno Health Department Conditions

(Kevin Tsuda, County of Fresno Health Department Representative – 600-3271)

118. The applicant shall refer to the attached Fresno County Health Department correspondence. If the list is not attached, please contact the Health Department for the list of requirements.

Caltrans

(Christopher Xiong, Caltrans Representative – 908-7064)

119. The applicant shall refer to the attached Caltrans correspondence. If the list is not attached, please contact the Caltrans for the list of requirements.

Clovis Unified School District

(Michael Johnston, CUSD Representative – 327-9000)

120. The applicant shall refer to the attached CUSD correspondence. If the list is not attached, please contact the CUSD for the list of requirements.

San Joaquin Valley Air Pollution Control District

(Carol Flores, SJVAPCD Representative – 230-5935)

121. The applicant shall refer to the attached SJVAPCD correspondence. If the list is not attached, please contact the SJVAPCD for the list of requirements.

Administration Department Conditions

(John Holt, Department Representative – 324-2060)

122. Prior to approval, recordation or filing of an annexation, final map, or site plan, the property covered by the Project shall be included within or annexed to a Community Facilities District (CFD), established by the City for the provision of public facilities and services, for which proceedings have been consummated, and shall be subject to the special tax approved with the formation or annexation to the CFD. The CFD applies only to residential projects.

RESOLUTION 24-__

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING A PLANNED DEVELOPMENT PERMIT FOR VESTING TENTATIVE TRACT MAP 6205 LOCATED AT THE NORTHEAST CORNER OF SHEPHERD AND N. SUNNYSIDE AVENUES

WHEREAS, Great Bigland, LP., 7550 N. Palm Avenue, Suite 102, Fresno, CA 93711, has applied for a Planned Development Permit (PDP 2021-004) to deviate from the R-1 Zone District development standards associated with Vesting Tentative Tract Map 6205 for a 605-lot single-family subdivision (“Project”) on approximately 77 acres of property located at the northeast corner of Shepherd and N. Sunnyside Avenues (“Property”); and

WHEREAS, the proposed PDP 2021-004 is in keeping with the intent and purpose of the Zoning Ordinance; and

WHEREAS, the Planning Commission considered PDP 2021-004 on November 16, 2023, recommending denial of said PDP; and

WHEREAS, a duly noticed hearing was held on March 18, 2024, at which time the City Council considered PDP 2021-004; and

WHEREAS, the City published notice of the public hearing in the Fresno Business Journal on March 6, 2024, mailed public notices to property owners within 800 feet of the Property, including the Dry Creek Preserve Area, ten (10) days prior to said Planning Commission hearing, and otherwise posted notice of the Public Hearing according to applicable law; and

WHEREAS, the City Council has given careful consideration to this Planned Development Permit on March 18, 2024, and considered the CEQA analysis outlined in the staff report and elsewhere in the Administrative Record which determines that the Project meets the requirements pursuant to CEQA Guidelines and does certify the Revised Final Project Environmental Impact Report for the Shepherd North Project; adopt the CEQA Findings of Fact and a Statement of Overriding Considerations; and adopt a Mitigation Monitoring and Reporting Program; and

WHEREAS, the City Council has reviewed and considered the entire Administrative Record relating to the Project, which is on file with the Department, and reviewed and considered those portions of the Administrative Record determined to be necessary to make an informed decision, including, but not necessarily limited to, the staff report, the written materials submitted with the request, and the verbal and written testimony and other evidence presented during the public hearing, and the conditions of approval attached as **Attachment A** to this Resolution, which are incorporated herein by this reference.

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. The City Council hereby approves Planned Development Permit 2021-004 (“PDP 2021-004”), subject to the conditions of approval set forth in **Attachment A** of this Resolution.

2. The Project satisfies the required findings for approval of a Planned Development Permit, as follows:

    a. The Project is allowed within the subject base zoning district;

    b. The Project is consistent with the purpose, intent, goals, policies, actions, and land use designations of the General Plan and any applicable specific plan;

    c. The Project is generally in compliance with all of the applicable provisions of this Development Code relating to both on- and off-site improvements that are necessary to accommodate flexibility in site planning and property development and to carry out the purpose, intent, and requirements of this chapter and the subject base zoning district, including prescribed development standards and applicable design guidelines;

    d. The Project ensures compatibility of property uses within the zoning district and general neighborhood of the proposed development;

    e. The Project would produce a comprehensive development of superior quality (e.g., appropriate variety of structure placement and orientation opportunities, appropriate mix of structure sizes, high quality architectural design, increased amounts of landscaping and open space, improved solutions to the design and placement of parking facilities, incorporation of a program of enhanced amenities, etc.) than which might otherwise occur from more traditional development applications;

    f. Proper standards and conditions have been imposed to ensure the protection of the public health, safety, and welfare;

    g. Proper on-site traffic circulation and control is designed into the development to ensure protection for fire suppression and police surveillance equal to or better than what would normally be created by compliance with the minimum setback and parcel width standards identified in Division 2 of this title (Zoning Districts, Allowable Land Uses, and Zone-Specific Standards);

    h. The subject parcel is adequate in terms of size, shape, topography, and circumstances to accommodate the proposed development; and

i. The design, location, operating characteristics, and size of the proposed development would be compatible with the existing and future land uses in the vicinity, in terms of aesthetic values, character, scale, and view protection.

3. The City Council could not make the findings necessary for approval of PDP 2021-004 without the conditions of approval set forth in **Attachment A** to this Resolution.

4. The basis for the findings is detailed in the March 18, 2024, staff report, which is hereby incorporated by reference, the entire Administrative Record, as well as the evidence and comments presented during the public hearing.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: March 18, 2024

Mayor

City Clerk

Attachment A
Conditions of Approval – PDP 2021-004
Planning Division Comments
(George González, Senior Planner - (559) 324-2383)

1. As part of the required public amenity for the Project, the developer shall contribute a dollar amount totaling $150,000 to the City for utilization in future open space and/or park improvements.

2. As a private amenity for the Project, the developer shall contribute the construction of a recreational area within two gated communities, which includes a pool, restroom facility, outdoor shower, cabana/ pergola, and lawn chairs. Specific amenity details will be reviewed during the civil plan review process.

3. The proposed project must also produce a comprehensive development of superior quality than which might otherwise occur from more traditional development on the site. This could include an enhanced entry point, an embellished block wall on both street frontages, and superior exterior elevation design, all of which will be reviewed and approved through the civil plan review process and residential site plan review.

4. No more than two of the same unit type (floor layout and exterior materials package) shall be repeated side by side. When two of the same units are repeated side by side, they shall be different colors. These identical provisions may be waived by the City Planner on a specific lot basis within the project when the size or configuration of a lot would otherwise prevent compliance with the above requirements of any other siting or setback/yard requirements established under this application. If such a waiver is requested, the developer and City Planner shall work together to ensure that any sitings of units not in compliance with the above requirements shall be of different materials and elevations in order to minimize any adverse visual impacts that may result.

5. Setbacks shall be measured to the exterior face of the framing of the structure. Exceptions to the setbacks are identified in §9.24.100, of the Clovis Municipal Code.

6. Maximum lot coverage for the Citrea lots/ homes of TM6205 is 60% unless specifically approved through a residential site plan review or variance.

7. Maximum lot coverage for the Elev8ions lots/ homes of TM6205 is 65% unless specifically approved through a residential site plan review or variance.

8. Maximum lot coverage for the Regent lots/ homes of TM6205 is 60% unless specifically approved through a residential site plan review or variance.

9. Maximum building (main structure) height shall not exceed thirty-five (35) feet.

10. Planned Development Permit PDP 2021-004 standards for Citrea lots/ homes within TM6205 shall be as follows:

Setbacks	Front (Garage)	Front (house)	Garage Side	Corner Street Sides	Rear
Plan 1334 (one-story)	18’	10’	5’	5’	5’
Plan 1482 (one-story)	18’	10’	5’	5’	5’
Plan 1612 (one-story)	18’	10’	5’	5’	5’
Plan 1782 (one-story)	18’	10’	5’	5’	5’
Plan 2741 (two-story)	18’	10’	5’	5’	5’

Lot Coverage:	60% Max
Maximum Height:	2-stories not to exceed 35 feet
Minimum Lot Size:	3,700 square feet
Minimum Parcel Width:	50 feet
Minimum Curved Parcel Width:	25 feet
Minimum Corner Parcel Width:	53 feet
Minimum Parcel Depth:	74 feet
Reversed Corner Street Side Setback:	5 feet
Corner Street Side Fence Setback:	3 feet
Interior Side Yard Setback (opposite from garage):	3 feet
Setback to Projections and/or Porch/ Patio:	9 feet
Garages:	20’x20’ interior dimension (**2-car**)

11. Planned Development Permit PDP2021-004 standards for Elev8ions lots/ homes within TM6205 shall be as follows:

Setbacks	Front (Garage)	Front (house)	Garage Side	Corner Street Sides	Rear
Plan 1212 (two-story)	5’	5’	5’	3’	4’
Plan 1390 (two-story)	5’	5’	5’	3’	4’
Plan 1648 (two-story)	5’	5’	5’	3’	4’
Plan 1660 (two-story)	5’	5’	5’	3’	4’

Lot Coverage:	65% Max
Maximum Height:	2-stories not to exceed 35 feet
Minimum Lot Size:	1,980 square feet
Minimum Parcel Width:	36 feet
Minimum Curved Parcel Width:	36 feet
Minimum Corner Parcel Width:	50 feet
Minimum Parcel Depth:	50 feet
Reversed Corner Street Side Setback:	3 feet
Corner Street Side Fence Setback:	3 feet
Interior Side Yard Setback (opposite from garage):	3 feet
Setback to Projections and/or Porch/ Patio:	4 feet
Garages:	20’x20’ interior dimension (**2-car**) 10’x20’ interior dimension (**1-car**)

12. Planned Development Permit PDP 2021-004 standards for Regent lots/ homes within TM6205 shall be as follows:

Setbacks	Front (Garage)	Front (house)	Garage Side	Corner Street Sides	Rear
Plan 1887 (one-story)	18’	10’	5’	8’	8’
Plan 2007 (one-story)	18’	10’	5’	8’	8’
Plan 2162 (one-story)	18’	10’	5’	8’	8’
Plan 2432 (two-story)	18’	10’	5’	8’	8’
Plan 3056 (two-story)	18’	10’	5’	8’	8’

Lot Coverage:	60% Max
Maximum Height:	2-stories not to exceed 35 feet
Minimum Lot Size:	4,500 square feet
Minimum Parcel Width:	50 feet
Minimum Curved Parcel Width:	25 feet
Minimum Corner Parcel Width:	53 feet
Minimum Parcel Depth:	90 feet
Reversed Corner Street Side Setback:	8 feet
Corner Street Side Fence Setback:	3 feet
Interior Side Yard Setback (opposite from garage):	3 feet
Setback to Projections and/or Porch/ Patio:	9 feet
Garages:	20’x20’ interior dimension (**2-car**) 20’x20’ minimum with 9’x15.5’ minimum tandem (**3-car**)

13. Landscape plans shall be reviewed and approved separately by the landscape review committee for tree and landscape type and location.

14. All lighting shall be screened from direct view from the public right-of-way and adjacent residential properties.

15. All landscaping (open space and private yards) shall conform to the City of Clovis Water Efficient Landscape Ordinance.

16. The developer shall construct a minimum six-foot high solid split face masonry wall along the Shepherd and N. Sunnyside Avenue frontages. The masonry wall along Shepherd Avenue shall incorporate tubular steel fencing with pedestrian gates. The masonry walls shall incorporate angled corners at entries, and columns at the corners and ends.

17. The developer shall construct a minimum six-foot high solid masonry wall along property lines adjacent to the Fordham Avenue frontage.

18. The developer shall construct a minimum six-foot high solid masonry wall along the northern property line of Heirloom Avenue and the western property line of Private Street “F” frontage.

19. A minimum 6-foot high wood fence shall be placed along the northern (near Perrin Road alignment) and eastern property lines. If one is existing, it shall be of a condition to the satisfactory of the Planning Division and in compliance with fence standards.

20. The developer shall provide trail furniture, including benches and trash receptacles, along Shepherd Avenue, Fordham Avenue, Heirloom Avenue, and Private Street “F.”

21. The developer shall install pedestrian bollard lighting along the community trail on Shepherd Avenue, consistent with TM6200 to the west. Bollard light spacing will be every 100 linear feet.

22. The applicant shall provide an all-weather surface for the placement and storage of trash receptacles.

23. This Project requires the submittal and approval of a residential site plan review entitlement for lot-specific development standards. Specific color and materials of the models, walls, amenities, landscaping, and fencing will be evaluated through the civil plans.

RESOLUTION 24-__

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS MAKING APPLICATION TO THE FRESNO LOCAL AGENCY FORMATION COMMISSION AND REQUESTING THE COMMISSION TO TAKE PROCEEDINGS FOR THE SHEPHERD-SUNNYSIDE NORTHEAST REORGANIZATION

WHEREAS, the City of Clovis desires to initiate proceedings pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, Division 3, commencing with Section 56000 of the California Government Code, for the reorganization; and

WHEREAS, the specific changes of organization requested are annexation to the City of Clovis and detachment from the Fresno County Fire Protection District; and

WHEREAS, the territory proposed to be reorganized is uninhabited, and on this day contains 0 voters, according to information received from the County Election Officer; and

WHEREAS, a description of the boundaries of the territory is set forth in **Attachment A** attached hereto and by this reference incorporated herein; and

WHEREAS, this proposal is consistent with the sphere of influence expansion request of the affected City as identified under the Fourth Amendment of the MOU; and

WHEREAS, the proposal complies with the terms and standards of the tax sharing agreement between the City of Clovis and the County of Fresno; and

WHEREAS, on March 18, 2024, the City Council certified the Revised Final Project Environmental Impact Report for the Shepherd North Project; adopted the CEQA Findings of Fact and a Statement of Overriding Considerations; and adopted a Mitigation Monitoring and Reporting Program for the annexation and development project of the property, which is the subject of the Shepherd-Sunnyside Northeast Reorganization; and

WHEREAS, it is desired to provide that the proposed Shepherd-Sunnyside Northeast Reorganization be subject to the following terms and conditions:

1. The regular assessment roll shall be utilized.
2. Each new development will be required to demonstrate adequate water availability and, if necessary, will be required to drill and test a well, and to connect it to the city water system.
3. Each new development will be required to obtain sewage capacity from the trunk sewer specified by the City Engineer.

ATTACHMENT 7

4. The provisions of Article II, Annexation by City, as agreed between the City of Clovis and the County of Fresno pursuant to the June 6, 2017, Memorandum of Understanding, as amended from time to time, regarding tax sharing shall apply.

5. The applicants shall reimburse the City for any expense associated with the transition agreement for fire services with the Fresno County Fire Protection District that would apply to this proposal.

6. A "Right-to-Farm" covenant shall be recorded for each tract map or made a condition of each tract map.

7. Pursuant to Government Code Section 56663, the City shall consent to the annexation and waive its rights to a hearing.

8. Prior to approval, recordation or filing of an annexation, tentative map, final map, parcel map, or site plan (Project), the property covered by the Project shall be included within or annexed to a Community Facilities District (CFD), established by the City for the provision of public facilities and services, for which proceedings have been consummated, and shall be subject to the special tax approved with the formation or annexation to the CFD.

   The applicant and the property owner acknowledge and agree that if the Project was not part of a CFD, the City might lack the financial resources to operate facilities and provide public services, such as police protection, fire protection, emergency medical services, parks and recreation services, street maintenance, and public transit. Absent the requirement for inclusion of the Project within a CFD, the City might not be able to make the finding that the Project is consistent with the General Plan and relevant specific plans, and might not be able to make the findings supporting approval of the Project as required by the Subdivision Map Act and the California Environmental Quality Act, and the City might be required to deny the application for the Project.

   The owner/developer shall notify all potential lot buyers prior to sale that this Project is a part of a Community Facilities District and shall inform potential buyers of the special tax amount. Said notification shall be in a manner approved by the City.

   This requirement may be waived in the discretion of the City Council if, at the time of the approval, recordation, or filing of the Project, the City Council has determined that it is not necessary that the Project be included in the CFD.

WHEREAS, the terms and conditions above are the sole responsibility of the City of Clovis to monitor and enforce. The Fresno Local Agency Formation Commission will not be required to enforce the aforesaid terms and conditions as a responsible agency; and

WHEREAS, the reason for this proposed reorganization is to provide municipal services, local controls, and logical growth to the unincorporated area of the County that is remote from County services and undergoing urban development; and

WHEREAS, this annexation proposal is consistent with the proposed City of Clovis' general plan land use diagram designations; and

WHEREAS, the City Council has reviewed and approved the master service plan for the subject change of organization; and

NOW, THEREFORE, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. The annexation of property within the boundaries set forth in **Attachment A** is in compliance with the Standards of Annexation as identified in the Memorandum of Understanding between the City of Clovis and the County of Fresno, which is commonly referred to as the Tax Sharing Agreement.

2. This Resolution of Application is hereby adopted and approved by the City Council of the City of Clovis, and the Fresno Local Agency Formation Commission is hereby requested to take proceedings for the reorganization of the territory as described in **Attachment A**, according to the terms and conditions stated above and in the manner provided by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: March 18, 2024

Mayor

City Clerk

SHEPHERD-SUNNYSIDE NORTHEAST REORGANIZAT
TO BE ANNEXED THE CITY OF CLOVIS AND DETACHMENT FROM FRESNO COUNTY FIRE PROTECTION DISTRICT AND KINGS RIVER CONSERVATION DISTRICT

That portion of the Southwest quarter of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian, in the County of Fresno, State of California, described as follows:

BEGINNING at the Northwest corner of the East half of said Southwest quarter;

Thence (1) North 89°21'24" East, along the North line of said East half, a distance of 659.82 feet to the Northeast corner of the West half of said East half;

Thence (2) South 00°53'01" East, along the East line of the West half of said East half, a distance of 2535.22 feet to the Northwest corner of that area granted to the City of Clovis per Grant Deed recorded December 8, 2016 as Document No. 2016-0168528-00, Official Records of Fresno County, said point being the beginning of a 2234.00 foot radius non-tangent curve concave Southerly, a radial to said beginning bears North 04°41'25" East;

Thence (3) Easterly, along the Northerly line of said area, along said curve, through a central angle of 0°09'54", an arc distance of 6.43 feet;

Thence (4) South 85°08'41" East, along the Northerly line of said area, a distance of 320.85 feet to a point on the East line of Parcel 3 of Parcel Map No. 3637 recorded in Book 24 of Parcel Maps at Page 59, Fresno County Records, said point being on the Westerly line of that area granted to the City of Clovis per Grant Deed recorded April 11, 2016 as Document No. 2016-0044555-00, Official Records of Fresno County;

Thence (5) North 00°53'06" West, along the East line of said Parcel 3 and along the Westerly line of last said area, a distance of 11.70 feet to the Northwest corner of last said area;

Thence (6) along the Northerly line of last said area, the following five [5] courses: [1] South 85°08'31" East, a distance of 235.79 feet;

Thence (7) [2] North 81°43'27" East, a distance of 13.20 feet;

Thence (8) [3] South 85°08'31" East, a distance of 12.68 feet;

Thence (9) [4] North 46°59'18" East, a distance of 32.01 feet;

Thence (10) [5] South 89°07'21" East, a distance of 20.00 feet to the Northeast corner of last said area;

Thence (11) North 79°15'13" East, a distance of 60.90 feet to a point on the Northwest corner of that area granted to the City of Clovis per Grant Deed recorded September 3, 2014 as Document No. 2014-0097740-00, Official Records of Fresno County;

Thence (12) along the Northerly line of last said area, the following three [3] courses: [1] North 89°07'09" East, a distance of 30.00 feet;

Thence (13) [2] South 45°55'52" East, a distance of 32.54 feet;

Thence (14) [3] South 84°50'13" East, a distance of 52.11 feet to the North corner of that area granted to the City of Clovis per Grant Deed recorded August 11, 2014 as Document No. 2014-0088209-00, Official Records of Fresno County;

Thence (15) South 00°40'56" East, along the East line of last said area, a distance of 72.43 feet to a point on the South line of the Southeast quarter of said Section 2, said point being on the existing city limits of the City of Clovis;

Thence (16) South 89°19'04" West, along the South line of said Southeast quarter and along the existing city limits of the City of Clovis, a distance of

AARON D. SPRAY
P.L.S. 9484

2-2-24

134.59 feet to the Southeast corner of the Southwest quarter of said Section 21;

Thence (17) South 89°19'18" West, along the South line of said Southwest quarter and along the existing city limits of the City of Clovis, a distance of 1319.35 feet to the Southwest corner of the Southeast quarter of said Southwest quarter;

Thence (18) North 00°53'13" West, along the West line of the Southeast quarter of said Southwest quarter and along the existing city limits of the City of Clovis, a distance of 30.00 feet to a point being 30.00 feet North of the South line of said Southwest quarter;

Thence (19) South 89°19'18" West, parallel with and 30.00 feet North of the South line of said Southwest quarter and along the existing city limits of the City of Clovis, a distance of 1299.35 feet to a point being 20.00 feet East of the West line of said Southwest quarter;

Thence (20) North 00°53'36" West, parallel with and 20.00 feet East of the West line of said Southwest quarter and along the existing city limits of the City of Clovis, a distance of 1293.68 feet to a point on the North line of the Southwest quarter of said Southwest quarter;

Thence (21) North 89°20'22" East, along the North line of the Southwest quarter of said Southwest quarter and along the existing city limits of the City of Clovis, a distance of 20.00 feet;

Thence (22) leaving the existing city limits of the City of Clovis, North 89°20'22" East, along the North line of the Southwest quarter of said Southwest quarter, a distance of 1279.49 feet to the Southwest corner of the North half of said East half;

Thence (23) North 00°53'13" West, along the West line of said East half, a distance of 1323.30 feet to the **POINT OF BEGINNING.**

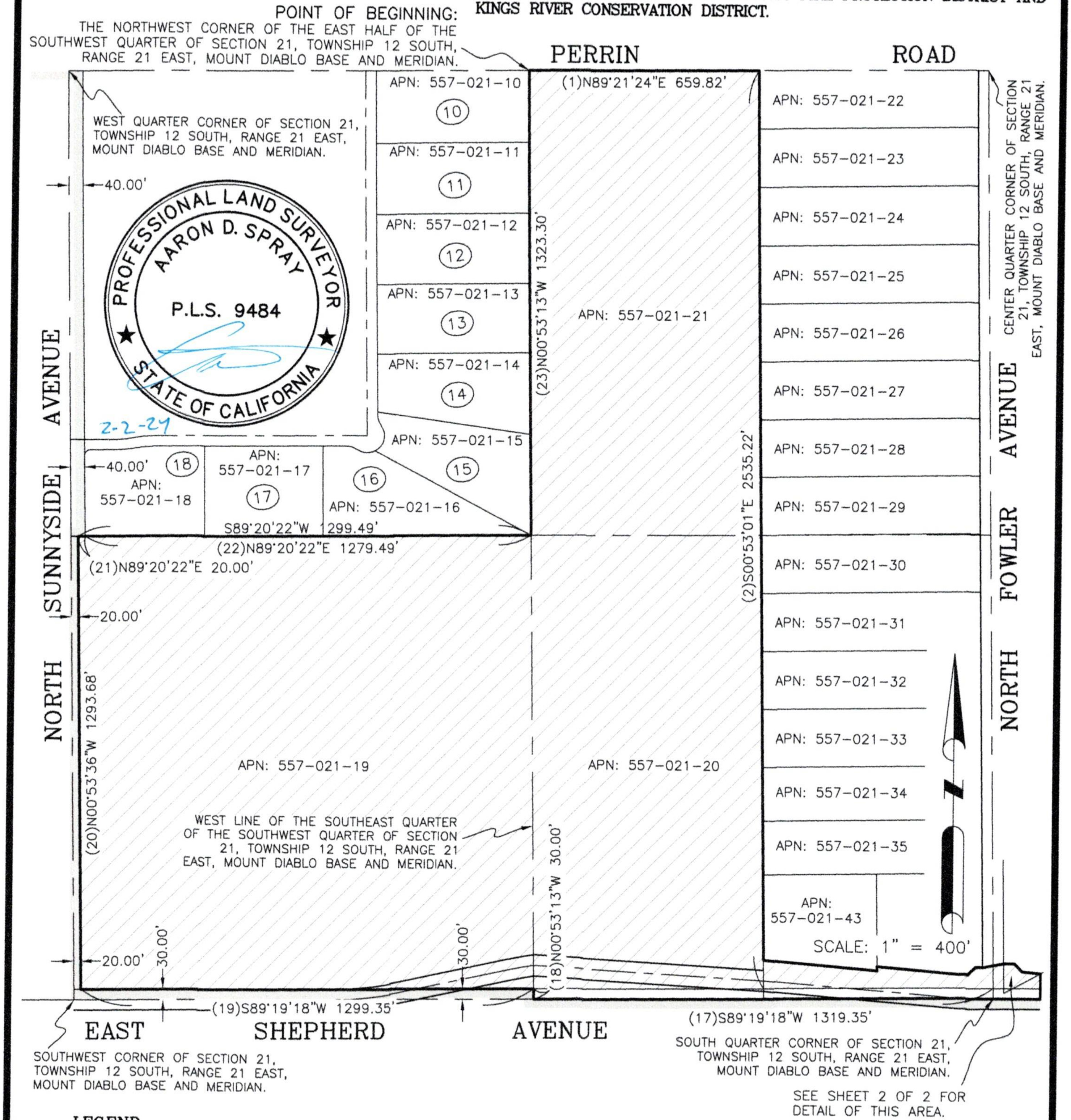
Containing 80.269 acres, more or less.

PROFESSIONAL LAND SURVEYOR
AARON D. SPRAY
P.L.S. 9484
STATE OF CALIFORNIA

2-2-24

SHEPHERD–SUNNYSIDE NORTHEAST REORGANIZATION

A PORTION OF SECTION 21 TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN TO BE ANNEXED TO THE CITY OF CLOVIS AND DETACHMENT FROM FRESNO COUNTY FIRE PROTECTION DISTRICT AND KINGS RIVER CONSERVATION DISTRICT.



LEGEND

▨ AREA TO BE ANNEXED TO THE CITY OF CLOVIS.
AREA: 80.269 ACRES +/-

EXISTING CITY LIMITS OF THE CITY OF CLOVIS.

(XX) LOT PER TRACT No. 3286, QUAIL RUN, RECORDED IN VOLUME 37 OF PLATS AT PAGE 88, FRESNO COUNTY RECORDS.

0' 400' 800' 1200'

PREPARED BY:

DIXON & ASSOCIATES, INC.
LAND SURVEYING

620 DEWITT, #101
CLOVIS, CALIFORNIA, 93612

PH: (559)297-4200 FAX: (559)297-4272

DATE: Jan. 5, 2022
SCALE: 1" = 400'
DWN BY: GMR
WO: 18-147/6205

REVISIONS:
Sep. 8, 2023
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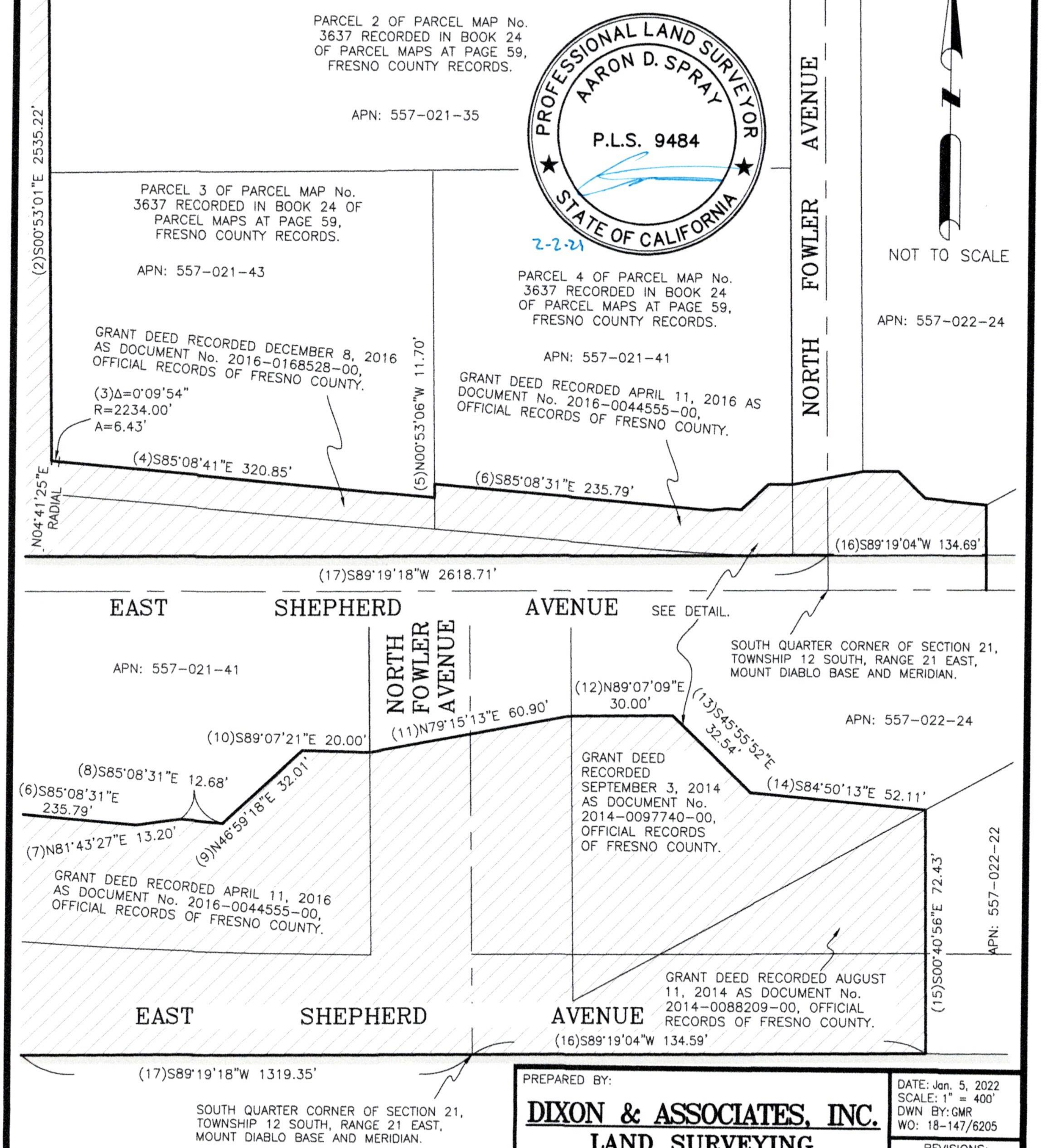
DRAWING NO.
1
OF 2 SHEET

SHEPHERD–SUNNYSIDE NORTHEAST REORGANIZATION
A PORTION OF SECTION 21 TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN TO BE ANNEXED TO THE CITY OF CLOVIS AND DETACHMENT FROM FRESNO COUNTY FIRE PROTECTION DISTRICT AND KINGS RIVER CONSERVATION DISTRICT.



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DRAWING NO.
2
OF 2 SHEE

RESOLUTION 24-__

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING THE FOURTH AMENDMENT TO THE 2017 AMENDED AND RESTATED MEMORANDUM OF UNDERSTANDING BETWEEN THE COUNTY OF FRESNO AND CITY OF CLOVIS REGARDING A SPHERE OF INFLUENCE EXPANSION AND STANDARDS OF ANNEXATION

WHEREAS, In November 2021, the Clovis City Council approved a request by Wilson Premier Homes to revise the previously approved SOI boundary from approximately 1,050 acres to 155 acres of land. The City Council authorized staff to proceed with the amendment to the City's SOI expansion to add approximately 155 acres and to prepare and submit a LAFCo application for the SOI expansion. Additionally, the City Council authorized staff to execute a consultant agreement for the preparation of an Environmental Impact Report (EIR) associated with the Shepherd North Project (TM6205); and

WHEREAS, A Fourth Amendment to the 2017 Amended and Restated Memorandum of Understanding between the County of Fresno and City of Clovis is necessary to facilitate the proposed sphere of influence expansion and the annexation of the Shepherd-Sunnyside Northeast Reorganization to the City of Clovis, as set forth in **Attachment A**; and

WHEREAS, the City Council has reviewed and considered the staff report and all written materials submitted in connection with the application and hearing and considered the testimony presented during the public hearing ("Administrative Record"); and

WHEREAS, this Council finds and determines that approval of said Fourth Amendment to the Memorandum of Understanding between the County of Fresno and City of Clovis should be conditioned on all conditions recommended by the City and County staff, as set forth in **Attachment B**.

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. A Fourth Amendment to the 2017 Amended and Restated Memorandum of Understanding between the County of Fresno and City of Clovis is necessary to facilitate the sphere of influence expansion and the annexation of the Shepherd-Sunnyside Northeast Reorganization to the City of Clovis, as set forth in **Attachment A**; and

2. The basis for the findings is detailed in the March 18, 2024, staff report, which is hereby incorporated by reference, the entire Administrative Record, as well as the evidence and comments presented during the Public Hearing; and

3. As part of the Shepherd-Sunnyside Northeast Reorganization boundaries, the annexation area will include the full public rights-of-way of Shepherd Avenue, along the project's frontage; and

4. The Fourth Amendment to the 2017 Amended and Restated Memorandum of Understanding between the County of Fresno and City of Clovis is hereby approved.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: March 18, 2024

Mayor City Clerk

SHEPHERD-SUNNYSIDE NORTHEAST REORGANIZAT
TO BE ANNEXED THE CITY OF CLOVIS AND DETACHMENT FROM FRESNO COUNTY FIRE PROTECTION DISTRICT AND KINGS RIVER CONSERVATION DISTRICT

That portion of the Southwest quarter of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian, in the County of Fresno, State of California, described as follows:

BEGINNING at the Northwest corner of the East half of said Southwest quarter;

Thence (1) North 89°21'24" East, along the North line of said East half, a distance of 659.82 feet to the Northeast corner of the West half of said East half;

Thence (2) South 00°53'01" East, along the East line of the West half of said East half, a distance of 2535.22 feet to the Northwest corner of that area granted to the City of Clovis per Grant Deed recorded December 8, 2016 as Document No. 2016-0168528-00, Official Records of Fresno County, said point being the beginning of a 2234.00 foot radius non-tangent curve concave Southerly, a radial to said beginning bears North 04°41'25" East;

Thence (3) Easterly, along the Northerly line of said area, along said curve, through a central angle of 0°09'54", an arc distance of 6.43 feet;

Thence (4) South 85°08'41" East, along the Northerly line of said area, a distance of 320.85 feet to a point on the East line of Parcel 3 of Parcel Map No. 3637 recorded in Book 24 of Parcel Maps at Page 59, Fresno County Records, said point being on the Westerly line of that area granted to the City of Clovis per Grant Deed recorded April 11, 2016 as Document No. 2016-0044555-00, Official Records of Fresno County;

Thence (5) North 00°53'06" West, along the East line of said Parcel 3 and along the Westerly line of last said area, a distance of 11.70 feet to the Northwest corner of last said area;

Thence (6) along the Northerly line of last said area, the following five [5] courses: [1] South 85°08'31" East, a distance of 235.79 feet;

Thence (7) [2] North 81°43'27" East, a distance of 13.20 feet;

Thence (8) [3] South 85°08'31" East, a distance of 12.68 feet;

Thence (9) [4] North 46°59'18" East, a distance of 32.01 feet;

Thence (10) [5] South 89°07'21" East, a distance of 20.00 feet to the Northeast corner of last said area;

Thence (11) North 79°15'13" East, a distance of 60.90 feet to a point on the Northwest corner of that area granted to the City of Clovis per Grant Deed recorded September 3, 2014 as Document No. 2014-0097740-00, Official Records of Fresno County;

Thence (12) along the Northerly line of last said area, the following three [3] courses: [1] North 89°07'09" East, a distance of 30.00 feet;

Thence (13) [2] South 45°55'52" East, a distance of 32.54 feet;

Thence (14) [3] South 84°50'13" East, a distance of 52.11 feet to the North corner of that area granted to the City of Clovis per Grant Deed recorded August 11, 2014 as Document No. 2014-0088209-00, Official Records of Fresno County;

Thence (15) South 00°40'56" East, along the East line of last said area, a distance of 72.43 feet to a point on the South line of the Southeast quarter of said Section 2, said point being on the existing city limits of the City of Clovis;

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AARON D. SPRAY
P.L.S. 9484

2-2-24

ATTACHMENT A

SHEPHERD-SUNNYSIDE NORTHEAST REORGANIZA
TO BE ANNEXED THE CITY OF CLOVIS AND DETACHMENT FROM FRESNO COUNTY FIRE PROTECTION DISTRICT AND KINGS RIVER CONSERVATION DISTRICT

134.59 feet to the Southeast corner of the Southwest quarter of said Section 21;

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Containing 80.269 acres, more or less.

PROFESSIONAL LAND SURVEYOR
AARON D. SPRAY
P.L.S. 9484
STATE OF CALIFORNIA

2-2-24

SHEPHERD–SUNNYSIDE NORTHEAST REORGANIZATION

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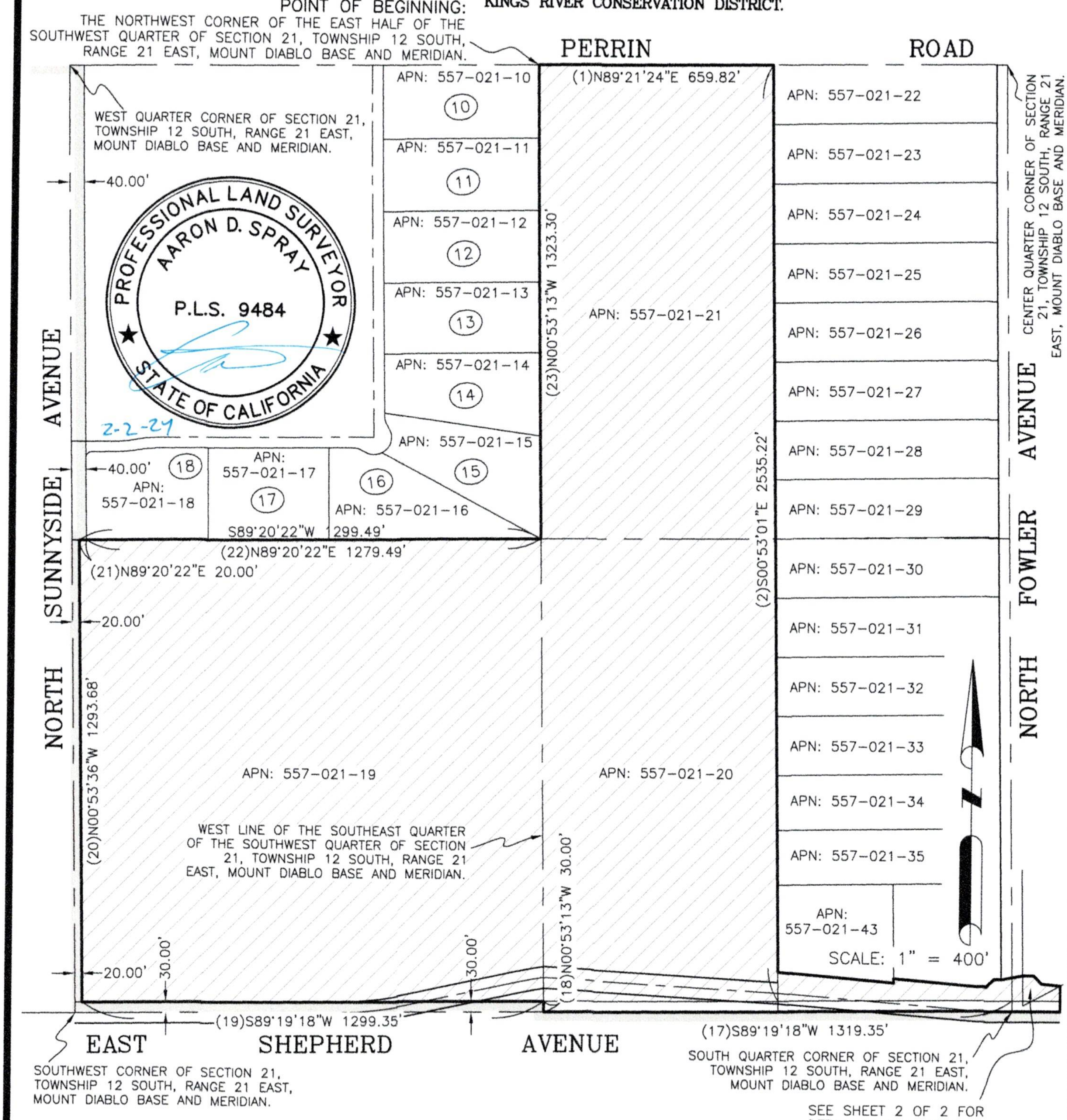

AARON D. SPRAY
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2-2-24

LEGEND

▨ AREA TO BE ANNEXED TO THE CITY OF CLOVIS.
AREA: 80.269 ACRES +/-

EXISTING CITY LIMITS OF THE CITY OF CLOVIS.

(XX) LOT PER TRACT No. 3286, QUAIL RUN, RECORDED IN VOLUME 37 OF PLATS AT PAGE 88, FRESNO COUNTY RECORDS.

0' 400' 800' 1200'

PREPARED BY:

DIXON & ASSOCIATES, INC.
LAND SURVEYING

620 DEWITT, #101
CLOVIS, CALIFORNIA, 93612

PH: (559)297-4200 FAX: (559)297-4272

DATE: Jan. 5, 2022
SCALE: 1" = 400'
DWN BY: GMR
WO: 18-147/6205

REVISIONS:
Sep. 8, 2023
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DRAWING NO.
1
OF 2 SHEET

SHEPHERD–SUNNYSIDE NORTHEAST REORGANIZATION

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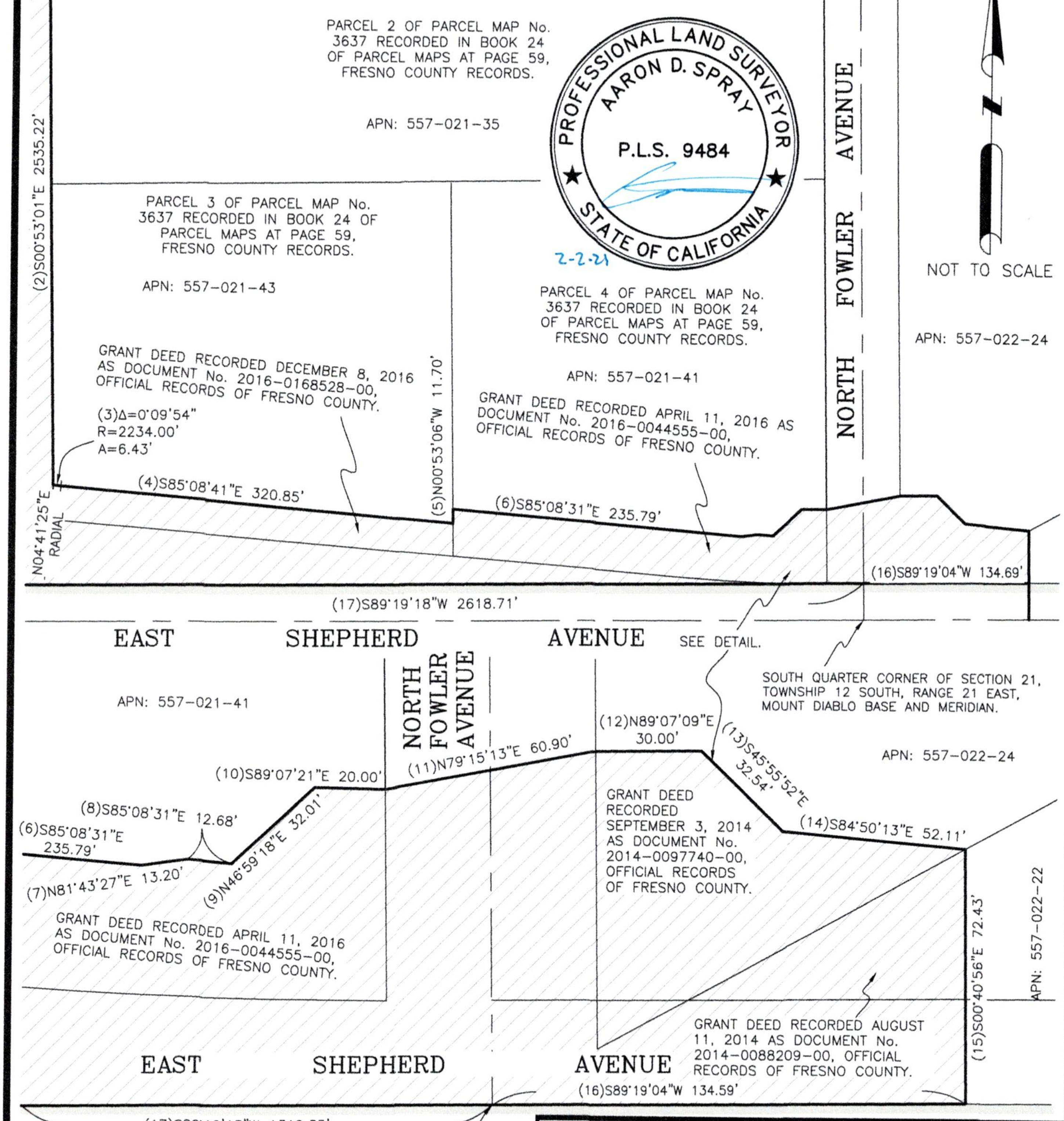

PROFESSIONAL LAND SURVEYOR
AARON D. SPRAY
P.L.S. 9484
STATE OF CALIFORNIA
2-2-21

LEGEND

▨	AREA TO BE ANNEXED TO THE CITY OF CLOVIS. AREA: 79.268 ACRES +/-
	EXISTING CITY LIMITS OF THE CITY OF CLOVIS.

PREPARED BY:

DIXON & ASSOCIATES, INC.
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DRAWING NO.
2
OF 2 SHEE

FOURTH AMENDMENT TO

2017 AMENDED AND RESTATED
MEMORANDUM OF UNDERSTANDING

COUNTY OF FRESNO AND THE CITY OF CLOVIS

This Fourth Amendment to 2017 Memorandum of Understanding ("Fourth Amendment") is executed on ____________________, 2024 ("Effective Date"), by and between the County of Fresno, a political subdivision of the State of California ("County"), and the City of Clovis, a municipal corporation of the State of California ("City"), with respect to the following Recitals, which are a substantive part of this Fourth Amendment. County and City are a "Party" to this Fourth Amendment and are sometimes collectively referred to as "the Parties."

RECITALS

A. The Parties previously entered into a comprehensive agreement covering development, annexations, sales taxes, property taxes, and other matters, which is entitled "2017 Amended and Restated Memorandum of Understanding," dated June 6, 2017 ("2017 MOU").

B. On June 6, 2017, the Parties executed a First Amendment to the 2017 MOU (County Agreement No. 17-236). On July 10, 2018, the Parties executed a Second Amendment to the 2017 MOU (County Agreement No. 18-380). On March 9, 2021, the Parties executed a Third Amendment to the 2017 MOU (County Agreement No. 21-072). Collectively, the 2017 MOU, First Amendment, Second Amendment, and Third Amendment are referred to as the "MOU."

C. It has become apparent to the Parties that an amendment to the MOU is necessary and desirable to accommodate changes in the patterns of new urban growth and development that City is experiencing as it regulates and facilitates the build-out of its Sphere of Influence ("SOI").

D. The City has notified the County of its desire to file a SOI proposal identified as the Shepherd North Sphere of Influence Expansion Area to the Fresno Local Agency Formation Commission ("LAFCo") for a 155-acre expansion of the City's SOI from Shepherd Avenue to Perrin Road and Sunnyside Avenue to Fowler Avenue as shown in the map attached hereto as **Exhibit A**.

E. The City's SOI proposal will be accompanied by an annexation proposal identified as the "Shepherd-Sunnyside Northeast Reorganization Project" to LAFCo for annexing 77 acres of land for development of a residential subdivision, as shown in the map attached hereto as **Exhibit A**.

F. For the Shepherd-Sunnyside Northeast Reorganization Project to be developed, it must be annexed into the City, which would extend a peninsula of the City north of Shepherd Avenue, between Sunnyside Avenue and Fowler Avenue, which peninsula would be consistent with the associated SOI request, but would not be consistent with the Standards for annexation set forth in the MOU.

G. The Shepherd-Sunnyside Northeast Reorganization Project represents a logical development pattern in that it is under one ownership who desires annexation to the City and has presented a tentative subdivision map for residential development to the City.

H. The parties recognize that this Fourth Amendment to the MOU is necessary to accommodate the Shepherd North Sphere of Influence Expansion and the Shepherd-Sunnyside Northeast Reorganization Project annexation and memorialize the City's agreement to certain conditions associated with said annexation.

NOW, THEREFORE, County and City hereby agree to amend the MOU as follows:

AGREEMENT

1. Amendment of City's SOI. County consents to an amendment of City's SOI to include the Shepherd North Sphere of Influence Expansion Area as depicted in **Exhibit A** attached hereto, and City may process the amendment through LAFCo.

2. City's Annexation.

a. Section 2.9 is added to Article II of the MOU, as follows:

"2.9. At such time as City applies to LAFCo for the annexation of the Shepherd-Sunnyside Northeast Reorganization Project, the boundaries of which are described in Exhibit 8 [**Exhibit A** attached to the Fourth Amendment to this MOU] attached and incorporated herein by reference, County agrees to express support for the annexation by letter or by staff appearance before LAFCo."

b. Section 2.10 is added to Article II of the MOU, as follows:

"2.10. The County and the City agree that the Shepherd-Sunnyside Northeast Reorganization Project would be best served by being annexed to the City, and the County and the City each agree to support annexation of the area and will express such

LOZANO SMITH
7404 N. Spalding Avenue Fresno, CA 93720-3370
Tel 559-431-5600 Fax 559-261-9366

support to LAFCo at appropriate times as set forth herein. The City shall request LAFCo to schedule a hearing on the annexation application within six (6) months after the Effective Date of the Fourth Amendment to this MOU.

In accordance with the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, if LAFCo approves the annexation of the Shepherd-Sunnyside Northeast Reorganization Project and there is an insufficient protest, the area will be annexed to the City. If there is a protest sufficient to require an election, the City will continue with the LAFCo process through the election procedure.

If LAFCo fails to approve the annexation of the Shepherd-Sunnyside Northeast Reorganization Project, or if the annexation is defeated at an election, the City will make good faith efforts to actively pursue incremental annexation of the area as the consent of various property owners can be obtained and logical annexation areas can be defined.

Upon the completion of the Shepherd-Sunnyside Northeast Reorganization Project annexation, the City shall be responsible for any existing code enforcement issues for the annexed property. The City shall pay required annexation fees and costs in addition to providing other preparation work. The City shall be responsible for the Fire District Transition Fee in accordance with its Transition Agreement with the Fresno County Fire Protection District."

c. Section 2.11 is added to Article II of the MOU, as follows:

"2.11. Upon the completion of the Shepherd-Sunnyside Northeast Reorganization Project annexation, the City agrees to do the following:

i. When development activity requires the construction of municipal utilities in County road rights-of-way adjacent to the annexed area, the City shall require reconstruction of affected sections of such roads to City standard cross-section specifications.

ii. As a part of its development entitlement process, City shall require developer(s) to obtain a County encroachment permit prior to constructing municipal utilities in County road rights-of-way adjacent to the annexed area. City agrees to the timely maintenance and repair of the County's roadway adjacent to the annexed area at City's expense for any repairs created by or related to the Shepherd-Sunnyside Northeast Reorganization Project annexation.

iii. All existing storm drainage patterns and all storm drainage generated as a result of development activity in the annexed area shall be accommodated by existing or project-installed Master Planned Storm Drainage infrastructure and shall not contribute to surface flows or ponding within the unincorporated areas. All new storm drainage shall conform to the Fresno Metropolitan Flood Control District's master plan for the area.

iv. Upon written request from the Fresno County Director of Public Works and Planning to the Clovis City Manager, the City shall commence and be responsible for specific traffic enforcement activities for Sunnyside Avenue between Shepherd and Nees Avenues within the confines of the Dry Creek Preserve area beginning no later than thirty (30) days after receipt of the request."

3. <u>MOU Exhibits Relating to SOI Expansion and Annexation</u>. The map included as **Exhibit A** attached hereto and incorporated herein by this reference shall be Exhibit 8 to the MOU as of the Effective Date of this Fourth Amendment.

4. <u>Amendment to MOU</u>. Upon the Effective Date, the MOU and this Fourth Amendment shall together constitute the MOU.

5. <u>Other terms of MOU Unaffected</u>. Unless expressly modified by the terms of this Fourth Amendment, all other terms of the MOU shall remain in full force and effect.

///

///

[Remainder of page blank – Signatures on next page]

IN WITNESS WHEREOF, the Parties hereto have executed this Fourth Amendment in the County of Fresno, State of California, to be effective on the Effective Date set forth above.

COUNTY OF FRESNO, a Political Subdivision
of the State of California
("County")

By: ______________________________
Nathan Magsig, Chairman of the Board of
Supervisors of the County of Fresno

ATTEST:

BERNICE E. SEIDEL
Clerk of the Board of Supervisors
County of Fresno, State of California

By: ______________________________
Deputy

CITY OF CLOVIS, a Municipal Corporation
of the State of California
("City")

By: ______________________________
Lynne Ashbeck, Mayor of the
City of Clovis

ATTEST:

KAREY CHA
City Clerk, City of Clovis

By: ______________________________
Karey Cha, City Clerk

REVIEWED AND RECOMMENDED FOR APPROVAL:

JOHN HOLT
City Manager, City of Clovis

By: ______________________________
John Holt

APPROVED AS TO LEGAL FORM:

SCOTT G. CROSS
City Attorney, City of Clovis

By: ______________________________
Scott G. Cross

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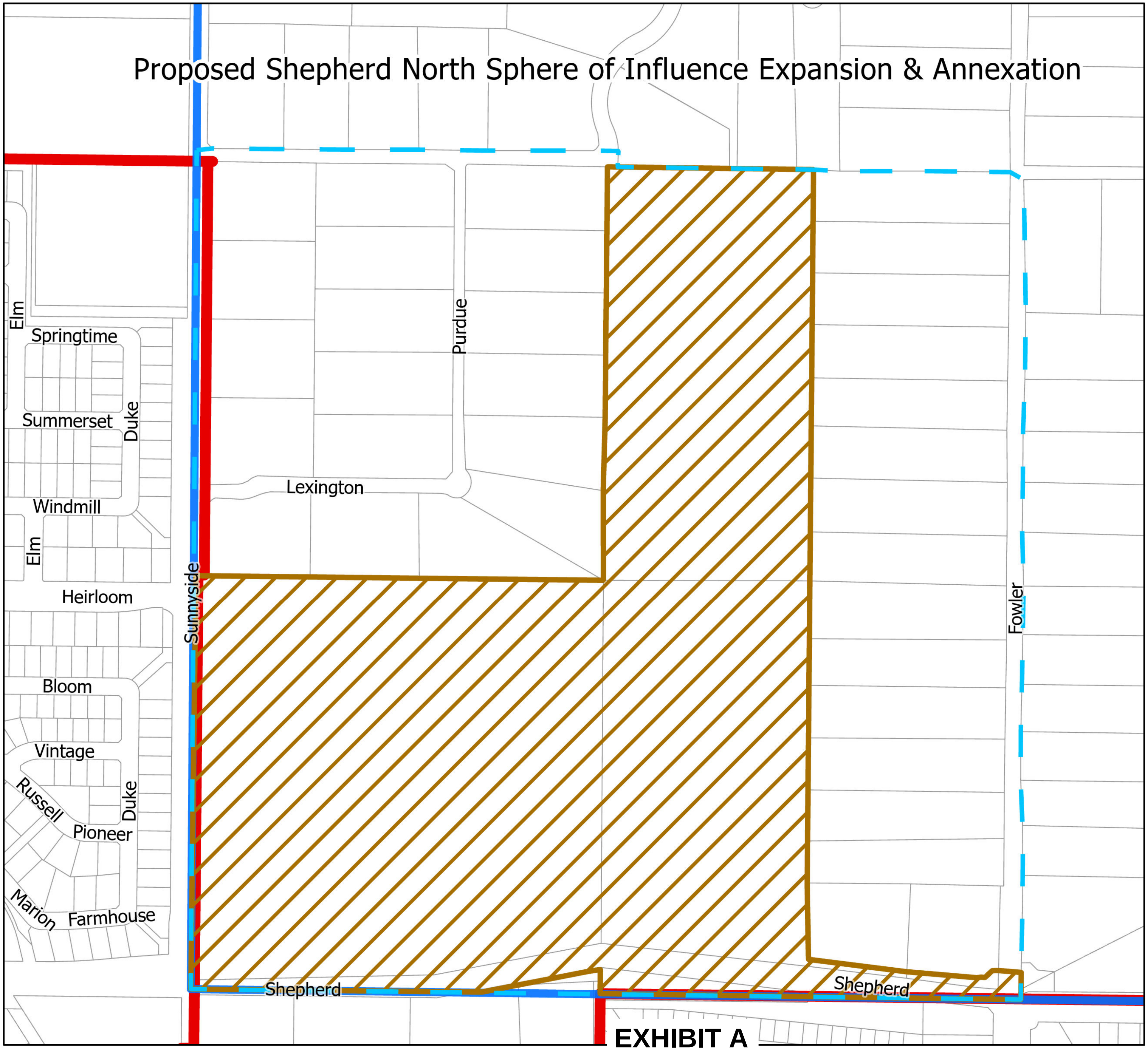
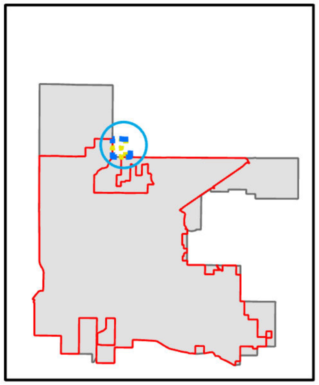
PLANNING & DEVELOPMENT

Proposed Shepherd North Sphere of Influence Expansion & Annexation





🟥 City Limits
🟦 Sphere of Influence

Proposed Boundaries

▨ Annexation
Sphere of Influence Expansion

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Tuesday, June 20,

EXHIBIT A

Wilson Homes, Inc.
Justification for General Plan Amendments
GPA2021-005 & GPA2021-006
October 11, 2023

Applicant:	Wilson Homes, Inc. Mr. Leo Wilson 7550 N. Palm Ave., Suite 102 Fresno, CA 93711
Property Owner:	Great Bigland, LP 7550 N. Palm Ave., Suite 102 Fresno, CA. 93711
APN:	557-021-19, 20 & 21
Current Zoning:	AL-20
Area:	75.05 ± gross acres

REQUEST

The applicant, Wilson Premier Homes, Inc. (Wilson Homes), proposes to increase the density from Rural Residential (1 DU per 2 acres) to Medium High Density Residential (7.1 to 15.0 du/acre) for this 77.89 gross acre project located at the northeast corner of Sunnyside and Shepherd Avenues. This project also proposes a local public street connection to Shepherd Avenue, roughly halfway between Sunnyside and Folwer Avenues. Shepherd Avenue is designated as an expressway and therefore access is limited to collector and arterial streets. Please see the attached vicinity map and Tentative Tract Map No. 6205.

The proposed project will include three distinct product types; the *Elev8ions, Citrea* and the *Regent Park* products which are successfully marketed in Clovis.

BACKGROUND

The 77.89 acres of Great Bigland, LP property is designated for Rural Residential (1 du/2 ac.) uses. The existing designation would allow for 38 rural residential homes. The proposed modification to allow for Medium High Density Residential would generate a maximum of 1,168 single- family homes. As illustrated on Tentative Tract Map No. 6205, Wilson Homes is proposing to develop 605 single-family homes with a density of 7.77 ± du/acre, which is slightly higher than the maximum number of units allowed for a Medium Density Residential land use.

The proposed density would allow Wilson Homes to provide a variety of housing types of high quality and meet functional market affordability. While density is often a point of interest, and with building materials soaring in cost, affordability relies even more on density. The cost and scarcity of materials has reached unprecedented levels with dramatic price increases and product scarcity. Communities, buyers, and developers are faced with not building and not providing for substantial demand detailed by various statewide mandates to build more homes to address the statewide shortage or to address the market challenges by adaptation.

The property has limited access with Sunnyside Avenue being the main access location for this project. The east side of this property is adjacent to developed rural residential parcels and doesn't allow for access to Fowler Avenue. Our northwesterly boundary also has developed rural residential parcels. We do have a very small amount of street frontage onto Perrin Avenue to the north, but the rural residential neighbors to the north of this project would like to discourage the amount of traffic utilizing this access point. Shepherd Avenue is an expressway and does not allow for local street connections.

Due to these limitations, we propose a local street connection to Shepherd Avenue, roughly halfway between Sunnyside Avenue to the west and Fowler Avenue to the east. This proposed access point will provide added circulation for this proposed community and increased access for emergency services. The location of this proposed access connection to Shepherd Avenue has been placed near the most northerly point of the curve of the Shepherd Avenue. At this location, traffic traveling along Shepherd Avenue will have a clear line of sight to see vehicles turning into or out of this proposed street connection.

JUSTIFICATION

The proposed General Plan Amendments should be granted based on the reasons provided below.

Consistency with the Heritage Grove Master Plan

The project proposed by Wilson Homes follows the goals detailed in the Heritage Grove Master Plan & Design Guidelines. The Plan goals are met by the project in the following ways:

1. **Establish an overall theme and quality for Heritage Grove.**

   The high-quality homes provided by Wilson Homes would incorporate seamlessly into the theme and quality that the adjacent Heritage Grove Master Plan and the vision of the City of Clovis General Plan. As seen in other Wilson Homes communities throughout Clovis, Wilson Homes offers projects which incorporate into the themes of the master plan communities in which it resides. For Tentative Tract Map No. 6205, Wilson Homes products (*Elev8ions, Citrea* and *Regent Park)* will provide prominent characteristic of cultural and agricultural heritage, as set forth in the adjacent Heritage Grove Master Plan.

2. **Illustrate and direct the intended architectural, landscape and site elements to reinforce the theme and quality.**

The products proposed by Wilson Homes will architecturally be implemented and will follow the Heritage Grove Design Guidelines. Wilson Homes products will be reviewed by the Residential Site Plan Review entitlement for consistency and to reassure the city that the neighborhoods will comply with community theme and character. The *Elev8ions, Citrea* and *Regent Park* products will provide a contemporary, attractive and aesthetically pleasing design that fits into the vision of the adjacent Heritage Grove Master Plan.

3. **Provide criteria and examples of expected design qualities and treatments.**

   The proposed project will provide a high-quality residential development which will fit into the vision of the adjacent Heritage Grove Master Plan and Design Guidelines. Wilson Homes is historically known for its top-quality homes which are constructed with high quality materials. Market research and product sales history accumulated by the developer indicates that the three products have a wide appeal to varying age groups, economic, and demographic diversity**.**

4. **Refine and implement the Goals and Objectives of the Clovis General Plan.**

   Please see below for a full explanation of how the proposed project meets the goals and objectives of the Clovis General Plan.

<u>Consistent with General Plan Housing Goals</u>

The following goals and policies are being met by the proposed project:

- **Goal 3: Orderly and sustainable outward growth into three Urban Centers with neighborhoods that provide a balanced mix of land uses and development types to support a community lifestyle and small-town character.**

  Tentative Tract Map No. 6205 is being proposed adjacent to the Northwest Urban Center in Clovis. The proposed project will offer future residence the opportunity to live and enjoy all future land uses, such as retail, recreational, public, proposed by the Heritage Grove Master Plan.

  - **Policy 3.6 Mix of housing types and sizes. Development is encouraged to provide a mix of housing types, unit sizes, and densities at the block level. To accomplish this, individual projects five acres or larger may be developed at densities equivalent to one designation higher or lower than the assigned designation, provided that the density across an individual project remains consistent with the General Plan.**

    As stated above, three housing product are proposed; the *Elev8ions* product which is an upscale residential product focused on the young professional in the move up market and the mature buyer who desires less yard maintenance. The Citrea product is an upscale residential product focused on the young professional market and the mature buyer who may be downsizing and desires lass yard maintenance. The *Regent Park* product which is also an upscale residence with a focus on the more traditional buyer who desires a larger lot and perhaps a larger home. Both products attract a large portion of current Clovis residents.

The proposed project encompasses a land area of 77.89 gross acres. The General Plan designation for the subject site is Rural Residential which allows for 1 du/2 ac. This Rural Residential density is not encouraged or generally planned for within cities general plans any longer. The proposed modification to the General Plan would change to Medium High Density Residential and would allow for 7.1 to 15.0 du/acre. This proposed density is a density that is currently encourage by State policies to reduce land consumption and develop more housing within a smaller footprint.

- **Goal 5: A city with housing, employment, and lifestyle opportunities for all ages and incomes of residents.**

  The proposed project will provide a mix of housing sizes and lifestyle opportunities for all ages. The three proposed product types focus on meeting varied housing lifestyles and income levels of the Clovis market.

  - **Policy 5.1 Housing variety in developments. The Clovis General Plan has been planned to provide a variety of housing product types suitable to each stage of a person's life. Each development should contribute to a diversity of housing sizes and types within the standards appropriate to the land use designation.**

    As stated above, the three proposed product types focus on meeting varied housing lifestyle categories. The *Elev8ions, Citrea* and *Regent Park* products were specifically designed to address distinct elements of the Clovis residential market. Each product contributes to the diversity of housing sizes and types while still delivering the decades long tradition of quality Wilson homes.

    Market research and product sales history accumulated by the developer indicates that the three products have a wide appeal to varying age groups and economic and demographic diversity**.**

  - **Policy 5.2 Ownership and rental. Encourage a mixture of both ownership and rental options to meet varied preferences and income affordability needs.**

    The proposed project is intended to provide for three distinct ownership opportunities based on market demand. Market research performed by the developer indicates that this project will appeal to varying economic demographic diversity. Incidental to the sale of the homes, there is some conversion to rental units, which will give an opportunity for people seeking to rent a unit the opportunity to do so. It should be noted there is no legal way for the developer to prohibit the rental of units.

- **Policy 5.3 Innovative housing. Encourage innovative housing product types, including multigenerational, cooperative, and variations on live-work housing.**

  The *Elev8ions, Citrea* and *Regent Park* products are currently offered in the Clovis market. Over time, these products have been modified to improve upon their design to better adapt to changing market demand. The *Elev8ions, Citrea* and *Regent Park* products have been widely accepted by a broader range of the market with a greater range of demographic, income and lifestyle appeal.

  As mentioned previously, the *Elev8ions* product is an upscale detached single-family residential product of a slightly higher density specifically developed for the first-time buyer or mature buyer who does not want a large lot. The product goal is to build a quality home on a small lot with great livability.

  The Citrea product is an upscale residential product focused on the young professional market and the mature buyer who may be downsizing and desires lass yard maintenance.

  The *Regent Park* product is also an upscale residence with a focus on the more traditional buyer who desires a larger lot and perhaps a larger home. Both products attract a large portion of current Clovis residents.

- **Goal 6: A city that grows and develops in a manner that implements its vision, sustains the integrity of its guiding principles, and requires few and infrequent amendments to the General Plan.**

The proposal to change the General Plan land use/circulation classifications is consistent with the adjacent Heritage Grove Design Guidelines by providing a quality residential development to accommodate a variety of lifestyles.

- **Policy 6.1 Amendment criteria. The City Council may approve amendments to the General Plan when the City Council is satisfied that the following conditions are met:**

  A. The proposed changes are and will be fiscally neutral or positive.

  In accordance with city policies, the proposed project will pay a range of development and impact fees and will install a variety of public improvements. The proposed homes are of a high quality which assures sustainability not only of the homes, but of the community in which they are located. No information exists to suggest the project will not be revenue neutral to the city.

1. **School Fees of $5.8 million to Clovis Unified School District**

    a. **Elev8ions – 1,500 sq. ft. average**
    407 units x 1,500 sq. ft. = 610,500 sq. ft. x $5.68 per sq. ft. = **$3.5 million**

    b. **Citrea – 1,800 sq. ft. average**
    66 units x 1,800 sq. ft. = 118,800 sq. ft. x $5.68 per sq. ft. = **$645 thousand**

    c. **Regent Park-2,300 sq. ft. average**
    132 units x 2,300 sq. ft. = 303,600 sq. ft. x $5.68 per sq. ft. **= $1.7 million**

2. **Regional Mitigation Fees**

    a. **Reginal Transportation Mitigation Fee** $2,143/unit x 605 units = **$1,296,515**

3. **Clovis Community Facility District Public Safety Annual Assessments $170,815.70**

    605 x $282.34/unit = **$170,815.70 per year for Clovis Public Safety (fire/police)**

B. **The proposed land use change can be adequately served by public facilities and would not negatively impact service on existing development or the ability to service future development.**

The proposed change can be adequately served by public facilities and will not negatively impact service on existing development or the ability to service future development.

C. **The proposed land use change is consistent with the Urban Village Neighborhood Concept when within an Urban Center.**

The proposed project is complementary to and directly adjacent to the Heritage Grove Master Plan. The proposed densities are reasonable and consistent with studies that suggest such densities reduce public and private cost of residential development.

- **Policy 6.2 Smart growth. The city is committed to the following smart growth goals.**

A. Create a range of housing opportunities and choices.

As described above, the proposed project offers three distinct housing products that appeal to a wide market base.

B. Create walkable neighborhoods.

The project will incorporate trails and pedestrian connection to enhance and promote walking and reduce the reliance on fossil fueled transportation sources to schools, and the Heritage Grove City Center Villages North and West.

The City Center Villages North and South Specific Plan is an area with the Heritage Grove Master Plan which will consist of approximately 210 ± acres of residential, commercial, and mixed-use developments. One of the main goals of the plan is to promote a healthy lifestyle by providing trails, parks, and pedestrian connectivity for all future residents to enjoy. A substantial body of empirical information exists indicating that walkability also has a positive influence on public health.

C. Encourage community and stakeholder collaboration.

Wilson Homes has committed to an appropriate outreach to the community to define the project characteristics and related compatibility.

D. Foster distinctive, attractive communities with a strong sense of place.

The project developer is well-known for developing attractive communities with a strong identity. This Wilson Homes project will not be an exception to historic high quality and design standards by integrating the project with its surroundings and linking with the master plan proposed open space areas that will create an attractive, distinctive project.

E. Make development decisions predictable, fair, and cost-effective.

Wilson Homes believes that there is ample justification for the proposed project and trusts that the public hearing and land use entitlement process will result in the approval of the request.

F. Mix land uses.

Please see the information above regarding the proposed mix of product.

G. Preserve open space, farmland, natural beauty, and critical environmental areas.

The proposed project will incorporate a trail connection to the regional trail system and facilitate development of a community park located to the west of the subject project. Consistent with the *Landscape of Choice,* the proposed increase in densities reduces pressure to convert nonurban farmland to urban purposes.

H. Provide a variety of transportation choices.

As mentioned above, the project will incorporate trails and pedestrian linkage to enhance walkability and reduce the reliance on fossil fueled transportation sources.

As stated in the Heritage Grove Master Plan, a roughly 30-acre community park will be constructed to the west of Tentative Tract Map No. 6205. The project will also provide a variety of open spaces throughout the development. Additionally, a community corner paseo will provide a reciprocal connection from the project's housing, community park, and will create future connectivity to the proximate planned school and community business center, as well as connectivity to the Dry Creek Trailhead and other community features.

Information developed when the *Landscape of Choice* was adopted, indicated that slight increases in residential densities promoted the use of non-motorized travel and increases in bus ridership.

I. Strengthen and direct development toward existing communities.

The proposed project is directly adjacent the Heritage Grove Master Plan. The project will strengthen the commitment to the planned area by providing a market sensitive product with exceptional master plan qualities.

J. Take advantage of compact building design.

The proposed products have evolved to be more efficient and still meet market demand for high quality housing on smaller than traditional sized lots**.**

K. Enhance the economic vitality of the region.

Completion of the proposed project will contribute to the completion of the Heritage Grove Master Plan area which was an integral part of the city's three urban village concepts. The proposed new housing will provide quality homes for employees and consumers thus contributing to the region's economic vitality.

This project will also complete an important segment of Shepherd Avenue to provide safer circulation east and west.

L. Support actions that encourage environmental resource management.

The proposed project seeks to create greater service delivery efficiencies, consume less fossil fuels which improves the quality of life and air quality by developing trails and open space amenities.

M. Key Overall City Benefits

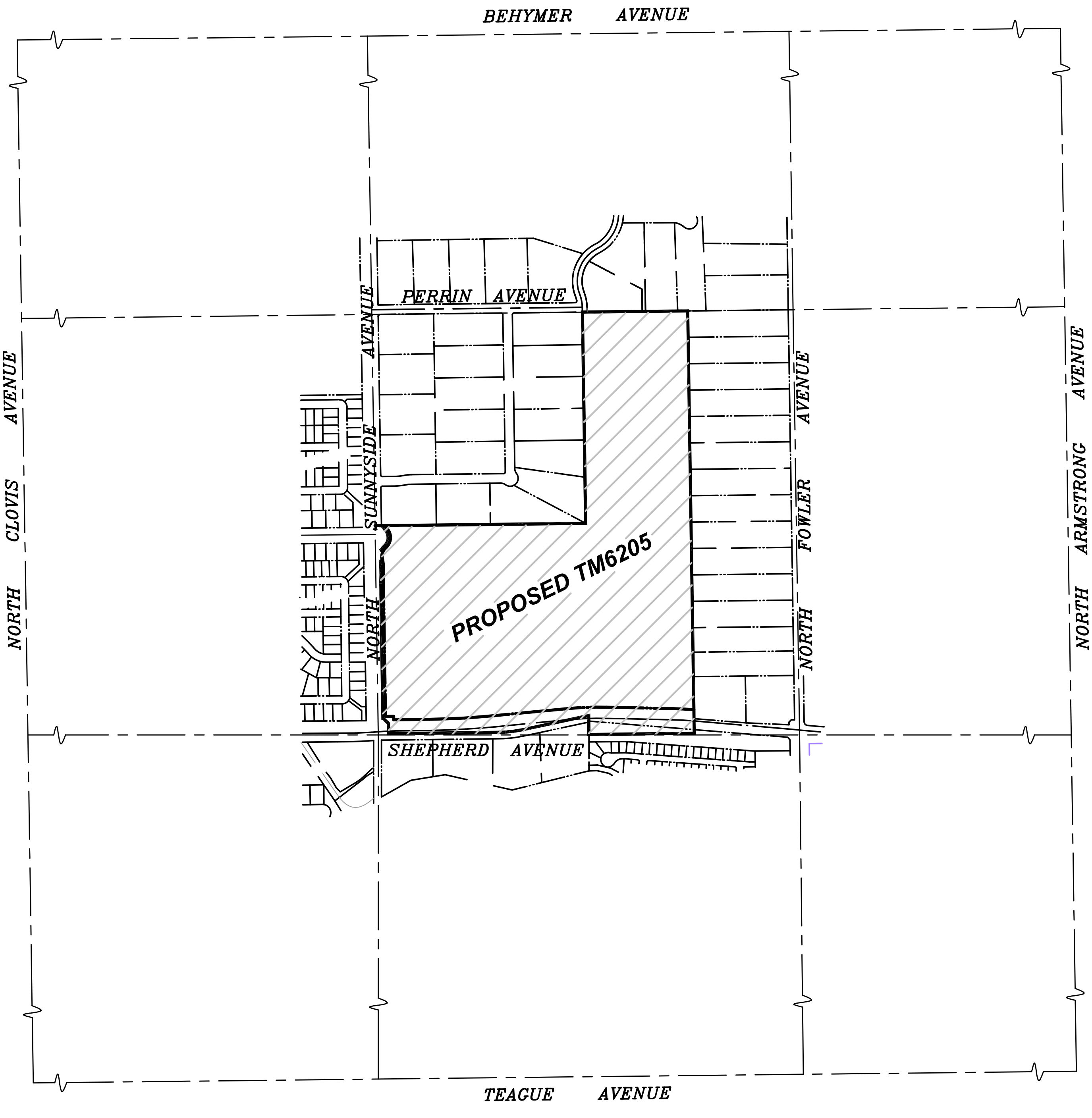
In addition to providing quality housing that meets several noted General Plan design criteria, this project uniquely provides several important benefits for the City of Clovis:

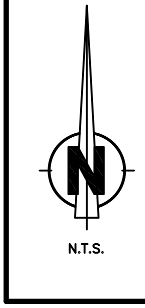
- Shepherd Avenue street improvements between Fowler Ave and Sunnyside Ave to greatly enhance community public safety and improve traffic circulation
- Sewer force main installation in Shepherd Ave between Sunnyside Ave and Fowler Ave, *to facilitate continued planned growth in Heritage Grove*
- Non-potable water main installation in Shepherd Ave between Sunnyside Ave and Fowler Ave, *to serve Heritage Grove*
- Completion of missing east-west community trail link between Sunnyside Ave and Fowler Ave
- Enhanced tax assessment (per Prop 13) and Public Safety CFD funding to provide enhanced Clovis General Fund & Safety Services tax revenue
- Construct 605 workforce housing priced units to address critical local market-rate housing needs:
    - Units priced between $450,000 - $800,000; 1,212sq.ft. – 3,020sq.ft.

CONCLUSION

For the reasons detailed above, Wilson Homes respectfully requests support of the proposed project as it is consistent with the Clovis General Plan, the adjacent Heritage Grove Master Plan, and the *Landscape of Choice.*

VICINITY MAP





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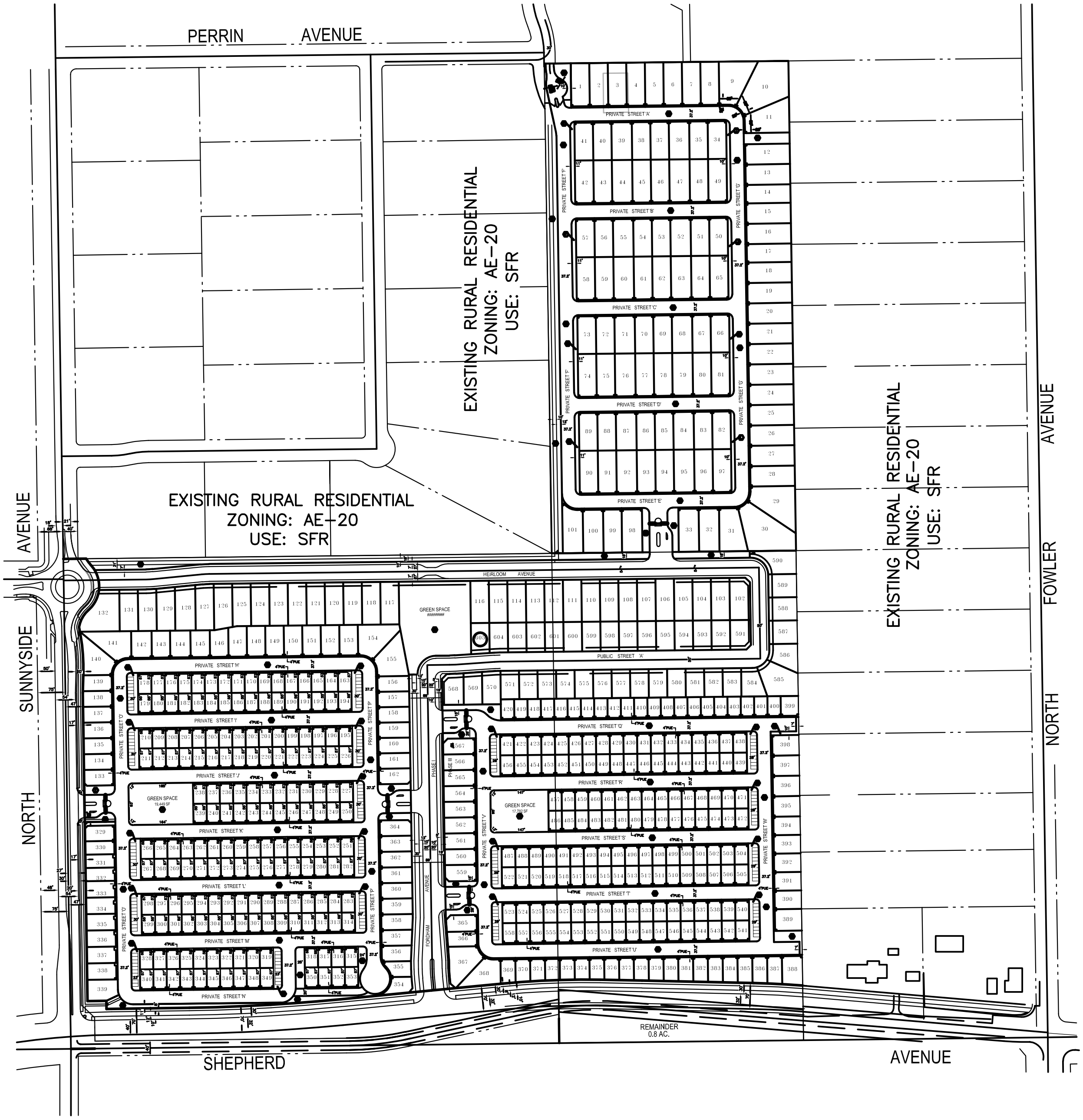
TENTATIVE SUBDIVISION MAP
OF
TRACT NO. 6205

AGENDA ITEM NO. 6.



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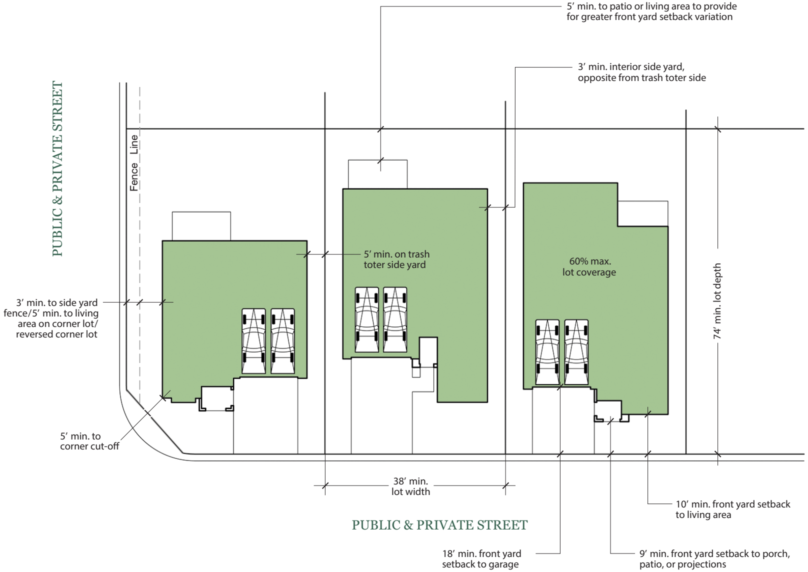
TRACT 6205 – NEC SHEPHERD & SUNNYSIDE

TRACT 6205 - Citrea

AGENDA ITEM NO. 6.

Residential Land Use Development Standards

LAND USE	DEVELOPMENT STANDARDS	
SINGLE-FAMILY RESIDENTIAL	STANDARD	NOTES
DESIGNATION		
Zone District	R-1-PRD	
GP Density Range	7.1 - 15.0 du/ac	Medium-High Density Residential
Dwelling Units	66	
BUILDING INTENSITY		
Minimum Lot Area	3,700 sqft	
Minimum Lot Width	50'	
Minimum Lot Depth	74'	
Maximum Height	35'	
Curved/Cul-de-sac/ Corner Lot	25' min/25' min/53' min	For street frontage
BUILDING SETBACKS		**All setbacks measured from PL.**
Front Yard (Local)	18' min/10' min/9' min	To garage/To living area/To projections and/or porch/patio
Side Yard	5' min/3' min	5' min one side/3' min other side
Corner/Reversed Corner	3' min/5' min	To side yard fence/To living area
Rear Yard	5' min	
Corner Cut-Off	5' min	
GARAGES/STREETS/PARKING		
Garages	2-car	20'x20' min
Streets (Private)	36' curb to curb	
On-Street Parking	Yes	
ACCESSORY USES		**General list of requirements and restrictions.**
Walls/Fences	6' min - 8' high max	
Trellises	12' high max	
Pools and Spas	5' min	Water portion to rear and side PLs. Pool and spa may not be located in front yard.
Equipment	HVAC, Pool, spa and fountain equipment allowed in side yard easement and rear setback.	
Covered Structures Accessory Buildings	12' high max	Covered structures and building additions are allowed subject to review by the City of Clovis, provided that lot coverage standards are not exceeded and that a rear yard encroachment permit is obtained if encroachment into rear yard occurs.



NOT TO SCALE

The imagery conveys samples of the architectural character intended for these neighborhoods.

Lots 140-155, 388-399, 568-605 of Tentative Map No. 6205.

ATTACHMENT 10

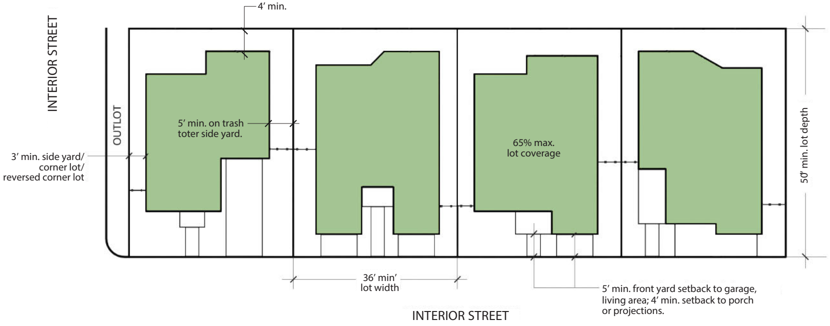
TRACT 6205 – NEC SHEPHERD & SUNNYSIDE

TRACT 6205 - Elev8ions

AGENDA ITEM NO. 6.

Residential Land Use Development Standards

LAND USE	DEVELOPMENT STANDARDS	
SINGLE-FAMILY RESIDENTIAL	**STANDARD**	**NOTES**
DESIGNATION		
Zone District	R-1-PRD	
GP Density Range	7.1 - 15.0 du/ac	Medium-High Density Residential
Dwelling Units	407	
BUILDING INTENSITY		
Minimum Lot Area	1,980 sq ft	
Minimum Lot Width	36’	
Minimum Lot Depth	50’	
Maximum Coverage	65%	
Maximum Height	35’	
Curved, Cul-de-sac or Corner Lot	36’ min/50’ min	For street frontage/For lot depth
BUILDING SETBACKS		**All setbacks measured from PL.**
Front Yard	5’ min/4’ min	To garage, living area/porch or projections
Side Yard	5’ min/3’ min	5’ min garage side/3’ min other side
Corner/Reversed Corner	3’ min	
Rear Yard	4’ min	
GARAGES/STREETS/PARKING		
Garages	1-car 2-car	10’x20’ min 20’x20’ min
Streets (Interior)	36’ wide	Curb-to-curb
Parking	1.5 spaces/unit min	1 covered space per unit min
ACCESSORY USES		**General list of requirements and restrictions.**
Walls/Fences	6’ min - 8’ high max	
Trellises	12’ high max	
Pools and Spas	3’ min	Water portion to rear and side PLs. Pool and spa may not be located in front yard.
Equipment	Pool, spa and fountain equipment allowed in side yard setback.	
Covered Structures Accessory Buildings	12’ high max	Covered structures and building additions are allowed subject to review by HOA committee and permitting by the City of Clovis, provided that lot coverage standards are not exceeded and that a rear yard encroachment permit is obtained if encroachment into rear yard occurs.



NOTE: Construction of more than two of the same plan type in a row or more than three 2-car garage models in a row (excepting tandem garage units) shall be addressed through the Residential Site Plan Review process.

The imagery conveys samples of the architectural character intended for these neighborhoods.

NOT TO SCALE

Lots 133-139, 156-387, 400-567 of Tentative Map No. 6205.

ATTACHMENT 11

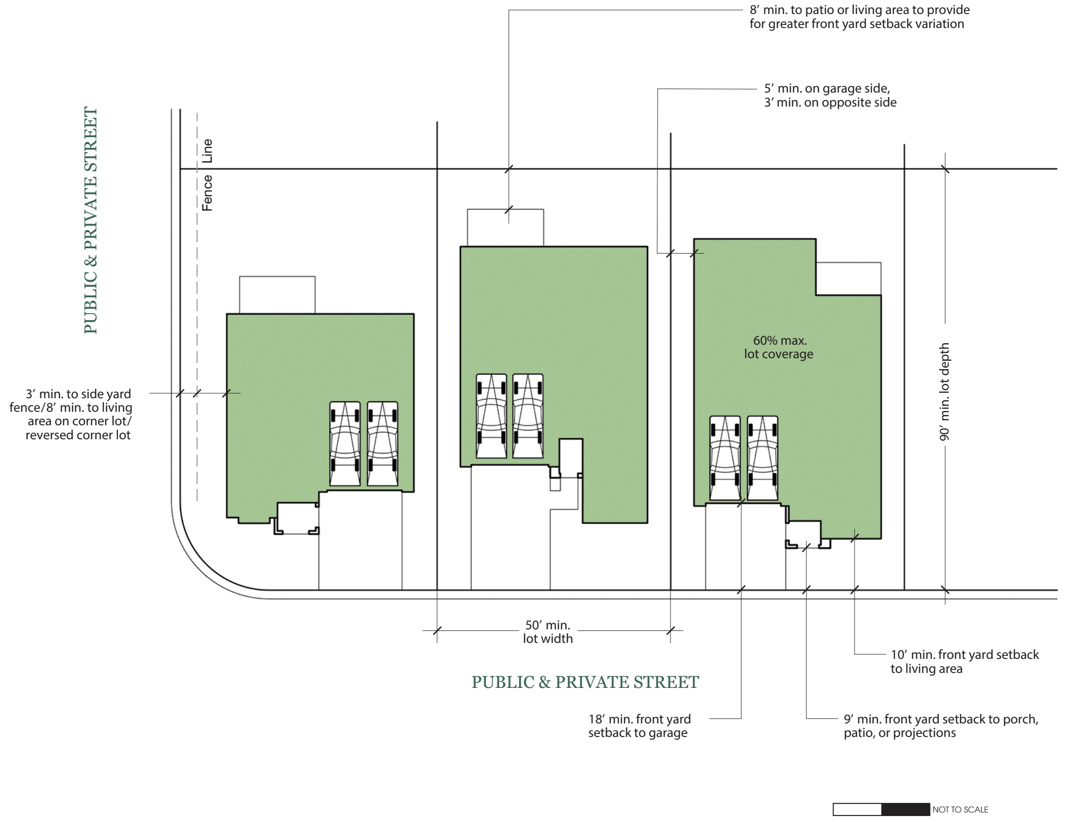
TRACT 6205 - Regent Park

AGENDA ITEM NO. 6.

Residential Land Use Development Standards

TRACT 6205 – NEC SHEPHERD & SUNNYSIDE

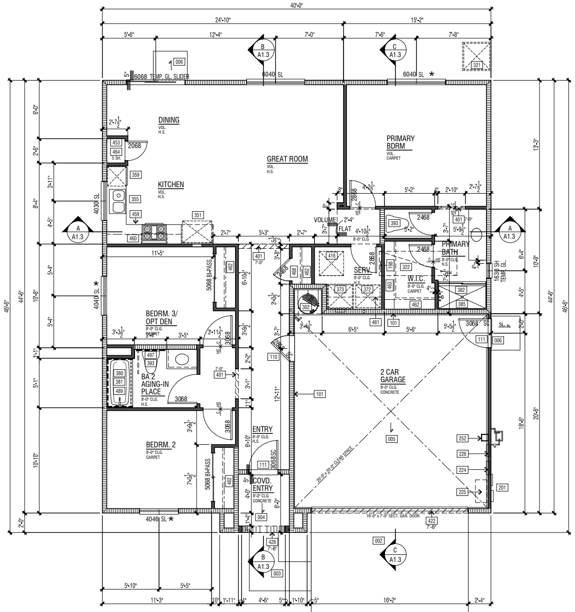
LAND USE	DEVELOPMENT STANDARDS	
SINGLE-FAMILY RESIDENTIAL	**STANDARD**	**NOTES**
DESIGNATION		
Zone District	R-1-PRD	
GP Density Range	7.1 - 15.0 du/ac	Medium-High Density Residential
Dwelling Units	132	Lots @ 50' x 90' min.
BUILDING INTENSITY		
Minimum Lot Area	4,500 sqft	
Minimum Lot Width	50'	
Minimum Lot Depth	90'	
Maximum Height	35'	
Curved/Cul-de-sac	25' min	For street frontage
Corner/ Reversed Corner	53' min	Lot width
BUILDING SETBACKS		**All setbacks measured from PL.**
Front Yard (Local)	18' min/10' min/9' min	To garage/To living area/To projections and/or porch/patio
Side Yard	5' min/3' min	5' min garage side/3' min opposite side
Corner/Reversed Corner	3' min/8' min	To side yard fence/To living area
Rear Yard	8' min	
GARAGES/STREETS/PARKING		
Garages	2-car	20'x20' min
	3-car	20'x20' min w/tandem 9'x15.5' min
Streets (Public)	50'/54' wide	
On-Street Parking	Yes	
ACCESSORY USES		**General list of requirements and restrictions.**
Walls/Fences	6' min - 8' high max	
Trellises	12' high max	
Pools and Spas	5' min	Water portion to rear and side PLs. Pool and spa may not be located in front yard.
Equipment	Pool, spa and fountain equipment allowed in side yard easement.	
Covered Structures Accessory Buildings	12' high max	Covered structures and building additions are allowed subject to review by the City of Clovis, provided that lot coverage standards are not exceeded and that a rear yard encroachment permit is obtained if encroachment into rear yard occurs.

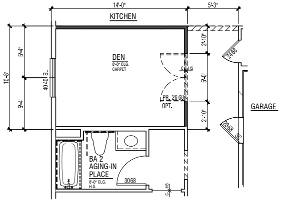


The imagery conveys samples of the architectural character intended for these neighborhoods.

Lots 1-132 of Tentative Map No. 6205.

ATTACHMENT 12





DEN OPT ILO BDRM 3

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED. LANDING SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 44 "; EXCEPT IN GROUPS R-3 AND U OCCUPANCIES AND WITHIN INDIVIDUAL UNITS OF GROUP R-2 NEED NOT EXCEED 36" (U.NO.) PER CBC SECTION 1010.1.5
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
110	PROVIDE SOLID WOOD DOOR NOT LESS THAN 1-3/8" THICK, SOLID OR HONEYCOMB-CORE STEEL DOOR NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE-RATED DOOR. DOORS SHALL BE SELF-LATCHING AND EQUIPPED WITH OR SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE PER C.R.C. SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
198	LOW VOLTAGE SUB PANEL. INSTALLATION IN CLOSETS IS PROHIBITED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
226	BACKUP SUB PANEL
252	SOLAR READY BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER. (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
322	FORCED AIR UNIT (FAU) ATTIC INSTALLATION. SEE DETAIL 26/D4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
359	DISHWASHER
360	SLIDE-IN RANGE/OVEN AND MICRO WITH VENT/LIGHT COMBINATION (EXHAUST VENT TO OUTSIDE). PROVIDE 24" CLEAR ABOVE RANGE/OVEN TO UNDERSIDE OF MICROWAVE VENT.
372	WASHER SPACE WITH RECESSED WATER BOX AND DRAIN PAN
373	DRYER SPACE
380	TUB/ SHOWER - SIZE PER PLAN. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
381	CURTAIN ROD
382	TEMPERED GLASS SHOWER DOOR/ ENCLOSURE
385	SHOWER - PREFABRICATED PAN - SIZE PER PLAN. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
416	30"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)3 - SEE DETAIL 5/D4
422	STUCCO SOFFIT: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
442	2x PONY WALL - SIZE/HEIGHT PER PLAN
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY
455	LINEN
459	BASE CABINET
460	UPPER CABINET
461	WIRE SHELF
462	SHELF AND POLE - LOCATE POLE 66" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
463	DOUBLE SHELF AND POLE - LOCATE POLES 44" & 88" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
464	SHELF (OR SHELVES)
468	COAT CLOSET
489	BATHTUB AND COMBINATION BATHTUB/SHOWER REINFORCEMENT TO BE CONTINUOUS ON EACH SIDE OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES ABOVE THE BATHTUB RIM
497	WATER CLOSET REINFORCEMENT TO BE FLOOR-MOUNTED OR FOLDAWAY OR SIMILAR ALTERNATIVE GRAB BAR REINFORCEMENT TO BE PROVIDED IN ADDITION TO THE BACK WALL REINFORCEMENT

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR PLAN LEGEND

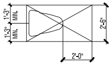
▥ = 2 x 6 D.F. #2 AT 16" O.C.

▬ = 2 x 4 D.F. #2 AT 16" O.C.

3050 SH★
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310

1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL

INTERIOR ELEVATION KEY

NAILING SCHEDULE IS LOCATED ON SHEET SD.2

SEE SHEETS A1.5 & A1.7 FOR ADDENDA PLANS

FLOOR AREA TABLE	PLAN 1334A
LOWER FLOOR PLAN	1334 SQ. FT.
TOTAL	1334 SQ. FT.
2-BAY GARAGE	425 SQ. FT.
COVERED ENTRY/PORCH	39 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ATTACHMENT 13

FLOOR PLAN

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1334
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

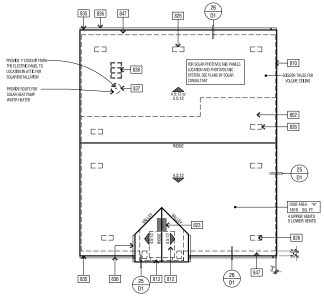
CONTEMPORARY SPANISH

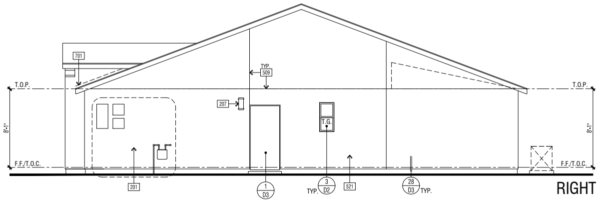
PLAN 1334A
FLOOR PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY	
1ST BLDG. DE	
ISSUED FOR C	
JOB NUMBER	
CAD FILE NAM	

DATE: 06-26-23
SHEET: A1.1

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023





RIGHT

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: A ELEVATION STYLE: CONTEMPORARY SPANISH

ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1	2x6	NONE	1'-0"	TIGHT

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

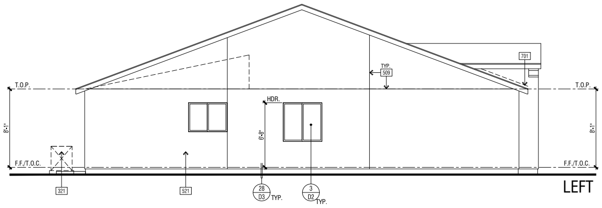
1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR FUTURE SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS					PLAN	1334A	
ROOF ATTIC AREA	A	1816	SQ. FT.		CALCULATION FACTOR:	1/300	
		261504	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	872	SQ. IN		TOTAL PROVIDED:	882	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	436	SQ. IN		TOTAL HIGH PROVI	392	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	436	SQ. IN		TOTAL LOW PROVI	490	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	4	392	SQ. IN
					TOTAL PROVIDED:	392	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	5	490	SQ. IN
					TOTAL PROVIDED:	490	SQ. IN



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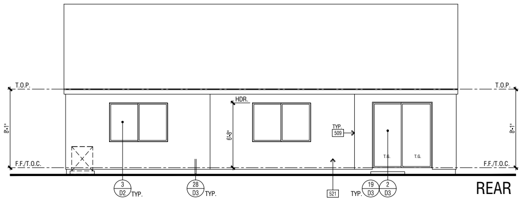
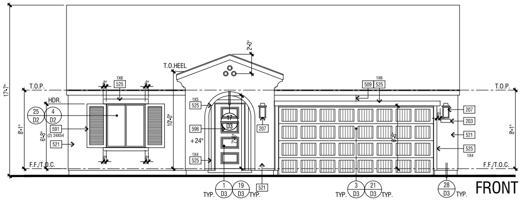


REAR



FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1334
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

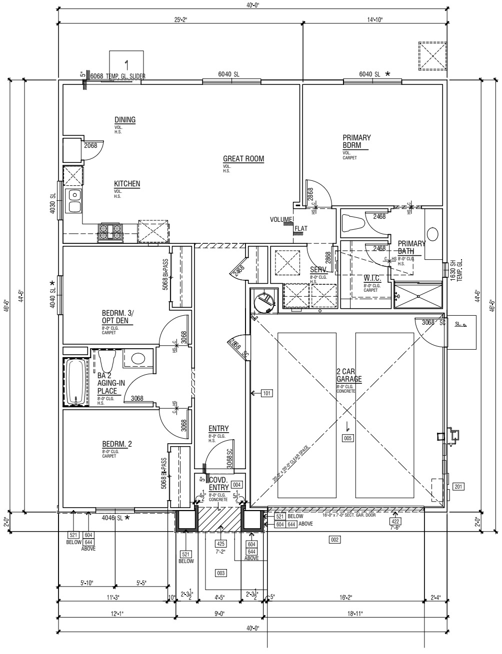
CONTEMPORARY SPANISH

PLAN 1334A
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY	
1ST BLDG. DE	
ISSUED FOR C	
JOB NUMBER	
CAD FILE NAM	

DATE:	SHEET:
06-26-23	A1.4

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



FLOOR PLAN

SCALE: 1/4" = 1'- 0"

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
422	STUCCO SOFFIT: HEIGHT PER PLAN
425	WOOD SOFFIT: HEIGHT PER ELEVATION
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
604	1x3 FIBER CEMENT BATTS SPACED AT 16" O.C.
644	FIBER CEMENT VERTICAL SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT, FINISH: SELECT CEDARMILL. (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1. FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	▩	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR AREA TABLE	PLAN 1334B
LOWER FLOOR PLAN	1334 SQ. FT.
TOTAL	1334 SQ. FT.
2-BAY GARAGE	425 SQ. FT.
COVERED ENTRY/PORCH	39 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1334
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1334B
ADDENDA
FLOOR PLAN

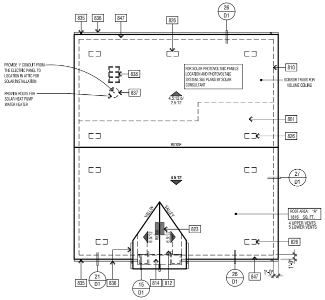
PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY	
1ST BLDG. DE	
ISSUED FOR C	
JOB NUMBER	
CAD FILE NAM	

MODERN

DATE: 06-26-23

SHEET: A1.5

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	B	ELEVATION STYLE:	MODERN		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2x8	2x8	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
814	WOOD SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION, PROVIDE ROUTE FOR FUTURE SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

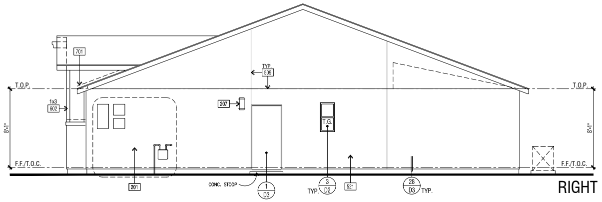
ATTIC VENTILATION CALCULATIONS

PLAN 1334B

ROOF ATTIC AREA	A	1816	SQ. FT.		CALCULATION FACTOR:	1/300	
		261504	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	872	SQ. IN		TOTAL PROVIDED:	891	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	436	SQ. IN		TOTAL HIGH PROVI	396	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	436	SQ. IN		TOTAL LOW PROVI	495	SQ. IN
		436					

HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	4	396	SQ. IN
					TOTAL PROVIDED:	396	SQ. IN

LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	5	495	SQ. IN
					TOTAL PROVIDED:	495	SQ. IN



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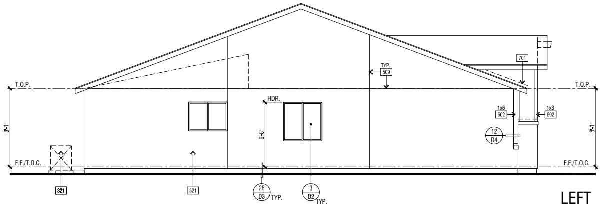

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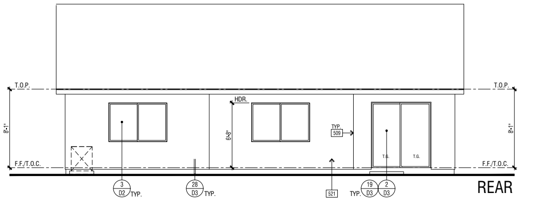

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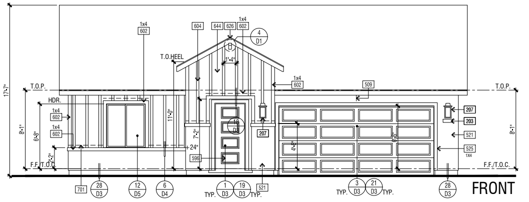


FRONT

SCALE: 1/4" = 1'-0"

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
205	ACCENT EXTERIOR WALL LIGHT
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	FIBER CEMENT TRIM(S) - SIZE PER ELEVATION
604	1x3 FIBER CEMENT BATTS SPACED AT 16" O.C.
626	OUTLOOKER ASSEMBLY - WOOD (SIZE/SHAPE PER ELEVATION)
644	FIBER CEMENT VERTICAL SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1334
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

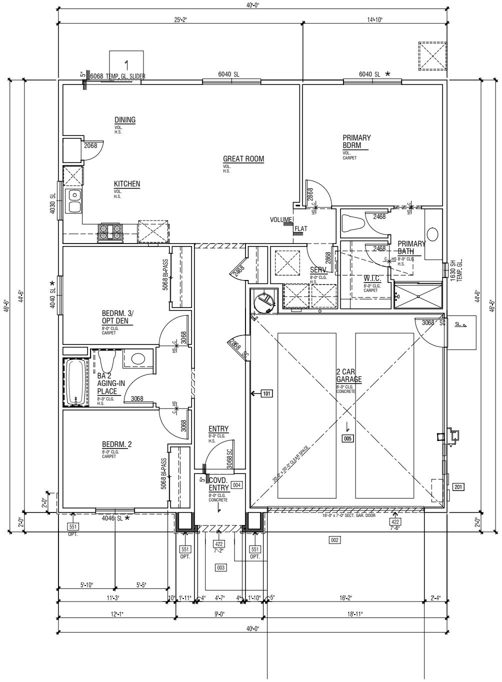
PLAN 1334B
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY	
1ST BLDG. DE	
ISSUED FOR C	
JOB NUMBER	
CAD FILE NAM	

MODERN

DATE:	SHEET:
06-26-23	A1.6

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



FLOOR PLAN

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

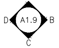
REFER TO BASE PLAN SHEET A1.1. FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	▩	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6



INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 1334C
LOWER FLOOR PLAN	1334 SQ. FT.
TOTAL	1334 SQ. FT.
2-BAY GARAGE	425 SQ. FT.
COVERED ENTRY/PORCH	39 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1334
CITREA at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

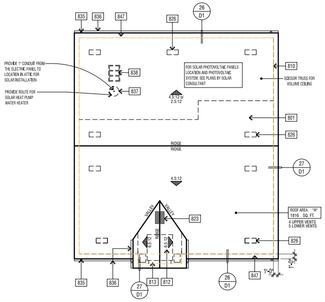
PLAN 1334C
ADDENDA
FLOOR PLAN

PROGRESSIVE NAPA

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY
1ST BLDG. DE
ISSUED FOR C
JOB NUMBER
CAD FILE NAM

DATE: 06-26-23
SHEET: A1.7

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	C	ELEVATION STYLE:	PROGRESSIVE NAPA		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	 RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

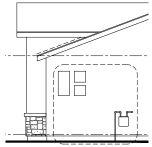
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

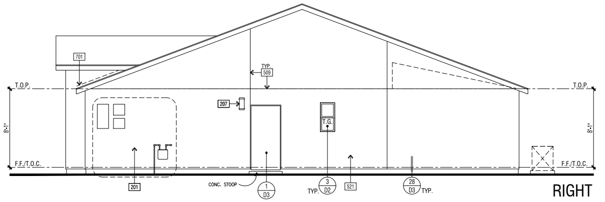
Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR FUTURE SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	1334C
ROOF ATTIC AREA	A	1816	SQ. FT.	CALCULATION FACTOR:			1/300
		261504	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	872	SQ. IN	TOTAL PROVIDED:	891		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	436	SQ. IN	TOTAL HIGH PROVII	396		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	436	SQ. IN	TOTAL LOW PROVII	495		SQ. IN
		436					
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	4		396	SQ. IN
				TOTAL PROVIDED:		396	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	5		495	SQ. IN
				TOTAL PROVIDED:		495	SQ. IN



PARTIAL RIGHT AT OPT. STONE



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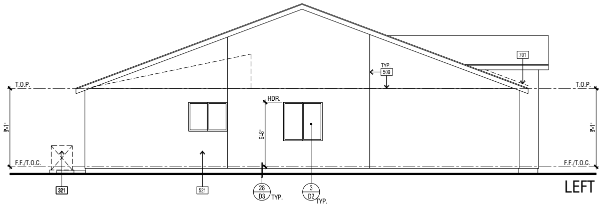

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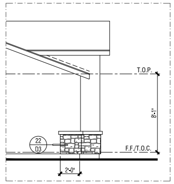
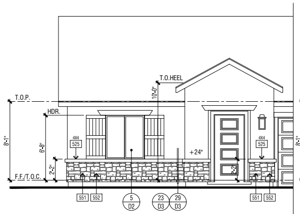
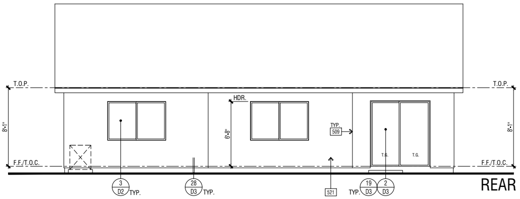


PARTIAL LEFT @ OPT. STONE



PARTIAL FRONT @ STONE OPT.



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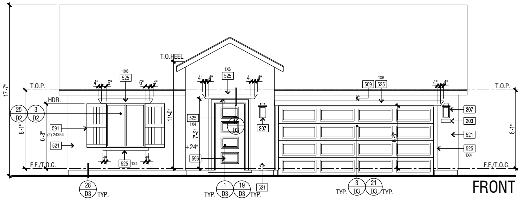


FRONT

SCALE: 1/4" = 1'-0"

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
552	STONE LOW WALL
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1334
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

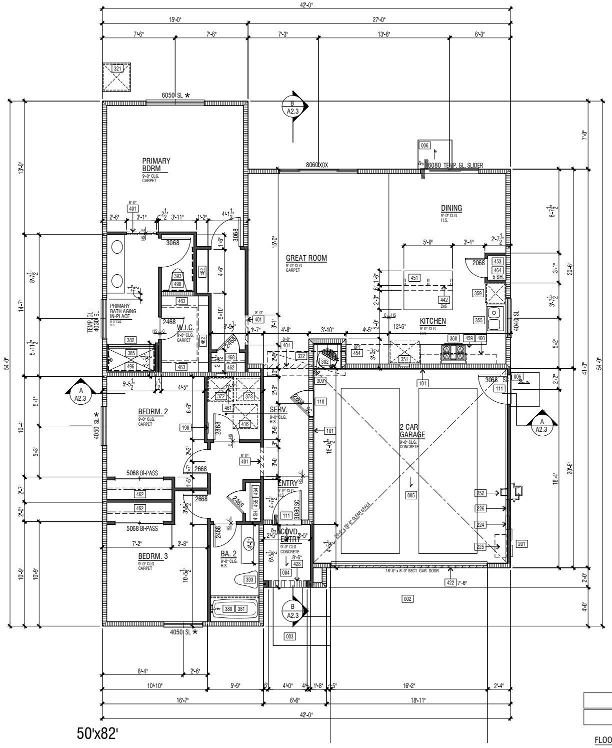
PROGRESSIVE NAPA

PLAN 1334C
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY
1ST BLDG. DE
ISSUED FOR C
JOB NUMBER
CAD FILE NAM

DATE: 06-26-23
SHEET: A1.8

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023

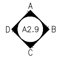


FLOOR PLAN

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED. LANDING SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 44 "; EXCEPT IN GROUPS R-3 AND U OCCUPANCIES AND WITHIN INDIVIDUAL UNITS OF GROUP R-2 NEED NOT EXCEED 36" (U.NO.) PER CBC SECTION 1010.1.5
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
110	PROVIDE SOLID WOOD DOOR NOT LESS THAN 1-3/8" THICK, SOLID OR HONEYCOMB-CORE STEEL DOOR NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE-RATED DOOR. DOORS SHALL BE SELF-LATCHING AND EQUIPPED WITH OR SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE PER C.R.C. SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
198	LOW VOLT SUB PANEL. INSTALLATION IN CLOSETS IS PROHIBITED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
226	BACKUP SUB PANEL
252	SOLAR READY BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER. (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
309	TEMPERATURE & PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE PER CPC SECTION 608.5
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
322	FORCED AIR UNIT (FAU) ATTIC INSTALLATION. SEE DETAIL 26/D4
346	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
359	DISHWASHER
360	SLIDE-IN RANGE/OVEN AND MICRO WITH VENT/LIGHT COMBINATION (EXHAUST VENT TO OUTSIDE). PROVIDE 24" CLEAR ABOVE RANGE/OVEN TO UNDERSIDE OF MICROWAVE VENT.
372	WASHER SPACE WITH RECESSED WATER BOX AND DRAIN PAN
373	DRYER SPACE
380	TUB/ SHOWER - SIZE PER PLAN. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
381	CURTAIN ROD
382	TEMPERED GLASS SHOWER DOOR/ ENCLOSURE
385	SHOWER - PREFABRICATED PAN - SIZE PER PLAN. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
416	30"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)2 - SEE DETAIL 25/D4
422	STUCCO SOFFIT: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
442	2x PONY WALL - SIZE/HEIGHT PER PLAN
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY
454	DESK
455	LINEN
459	BASE CABINET
460	UPPER CABINET
461	WIRE SHELF
462	SHELF AND POLE - LOCATE POLE 66" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
463	DOUBLE SHELF AND POLE - LOCATE POLES 44" & 88" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
464	SHELF (OR SHELVES)
468	COAT CLOSET
482	FULL HEIGHT LINEN
496	SHOWER REINFORCEMENT TO BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED. ACTUAL GRAB BARS NOT REQUIRED PER CODE
498	WATER CLOSET REINFORCEMENT TO BE INSTALLED ON BOTH SIDES WALLS OF THE FIXTURE, OR ON ONE SIDE WALL AND THE BACK WALL. ACTUAL GRAB BARS NOT REQUIRED PER CODE

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6



INTERIOR ELEVATION KEY

NAILING SCHEDULE IS LOCATED ON SHEET SD.2

SEE SHEETS A2.5 & A2.7 FOR ADDENDA PLANS

FLOOR PLAN LEGEND

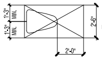
▥ = 2 x 6 D.F. #2 AT 16" O.C.

▬ = 2 x 4 D.F. #2 AT 16" O.C.

3050 SH★
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310

1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL

FLOOR AREA TABLE	PLAN 1482 A
LOWER FLOOR PLAN	1482 SQ. FT.
TOTAL	1482 SQ. FT.
2-BAY GARAGE	423 SQ. FT.
COVERED ENTRY/PORCH	35 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1482
CITREA at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

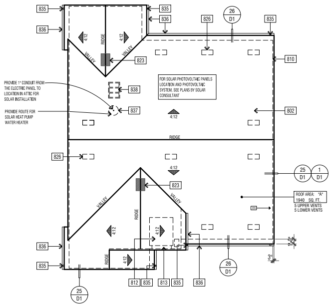
PLAN 1482A
FLOOR PLAN

CONTEMPORARY SPANISH

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONST
JOB NUMBER :
CAD FILE NAME :

DATE: 06-26-23
SHEET: A2.1

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: A		ELEVATION STYLE: CONTEMPORARY SPANISH			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1	2x6	NONE	1'-0"	TIGHT

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

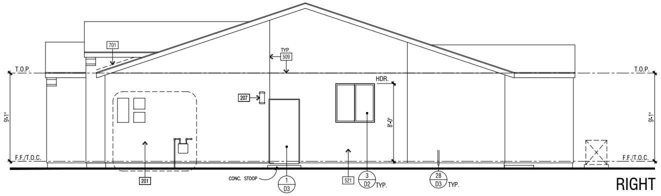
Name	NOTE
802	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

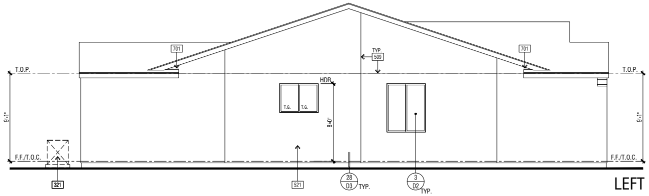
					PLAN	1482A
ROOF ATTIC AREA	A	1940	SQ. FT.	CALCULATION FACTOR:		1/300
		279360	SQ. IN			
MIN. VENTILATION REQUIRED:	TOTAL	932	SQ. IN	TOTAL PROVIDED:	980	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	466	SQ. IN	TOTAL HIGH PROVII	490	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	466	SQ. IN	TOTAL LOW PROVII	490	SQ. IN

HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	5	490	SQ. IN
					TOTAL PROVIDED:	490	SQ. IN

LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	5	490	SQ. IN
					TOTAL PROVIDED:	490	SQ. IN



RIGHT



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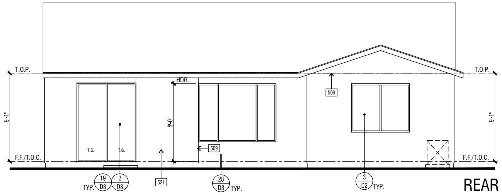
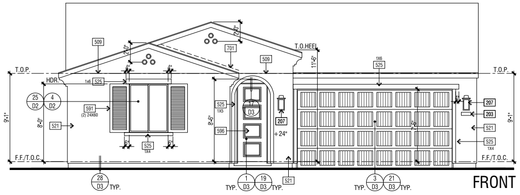


REAR



FRONT

SCALE: 1/4" = 1'-0"

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

LICENSED ARCHITECT
WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE
STATE OF CALIFORNIA

WILSON HÔMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1482
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

PLAN 1482A
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-26-23	A2.4

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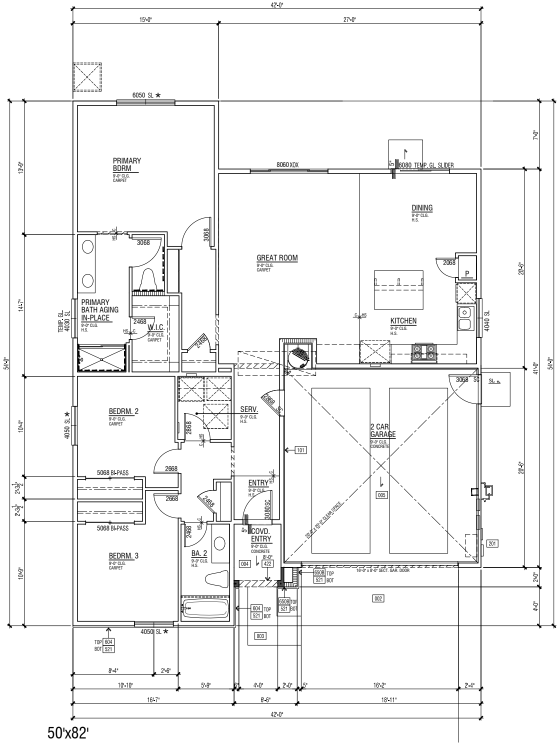

FLOOR PLAN

FLOOR PLAN KEY NOTES

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003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
422	STUCCO SOFFIT: HEIGHT PER PLAN
425	WOOD SOFFIT: HEIGHT PER ELEVATION
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
604	1X3 FIBER CEMENT BATTS SPACED AT 16" O.C.
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT). FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A2.1. FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	▦	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
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5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
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7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
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12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 1482 B
LOWER FLOOR PLAN	1482 SQ. FT.
TOTAL	1482 SQ. FT.
2-BAY GARAGE	423 SQ. FT.
COVERED ENTRY/PORCH	35 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1482
CITREA at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

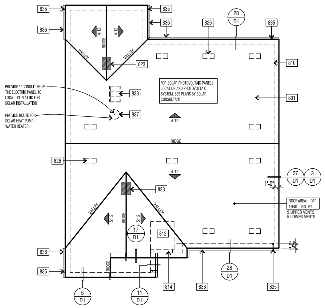
PLAN 1482B
ADDENDA
FLOOR PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

MODERN

DATE:	SHEET:
06-26-23	A2.5

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: B		ELEVATION STYLE: MODERN			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	 RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2x8	2x8	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

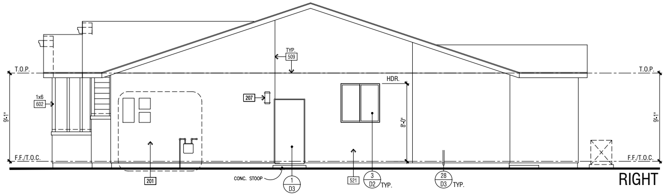
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
814	WOOD SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	1482B	
ROOF ATTIC AREA	A	1940	SQ. FT.		CALCULATION FACTOR:		1/300	
		279360	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	932	SQ. IN		TOTAL PROVIDED:	990		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	466	SQ. IN		TOTAL HIGH PROVII	495		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	466	SQ. IN		TOTAL LOW PROVII	495		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	5		495	SQ. IN
					TOTAL PROVIDED:		495	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	5		495	SQ. IN
					TOTAL PROVIDED:		495	SQ. IN



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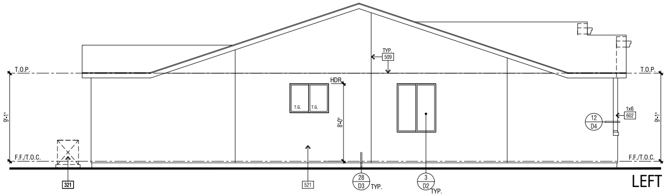
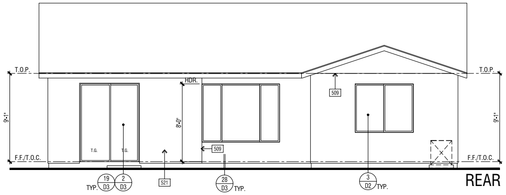


LEFT



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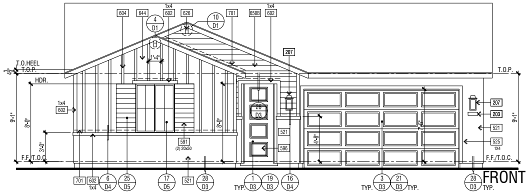


FRONT

SCALE: 1/4" = 1'-0"

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 13/D5
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	FIBER CEMENT TRIM(S) - SIZE PER ELEVATION
604	1X3 FIBER CEMENT BATTS SPACED AT 16" O.C.
626	OUTLOOKER ASSEMBLY - WOOD (SIZE/SHAPE PER ELEVATION)
644	FIBER CEMENT VERTICAL SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT). FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1482
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023

REVISIONS

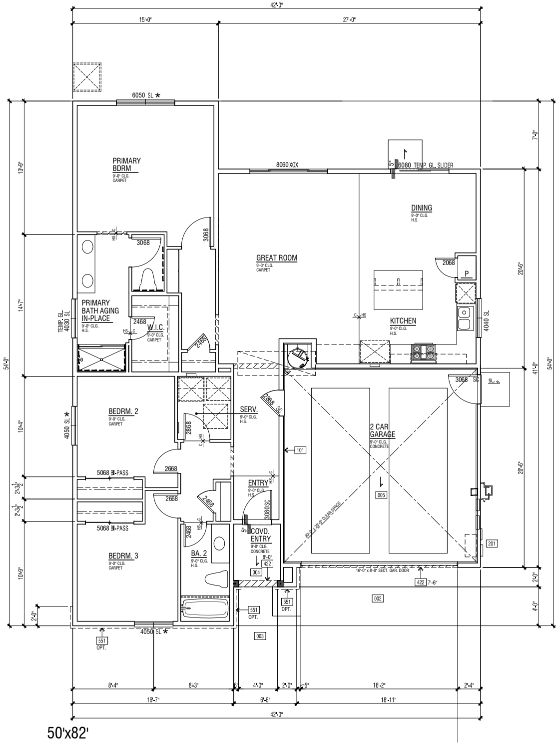
NO.	DATE	DESCRIPTION

PLAN 1482B
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONST
JOB NUMBER :
CAD FILE NAME :

MODERN

DATE:	SHEET:
06-26-23	A2.6



FLOOR PLAN

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A2.1. FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	⊠	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 1482 C
LOWER FLOOR PLAN	1482 SQ. FT.
TOTAL	1482 SQ. FT.
2-BAY GARAGE	423 SQ. FT.
COVERED ENTRY/PORCH	35 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1482
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

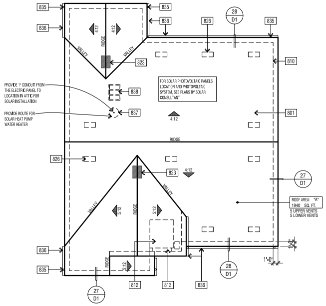
PLAN 1482C
ADDENDA
FLOOR PLAN

PROGRESSIVE NAPA

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

DATE: 06-26-23
SHEET: A2.7

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	C	ELEVATION STYLE:	PROGRESSIVE NAPA		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
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   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
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6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

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NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
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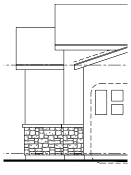
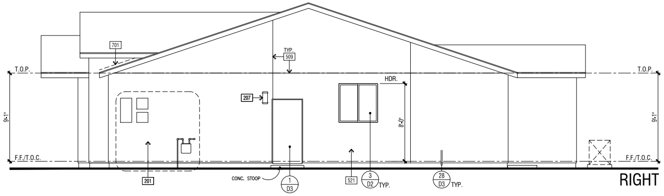
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	1482C	
ROOF ATTIC AREA	A	1940	SQ. FT.		CALCULATION FACTOR:		1/300	
		279360	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	932	SQ. IN		TOTAL PROVIDED:	990		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	466	SQ. IN		TOTAL HIGH PROVII	495		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	466	SQ. IN		TOTAL LOW PROVII	495		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	5	495		SQ. IN
					TOTAL PROVIDED:	495		SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	5	495		SQ. IN
					TOTAL PROVIDED:	495		SQ. IN



PARTIAL RIGHT AT OPT. STONE



RIGHT

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

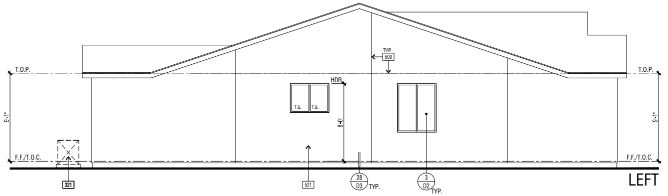
ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS, THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



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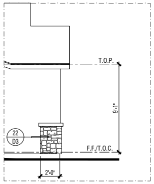

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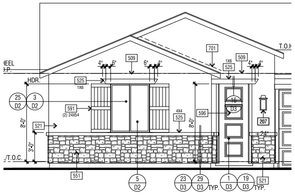

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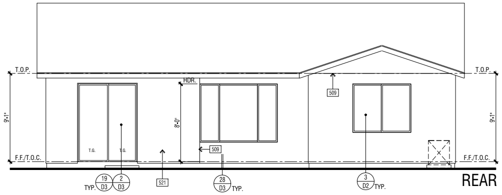

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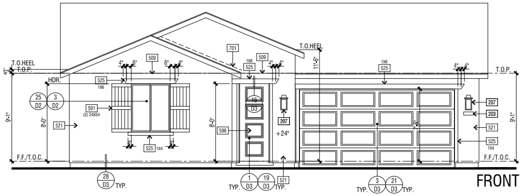


FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1482
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

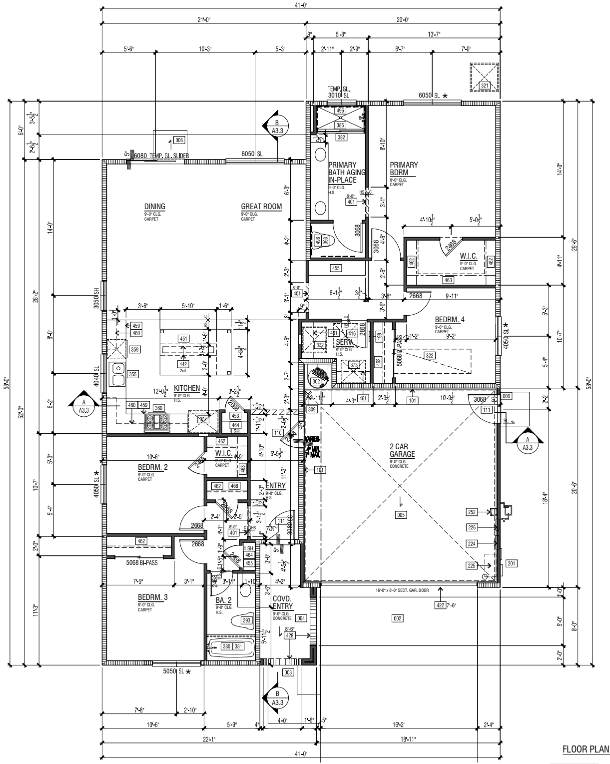
2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023

PROGRESSIVE NAPA

PLAN 1482C
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-26-23	A2.8



FLOOR PLAN

INTERIOR ELEVATION KEY

FLOOR PLAN LEGEND

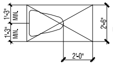
= 2 x 6 D.F. #2 AT 16" O.C.

= 2 x 4 D.F. #2 AT 16" O.C.

3050 SH★
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310

1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED, REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED, LANDING SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 44 "; EXCEPT IN GROUPS R-3 AND U OCCUPANCIES AND WITHIN INDIVIDUAL UNITS OF GROUP R-2 NEED NOT EXCEED 36" (U.NO.) PER CBC SECTION 1010.1.5
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
110	PROVIDE SOLID WOOD DOOR NOT LESS THAN 1-3/8" THICK, SOLID OR HONEYCOMB-CORE STEEL DOOR NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE-RATED DOOR. DOORS SHALL BE SELF-LATCHING AND EQUIPPED WITH OR SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE PER C.R.C. SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
198	LOW VOLTAGE SUB PANEL. INSTALLATION IN CLOSETS IS PROHIBITED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
226	BACKUP SUB PANEL
252	SOLAR READY BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER, (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
309	TEMPERATURE & PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE PER CPC SECTION 608.5
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
322	FORCED AIR UNIT (FAU) ATTIC INSTALLATION, SEE DETAIL 26/D4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
359	DISHWASHER
360	SLIDE-IN RANGE/OVEN AND MICRO WITH VENT/LIGHT COMBINATION (EXHAUST VENT TO OUTSIDE). PROVIDE 24" CLEAR ABOVE RANGE/OVEN TO UNDERSIDE OF MICROWAVE VENT.
372	WASHER SPACE WITH RECESSED WATER BOX AND DRAIN PAN
373	DRYER SPACE
380	TUB/ SHOWER - SIZE PER PLAN. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
381	CURTAIN ROD
382	TEMPERED GLASS SHOWER DOOR/ ENCLOSURE
385	SHOWER - PREFABRICATED PAN - SIZE PER PLAN. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
416	30"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)3 - SEE DETAIL 26/D4
422	STUCCO SOFFIT: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
442	2x PONY WALL - SIZE/HEIGHT PER PLAN
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY
455	LINEN
459	BASE CABINET
460	UPPER CABINET
461	WIRE SHELF
462	SHELF AND POLE - LOCATE POLE 66" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
463	DOUBLE SHELF AND POLE - LOCATE POLES 44" & 88" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
464	SHELF (OR SHELVES)
468	COAT CLOSET
496	SHOWER REINFORCEMENT TO BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED
498	WATER CLOSET REINFORCEMENT TO BE INSTALLED ON BOTH SIDES WALLS OF THE FIXTURE, OR ON ONE SIDE WALL AND THE BACK WALL

NAILING SCHEDULE IS LOCATED ON SHEET SD.2

SEE SHEETS A3.5 & A3.7 FOR ADDENDA PLANS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR AREA TABLE	PLAN 1612 A
LOWER FLOOR PLAN	1612 SQ. FT.
TOTAL	1612 SQ. FT.
2-BAY GARAGE	423 SQ. FT.
COVERED ENTRY/PORCH	65 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

CONTEMPORARY SPANISH

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1612
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

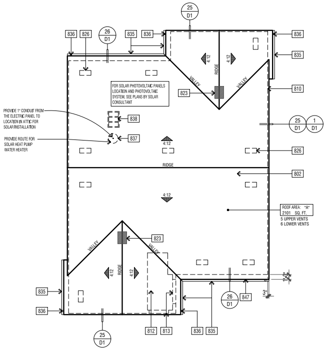
NO.	DATE	DESCRIPTION

PLAN 1612A
FLOOR PLAN

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY
1ST BLDG. DE
ISSUED FOR C
JOB NUMBER
CAD FILE NAM

DATE: 06-26-23
SHEET: A3.1

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.		
				EAVE	RAKE	
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1	2x6	NONE	1'-0"	TIGHT	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
    - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
    - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

4\. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)

5\. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.

6\. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

7\. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

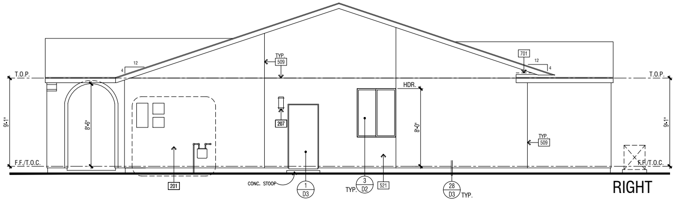
1\. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2\. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS							PLAN	1612A	
ROOF ATTIC AREA	A	2101	SQ. FT.		**CALCULATION FACTOR:**			1/300	
		302544	SQ. IN						
MIN. VENTILATION REQUIRED:	TOTAL	1008	SQ. IN		**TOTAL PROVIDED:**	1078		SQ. IN	
MIN. VENTILATION REQUIRED:	HIGH	504	SQ. IN		**TOTAL HIGH PROVII**	490		SQ. IN	
MIN. VENTILATION REQUIRED:	LOW	504	SQ. IN		**TOTAL LOW PROVII**	588		SQ. IN	
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA		
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	5		490	SQ. IN	
					TOTAL PROVIDED:		490	SQ. IN	
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA		
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	6		588	SQ. IN	
					TOTAL PROVIDED:		588	SQ. IN	



RIGHT

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
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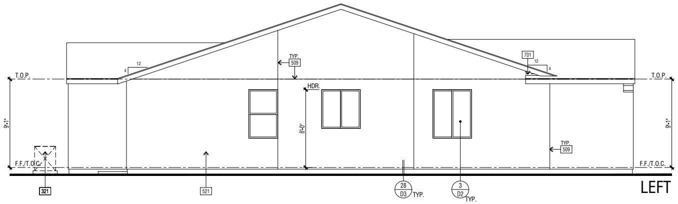
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
701	G.I. FLASHING

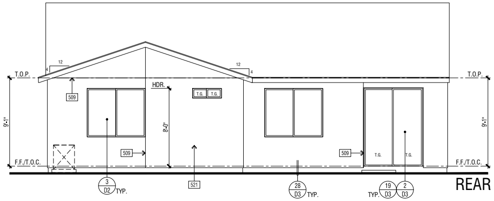
ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



LEFT



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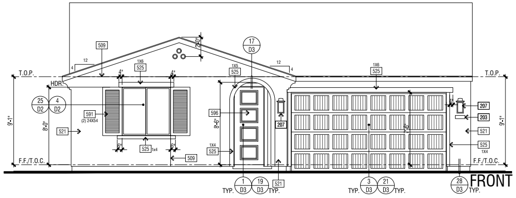


FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HÔMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1612
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

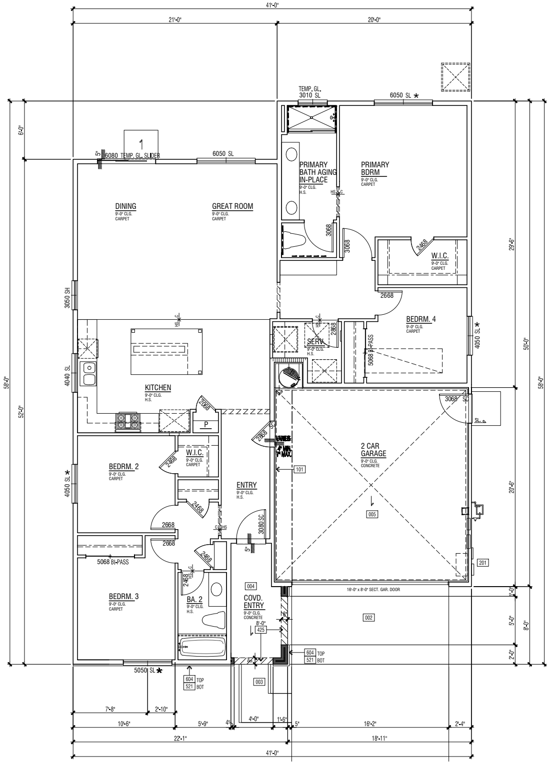
CONTEMPORARY SPANISH

PLAN 1612A
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-26-23	A3.4

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



FLOOR PLAN

SCALE: 1/4" = 1'- 0"

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
422	STUCCO SOFFIT: HEIGHT PER PLAN
425	WOOD SOFFIT: HEIGHT PER ELEVATION
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
604	1X3 FIBER CEMENT BATTS SPACED AT 16" O.C.

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEETS A3.1. FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	⊠	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

A
D A3.9 B
C
INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 1612 B
LOWER FLOOR PLAN	1612 SQ. FT.
TOTAL	1612 SQ. FT.
2-BAY GARAGE	423 SQ. FT.
COVERED ENTRY/PORCH	65 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

MODERN

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1612
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

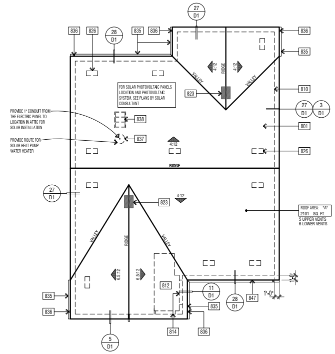
NO.	DATE	DESCRIPTION

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023

PLAN 1612B
ADDENDA
FLOOR PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-26-23	A3.5



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: B		ELEVATION STYLE: MODERN			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1.1	2x8	2x8	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

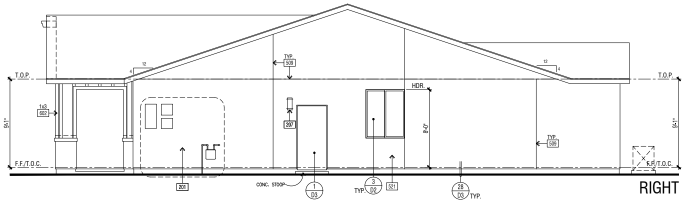
Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
814	WOOD SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS					PLAN	1612B
ROOF ATTIC AREA	A	2101	SQ. FT.	CALCULATION FACTOR:		1/300
		302544	SQ. IN			
MIN. VENTILATION REQUIRED:	TOTAL	1008	SQ. IN	TOTAL PROVIDED:	1089	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	504	SQ. IN	TOTAL HIGH PROVI	495	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	504	SQ. IN	TOTAL LOW PROVI	594	SQ. IN

HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	5	495	SQ. IN
					TOTAL PROVIDED:	495	SQ. IN

LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6	594	SQ. IN
					TOTAL PROVIDED:	594	SQ. IN



RIGHT

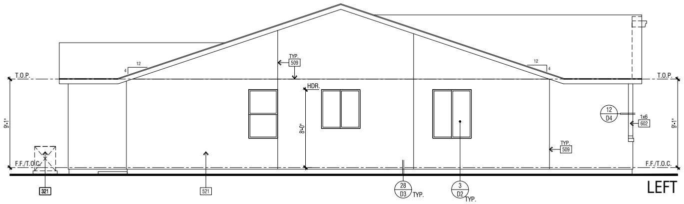
ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 13/D5
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	FIBER CEMENT TRIM(S) - SIZE PER ELEVATION
604	1X3 FIBER CEMENT BATTS SPACED AT 16" O.C.
626	OUTLOOKER ASSEMBLY - WOOD (SIZE/SHAPE PER ELEVATION)
644	FIBER CEMENT VERTICAL SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT, FINISH: SELECT CEDARMILL. (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) ICC-ES NER-405
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES, SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



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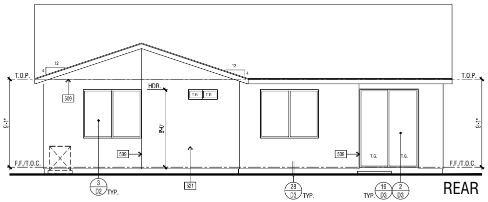

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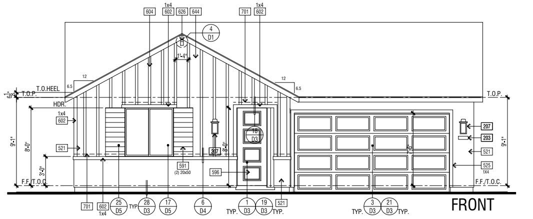

FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1612
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1612B
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONST
JOB NUMBER :
CAD FILE NAME :

MODERN

DATE: 06-26-23
SHEET: A3.6

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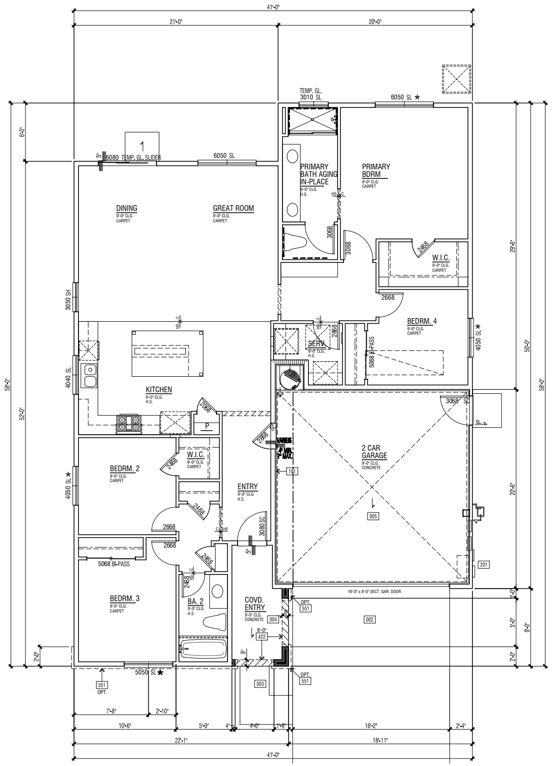

FLOOR PLAN

SCALE: 1/4" = 1'- 0"

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEETS A3.1. FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	⊠	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
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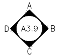
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6



INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 1612 C
LOWER FLOOR PLAN	1612 SQ. FT.
TOTAL	1612 SQ. FT.
2-BAY GARAGE	423 SQ. FT.
COVERED ENTRY/PORCH	65 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1612
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1612C
ADDENDA
FLOOR PLAN

PROGRESSIVE NAPA

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-26-23	A3.7

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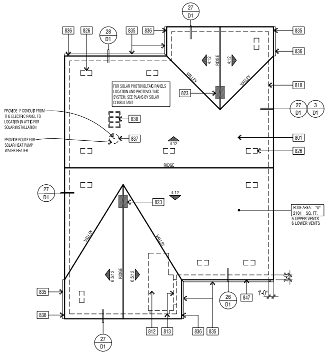


ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: C		ELEVATION STYLE: PROGRESSIVE NAPA			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	 RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

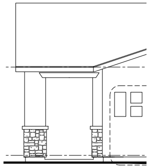
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

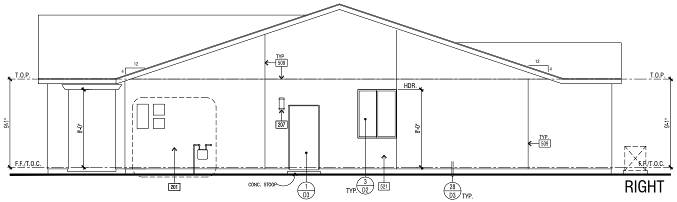
Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS							PLAN	1612C
ROOF ATTIC AREA	A	2101	SQ. FT.		CALCULATION FACTOR:			1/300
		302544	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	1008	SQ. IN		TOTAL PROVIDED:	1089		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	504	SQ. IN		TOTAL HIGH PROVII	495		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	504	SQ. IN		TOTAL LOW PROVII	594		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	5		495	SQ. IN
					TOTAL PROVIDED:		495	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6		594	SQ. IN
					TOTAL PROVIDED:		594	SQ. IN



PARTIAL RIGHT AT OPT. STONE



RIGHT

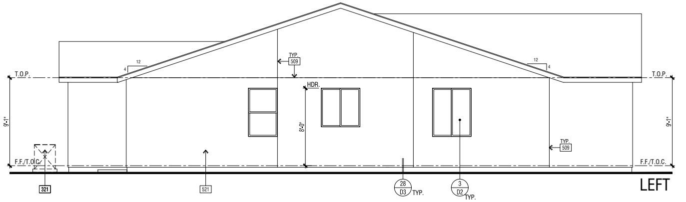
ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
515	-2" STUCCO RECESS. SIZE PER ELEVATION. SLOPE SILL 1/4" PER FT. MINIMUM
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS

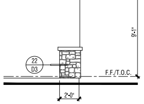
ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

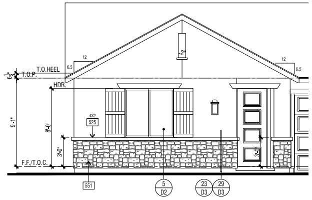
FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



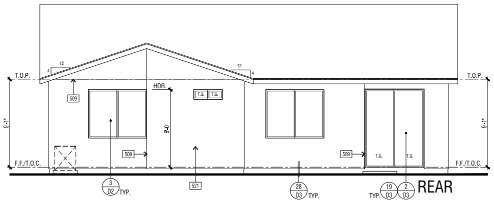
LEFT



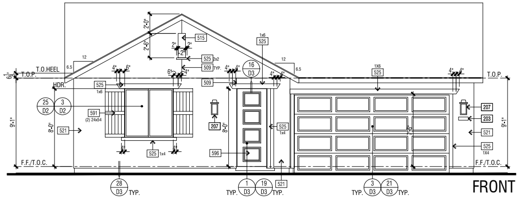
PARTIAL LEFT AT OPT. STONE



PARTIAL FRONT @ STONE OPT.



REAR



FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1612
CITREA at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

PROGRESSIVE NAPA

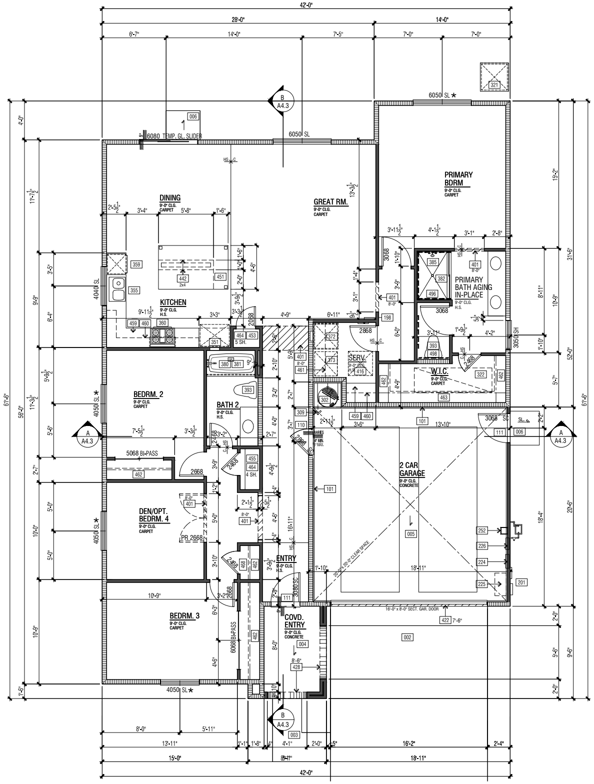
PLAN 1612C
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONST
JOB NUMBER :
CAD FILE NAME :

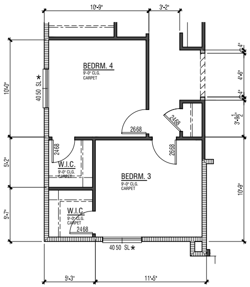
DATE: 06-26-23
SHEET: A3.8

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023

AGENDA ITEM NO. 6.



FLOOR PLAN



OPT. BEDRM. 4 AT DEN

INTERIOR ELEVATION KEY

NAILING SCHEDULE IS LOCATED ON SHEET SD.2

SEE SHEETS A4.5 & A4.7 FOR ADDENDA PLANS

FLOOR PLAN LEGEND

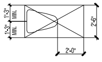
▥ = 2 x 6 D.F. #2 AT 16" O.C.

▬ = 2 x 4 D.F. #2 AT 16" O.C.

3050 SH★
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310

1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OT IN THE DIRECTION INDICATED. F INFORMATION
005	CONCRETE GARAGE SLAB - SLO
006	CONCRETE STOOP - SLOPE 1/4" LANDING SHALL HAVE A LENGT THAN 44 "; EXCEPT IN GROUPS GROUP R-2 NEED NOT EXCEED
101	THE PRIVATE GARAGE SHALL B MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
110	PROVIDE SOLID WOOD DOOR NOT LESS THAN 1-3/8" THICK, SOLID OR HONEYCOMB-CORE STEEL DOOR NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE-RATED DOOR. DOORS SHALL BE SELF-LATCHING AND EQUIPPED WITH OR SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE PER C.R.C. SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
198	LOW VOLT SUB PANEL. INSTALLATION IN CLOSETS IS PROHIBITED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
226	BACKUP SUB PANEL
252	SOLAR READY BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER. (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
309	TEMPERATURE & PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE PER CPC SECTION 608.5
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
322	FORCED AIR UNIT (FAU) ATTIC INSTALLATION. SEE DETAIL 26/D4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
359	DISHWASHER
360	SLIDE-IN RANGE/OVEN AND MICRO WITH VENT/LIGHT COMBINATION (EXHAUST VENT TO OUTSIDE). PROVIDE 24" CLEAR ABOVE RANGE/OVEN TO UNDERSIDE OF MICROWAVE VENT.
372	WASHER SPACE WITH RECESSED WATER BOX AND DRAIN PAN
373	DRYER SPACE
380	TUB/ SHOWER - SIZE PER PLAN. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
381	CURTAIN ROD
382	TEMPERED GLASS SHOWER DOOR/ ENCLOSURE
385	SHOWER - PREFABRICATED PAN - SIZE PER PLAN. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
416	30"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)2 - SEE DETAIL 25/D4
422	STUCCO SOFFIT: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
442	2x PONY WALL - SIZE/HEIGHT PER PLAN
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY
455	LINEN
459	BASE CABINET
460	UPPER CABINET
461	WIRE SHELF
462	SHELF AND POLE - LOCATE POLE 66" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
463	DOUBLE SHELF AND POLE - LOCATE POLES 44" & 88" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
464	SHELF (OR SHELVES)
468	COAT CLOSET
482	FULL HEIGHT LINEN
496	SHOWER REINFORCEMENT TO BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED
498	WATER CLOSET REINFORCEMENT TO BE INSTALLED ON BOTH SIDES WALLS OF THE FIXTURE, OR ON ONE SIDE WALL AND THE BACK WALL

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR AREA TABLE	PLAN 1782 A
LOWER FLOOR PLAN	1782 SQ. FT.
TOTAL	1782 SQ. FT.
2-BAY GARAGE	424 SQ. FT.
COVERED ENTRY/PORCH	63 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA

CRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1782
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

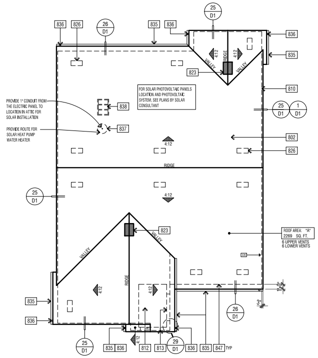
PLAN 1782 A
FLOOR PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	-
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	06-26-2023
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023009
CAD FILE NAME :	A4.1

DATE: 06-26-23

SHEET: A4.1

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	RAKE
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1	2x6	NONE	1'-0"	TIGHT

ROOF PLAN NOTES

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2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
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   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
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1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

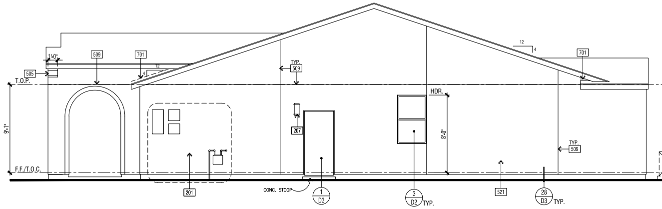
ATTIC VENTILATION CALCULATIONS

PLAN 1782A

ROOF ATTIC AREA	A	2269	SQ. FT.	CALCULATION FACTOR:	1/300	
		326736	SQ. IN			
MIN. VENTILATION REQUIRED:	TOTAL	1090	SQ. IN	TOTAL PROVIDED:	1176	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	545	SQ. IN	TOTAL HIGH PROVI	588	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	545	SQ. IN	TOTAL LOW PROVI	588	SQ. IN

HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	6	588	SQ. IN
					TOTAL PROVIDED:	588	SQ. IN

LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	6	588	SQ. IN
					TOTAL PROVIDED:	588	SQ. IN



RIGHT

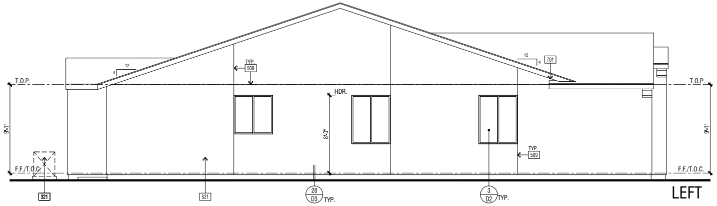
ELEVATION KEY NOTES

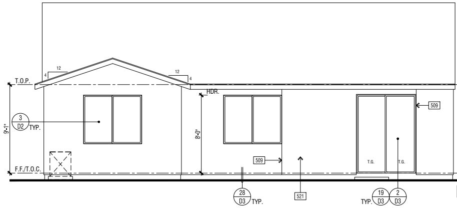
Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
505	STUCCO OVER SHAPED RIGID FOAM TRIM (SEE DETAIL 29/D1)
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS, THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

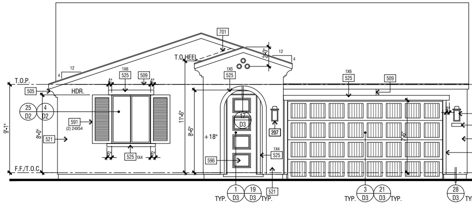
NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.





REAR



FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'XX' Lots)

PLAN 1782
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

PLAN 1782A
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONST
JOB NUMBER :
CAD FILE NAME :

DATE: 06-26-23
SHEET: A4.4

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023

AGENDA ITEM NO. 6.

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY O IN THE DIRECTION INDICATED. INFORMATION
005	CONCRETE GARAGE SLAB - SL
101	THE PRIVATE GARAGE SHALL B MEANS OF GYPSUM BOARD, NO SIDE. C.B.C. SECTION 406.3.2.1
201	UTILITY EQUIPMENT AND SERV
422	STUCCO SOFFIT: HEIGHT PER P
425	WOOD SOFFIT: HEIGHT PER ELEVATION
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
604	1X3 FIBER CEMENT BATTS SPACED AT 16" O.C.
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT). FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

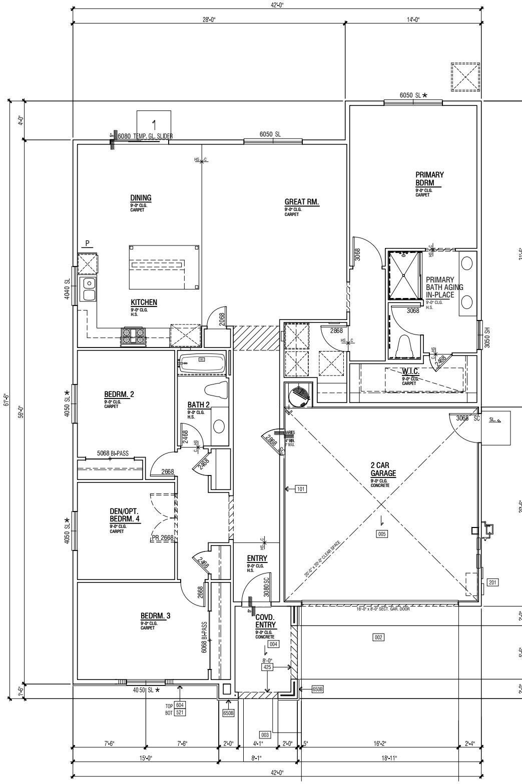
REFER TO BASE PLAN SHEETS A4.1. FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

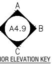
▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	☒	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6



FLOOR PLAN



INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 1782 B
LOWER FLOOR PLAN	1782 SQ. FT.
TOTAL	1782 SQ. FT.
2-BAY GARAGE	424 SQ. FT.
COVERED ENTRY/PORCH	63 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA

CRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1782
CITREA at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

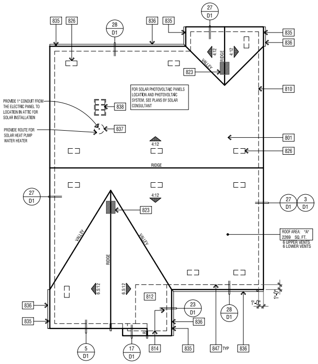
PLAN 1782B
ADDENDA
FLOOR PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	-
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	06-26-2023
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023009
CAD FILE NAME :	A405

DATE:	SHEET:
06-26-23	A4.5

MODERN

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	B	ELEVATION STYLE:	MODERN		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2x8	2x8	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

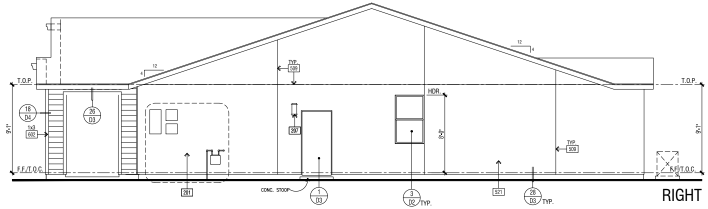
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
814	WOOD SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	1782B	
ROOF ATTIC AREA	A	2269	SQ. FT.		CALCULATION FACTOR:		1/300	
		326736	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	1090	SQ. IN		TOTAL PROVIDED:	1188	SQ. IN	
MIN. VENTILATION REQUIRED:	HIGH	545	SQ. IN		TOTAL HIGH PROVI	594	SQ. IN	
MIN. VENTILATION REQUIRED:	LOW	545	SQ. IN		TOTAL LOW PROVI	594	SQ. IN	
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6	594	SQ. IN	
					TOTAL PROVIDED:	594	SQ. IN	
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6	594	SQ. IN	
					TOTAL PROVIDED:	594	SQ. IN	



RIGHT

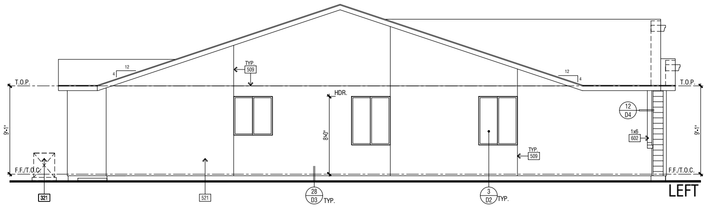
ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	FIBER CEMENT TRIM(S) - SIZE PER ELEVATION
604	1x3 FIBER CEMENT BATTS SPACED AT 16" O.C.
626	OUTLOOKER ASSEMBLY - WOOD (SIZE/SHAPE PER ELEVATION)
644	FIBER CEMENT VERTICAL SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT, FINISH: SELECT CEDARMILL. (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT). FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
701	G.I. FLASHING

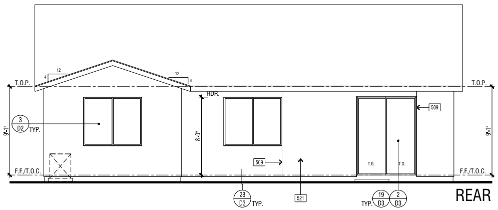
ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS, THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



LEFT



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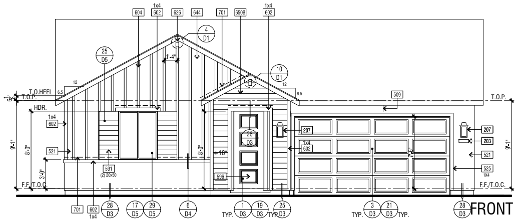


FRONT

SCALE: 1/4" = 1'-0"

MODERN

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH C12920 04-30-25 RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1782
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1782B
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONST
JOB NUMBER :
CAD FILE NAME :

DATE: 06-26-23
SHEET: A4.6

20230009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023

AGENDA ITEM NO. 6.

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY O IN THE DIRECTION INDICATED. INFORMATION
005	CONCRETE GARAGE SLAB - SL
101	THE PRIVATE GARAGE SHALL B MEANS OF GYPSUM BOARD, NO SIDE. C.B.C. SECTION 406.3.2.1
201	UTILITY EQUIPMENT AND SERV
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

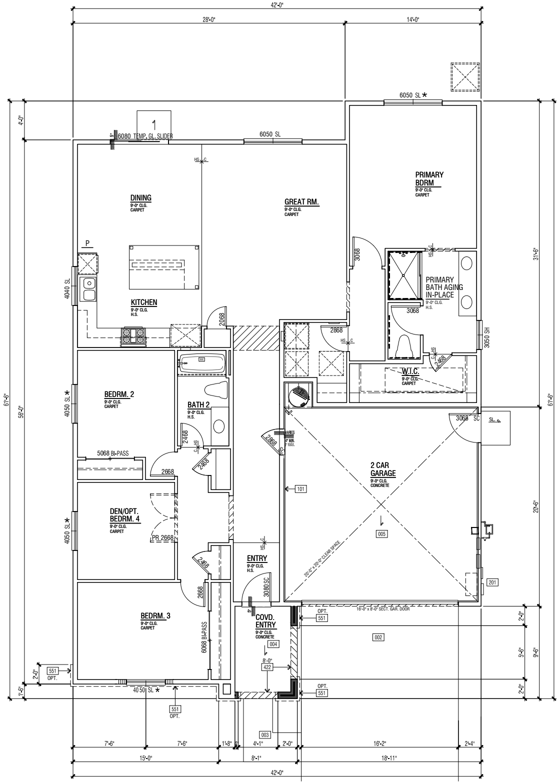
REFER TO BASE PLAN SHEETS A4.1. FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	☒	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6



FLOOR PLAN

A
D A4.9 B
C

INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 1782 C
LOWER FLOOR PLAN	1782 SQ. FT.
TOTAL	1782 SQ. FT.
2-BAY GARAGE	424 SQ. FT.
COVERED ENTRY/PORCH	63 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

PROGRESSIVE NAPA

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

CRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1782
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

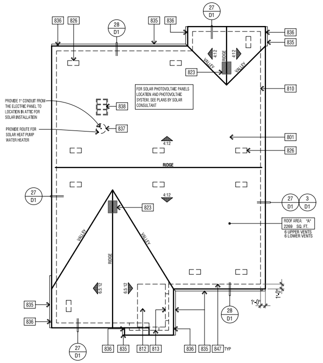
NO.	DATE	DESCRIPTION

PLAN 1782C
ADDENDA
FLOOR PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	-
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	06-26-2023
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023009
CAD FILE NAME :	A407

DATE:	SHEET:
06-26-23	A4.7

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	C	ELEVATION STYLE:	PROGRESSIVE NAPA		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

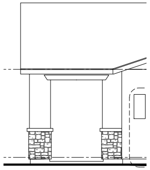
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

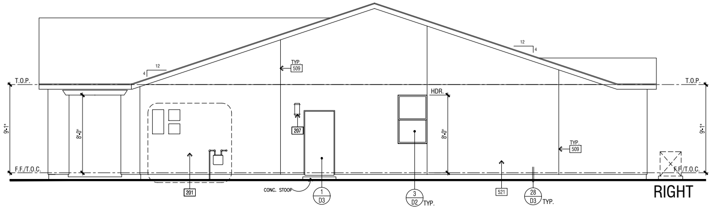
Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

						PLAN	1782C
ROOF ATTIC AREA	A	2269	SQ. FT.	CALCULATION FACTOR:			1/300
		326736	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1090	SQ. IN	TOTAL PROVIDED:	1188		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	545	SQ. IN	TOTAL HIGH PROVII	594		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	545	SQ. IN	TOTAL LOW PROVII	594		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	6		594	SQ. IN
				TOTAL PROVIDED:		594	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	6		594	SQ. IN
				TOTAL PROVIDED:		594	SQ. IN



PARTIAL RIGHT AT OPT. STONE



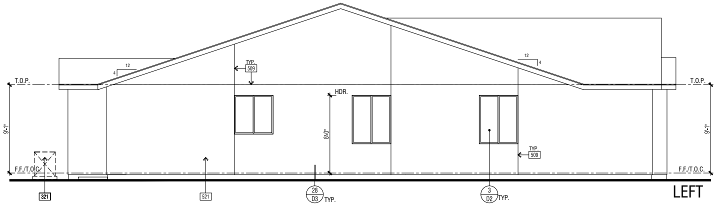
ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

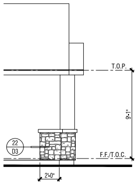
NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
515	-2" STUCCO RECESS. SIZE PER ELEVATION. SLOPE SILL 1/4" PER FT. MINIMUM
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
701	G.I. FLASHING





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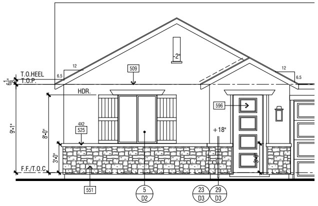

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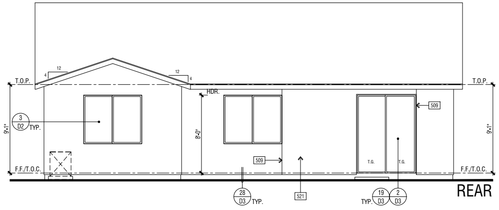
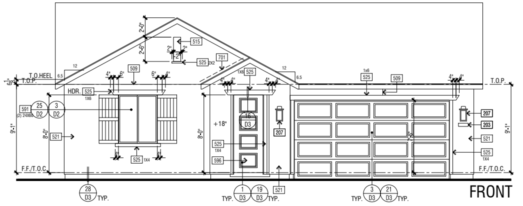




SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 1782
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

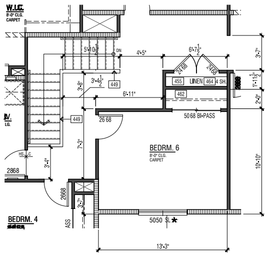
PROGRESSIVE NAPA

PLAN 1782C
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-26-23	A4.8

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



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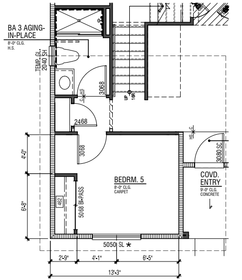

OPT. BEDRM. 5 ILO DEN

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
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18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED, REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED, LANDING SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 44 "; EXCEPT IN GROUPS R-3 AND U OCCUPANCIES AND WITHIN INDIVIDUAL UNITS OF GROUP R-2 NEED NOT EXCEED 36" (U.NO.) PER CBC SECTION 1010.1.5
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. CRC SECTION 302.6.
102	ENCLOSED SPACE UNDER STAIRS THAT IS ACCESSED BY A DOOR OR ACCESS PANEL SHALL HAVE WALLS, UNDER-STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2-INCH GYPSUM BOARD PER C.R.C. SECTION R302.7.
104	GARAGE AND/OR CARPORT WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQ. STRUCTURE(S) SUPPORTING THE FLR./CLG. ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER C.R.C. SECTION R302.6, TABLE 302.6.
110	PROVIDE SOLID WOOD DOOR NOT LESS THAN 1-3/8" THICK, SOLID OR HONEYCOMB-CORE STEEL DOOR NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE-RATED DOOR. DOORS SHALL BE SELF-LATCHING AND EQUIPPED WITH OR SELF-CLOSING OR AUTOMATIC-CLOSING DEVICE PER C.R.C. SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
198	LOW VOLTAGE SUB PANEL. INSTALLATION IN CLOSETS IS PROHIBITED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
226	BACKUP SUB PANEL
232	SERVICE ROOM FLOOR DRAIN - SEE DETAIL 24/D4
252	SOLAR READY BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER. (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
322	FORCED AIR UNIT (FAU) ATTIC INSTALLATION. SEE DETAIL 26/D4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
359	DISHWASHER
360	SLIDE-IN RANGE/OVEN AND MICRO WITH VENT/LIGHT COMBINATION (EXHAUST VENT TO OUTSIDE). PROVIDE 24" CLEAR ABOVE RANGE/OVEN TO UNDERSIDE OF MICROWAVE VENT.
372	WASHER SPACE WITH RECESSED WATER BOX AND DRAIN PAN
373	DRYER SPACE
375	DROP-IN TUB - SIZE PER PLAN
380	TUB/ SHOWER - SIZE PER PLAN. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
381	CURTAIN ROD
382	TEMPERED GLASS SHOWER DOOR/ ENCLOSURE
385	SHOWER - PREFABRICATED PAN - 60x36 SIZE. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
416	30"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)2 - SEE DETAIL 26/D4
422	STUCCO SOFFIT: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
442	2x PONY WALL - SIZE/HEIGHT PER PLAN
444	+34"- +38" HANDRAIL (1E/D4)
445	+42" GUARD (SEE DETAIL 1F/D4)
449	+42" HIGH INTERIOR GYP. BD. WALL GUARD WITH WOOD CAP PER C.B.C. SECTION 1015.3.
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
455	LINEN
457	LINEN (LOW ONLY)
459	BASE CABINET
460	UPPER CABINET
461	WIRE SHELF
462	SHELF AND POLE - LOCATE POLE 66" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
463	DOUBLE SHELF AND POLE - LOCATE POLES 44" & 88" A.F.F., PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
464	SHELF (OR SHELVES)
468	COAT CLOSET
496	SHOWER REINFORCEMENT TO BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED
497	WATER CLOSET REINFORCEMENT TO BE FLOOR-MOUNTED OR FOLDAWAY OR SIMILAR ALTERNATIVE GRAB BAR REINFORCEMENT TO BE PROVIDED IN ADDITION TO THE BACK WALL REINFORCEMENT

ARCHITECTS . PLANNERS . DESIGNERS

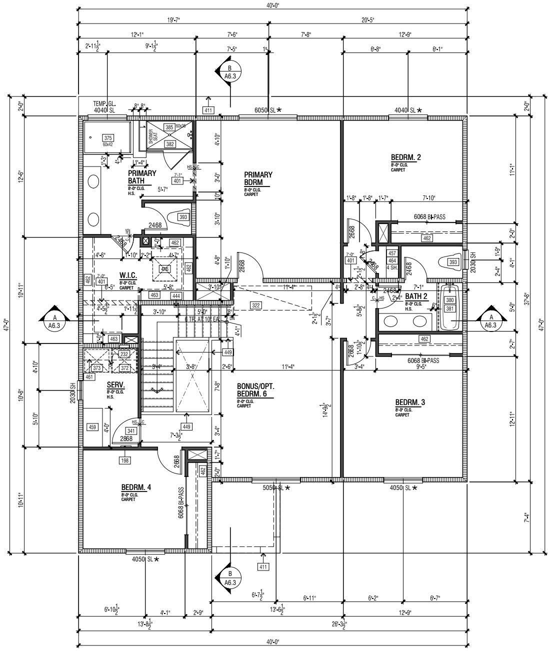
WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

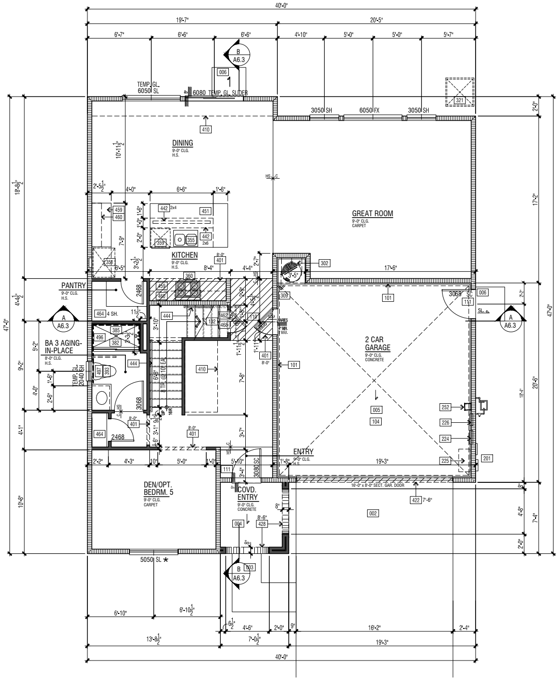
LICENSED ARCHITECT
WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE
STATE OF CALIFORNIA

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'X' Lots)



UPPER FLOOR PLAN



LOWER FLOOR PLAN

FLOOR PLAN LEGEND

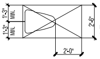
▥ = 2 x 6 D.F. #2 AT 16" O.C.

■ = 2 x 4 D.F. #2 AT 16" O.C.

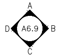
3050 SH★
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310

1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL



INTERIOR ELEVATION KEY

NAILING SCHEDULE IS LOCATED ON SHEET SD.2

SEE SHEETS A6.5 & A6.7 FOR ADDENDA PLANS

FLOOR AREA TABLE	PLAN 2741A
LOWER FLOOR PLAN	1219 SQ. FT.
UPPER FLOOR PLAN	1522 SQ. FT.
TOTAL	2741 SQ. FT.
2-BAY GARAGE	427 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

PLAN 2741
CITREA at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023

REVISIONS

NO.	DATE	DESCRIPTION

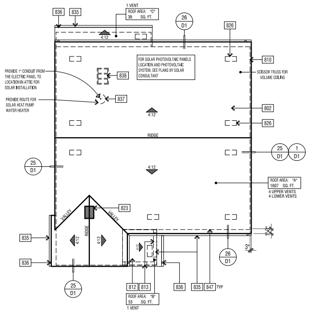
CONTEMPORARY SPANISH

PLAN 2741A
FLOOR PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY	
1ST BLDG. DE	
ISSUED FOR C	
JOB NUMBER	
CAD FILE NAM	

DATE:
06-26-23

SHEET:
A6.1



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE	
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1	2x6	NONE	1'-0"	TIGHT	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

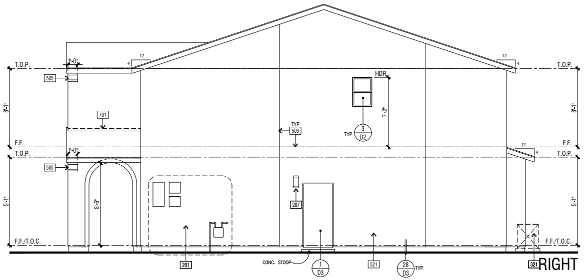
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	2741A	
ROOF ATTIC AREA	A	1607	SQ. FT.		CALCULATION FACTOR:		1/300	
		231408	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	772	SQ. IN		TOTAL PROVIDED:	784	SQ. IN	
MIN. VENTILATION REQUIRED:	HIGH	386	SQ. IN		TOTAL HIGH PROVII	392	SQ. IN	
MIN. VENTILATION REQUIRED:	LOW	386	SQ. IN		TOTAL LOW PROVII	392	SQ. IN	
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	4	392	SQ. IN	
					TOTAL PROVIDED:	392	SQ. IN	
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. 'S' TILE	-	98	SQ. IN	X	4	392	SQ. IN	
					TOTAL PROVIDED:	392	SQ. IN	
ROOF ATTIC AREA	B	53	SQ. FT.		CALCULATION FACTOR:		1/150	
		7632	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	51	SQ. IN		TOTAL PROVIDED:	98	SQ. IN	
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN	X	1	98	SQ. IN	
					TOTAL PROVIDED:	98	SQ. IN	
ROOF ATTIC AREA	C	39	SQ. FT.		CALCULATION FACTOR:		1/150	
		5616	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	37	SQ. IN		TOTAL PROVIDED:	98	SQ. IN	
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN	X	1	98	SQ. IN	
					TOTAL PROVIDED:	98	SQ. IN	



RIGHT

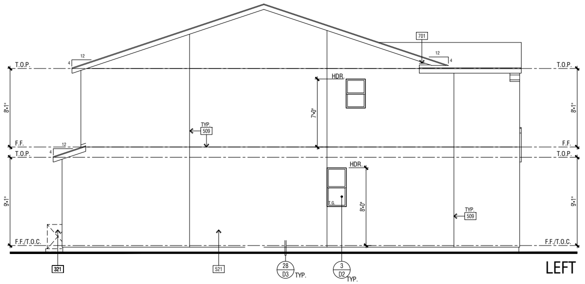
ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
505	STUCCO OVER SHAPED RIGID FOAM TRIM (SEE DETAIL 29/D1)
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - OMEGA DIAMOND WALL ONE COAT STUCCO ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER 'STAR R GUARD' ESR - 1566 BY 'STAR R FOAM' - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



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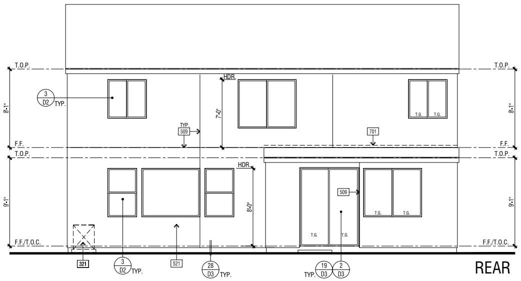
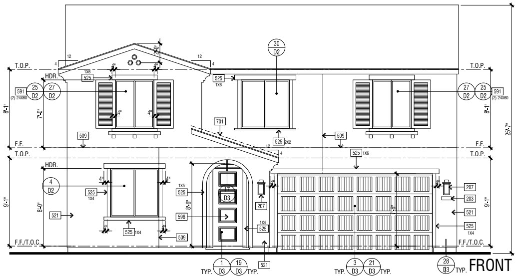


REAR



FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HÔMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 2741
CITREA at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

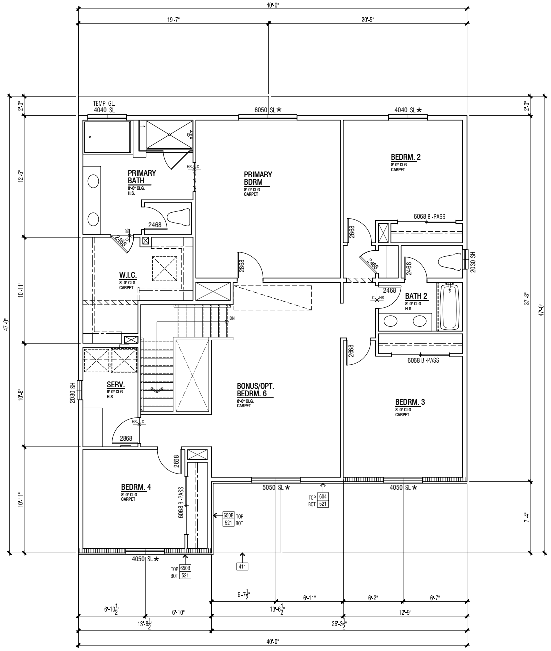
CONTEMPORARY SPANISH

PLAN 2741A
ELEVATIONS AND
ROOF PLAN

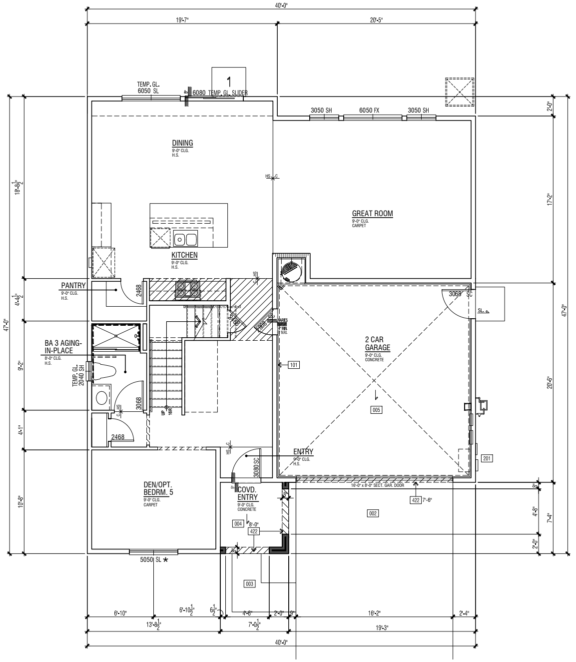
PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY	
1ST BLDG. DE	
ISSUED FOR C	
JOB NUMBER	
CAD FILE NAM	

DATE: 06-26-23
SHEET: A6.4

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



UPPER FLOOR PLAN



LOWER FLOOR PLAN

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED, REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE. C.B.C. SECTION 406.3.2.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
422	STUCCO SOFFIT: HEIGHT PER PLAN
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
604	1x3 FIBER CEMENT BATTS SPACED AT 16" O.C.
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT). FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

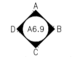
REFER TO BASE PLAN SHEET A6.1 FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	☒	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6



INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 2741B
LOWER FLOOR PLAN	1219 SQ. FT.
UPPER FLOOR PLAN	1522 SQ. FT.
TOTAL	2741 SQ. FT.
2-BAY GARAGE	427 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 2741
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

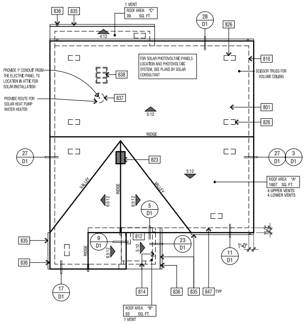
PLAN 2741B
ADDENDA FLOOR PLANS

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY
1ST BLDG. DE
ISSUED FOR C
JOB NUMBER
CAD FILE NAM

MODERN

DATE: 06-26-23
SHEET: A6.5

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	B	ELEVATION STYLE:	MODERN			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE	
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1.1	2x8	2x8	1'-0"	1'-0"	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

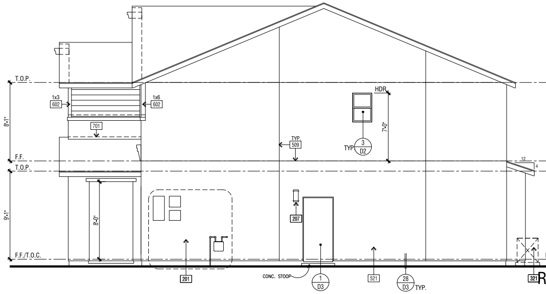
ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
814	WOOD SOFFIT
823	MIN. 22"X30" CLEAR OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

PLAN 2741B

ROOF ATTIC AREA	A	1607	SQ. FT.	CALCULATION FACTOR:		1/300	
		231408	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	772	SQ. IN	TOTAL PROVIDED:	792		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	386	SQ. IN	TOTAL HIGH PROVI	396		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	386	SQ. IN	TOTAL LOW PROVI	396		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	4		396	SQ. IN
				TOTAL PROVIDED:		396	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	4		396	SQ. IN
				TOTAL PROVIDED:		396	SQ. IN
ROOF ATTIC AREA	B	53	SQ. FT.	CALCULATION FACTOR:		1/150	
		7632	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	51	SQ. IN	TOTAL PROVIDED:	99		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN X	1		99	SQ. IN
				TOTAL PROVIDED:		99	SQ. IN
ROOF ATTIC AREA	C	39	SQ. FT.	CALCULATION FACTOR:		1/150	
		5616	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	37	SQ. IN	TOTAL PROVIDED:	99		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN X	1		99	SQ. IN
				TOTAL PROVIDED:		99	SQ. IN



RIGHT

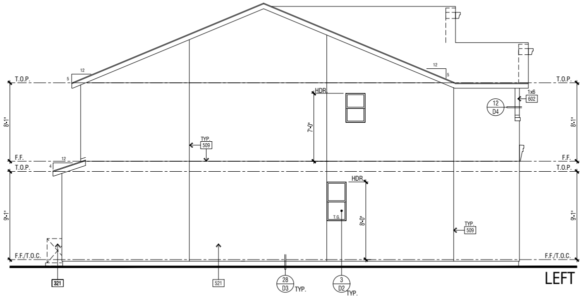
ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	FIBER CEMENT TRIM(S) - SIZE PER ELEVATION
604	1X3 FIBER CEMENT BATTS SPACED AT 16" O.C.
626	OUTLOOKER ASSEMBLY - WOOD (SIZE/SHAPE PER ELEVATION)
644	FIBER CEMENT VERTICAL SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) ICC-ES NER-405
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT). FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
685	STUCCO OVER DECORATIVE FOAM POT SHELF
701	G.I. FLASHING

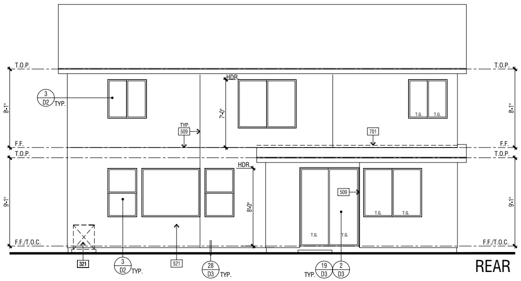
ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

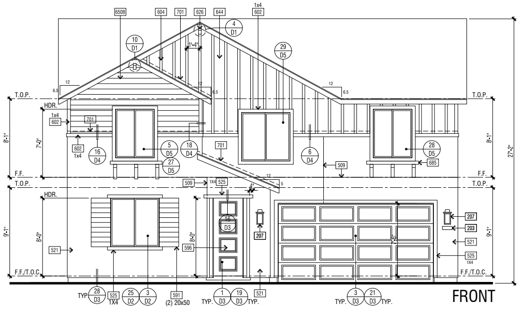
FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



LEFT



REAR



FRONT

SCALE: 1/4" = 1'-0"

MODERN

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25
RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 2741
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

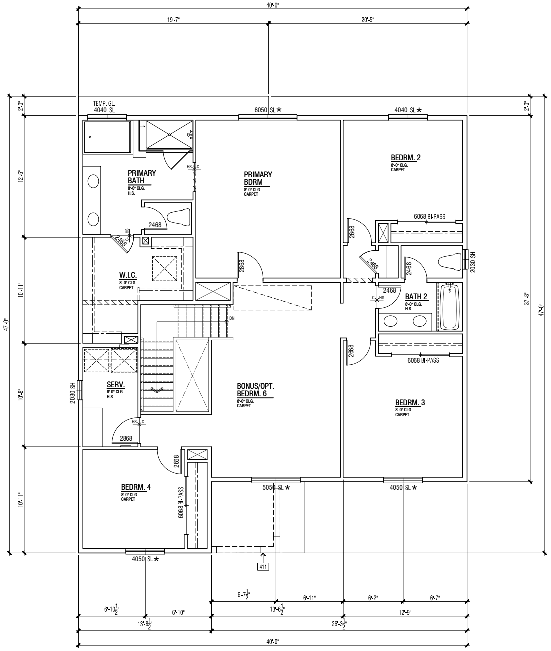
PLAN 2741B
ELEVATIONS AND
ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

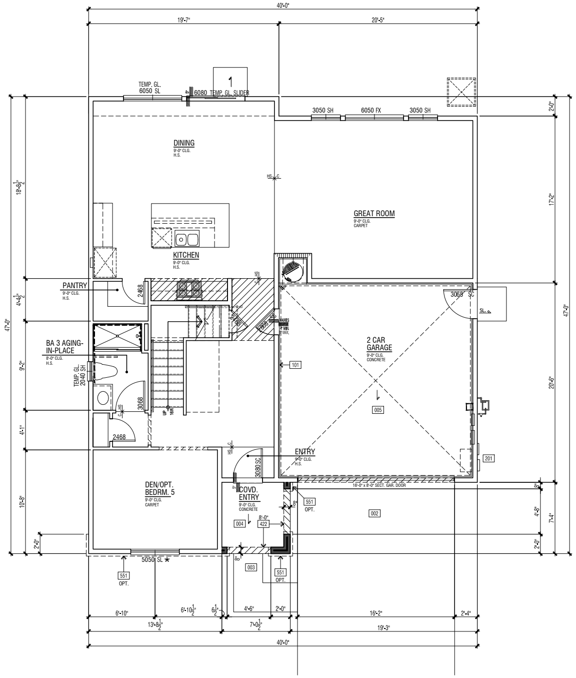
203

DATE:	SHEET:
06-26-23	A6.6

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023



UPPER FLOOR PLAN



LOWER FLOOR PLAN

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED, REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
101	THE PRIVATE GARAGE SHALL BE SEPARATED FROM THE DWELLING UNIT AND ATTIC AREA BY MEANS OF GYPSUM BOARD, NOT LESS THAN 1/2" IN THICKNESS, APPLIED TO THE GARAGE SIDE, C.B.C. SECTION 406.3.2.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

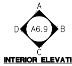
REFER TO BASE PLAN SHEET A6.1 FOR ADDITIONAL NOTES AND DIMENSIONS.

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	▩	SHELF ABOVE
▥	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6



INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 2741C
LOWER FLOOR PLAN	1219 SQ. FT.
UPPER FLOOR PLAN	1522 SQ. FT.
TOTAL	2741 SQ. FT.
2-BAY GARAGE	427 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

PROGRESSIVE NAPA

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH
C12920
04-30-25

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

PLAN 2741
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

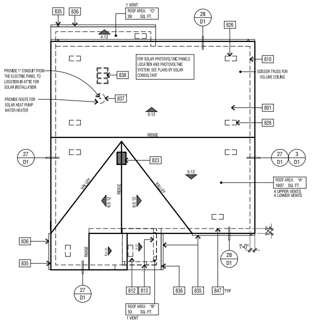
PLAN 2741C
ADDENDA FLOOR
PLANS

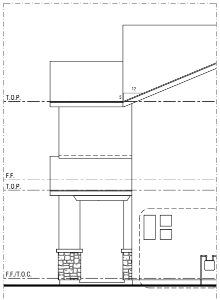
PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY	
1ST BLDG. DE	
ISSUED FOR C	
JOB NUMBER	
CAD FILE NAM	

DATE: 06-26-23

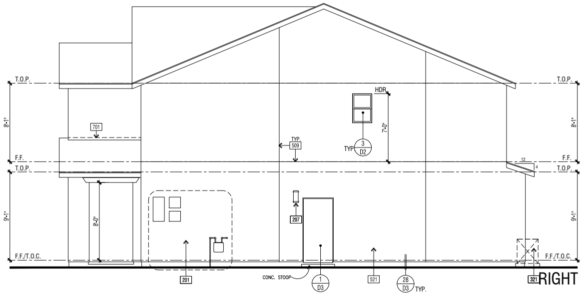
SHEET: A6.7

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023





PARTIAL RIGHT
AT OPT. STONE



RIGHT

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	"STREET ADDRESS AND NUMBERS SHALL BE POSTED PRIOR TO THE FIRST INSPECTION." ADDRESS NUMBERS SHALL BE A MINIMUM OF 4 INCHES (102 MM) HIGH WITH A MINIMUM STROKE WIDTH OF 1/2" INCH. - 2019 CRC R106.1.1, R319.1 INSTALLATION DIMENSIONS AND ADDITIONAL INFORMATION
207	COACH LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION - PAD SUPPORTING COMPRESSOR/ CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE PER C.M.C. SECTION 1105.2.
509	STUCCO CONTROL JOINT - SEE DETAIL 17/D4
521	1-COAT STUCCO - INSTALL PER MANUFACTURER'S LISTING - OMEGA DIAMOND WALL ONE COAT STUCCO ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER 'STAR R GUARD' ESR - 1566 BY 'STAR R FOAM' - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION (SEE SHEET D2.0)
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION). SEE DETAIL 25/D2
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
685	STUCCO OVER DECORATIVE FOAM POT SHELF
701	G.I. FLASHING

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILLIAM HEZMALHALCH C12920 04-30-25 RENEWAL DATE

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (X'xX' Lots)

ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: C		ELEVATION STYLE: PROGRESSIVE NAPA			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

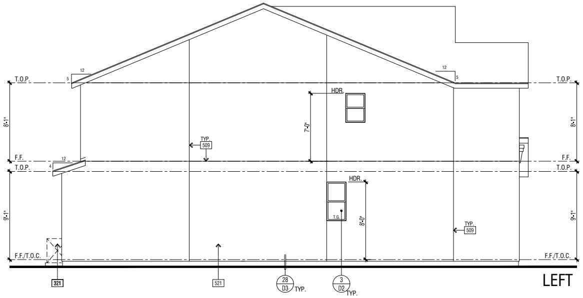
ROOF PLAN KEY NOTES

Name	NOTE
803	ROOFING - COMPOSITION - BY CERTAINTEED ROOFING ICC# ES ESR-3537 - IN STALL PER MANUFACTURE'S SPECIFICATIONS
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
835	G.I. METAL GUTTER(S) - VERIFY LOICATIONS WITH INSTALLER
836	G.I. METAL DOWNSPOUT(S) - DISCHARGE TO APPROVED SITE DRAINAGE SYSTEM- VERIFY LOCATIONS WITH INSTALLER
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR HEAT PUMP SOLAR WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

PLAN 2741C

ROOF ATTIC AREA	A	1607	SQ. FT.		CALCULATION FACTOR:	1/300	
		231408	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	772	SQ. IN		TOTAL PROVIDED:	792	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	386	SQ. IN		TOTAL HIGH PROVI	396	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	386	SQ. IN		TOTAL LOW PROVI	396	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	4	396	SQ. IN
					TOTAL PROVIDED:	396	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	4	396	SQ. IN
					TOTAL PROVIDED:	396	SQ. IN
ROOF ATTIC AREA	B	53	SQ. FT.		CALCULATION FACTOR:	1/150	
		7632	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	51	SQ. IN		TOTAL PROVIDED:	99	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1	99	SQ. IN
					TOTAL PROVIDED:	99	SQ. IN
ROOF ATTIC AREA	C	39	SQ. FT.		CALCULATION FACTOR:	1/150	
		5616	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	37	SQ. IN		TOTAL PROVIDED:	99	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1	99	SQ. IN
					TOTAL PROVIDED:	99	SQ. IN



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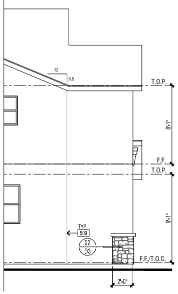
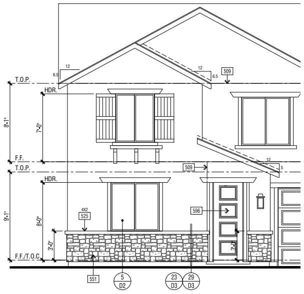


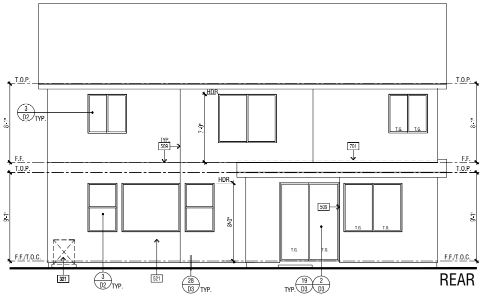
PARTIAL LEFT AT
OPT. STONE

PLAN 2741
CITREA at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA



PARTIAL FRONT AT STONE OPT.



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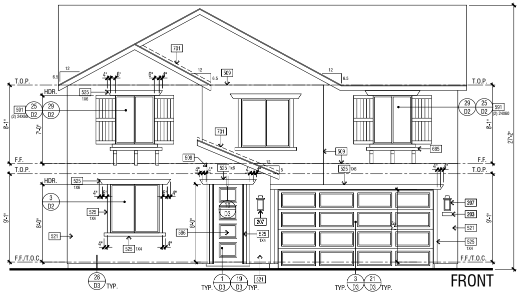


FRONT

SCALE: 1/4" = 1'-0"

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 2741C
ELEVATIONS AND
ROOF PLAN

PROGRESSIVE NAPA

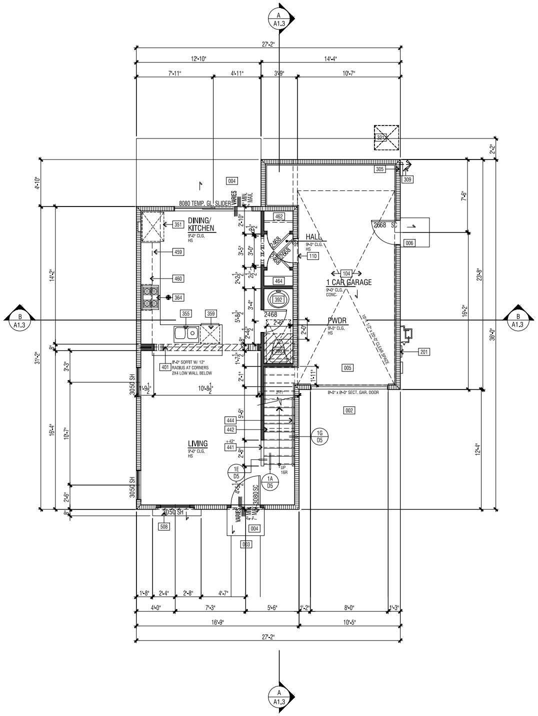
PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

DATE: 06-26-23
SHEET: A6.8

2023009- 2022 CODE UPDATE FIRST BLDG DEPT SET 06-26-2023

FLOOR PLAN KEY NOTES

Name	NOTE
001	GALVANIZED STEEL PIPE BOLLARD W/ CONCRETE FILL (SEE DETAIL 15/D5.1)
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
101	GARAGE AND/OR CARPORT SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE AND EXTENDED TO THE ROOF SHEATHING PER CRC SECTION R302.6.
104	GARAGE AND/OR CARPORT WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQ. STRUCTURE(S) SUPPORTING THE FLR./CLG. ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER CRC SEC. R302.6.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
305	TANK LESS WATER HEATER. INSTALLATION PER MANUFACTURE'S INSTRUCTIONS
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
309	TEMPERATURE AND PRESSURE RELIEF VALVE: DISCHARGE LINE TO THE OUTSIDE PER CPC SECTION 608.5
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) IN ATTIC ON 6' X 12' PLATFORM
336	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH ROOF
341	14"x8" MAKE-UP AIR VENT ABOVE DOOR (100 SQ IN MIN). UNDER-CUT THE DOOR 1 INCH
349	SLIDE-IN RANGE/ OVEN AND MICRO WITH VENT/ LIGHT COMBINATION
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
359	DISHWASHER
364	COOKTOP & EXHAUST HOOD WITH FAN LIGHT (EXHAUST VENT TO OUTSIDE)
372	WASHER SPACE WITH RECESSED WATER BOX AND DRAIN
373	DRYER SPACE
374	SHELF ABOVE - OPT. CABINETS (SEE INTERIOR ELEV.)
380	TUB/ SHOWER
381	CURTAIN ROD
382	SHATTERPROOF SHOWER DOOR (MIN. 22" WIDTH)/ ENCLOSURE
386	SHOWER - PREFABRICATED STALL - 60"X42"
387	SHOWER - HOT MOP - SIZE PER PLAN
392	PEDESTAL SINK
393	TOILET - PROVIDE MINIMUM 24"x30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
416	30"x30" ATTIC ACCESS - DIMENSIONS ARE CLEAR - PER CEnC 150.0(a)1, ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS AND THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
442	2X PONY WALL - SIZE & HEIGHT PER PLAN
443	2X CRIPPLE WALL - SIZE PER PLAN
444	+34"- +38" HANDRAIL (SEE DETAIL 1G/D5)
455	LINEN
457	LINEN (LOW ONLY)
458	LINEN (UPPER ONLY)
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE
463	DOUBLE SHELF & POLE
464	WIRE SHELF/SHELVES
465	VANITY
508	WATERPROOF STUCCO SHELF - SLOPE 1/4" PER FOOT

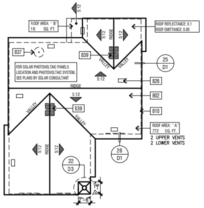


SPN # .

FLOOR AREA TABLE PLAN 121

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ATTACHMENT 14



ATTIC VENTILATION CALCULATIONS					PLAN	2A
ROOF ATTIC AREA	A	772	SQ. FT.	CALCULATION FACTOR:		1/300
		111168	SQ. IN			
MIN. VENTILATION REQUIRED:	TOTAL	366	SQ. IN	TOTAL PROVIDED:	392	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	183	SQ. IN	TOTAL HIGH PROVII	196	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	183	SQ. IN	TOTAL LOW PROVII	196	SQ. IN

HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN	X	2	196	SQ. IN
					TOTAL PROVIDED:	196	SQ. IN

LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN	X	2	196	SQ. IN
					TOTAL PROVIDED:	196	SQ. IN

ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: A		ELEVATION STYLE: CONTEMPORARY SPANISH			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1	2X6	NONE	1'-0"	TIGHT

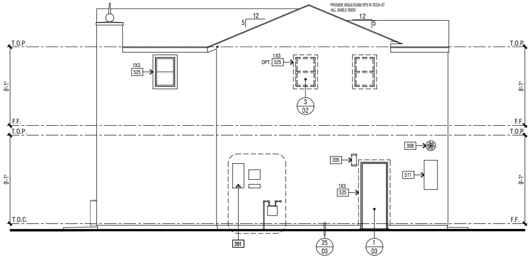
ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION.
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



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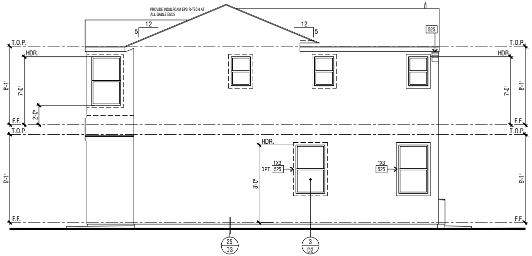

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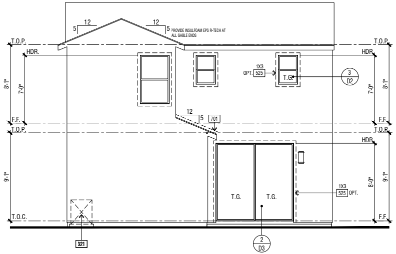

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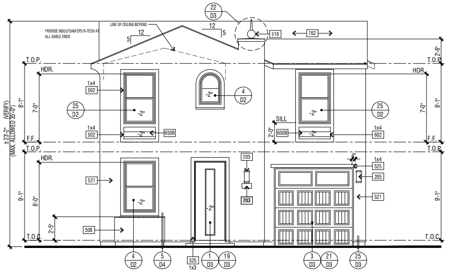


FRONT

SCALE: 1/4" = 1'-0"

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
321	AIR CONDITIONING CONDENSER LOCATION
508	WATERPROOF STUCCO SHELF - SLOPE 1/4" PER FOOT
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
516	DECORATIVE FOAM ACCENT - SEE DETAIL 22/D3 - ICC ESR 1566
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
674	DECORATIVE METAL WINDOW SHADE
701	G.I. FLASHING
762	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2019 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

William Hezmalhalch
No. C 12920
REN 4-30-21

WILSON HOMES

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

NEW ELEV8IONS- PLAN 1212
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1212A EXTERIOR ELEVATIONS & ROOF PLAN

PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONST
JOB NUMBER :
CAD FILE NAME :

DATE: 06-18-20
SHEET: A1.4

FLOOR PLAN KEY NOTES

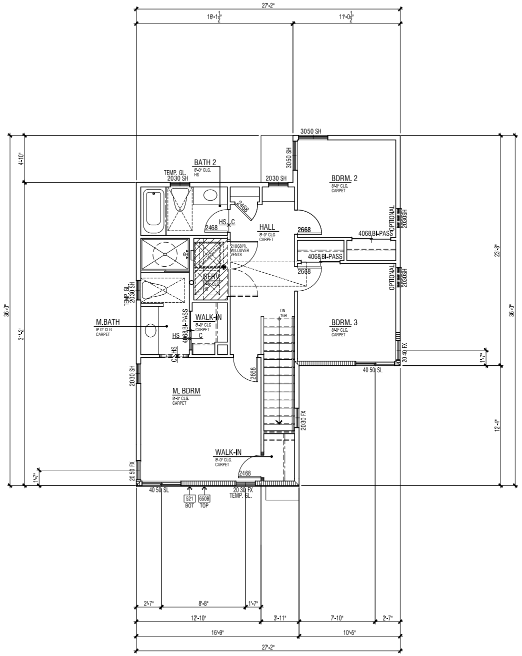
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS' BY EL DORADO STONE PRODUCTS - TER# 1312-01
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT, FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**

ADDENDA FLOOR PLAN NOTES

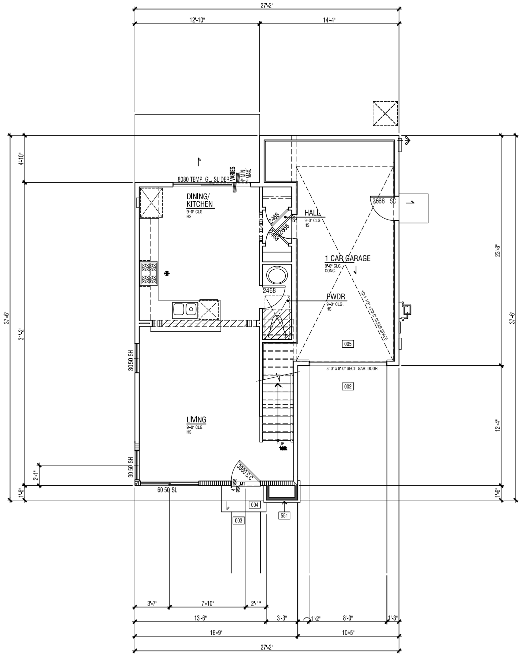
NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1 FOR ADDITIONAL NOTES AND DIMENSIONS.



UPPER FLOOR PLAN



LOWER FLOOR PLAN

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS- PLAN 1212
CLOVIS, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

WILSON HOMES
FRESNO, CALIFORNIA

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

REVISIONS

NO.	DATE	DESCRIPTION

ADDENDA FLOOR PLANS 1212B

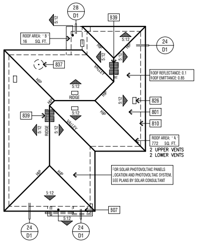
SPN #	.
FLOOR AREA TABLE	PLAN 1212B
LOWER FLOOR PLAN	495 SQ. FT.
UPPER FLOOR PLAN	732 SQ. FT.
TOTAL	1227 SQ. FT.
GARAGE	292 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-18-20	A1.5



ATTIC VENTILATION CALCULATIONS					PLAN	2B
ROOF ATTIC AREA	A	772	SQ. FT.	CALCULATION FACTOR:		1/300
		111168	SQ. IN			
MIN. VENTILATION REQUIRED:	TOTAL	366	SQ. IN	TOTAL PROVIDED:	396	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	183	SQ. IN	TOTAL HIGH PROVI	198	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	183	SQ. IN	TOTAL LOW PROVI	198	SQ. IN

HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	2	198	SQ. IN
				TOTAL PROVIDED:	198	SQ. IN

LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	2	198	SQ. IN
				TOTAL PROVIDED:	198	SQ. IN

ROOF ATTIC AREA	B	16	SQ. FT.	CALCULATION FACTOR:		1/150
		2304	SQ. IN			
MIN. VENTILATION REQUIRED:	TOTAL	15	SQ. IN	TOTAL PROVIDED:	99	SQ. IN

HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN X	1	99	SQ. IN
				TOTAL PROVIDED:	99	SQ. IN

ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	B	ELEVATION STYLE:	MODERN		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE 'FLAT' TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1	2x6	2x6	1'-6" U.N.O.	1'-0"

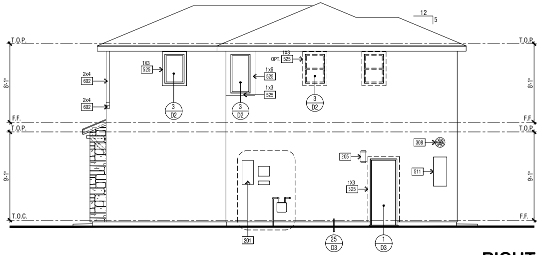
ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
807	ROOFING - METAL BY CUSTOM BILT METALS - ASTM A792
810	LINE OF WALL BELOW
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR FUTURE SOLAR INSTALLATION.
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



RIGHT

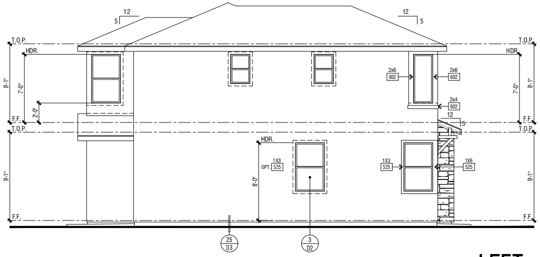
FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
321	AIR CONDITIONING CONDENSER LOCATION
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE - BY EAGLE ROOFING ICC# ESR 1900
770	ROOFING - METAL BY CUSTOM BILT METALS - ASTM A792

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2019 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63



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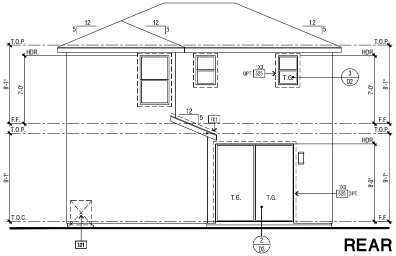

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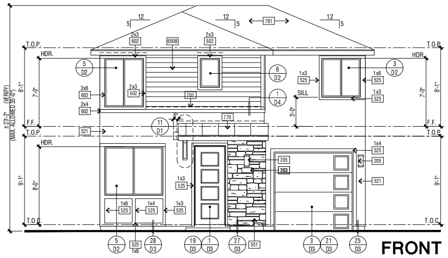


FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS- PLAN 1212
CLOVIS, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

WILSON HOMES
FRESNO, CALIFORNIA

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1212B
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONST	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-18-20	A1.6

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL, EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1 FOR ADDITIONAL NOTES AND DIMENSIONS.

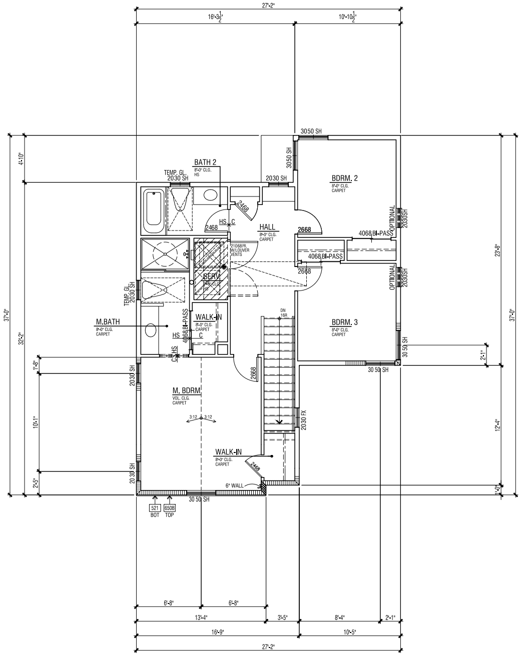
ARCHITECTS . PLANNERS . DESIGNERS

WHA.

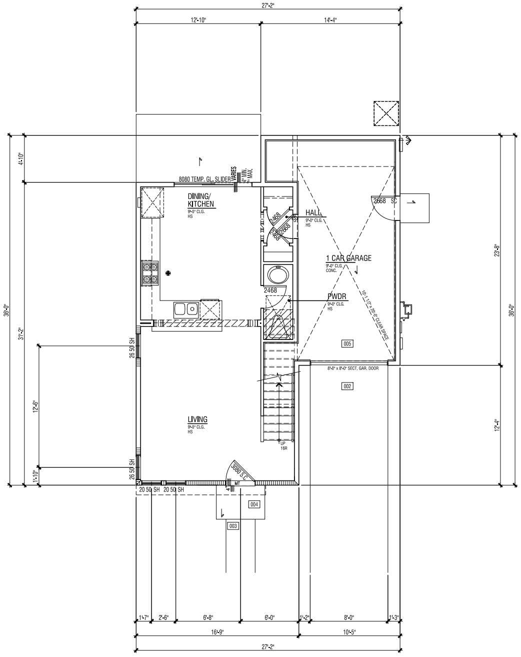
ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES



UPPER FLOOR PLAN



LOWER FLOOR PLAN

SPN #	.
FLOOR AREA TABLE	PLAN 1212C
LOWER FLOOR PLAN	495 SQ. FT.
UPPER FLOOR PLAN	745 SQ. FT.
TOTAL	1240 SQ. FT.
GARAGE	292 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

NEW ELEV8IONS- PLAN 1212
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

REVISIONS

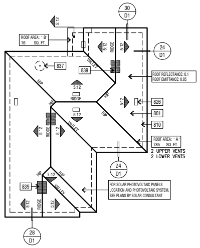
NO.	DATE	DESCRIPTION

ADDENDA
FLOOR PLAN
1212C

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

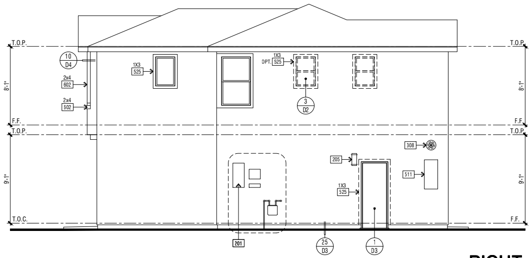
DATE:	SHEET:
06-18-20	A1.7

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020



ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	2C
ROOF ATTIC AREA	A	785	SQ. FT.		CALCULATION FACTOR:		1/300
		113040	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	374	SQ. IN		TOTAL PROVIDED:	396	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	187	SQ. IN		TOTAL HIGH PROVI	198	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	187	SQ. IN		TOTAL LOW PROVI	198	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN
ROOF ATTIC AREA	B	16	SQ. FT.		CALCULATION FACTOR:		1/150
		2304	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	15	SQ. IN		TOTAL PROVIDED:	99	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1	99	SQ. IN
					TOTAL PROVIDED:	99	SQ. IN



RIGHT

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
321	AIR CONDITIONING CONDENSER LOCATION
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
515	STUCCO NICHE. SIZE PER ELEVATION - SLOPE SILL ¼" PER FT. MINIMUM
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
592	OVERHEAD AWNING - SIZE AND STYLE PER ELEVATION
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
701	G.I. FLASHING
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NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	C	ELEVATION STYLE:	PROGRESSIVE NAPA		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
CONCRETE 'FLAT' TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1.1	2X6	2X6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
    - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
    - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
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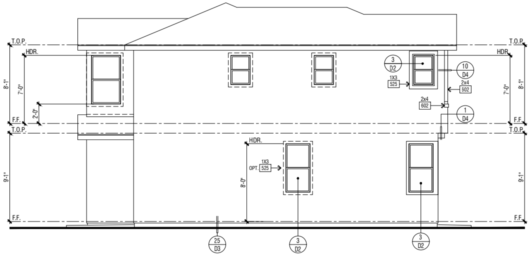
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR FUTURE SOLAR INSTALLATION.
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



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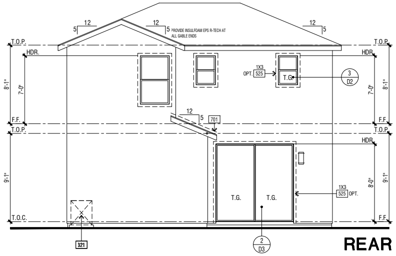

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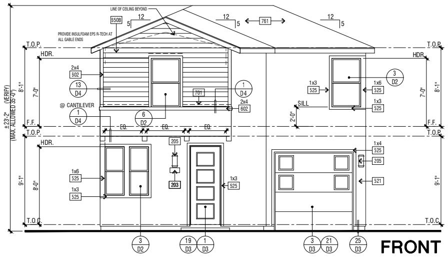


FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS
WHA
ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS- PLAN 1212
CLOVIS, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

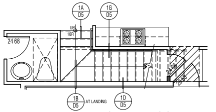
NO.	DATE	DESCRIPTION

PLAN 1212C EXTERIOR ELEVATIONS & ROOF PLAN

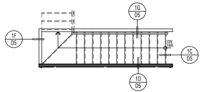
PROJECT MANAGER : CC
DESIGNER :
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONST
JOB NUMBER :
CAD FILE NAME :

DATE: 06-18-20
SHEET: A1.8

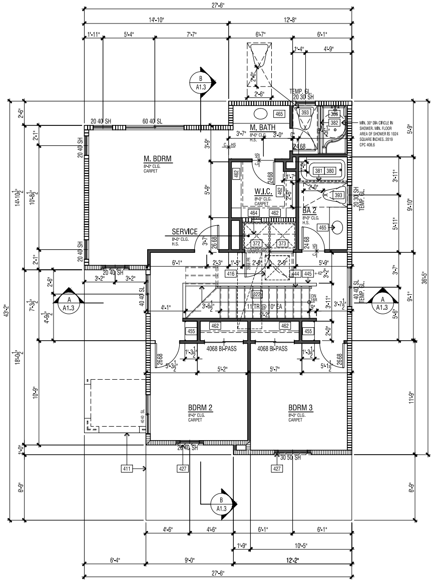
2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020



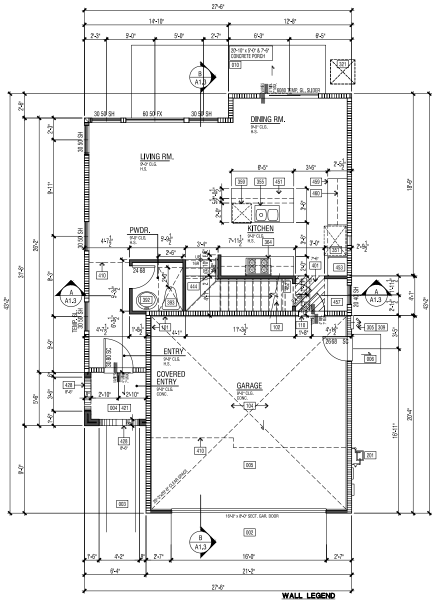
STAIRS AT LOWER FLOOR



STAIRS AT UPPER FLOOR



UPPER FLOOR PLAN



LOWER FLOOR PLAN

FLOOR PLAN KEY NOTES

Name	NOTE
001	CONCRETE SLAB (SEE STRUCTURAL DRAWINGS)
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
010	CONCRETE PATIO (BY OTHERS)
101	GARAGE AND/OR CARPORT SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE AND EXTENDED TO THE ROOF SHEATHING PER CRC SECTION R302.6.
102	ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD PER CRC SECTION R302.7.
104	GARAGE AND/OR CARPORT WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQ. STRUCTURE(S) SUPPORTING THE FLR./CLG. ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER CRC SEC. R302.6.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
305	TANKLESS WATER HEATER - MODEL RINNAI (R75LS) - INSTALL PER MANUFACTURER'S INSTRUCTIONS
309	TEMPERATURE AND PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE OUTSIDE PER CPC SECTION 608.5
312	METAL FIREPLACE (GAS APPLIANCE) - HEIGHT PER PLAN - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY HEATILATOR MODEL# ND4842 ANSI Z21.88-2002
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) ATTIC INSALLATION
334	4" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT TO OUTSIDE
336	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH ROOF
342	RETURN AIR GRILL - SEE MECHANICAL
344	WHOLE HOUSE EXHAUST FAN PER 2010 CEC. REFER TO ATTACHED "SUMMARY OF THE 2019 ENERGY CODE ASHRAE 62.2 REQUIREMENTS"
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
357	UTILITY SINK
359	DISHWASHER - ENERGY STAR
364	COOKTOP & EXHAUST HOOD WITH FAN AND LIGHT (EXHAUST VENT TO OUTSIDE). THE VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLE IS 30" UNPROTECTED, OR 24" PROTECTED., AND THE HORIZONTAL DIMENSION IS REQUIRED TO BE PER THE MARKING LISTED ON THE UNIT. 2019 CMC 921.3.2 & 921.4.3
372	WASHER SPACE WITH RECESSED WATER BOX AND DBL. WIDE SMITTY PAN
373	DRYER SPACE
380	TUB/ SHOWER - 32"X60" MODEL 2603DT - GELCOAT SURFACE - BY AQUATIC
381	CURTAIN ROD
382	SHATTERPROOF SHOWER DOOR (MIN. 22" WIDTH)/ ENCLOSURE
383	TUB ACCESS PANEL
386	SHOWER - PREFABRICATED STALL - 36"X60"X76" MODEL 1603DTS - GELCOAT SURFACE - BY AQUATIC. (MIN. 1,024 S.I. FLOOR AREA)
390	SHOWER SEAT - SLOPE $\frac{1}{4}$" MINIMUM TO DRAIN
392	PEDESTAL SINK
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
412	OPEN TO ABOVE
413	OPEN TO BELOW
416	30"x30" ATTIC ACCESS - DIMENSIONS ARE CLEAR - PER CEnC 150.0(a)1, ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS AND THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)2
417	22"X30" 1-HOUR ATTIC ACCESS-DIMENSIONS CLEAR
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT - HEIGHT PER ELEVATION
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
442	2X PONY WALL - SIZE PER PLAN
444	+34"- +38" HANDRAIL (SEE DETAIL 1G/D5)
445	+42" GUARD (SEE DETAIL 1F/D5)
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOE ELECTRIC SERVICE TO ISLAND
453	PANTRY WITH WIRE SHELVING
454	DESK
455	LINEN
456	LINEN (UPPER & LOWER)
457	LINEN (LOW ONLY)
458	WIRE SHELF
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE
464	WIRE SHELF (OR SHELVES)
465	VANITY

FLOOR PLAN NOTES

1. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
2. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
3. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
4. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
5. FACTORY-BUILT FIREPLACES AND CHIMNEYS PER CRC R1004, R1005, R1006 AND A.Q.M.D. RULE 445.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. PROVIDE A 6" SQUARE FRESH AIR INTAKE FOR THE GAS APPLIANCE FIREPLACE 2019 T-24
16. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
17. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
18. THE THREE CAR GARAGE IS NON-CONFORMING AND THE REQUIRED SIDEYARD SETBACKS MAY NOT BE RELAXED. CRC R106.1.1
19. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
20. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

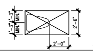
SCALE: 1/4" = 1'- 0"

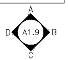
WALL LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.
▬ = 2 x 4 D.F. #2 AT 16" O.C.

NAILING SCHEDULE IS LOCATED ON SHEET SD.2

REQUIRED FLOOR CLEARANCES AT WATER CLOSETS - TYPICAL





INTERIOR ELEVATION KEY

SPN #	.
FLOOR AREA TABLE	PLAN 1390A
LOWER FLOOR	630 SQ. FT.
UPPER FLOOR	791 SQ. FT.
TOTAL	1422 SQ. FT.
GARAGE	428 SQ. FT.
COVERED ENTRY	35 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1390
CLOVIS, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

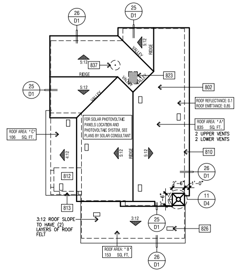
NO.	DATE	DESCRIPTION

PLAN 1390A
FLOOR PLANS

PROJECT MANAGER : MM
DESIGNER : AM
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONS
JOB NUMBER :
CAD FILE NAME :

DATE: 06-18-20
SHEET: A1.1

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	RAKE
CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1	2X6	NONE	1'-0"	TIGHT

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY, THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

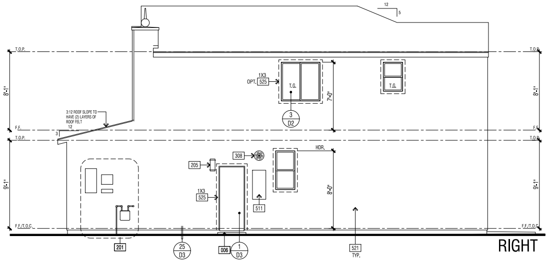
ATTIC VENTILATION CALCULATIONS

PLAN 1390A

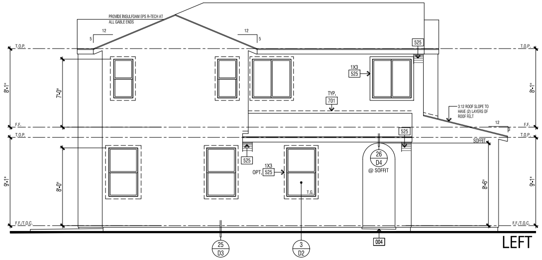
ROOF ATTIC AREA	A	835	SQ. FT.		CALCULATION FACTOR:			1/300
		120240	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	390	SQ. IN		TOTAL PROVIDED:		392	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	195	SQ. IN		TOTAL HIGH PROVI		196	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	195	SQ. IN		TOTAL LOW PROVI		196	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN	X	2		196	SQ. IN
					TOTAL PROVIDED:		196	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN	X	2		196	SQ. IN
					TOTAL PROVIDED:		196	SQ. IN
ROOF ATTIC AREA	B	153	SQ. FT.		CALCULATION FACTOR:			1/150
		22032	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	147	SQ. IN		TOTAL PROVIDED:		196	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.'S' TILE	-	98	SQ. IN	X	2		196	SQ. IN
					TOTAL PROVIDED:		196	SQ. IN
ROOF ATTIC AREA	C	106	SQ. FT.		CALCULATION FACTOR:			1/150
		15264	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	102	SQ. IN		TOTAL PROVIDED:		196	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.'S' TILE	-	98	SQ. IN	X	2		196	SQ. IN
					TOTAL PROVIDED:		196	SQ. IN

ROOF PLAN KEY NOTES

Name	NOTE
802	ROOFING - CONCRETE - LOW PROFILE "S" TILE BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR FUTURE SOLAR INSTALLATION.
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



RIGHT



LEFT

NEW ELEV8IONS PLAN
1930 (P4)
REVISED LEFT ELEV 'A'

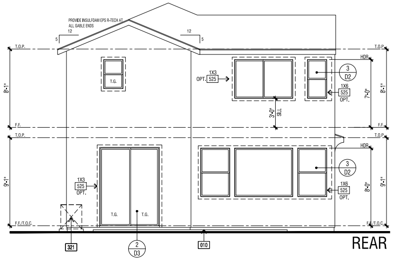
ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
010	CONCRETE PATIO (BY OTHERS)
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
321	AIR CONDITIONING CONDENSER LOCATION
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
516	DECORATIVE FOAM ACCENT - SEE DETAIL 22/D3 - ICC ESR 1566
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
674	DECORATIVE METAL WINDOW SHADE
701	G.I. FLASHING
762	ROOFING - CONCRETE - LOW PROFILE "S" TILE BY EAGLE ROOFING ICC# ESR 1900

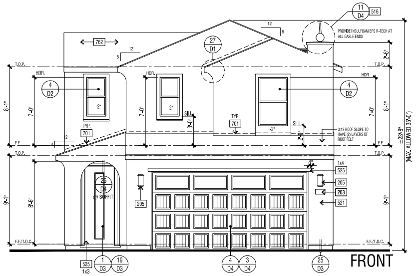
ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2019 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

FINISHED GRADE VARIES, SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



REAR



FRONT

SCALE: 1/4" = 1'-0"

WHA.
ARCHITECTS . PLANNERS . DESIGNERS
ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

NEW ELEV8IONS - PLAN 1390
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1390A
EXTERIOR ELEVATIONS
& ROOF PLAN

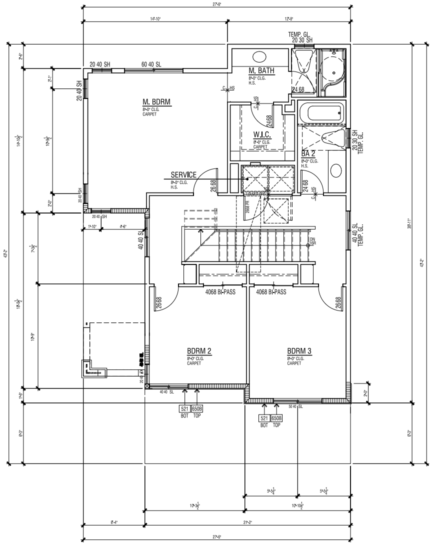
PROJECT MANAGER : MM
DESIGNER : AM
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONS
JOB NUMBER :
CAD FILE NAME :

DATE: 06-18-20
SHEET: A1.4

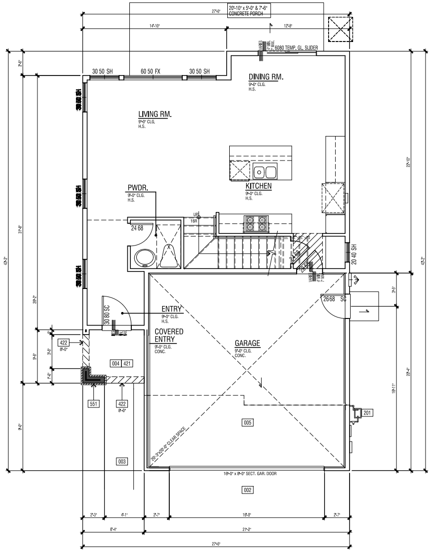
2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) ICC-ES NER-405



UPPER FLOOR PLAN



LOWER FLOOR PLAN

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1
FOR ADDITIONAL NOTES AND DIMENSIONS.

SPN #	.
FLOOR AREA TABLE	PLAN 1390B
LOWER FLOOR	630 SQ. FT.
UPPER FLOOR	797 SQ. FT.
TOTAL	1427 SQ. FT.
GARAGE	428 SQ. FT.
COVERED ENTRY	35 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1390
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

DO NOT SCALE PLANS

REVISIONS

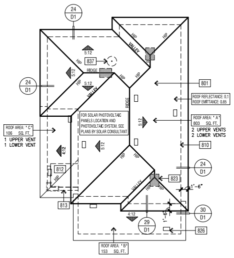
NO.	DATE	DESCRIPTION

PLAN 1390B
ADDENDA PLANS

PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-18-20	A1.5

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	B	ELEVATION STYLE:	MODERN		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	 RAKE
CONCRETE 'FLAT' TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1	2x6	2x6	1'-6" U.N.O.	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806, PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

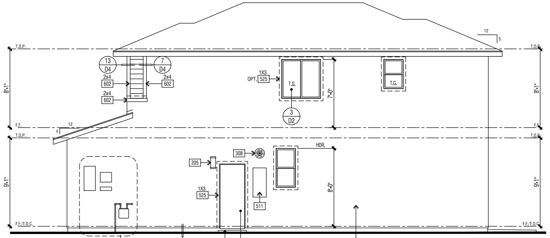
SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS					PLAN	4B	
ROOF ATTIC AREA	A	833	SQ. FT.		CALCULATION FACTOR:	1/300	
		119952	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	396	SQ. IN		TOTAL PROVIDED:	396	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	198	SQ. IN		TOTAL HIGH PROVII	198	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	198	SQ. IN		TOTAL LOW PROVII	198	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN
ROOF ATTIC AREA	B	153	SQ. FT.		CALCULATION FACTOR:	1/150	
		22032	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	147	SQ. IN		TOTAL PROVIDED:	198	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN
ROOF ATTIC AREA	C	106	SQ. FT.		CALCULATION FACTOR:	1/150	
		15264	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	102	SQ. IN		TOTAL PROVIDED:	198	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR FUTURE SOLAR INSTALLATION.
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



RIGHT

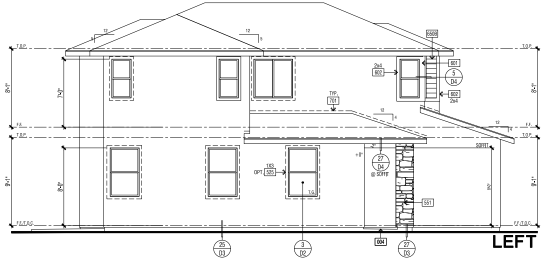
ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
010	CONCRETE PATIO (BY OTHERS)
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568
601	WOOD TRIM(S) - SIZE PER DETAIL
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT, FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) ICC-ES NER-405
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2019 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



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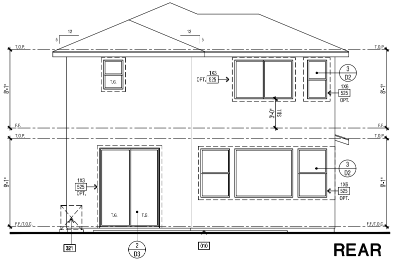

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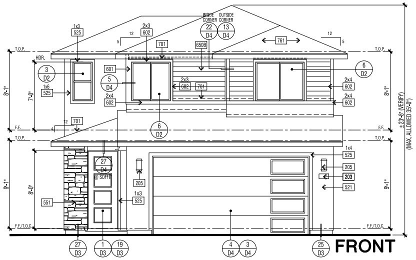


FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1390
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1390B EXTERIOR
ELEVATIONS & ROOF
PLAN

PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

215

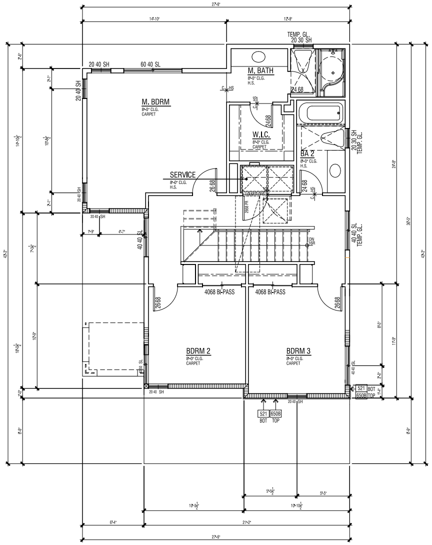
DATE: 06-18-20

SHEET: A1.6

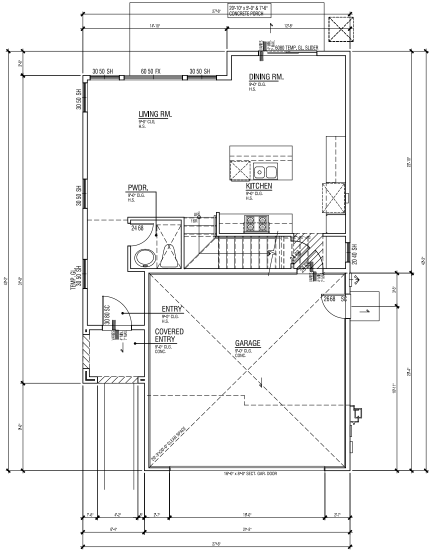
2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
421	STUCCO CEILING: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT: HEIGHT PER PLAN
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) ICC-ES NER-405



UPPER FLOOR PLAN



LOWER FLOOR PLAN

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

NEW ELEV8IONS - PLAN 1390

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1 FOR ADDITIONAL NOTES AND DIMENSIONS.

SPN #	.
FLOOR AREA TABLE	PLAN 1390C
LOWER FLOOR	630 SQ. FT.
UPPER FLOOR	791 SQ. FT.
TOTAL	1421 SQ. FT.
GARAGE	428 SQ. FT.
COVERED ENTRY	35 SQ. FT.

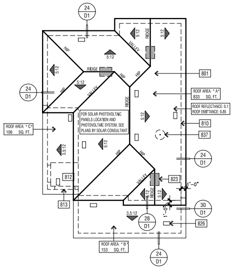
NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'-0"

PLAN 1390C
ADDENDA PLANS

PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-18-20	A1.7



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	C	ELEVATION STYLE:	PROGRESSIVE NAPA			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.		
				EAVE	RAKE	
CONCRETE 'FLAT' TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1.1	2X6	2X6	1'-0"	1'-0"	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE, WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

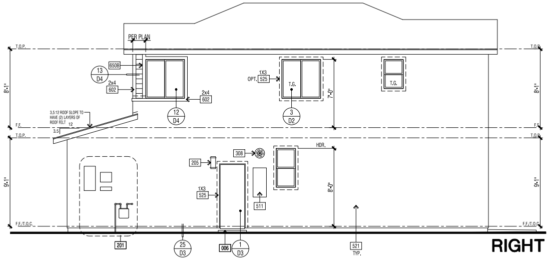
ATTIC VENTILATION CALCULATIONS

PLAN 4C

ROOF ATTIC AREA	A	833	SQ. FT.		CALCULATION FACTOR:	1/300	
		119952	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	396	SQ. IN		TOTAL PROVIDED:	396	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	198	SQ. IN		TOTAL HIGH PROVI	198	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	198	SQ. IN		TOTAL LOW PROVI	198	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN
ROOF ATTIC AREA	B	153	SQ. FT.		CALCULATION FACTOR:	1/150	
		22032	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	147	SQ. IN		TOTAL PROVIDED:	198	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN
ROOF ATTIC AREA	C	106	SQ. FT.		CALCULATION FACTOR:	1/150	
		15264	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	102	SQ. IN		TOTAL PROVIDED:	198	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR FUTURE SOLAR INSTALLATION.
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



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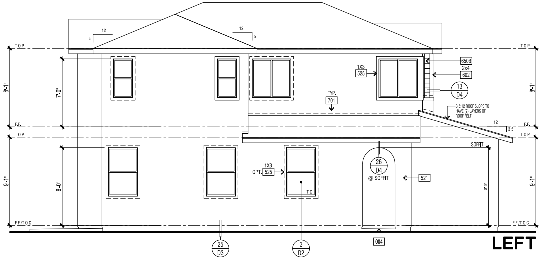

LEFT

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
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203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
321	AIR CONDITIONING CONDENSER LOCATION
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
515	STUCCO NICHE. SIZE PER ELEVATION - SLOPE SILL ¼" PER FT. MINIMUM
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
592	OVERHEAD AWNING - SIZE AND STYLE PER ELEVATION
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) ICC-ES NER-405
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE BY EAGLE ROOFING ICC# ESR 1900

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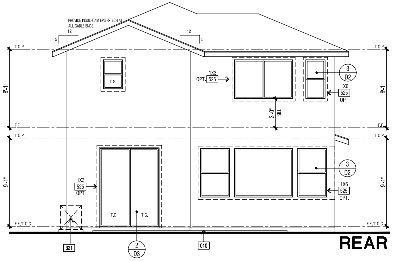

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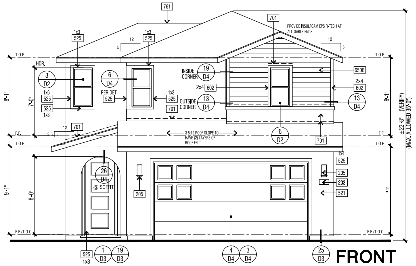


FRONT

SCALE: 1/4" = 1'-0"

WHA.

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1390
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

DO NOT SCALE PLANS

REVISIONS

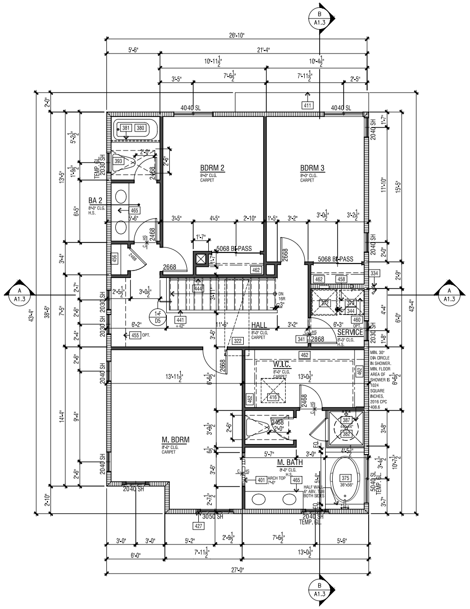
NO.	DATE	DESCRIPTION

PLAN 1390C EXTERIOR ELEVATIONS & ROOF PLAN

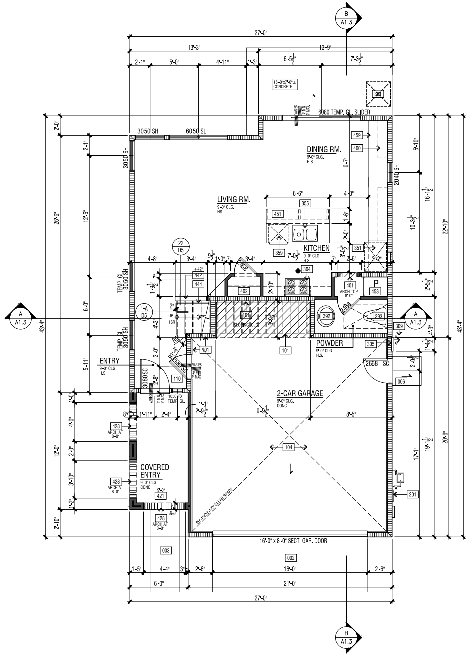
PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

DATE: 06-18-20

SHEET: A1.8



UPPER FLOOR PLAN



LOWER FLOOR PLAN

FLOOR PLAN NOTES

1. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
2. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
3. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
4. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
5. FACTORY-BUILT FIREPLACES AND CHIMNEYS PER CRC R1004, R1005, R1006 AND A.Q.M.D. RULE 445.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. PROVIDE A 6" SQUARE FRESH AIR INTAKE FOR THE GAS APPLIANCE FIREPLACE 2019 T-24
16. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
17. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
18. THE THREE CAR GARAGE IS NON-CONFORMING AND THE REQUIRED SIDEYARD SETBACKS MAY NOT BE RELAXED. CRC R106.1.1
19. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
20. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR PLAN KEY NOTES

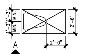
Name	NOTE
001	CONCRETE SLAB (SEE STRUCTURAL DRAWINGS)
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
010	CONCRETE PATIO (BY OTHERS)
101	GARAGE AND/OR CARPORT SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE AND EXTENDED TO THE ROOF SHEATHING PER CRC SECTION R302.6.
102	ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD PER CRC SECTION R302.7.
104	GARAGE AND/OR CARPORT WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQ. STRUCTURE(S) SUPPORTING THE FLR./CLG. ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER CRC SEC. R302.6.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
305	TANKLESS WATER HEATER - MODEL RINNAI (R75LS) - INSTALL PER MANUFACTURER'S INSTRUCTIONS
309	TEMPERATURE AND PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE OUTSIDE PER CPC SECTION 608.5
312	METAL FIREPLACE (GAS APPLIANCE) - HEIGHT PER PLAN - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY HEATILATOR MODEL# ND4842 ANSI Z21.88-2002
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) ATTIC INSALLATION
334	4" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT TO OUTSIDE
336	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH ROOF
342	RETURN AIR GRILL - SEE MECHANICAL
341	14"x8" MAKE-UP AIR VENT ABOVE DOOR - UNDER-CUT THE DOOR 1 INCH
344	WHOLE HOUSE EXHAUST FAN PER 2010 CEC. REFER TO ATTACHED "SUMMARY OF THE 2010 ENERGY CODE ASHRAE 62.2 REQUIREMENTS"
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
357	UTILITY SINK
359	DISHWASHER - ENERGY STAR
364	30" COOKTOP & EXHAUST HOOD WITH FAN AND LIGHT. EXHAUST VENT TO OUTSIDE
367	30" OVEN
369	30" OVER THE COUNTER MICROWAVE OVEN/HOOD COMBO
372	WASHER SPACE WITH RECESSED WATER BOX AND DBL. WIDE SMITTY PAN
373	DRYER SPACE
375	DROP IN TUB - 36" X 56"
380	TUB/ SHOWER - 32"X60" MODEL 2603DT - GELCOAT SURFACE - BY AQUATIC
381	CURTAIN ROD
382	SHATTERPROOF SHOWER DOOR (MIN. 22" WIDTH)/ ENCLOSURE
383	TUB ACCESS PANEL
386	SHOWER - PREFABRICATED STALL - 36"x60"X76" MODEL 1603DTS - GELCOAT SURFACE - BY AQUATIC
387	SHOWER - LASCO MODEL# 1603DTS (30" DIA CIRCLE PROVIDED) - (MIN. 1,024 S.I. FLOOR AREA)
390	SHOWER SEAT - SLOPE ¼" MINIMUM TO DRAIN
392	PEDESTAL SINK
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
397	SOAP SHELF
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
412	OPEN TO ABOVE
413	OPEN TO BELOW
416	30"x30" ATTIC ACCESS - DIMENSIONS ARE CLEAR - PER CEnC 150.0(a)1, ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS AND THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE
417	22"X30" 1-HOUR ATTIC ACCESS-DIMENSIONS CLEAR
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT - HEIGHT PER ELEVATION
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
442	2X PONY WALL - SIZE PER PLAN
444	+34"- +38" HANDRAIL (SEE DETAIL 1G/D5)
445	+42" GUARD (SEE DETAIL 1F/D5)
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY WITH WIRE SHELVING
454	DESK
455	LINEN
456	LINEN (UPPER & LOWER)
457	LINEN (LOW ONLY)
458	WIRE SHELF
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE
464	WIRE SHELF (OR SHELVES)
465	VANITY

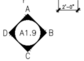
NAILING SCHEDULE IS LOCATED ON SHEET SD.2

WALL LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.
▬ = 2 x 4 D.F. #2 AT 16" O.C.

REQUIRED FLOOR CLEARANCES AT WATER CLOSETS - TYPICAL





INTERIOR ELEVATION KEY

SPN #	.
FLOOR AREA TABLE	PLAN 1648A
LOWER FLOOR	589 SQ. FT.
UPPER FLOOR	1063 SQ. FT.
TOTAL	1651 SQ. FT.
2-CAR GARAGE	466 SQ. FT.
COVERED ENTRY	72 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SEE SHEET A1.5 & A1.7 FOR ADDENDA FLOOR PLANS

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

William Hezmalhalch
No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1648
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

REVISIONS

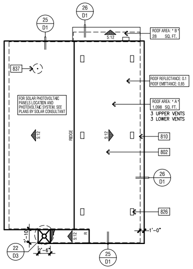
NO.	DATE	DESCRIPTION

PLAN 1648A
FLOOR PLANS

PROJECT MANAGER :	MM
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-18-20	A1.1

2018077.07 - FIRST BLDG DEPARTMENT SUBMITTAL SET 06-18-2020



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE	
CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1	2X6	NONE	1'-0"	TIGHT	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

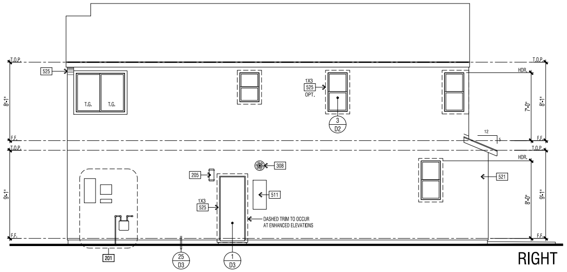
SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS							PLAN	6A
ROOF ATTIC AREA	A	1098	SQ. FT.		CALCULATION FACTOR:			1/300
		158112	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	520	SQ. IN		TOTAL PROVIDED:	588		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	260	SQ. IN		TOTAL HIGH PROVI	294		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	260	SQ. IN		TOTAL LOW PROVI	294		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN	X	3		294	SQ. IN
					TOTAL PROVIDED:		294	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN	X	3		294	SQ. IN
					TOTAL PROVIDED:		294	SQ. IN
ROOF ATTIC AREA	B	28	SQ. FT.		CALCULATION FACTOR:			1/150
		4032	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	27	SQ. IN		TOTAL PROVIDED:	98		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.'S' TILE	-	98	SQ. IN	X	1		98	SQ. IN
					TOTAL PROVIDED:		98	SQ. IN

ROOF PLAN KEY NOTES

Name	NOTE
802	ROOFING - CONCRETE - LOW PROFILE "S" TILE BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



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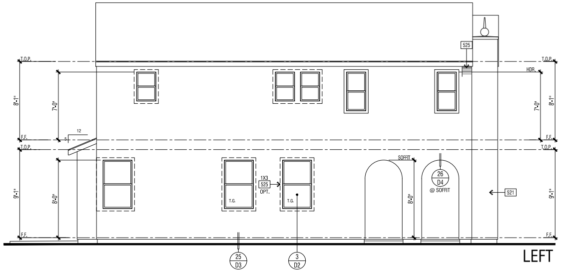

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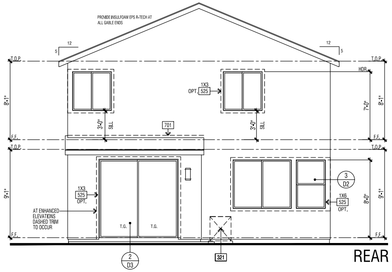
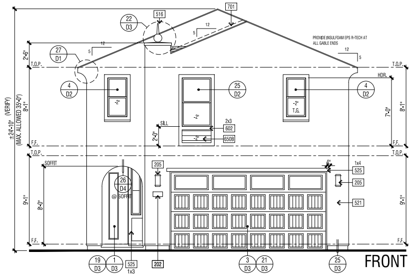


REAR



FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL, 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
321	AIR CONDITIONING CONDENSER LOCATION
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
516	DECORATIVE FOAM ACCENT - SEE DETAIL 22/D3 - ICC ESR 1566
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
674	DECORATIVE METAL WINDOW SHADE
701	G.I. FLASHING
762	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2019 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1648
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

2018077.07 - FIRST BLDG DEPARTMENT SUBMITTAL SET 06-18-2020

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

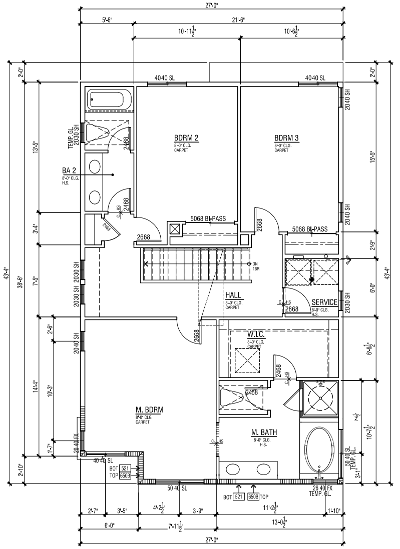
PLAN 1648A
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

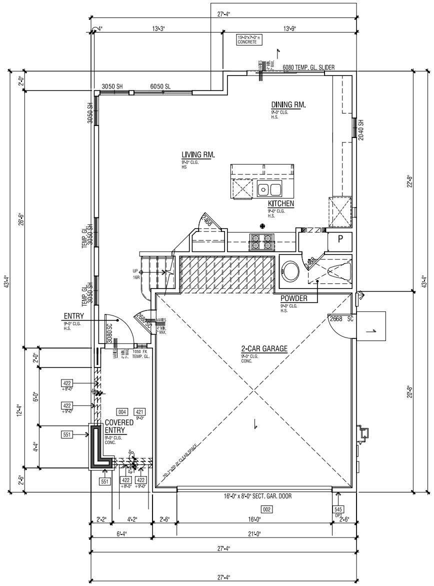
DATE:	SHEET:
06-18-20	A1.4

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**



UPPER FLOOR PLAN



LOWER FLOOR PLAN

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1 FOR ADDITIONAL NOTES AND DIMENSIONS.

SPN #	.
FLOOR AREA TABLE	PLAN 1648B
LOWER FLOOR	588 SQ. FT.
UPPER FLOOR	1063 SQ. FT.
TOTAL	1651 SQ. FT.
2-CAR GARAGE	466 SQ. FT.
COVERED ENTRY/PORCH	74 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21
STATE OF CALIFORNIA

WILSON HOMES

NEW ELEV8IONS - PLAN 1648

CLOVIS, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

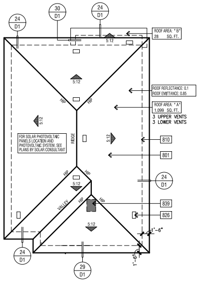
PLAN 1648B
ADDENDA PLANS

PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

DATE: 06-18-20

SHEET: A1.5

2018077.07 - FIRST BLDG DEPARTMENT SUBMITTAL SET 06-18-2020



ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	6B	
ROOF ATTIC AREA	A	1099	SQ. FT.		CALCULATION FACTOR:		1/300	
		158256	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	522	SQ. IN		TOTAL PROVIDED:	594		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	261	SQ. IN		TOTAL HIGH PROVI	297		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	261	SQ. IN		TOTAL LOW PROVI	297		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3		297	SQ. IN
					TOTAL PROVIDED:		297	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3		297	SQ. IN
					TOTAL PROVIDED:		297	SQ. IN
ROOF ATTIC AREA	B	28	SQ. FT.		CALCULATION FACTOR:		1/150	
		4032	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	27	SQ. IN		TOTAL PROVIDED:	99		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1		99	SQ. IN
					TOTAL PROVIDED:		99	SQ. IN

ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	B	ELEVATION STYLE:	MODERN		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE 'FLAT' TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1	2x6	2x6	1'-6" U.N.O.	1'-0"

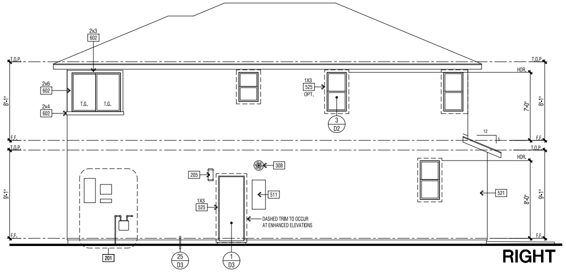
ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY, THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	ROOFING - CONCRETE - "FLAT" TILE BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
814	WOOD SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



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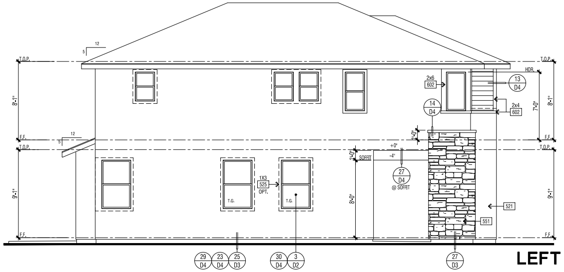


LEFT

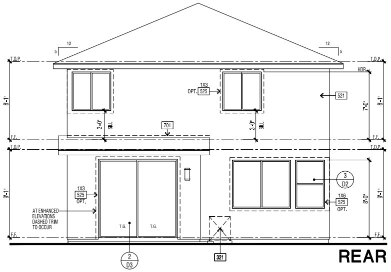
ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT, FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2019 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



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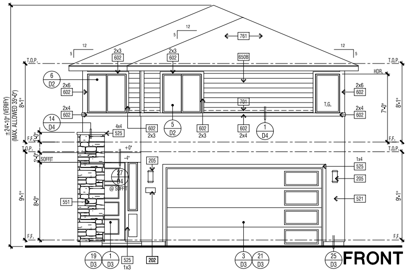


FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

NEW ELEV8IONS - PLAN 1648

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

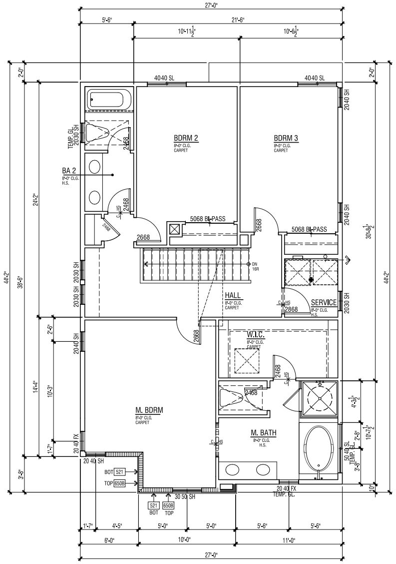
NO.	DATE	DESCRIPTION

PLAN 1648B
EXTERIOR ELEVATIONS
& ROOF PLAN

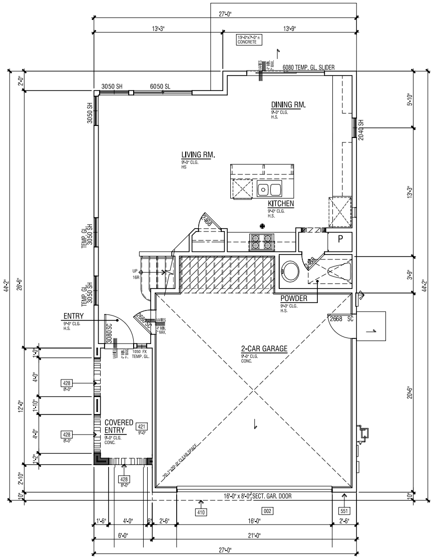
PROJECT MANAGER : MM
DESIGNER : AM
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONS
JOB NUMBER :
CAD FILE NAME :

DATE: 06-18-20
SHEET: A1.6

2018077.07 - FIRST BLDG DEPARTMENT SUBMITTAL SET 06-18-2020



UPPER FLOOR PLAN



LOWER FLOOR PLAN

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
410	LINE OF FLOOR ABOVE
421	STUCCO CEILING: HEIGHT PER PLAN
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
428	ARCHED STUCCO SOFFIT: HEIGHT PER PLAN
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT, FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1
FOR ADDITIONAL NOTES AND DIMENSIONS.

SPN #	.
FLOOR AREA TABLE	PLAN 1648C
LOWER FLOOR	589 SQ. FT.
UPPER FLOOR	1071 SQ. FT.
TOTAL	1660 SQ. FT.
2-CAR GARAGE	466 SQ. FT.
COVERED ENTRY/PORCH	72 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1648
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

DO NOT SCALE PLANS

REVISIONS

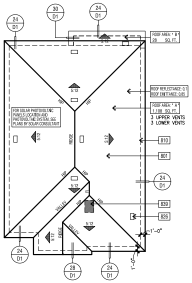
NO.	DATE	DESCRIPTION

PLAN 1648C
ADDENDA PLANS

PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-18-20	A1.7

2018077.07 - FIRST BLDG DEPARTMENT SUBMITTAL SET 06-18-2020



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	C	ELEVATION STYLE:	PROGRESSIVE NAPA		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE 'FLAT' TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2X6	2X6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

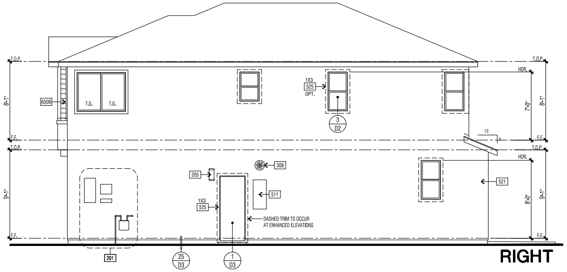
SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	6C
ROOF ATTIC AREA	A	1108	SQ. FT.	CALCULATION FACTOR:			1/300
		159552	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	526	SQ. IN	TOTAL PROVIDED:		594	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	263	SQ. IN	TOTAL HIGH PROVI		297	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	263	SQ. IN	TOTAL LOW PROVI		297	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	3		297	SQ. IN
				TOTAL PROVIDED:		297	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	3		297	SQ. IN
				TOTAL PROVIDED:		297	SQ. IN
ROOF ATTIC AREA	B	28	SQ. FT.	CALCULATION FACTOR:			1/150
		4032	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	27	SQ. IN	TOTAL PROVIDED:		99	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN X	1		99	SQ. IN
				TOTAL PROVIDED:		99	SQ. IN

ROOF PLAN KEY NOTES

Name	NOTE
801	ROOFING - CONCRETE - "FLAT" TILE BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL, 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
321	AIR CONDITIONING CONDENSER LOCATION
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
515	STUCCO NICHE. SIZE PER ELEVATION - SLOPE SILL ¼" PER FT. MINIMUM
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
592	AWNING BY "FYPON" - SIZE AND STYLE PER ELEVATION
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
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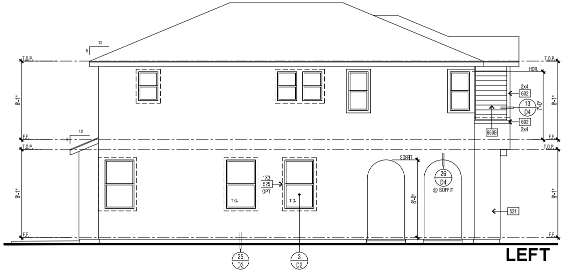

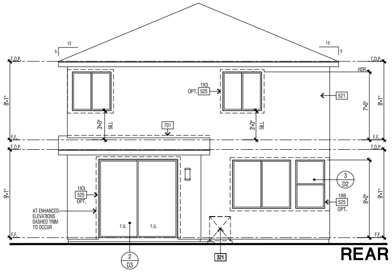

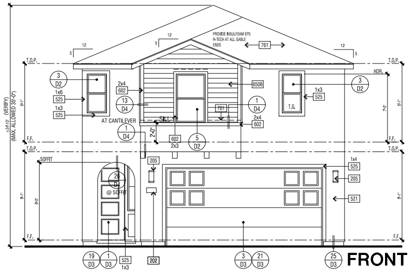

SCALE: 1/4" = 1'-0"

WHA.

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1648
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1648C
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER : MM
DESIGNER : AM
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
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DATE: 06-18-20
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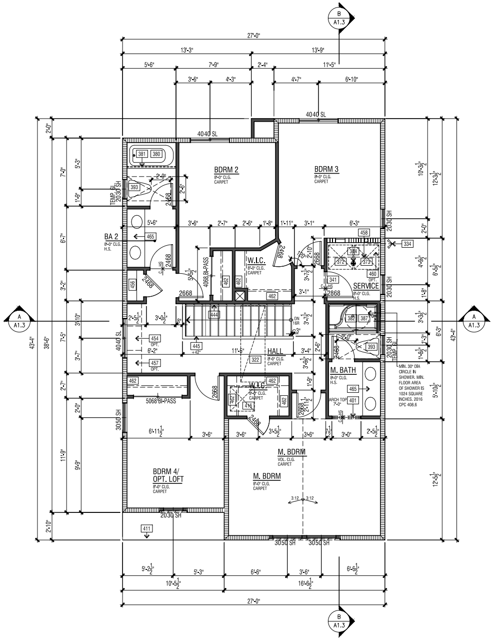
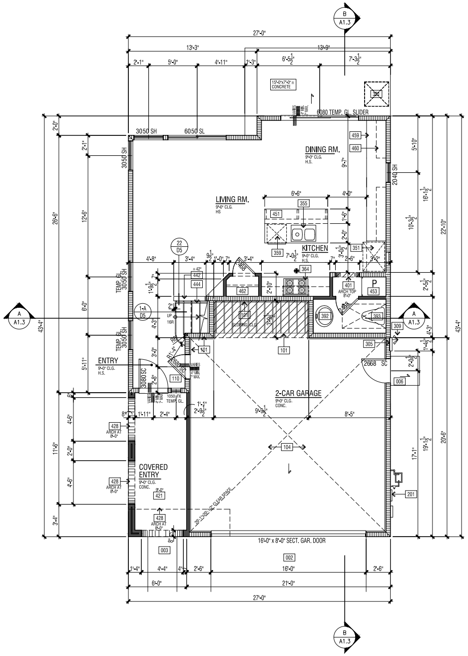
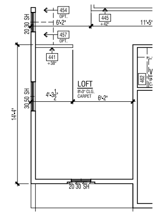


UPPER FLOOR PLAN



LOWER FLOOR PLAN



LOFT ILO BDRM 4

SEE SHEET A1.5 & A1.7 FOR ADDENDA FLOOR PLANS

FLOOR PLAN KEY NOTES

Name	NOTE
001	CONCRETE SLAB (SEE STRUCTURAL DRAWINGS)
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
010	CONCRETE PATIO - SIZE PER PLAN (BY OTHERS)
101	GARAGE AND/OR CARPORT SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE AND EXTENDED TO THE ROOF SHEATHING PER CRC SECTION R302.6.
102	ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD PER CRC SECTION R302.7.
104	GARAGE AND/OR CARPORT WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQ. STRUCTURE(S) SUPPORTING THE FLR./CLG. ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER CRC SEC. R302.6.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
305	TANKLESS WATER HEATER - MODEL RINNAI (R75LS) - INSTALL PER MANUFACTURER'S INSTRUCTIONS
309	TEMPERATURE AND PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE OUTSIDE PER CPC SECTION 608.5
312	METAL FIREPLACE (GAS APPLIANCE) - HEIGHT PER PLAN - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY HEATILATOR MODEL# ND4842 ANSI Z21.88-2002
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) ATTIC INSALLATION
334	4" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT TO OUTSIDE
336	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH ROOF
341	14"x8" MAKE-UP AIR VENT ABOVE DOOR - UNDER-CUT THE DOOR 1 INCH
342	RETURN AIR GRILL - SEE MECHANICAL
344	WHOLE HOUSE EXHAUST FAN PER 2016 CEC. REFER TO ATTACHED "SUMMARY OF THE 2010 ENERGY CODE ASHRAE 62.2 REQUIREMENTS"
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
357	UTILITY SINK
359	DISHWASHER - ENERGY STAR
364	COOKTOP & EXHAUST HOOD WITH FAN AND LIGHT (EXHAUST VENT TO OUTSIDE). THE VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLE IS 30" UNPROTECTED, OR 24" PROTECTED., AND THE HORIZONTAL DIMENSION IS REQUIRED TO BE PER THE MARKING LISTED ON THE UNIT. 2019 CMC 921.3.2 & 921.4.3
367	30" OVEN
372	WASHER SPACE WITH RECESSED WATER BOX AND DBL. WIDE SMITTY PAN
373	DRYER SPACE
380	TUB/ SHOWER - 32"X60" MODEL 2603DT - GELCOAT SURFACE - BY AQUATIC
381	CURTAIN ROD
382	SHATTERPROOF SHOWER DOOR (MIN. 22" WIDTH)/ ENCLOSURE
383	TUB ACCESS PANEL
387	SHOWER - LASCO MODEL# 1603DTS (30" DIA CIRCLE PROVIDED) - (MIN. 1,024 S.I. FLOOR AREA)
390	SHOWER SEAT - SLOPE $\frac{1}{4}$" MINIMUM TO DRAIN
392	PEDESTAL SINK
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
412	OPEN TO ABOVE
413	OPEN TO BELOW
416	30"x30" ATTIC ACCESS - DIMENSIONS ARE CLEAR - PER CEnC 150.0(a)1, ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS AND THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE
417	22"X30" 1-HOUR ATTIC ACCESS-DIMENSIONS CLEAR
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT - HEIGHT PER ELEVATION
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
442	2X PONY WALL - SIZE PER PLAN
444	+34"- +38" HANDRAIL (SEE DETAIL 1G/D5)
445	+42" GUARD (SEE DETAIL 1F/D5)
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY WITH WIRE SHELVING
454	DESK
455	LINEN
456	LINEN (UPPER & LOWER)
457	LINEN (LOW ONLY)
458	WIRE SHELF
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE
464	WIRE SHELF (OR SHELVES)
465	VANITY

FLOOR PLAN NOTES

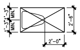
1. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
2. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
3. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
4. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
5. FACTORY-BUILT FIREPLACES AND CHIMNEYS PER CRC R1004, R1005, R1006 AND A.Q.M.D. RULE 445.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS, CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. PROVIDE A 6" SQUARE FRESH AIR INTAKE FOR THE GAS APPLIANCE FIREPLACE 2019 T-24
16. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
17. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
18. THE THREE CAR GARAGE IS NON-CONFORMING AND THE REQUIRED SIDEYARD SETBACKS MAY NOT BE RELAXED. CRC R106.1.1
19. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
20. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

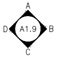
NAILING SCHEDULE IS LOCATED ON SHEET SD.2

WALL LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.
▬ = 2 x 4 D.F. #2 AT 16" O.C.

REQUIRED FLOOR CLEARANCES AT WATER CLOSETS - TYPICAL





INTERIOR ELEVATION KEY

SPN #	.
FLOOR AREA TABLE	PLAN 1660A
LOWER FLOOR	589 SQ. FT.
UPPER FLOOR	1073 SQ. FT.
TOTAL	1661 SQ. FT.
GARAGE	466 SQ. FT.
COVERED ENTRY/PORCH	89 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1660
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

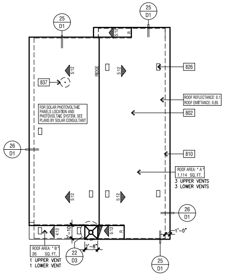
REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1660A
FLOOR PLANS &
OPTION

PROJECT MANAGER :	MM
DESIGNER :	
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

DATE:	SHEET:
06-18-20	A1.1



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.		
				EAVE	RAKE	
CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1	2X6	NONE	1'-0"	TIGHT	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806, PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

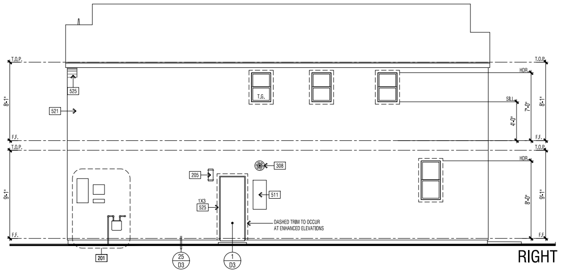
ROOF PLAN KEY NOTES

Name	NOTE
802	ROOFING - CONCRETE - LOW PROFILE "S" TILE BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR FUTURE SOLAR INSTALLATION.
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS

ATTIC VENTILATION CALCULATIONS

PLAN 7A

ROOF ATTIC AREA	A	1114	SQ. FT.	CALCULATION FACTOR:		1/300	
		160416	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	530	SQ. IN	TOTAL PROVIDED:	588		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	265	SQ. IN	TOTAL HIGH PROVI	294		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	265	SQ. IN	TOTAL LOW PROVI	294		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN X	3		294	SQ. IN
				TOTAL PROVIDED:		294	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN X	3		294	SQ. IN
				TOTAL PROVIDED:		294	SQ. IN
ROOF ATTIC AREA	B	26	SQ. FT.	CALCULATION FACTOR:		1/300	
		3744	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	12	SQ. IN	TOTAL PROVIDED:	196		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	6	SQ. IN	TOTAL HIGH PROVI	98		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	6	SQ. IN	TOTAL LOW PROVI	98		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN X	1		98	SQ. IN
				TOTAL PROVIDED:		98	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN X	1		98	SQ. IN
				TOTAL PROVIDED:		98	SQ. IN



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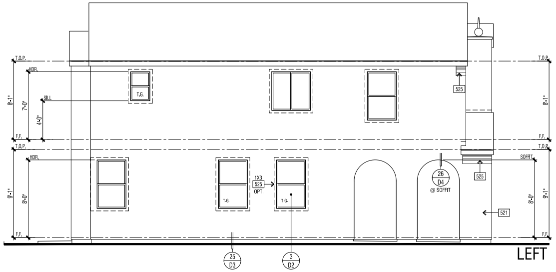

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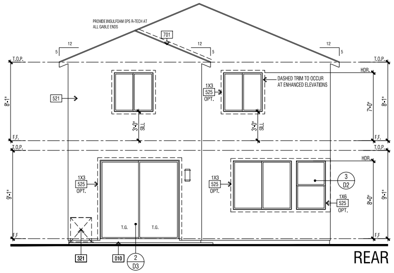

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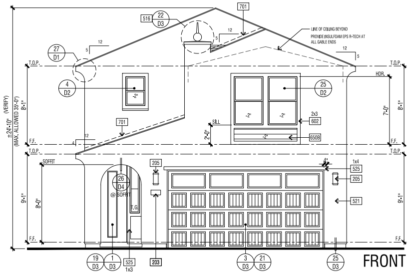


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
010	CONCRETE PATIO - SIZE PER PLAN (BY OTHERS)
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL, 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
321	AIR CONDITIONING CONDENSER LOCATION
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
516	DECORATIVE FOAM ACCENT - SEE DETAIL 22/D3 - ICC ESR 1566
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
674	DECORATIVE METAL WINDOW SHADE
701	G.I. FLASHING
762	ROOFING - CONCRETE - 'S' TILE BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2019 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

NEW ELEV8IONS - PLAN 1660
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

REVISIONS

NO.	DATE	DESCRIPTION

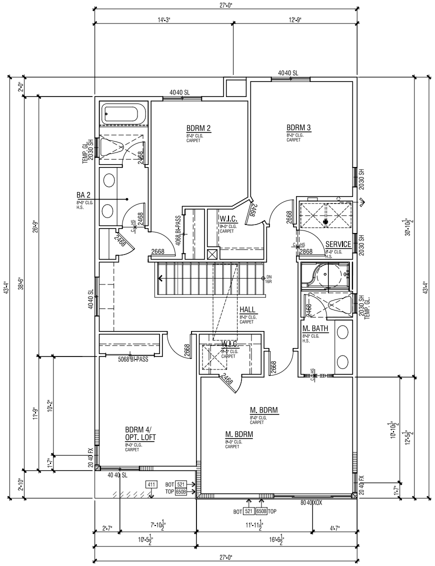
PLAN 1660A EXTERIOR ELEVATIONS & ROOF PLAN

PROJECT MANAGER : MM
DESIGNER : AM
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONS
JOB NUMBER :
CAD FILE NAME :

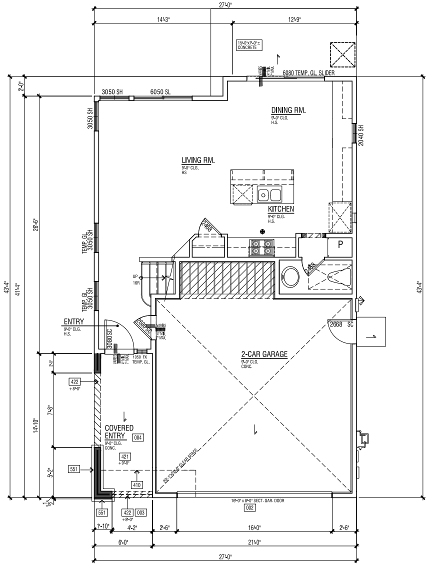
DATE: 06-18-20
SHEET: A1.4

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS, BY 'EL DORADO STONE' ICC-ES ER-3568
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT, FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**



UPPER FLOOR PLAN



LOWER FLOOR PLAN

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1 FOR ADDITIONAL NOTES AND DIMENSIONS.

SPN #	.
FLOOR AREA TABLE	PLAN 1660B
LOWER FLOOR	589 SQ. FT.
UPPER FLOOR	1073 SQ. FT.
TOTAL	1661 SQ. FT.
GARAGE	466 SQ. FT.
COVERED ENTRY/PORCH	89 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1660
CLOVIS, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

WILSON HOMES
FRESNO, CALIFORNIA

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

REVISIONS

NO.	DATE	DESCRIPTION

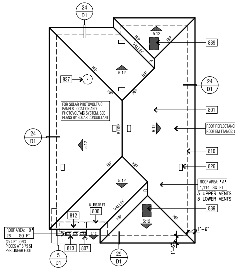
PLAN 1660B
ADDENDA PLANS

PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
06-18-20

SHEET:
A1.5

ATTIC VENTILATION CALCULATIONS					PLAN	7B	
ROOF ATTIC AREA	A	1114	SQ. FT.		CALCULATION FACTOR:	1/300	
		160416	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	530	SQ. IN		TOTAL PROVIDED:	594	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	265	SQ. IN		TOTAL HIGH PROVI	297	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	265	SQ. IN		TOTAL LOW PROVI	297	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3	297	SQ. IN
					TOTAL PROVIDED:	297	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3	297	SQ. IN
					TOTAL PROVIDED:	297	SQ. IN



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: B		ELEVATION STYLE: MODERN			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
CONCRETE 'FLAT' TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1	2x6	2x6	1'-6" U.N.O.	1'-0"

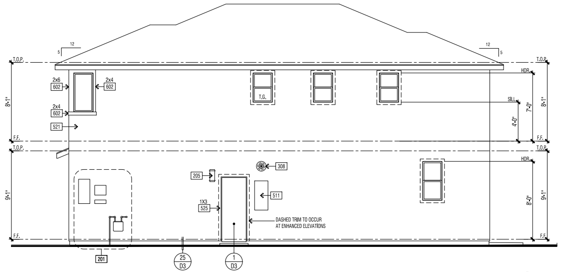
ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY, THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	ROOFING - CONCRETE - "FLAT" TILE BY EAGLE ROOFING ICC# ESR 1900
806	METAL ROOF TO WALL VENT - COR-A- VENT (6.75 S.I. NET FREE AREA PER LINEAR FOOT)
807	ROOFING - METAL BY CUSTOM BILT METALS - ASTM A792
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR FUTURE SOLAR INSTALLATION.
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)



RIGHT

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

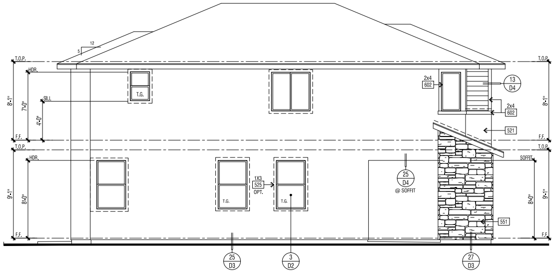
ELEVATION KEY NOTES

Name	NOTE
010	CONCRETE PATIO - SIZE PER PLAN (BY OTHERS)
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL, EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE BY EAGLE ROOFING ICC# ESR 1900
770	ROOFING - METAL BY CUSTOM BILT METALS - ASTM A792

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2019 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



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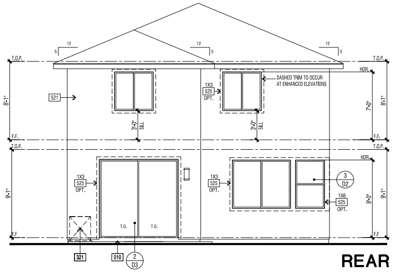

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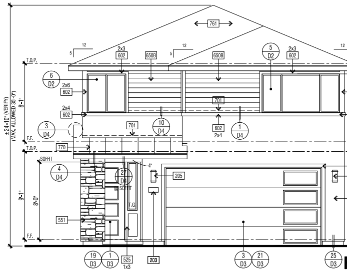


FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

NEW ELEV8IONS - PLAN 1660

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1660B EXTERIOR ELEVATIONS & ROOF PLAN

PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

227

DATE:	SHEET:
06-18-20	A1.6

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
421	STUCCO CEILING: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT: HEIGHT PER PLAN
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
650B	FIBER CEMENT LAP SIDING - 5/16' THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**

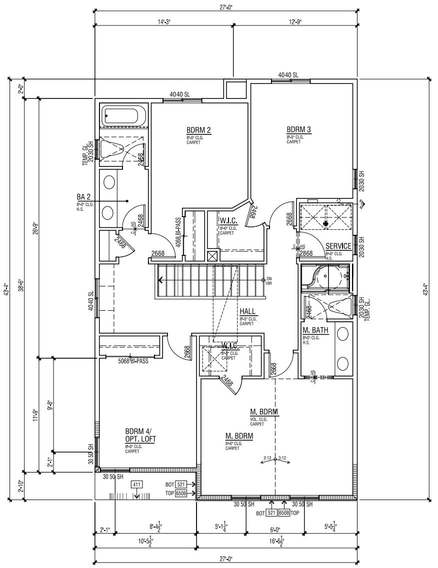
ARCHITECTS . PLANNERS . DESIGNERS

WHA.

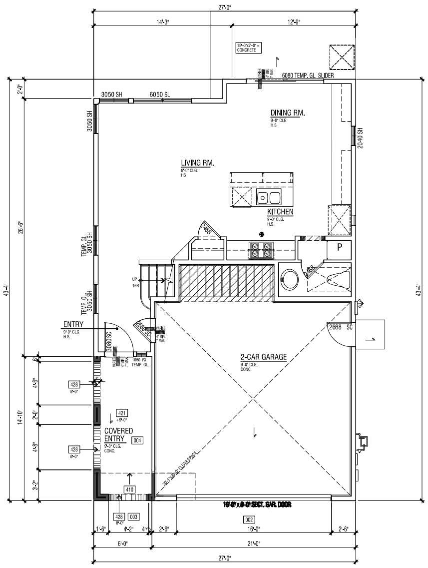
ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES



UPPER FLOOR PLAN



LOWER FLOOR PLAN

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1 FOR ADDITIONAL NOTES AND DIMENSIONS.

SPN #	.
FLOOR AREA TABLE	PLAN 1660C
LOWER FLOOR	589 SQ. FT.
UPPER FLOOR	1073 SQ. FT.
TOTAL	1661 SQ. FT.
GARAGE	466 SQ. FT.
COVERED ENTRY/PORCH	89 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'- 0"

NEW ELEV8IONS - PLAN 1660
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

REVISIONS

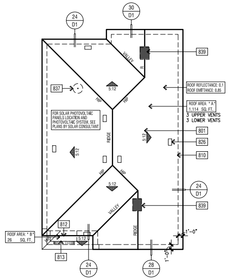
NO.	DATE	DESCRIPTION

PLAN 1660C
ADDENDA PLANS

PROJECT MANAGER : MM
DESIGNER : AM
DRAWN BY :
REVIEWED BY :
1ST BLDG. DEPT. S
ISSUED FOR CONS
JOB NUMBER :
CAD FILE NAME :

DATE:	SHEET:
06-18-20	A1.7

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	C	ELEVATION STYLE:	PROGRESSIVE NAPA			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.		
				EAVE	RAKE	
CONCRETE 'FLAT' TILE "EAGLE ROOFING" ICC# ESR-1900	1 D1.1	2X6	2X6	1'-0"	1'-0"	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

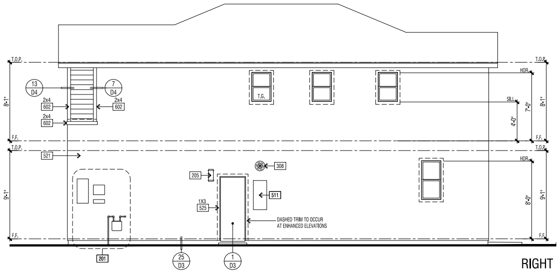
SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH C.R.C. SECTION 324.3.1 THROUGH R324.7.2.7 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS. NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS							PLAN	7C
ROOF ATTIC AREA	A	1114	SQ. FT.		CALCULATION FACTOR:			1/300
		160416	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	530	SQ. IN		TOTAL PROVIDED:		594	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	265	SQ. IN		TOTAL HIGH PROVII		297	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	265	SQ. IN		TOTAL LOW PROVII		297	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3		297	SQ. IN
					TOTAL PROVIDED:		297	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3		297	SQ. IN
					TOTAL PROVIDED:		297	SQ. IN
ROOF ATTIC AREA	B	26	SQ. FT.		CALCULATION FACTOR:			1/150
		3744	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	25	SQ. IN		TOTAL PROVIDED:		99	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1		99	SQ. IN
					TOTAL PROVIDED:		99	SQ. IN

ROOF PLAN KEY NOTES

Name	NOTE
801	ROOFING - CONCRETE - "FLAT" TILE BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR FUTURE SOLAR INSTALLATION.
839	MIN. 22"X30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS



RIGHT

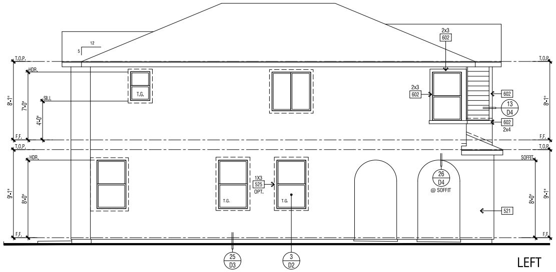
ELEVATION KEY NOTES

Name	NOTE
010	CONCRETE PATIO - SIZE PER PLAN (BY OTHERS)
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
321	AIR CONDITIONING CONDENSER LOCATION
511	RECESS BOX FOR TANKLESS WATER HEATER - INSTALL PER MFR. INSTRUCTIONS
515	STUCCO NICHE. SIZE PER ELEVATION - SLOPE SILL ¼" PER FT. MINIMUM
521	STUCCO - OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC# ESR-1194 STUCCO TYPE 1 OR 11 PORTLAND CEMENT OVER SRAT 'R' GUARD ESR-1566 BY 'START R FOAM'.
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
592	OVERHEAD AWNING - SIZE AND STYLE PER ELEVATION
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE BY EAGLE ROOFING ICC# ESR 1900

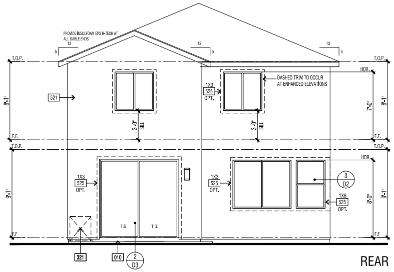
ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2019 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

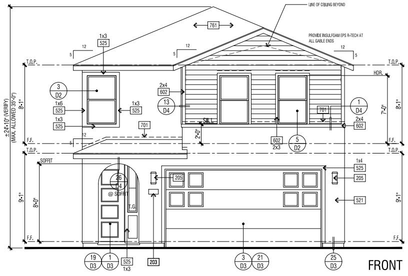
FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



LEFT



REAR



FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

No. C 12920
REN 4-30-21

WILSON HOMES

TRACT NUMBER: 6168/6202
PROJECT TYPE: S.F.D.

NEW ELEV8IONS - PLAN 1660

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1660C EXTERIOR ELEVATIONS & ROOF PLAN

PROJECT MANAGER :	MM
DESIGNER :	AM
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. S	
ISSUED FOR CONS	
JOB NUMBER :	
CAD FILE NAME :	

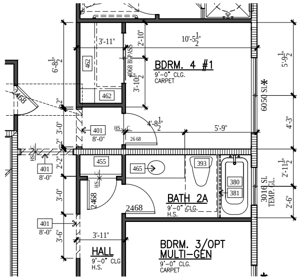
DATE:	SHEET:
06-18-20	A1.8

2018077.07 - FIRST BUILDING DEPARTMENT SUBMITTAL SET 06-18-2020

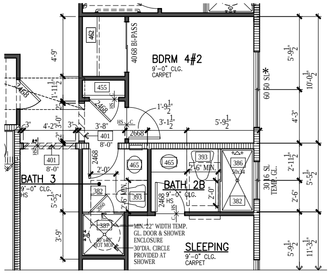
AGENDA ITEM NO. 6.

FLOOR PLAN NOTES

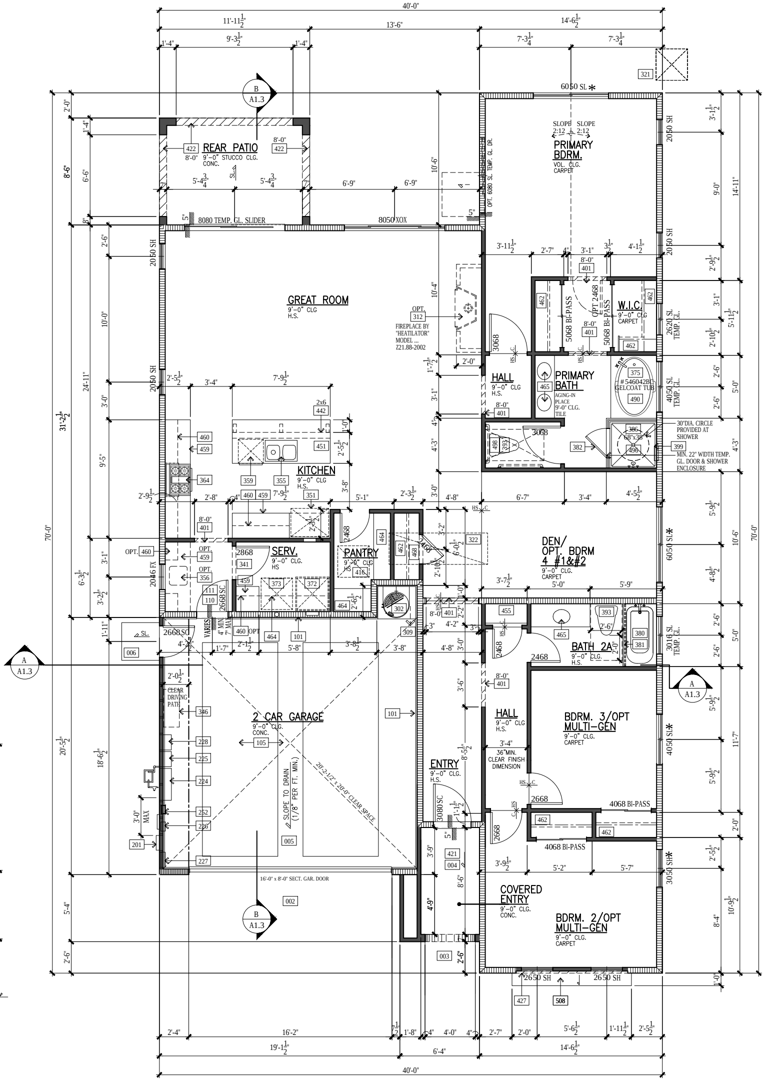
1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6



OPT. BDRM. 4 #1
ILO DEN



OPT. BDRM. 4 #2 ILO
DEN AT
MULTI-GENERAL SUITE



FLOOR PLAN

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMU DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECT
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
101	GARAGE AND/OR CARPORT (WALL ASSEMBLY USED FOR SEPARATION) SHALL BE SEPARATED FROM THE RESIDENCE BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE
105	GARAGE AND/OR CARPORT ATTIC (CEILING ASSEMBLY USED FOR SEPARATION) SHALL BE SEPARATED FROM THE RESIDENCE'S ATTIC BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQUIVALENT.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	14"X14" PV CIRCUIT PANEL. NO PROTECTION REQUIRED
226	ACCESS PANEL
227	BACKUP SUB PANEL
228	SPLICE BOX
305	TANK LESS WATER HEATER. INSTALLATION PER MANUFACTURE'S INSTRUCTIONS
308	TANKLESS WATER HEATER TERMINATION CAP - INSTALL PER MFR. INSTRUCTIONS (CO-AXIAL VENT INTAKE & EXHAUST DIRECTLY FROM OUTSIDE)
309	TEMPERATURE AND PRESSURE RELIEF VALVE: DISCHARGE LINE TO THE OUTSIDE PER CPC SECTION 608.5
312	METAL FIREPLACE (GAS APPLIANCE) - HEIGHT PER PLAN - INSTALL PER MANUFACTURER'S INSTRUCTIONS. MANUFACTURER, MODEL NUMBER AND APPROVAL LISTING PER PLAN. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. (2016 CAL GREEN BLDG STANDARDS 4.503
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) IN ATTIC ON 6' X 12' PLATFORM
336	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH ROOF
341	18"x8" MAKE-UP AIR VENT ABOVE DOOR (100 SQ IN MIN). UNDER-CUT THE DOOR 1 INCH
344	WHOLE HOUSE EXHAUST FAN PER 2019 CEC. REFER TO ATTACHED "SUMMARY OF THE 2019 ENERGY CODE ASHRAE 62.2 REQUIREMENTS"
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
356	VEGETABLE SINK
359	DISHWASHER
364	COOKTOP & EXHAUST HOOD WITH FAN AND LIGHT (EXHAUST VENT TO OUTSIDE). THE VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLE IS 30" UNPROTECTED, OR 24" PROTECTED., AND THE HORIZONTAL DIMENSION IS REQUIRED TO BE PER THE MARKING LISTED ON THE UNIT. 2019 CMC 921.3.2 & 921.4.3
372	WASHER SPACE WITH RECESSED WATER BOX AND DRAIN
373	DRYER SPACE
374	SHELF ABOVE - OPT. CABINETS (SEE INTERIOR ELEV.)
375	DROP-IN TUB - SIZE PER PLAN
380	TUB/ SHOWER
381	CURTAIN ROD
382	SHATTERPROOF ENCLOSURE/SHOWER DOOR (MIN. 22" WIDTH)
386	SHOWER - PREFABRICATED STALL (30" DIA CIRCLE PROVIDED) - SIZE PER PLAN (MIN. 1,024 S.I. FLOOR AREA)
387	SHOWER - HOT MOP - SIZE PER PLAN (MIN. 1,024 S.I. FLOOR AREA)
392	PEDESTAL SINK
393	TOILET - PROVIDE MINIMUM 24"x30" CLEAR FLOOR AREA IN FRONT OF TOILET
399	24" x 16" SHAMPOO TRAY. BOTTOM OF TRAY AT 48" - SLOPE $\frac{1}{4}$" TO DRAIN.
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
416	30"x30" ATTIC ACCESS - DIMENSIONS ARE CLEAR - PER CEnC 150.0(a)1, ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS AND THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
442	2X PONY WALL - SIZE & HEIGHT PER PLAN
443	2X CRIPPLE WALL - SIZE PER PLAN
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY WITH WIRE SHELVING
454	DESK
455	LINEN
457	LINEN (LOW ONLY)
458	LINEN (UPPER ONLY)
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE - LOCATE POLE 66" A.F.F.; PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
463	DOUBLE SHELF & POLE
464	WIRE SHELF/SHELVES
465	VANITY
468	COAT CLOSET
490	BATHTUB REINFORCEMENT TO BE CONTINUOUS ON EACH SIDE OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES ABOVE THE BATHTUB RIM
496	SHOWER REINFORCEMENT TO BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED. ACTUAL GRAB BARS NOT REQUIRED PER CODE
498	WATER CLOSET REINFORCEMENT TO BE INSTALLED ON BOTH SIDES WALLS OF THE FIXTURE, OR ON ONE SIDE WALL AND THE BACK WALL. ACTUAL GRAB BARS NOT REQUIRED PER CODE
508	WATERPROOF STUCCO SHELF - SLOPE 1/4" PER FOOT

SEE SHEET A1.1.3 FOR ADDENDA FLOOR PLANS

NAILING SCHEDULE IS IN SHEET SD.2

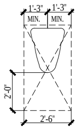
FLOOR PLAN LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.

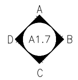
■ = 2 x 4 D.F. #2 AT 16" O.C.

3050 SH*
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310
1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL



INTERIOR ELEVATION KEY

SCALE: 1/4" = 1'-0"

STANDARD PLAN W/MULTI-GEN SUITE WITH BATH 2B AND BATH 3

FLOOR AREA TABLE	PLAN 1887A	PLAN 1887B	PLAN 1887C	PLAN 1887D	PLAN 1887E
LOWER FLOOR PLAN	1,887 SQ. FT.	1,887 SQ. FT.	1,887 SQ. FT.	1,887 SQ. FT.	1,887 SQ. FT.
TOTAL	1,887 SQ. FT.	1,887 SQ. FT.	1,887 SQ. FT.	1,887 SQ. FT.	1,887 SQ. FT.
GARAGE	429 SQ. FT.	429 SQ. FT.	429 SQ. FT.	429 SQ. FT.	429 SQ. FT.
COVERED ENTRY	44 SQ. FT.	44 SQ. FT.	27 SQ. FT.	27 SQ. FT.	27 SQ. FT.
REAR PATIO	102 SQ. FT.	102 SQ. FT.	102 SQ. FT.	102 SQ. FT.	102 SQ. FT.

FLOOR AREA TABLE	PLAN 1887A
LOWER FLOOR PLAN	1887 SQ. FT.
TOTAL	1887 SQ. FT.
GARAGE	429 SQ. FT.
COVERED ENTRY	44 SQ. FT.
REAR PATIO	102 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ATTACHMENT 15

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'xXX' Lots)

PLAN 1887
REGENT PARK at Clovis
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

PLAN 1887A
FLOOR PLAN & OPTIONS

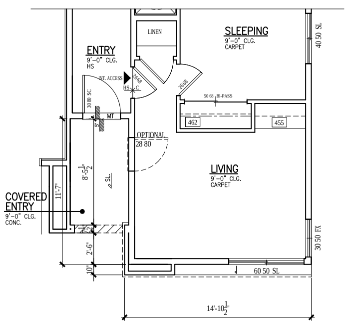
PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	xx-xx-xx
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023010
CAD FILE NAME :	A1..1.1

DATE: 02-23-23

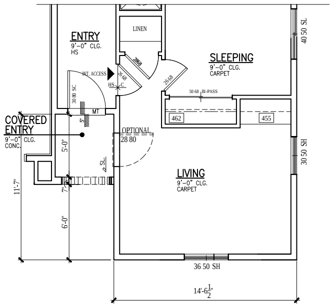
SHEET: A1.1.1

2023011- PROGRESS SET 02-23-2023

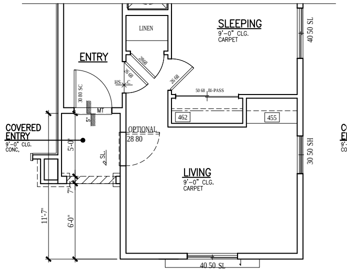
AGENDA ITEM NO. 6.



OPT. MULTI-GENERAL SUITE ILO BDRMS 2 & 3 AT PLAN 'B'



OPT. MULTI-GENERAL SUITE ILO BDRMS 2 & 3 AT PLAN 'C'



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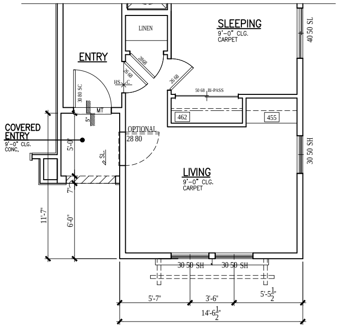
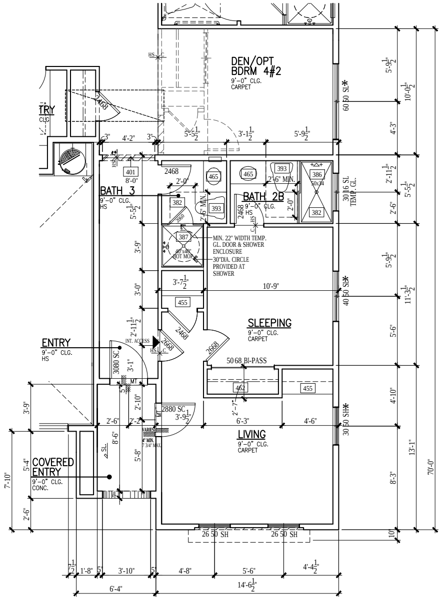


OPT. MULTI-GENERAL SUITE ILO BDRMS 2 & 3 AT PLAN 'E'



OPT. MULTI-GENERAL SUITE ILO BDRMS 2 & 3 AT PLAN 'A'

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN INDICATED
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
375	DROP-IN TUB - SIZE PER PLAN
382	SHATTER PROOF SHOWER DOOR/ENCLOSURE
386	SHOWER - PREFABRICATED STALL - 44"X44" (MIN. 1,024 S.I. FLOOR AREA)
387	SHOWER - HOT MOP. SIZE PER PLAN. (MIN. 1,024 S.I. FLOOR AREA)
393	TOILET - PROVIDE MINIMUM 24"x30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT: HEIGHT PER PLAN
455	LINEN
462	WIRE SHELF AND POLE - LOCATE POLE 66" A.F.F.; PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
465	VANITY

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1.1
FOR ADDITIONAL NOTES AND DIMENSIONS.

SCALE: 1/4" = 1'-0"

A CONTEMPORARY SPANISH - B MODERN - C PROGRESSIVE NAPA - D COTTAGE - E PROGRESSIVE FARMHOUSE

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'XX' Lots)

PLAN 1887
REGENT PARK at Clovis

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 1887A, B, C, D & E
FLOOR PLAN OPTIONS

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	xx-xx-xx
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023010
CAD FILE NAME :	A1..1.2

DATE: 02-23-23
SHEET: A1.1.2

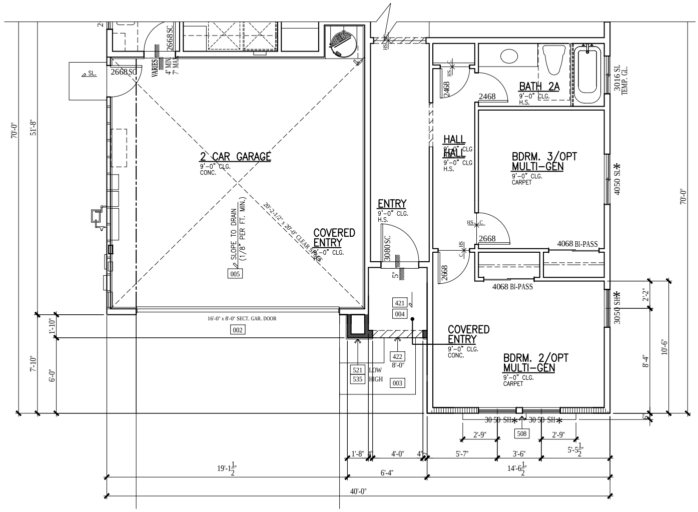
2023011- PROGRESS SET 02-23-2023

ARCHITECTS . PLANNERS . DESIGNERS

AGENDA ITEM NO. 6.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES



PARTIAL FLOOR PLAN 1870E - PROGRESSIVE FARMHOUSE

FLOOR AREA TABLE	PLAN 1887E
LOWER FLOOR PLAN	1887 SQ. FT.
TOTAL	1887 SQ. FT.
GARAGE	429 SQ. FT.
COVERED ENTRY	27 SQ. FT.
REAR PATIO	102 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

FLOOR PLAN KEY NOTES

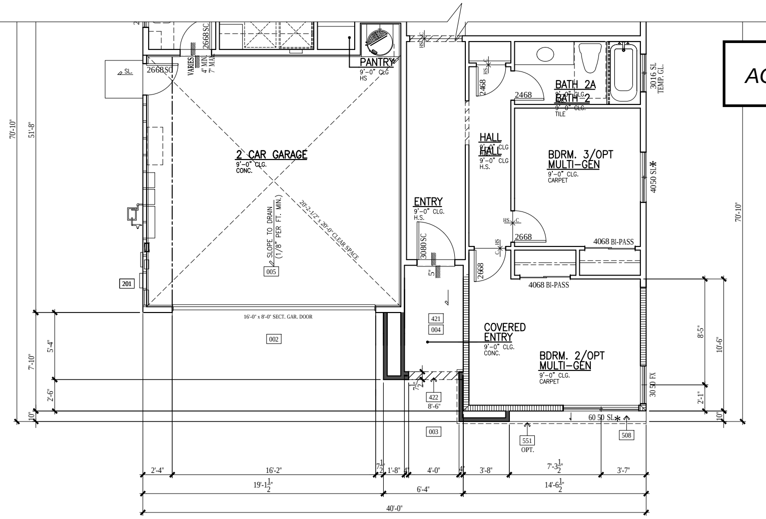
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
535	BATT & BOARD WALL FINISH
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT

FLOOR AREA TABLE	PLAN 1887B
LOWER FLOOR PLAN	1887 SQ. FT.
TOTAL	1887 SQ. FT.
GARAGE	429 SQ. FT.
COVERED ENTRY	44 SQ. FT.
REAR PATIO	102 SQ. FT.

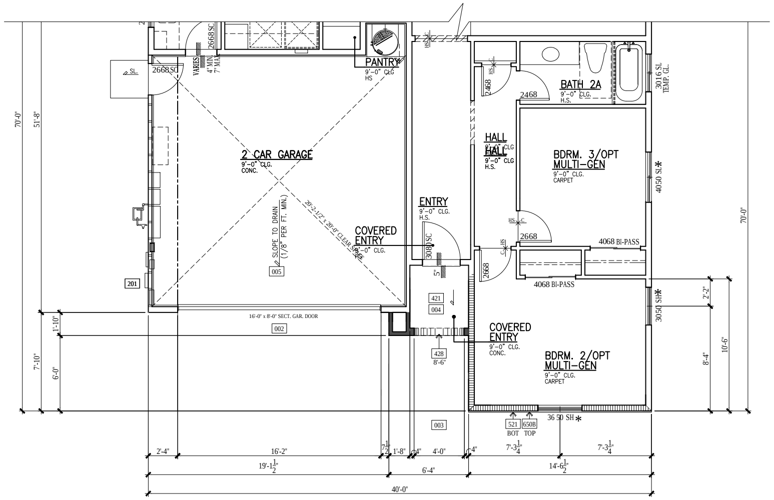
NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT



PARTIAL FLOOR PLAN 1870B - MODERN



PARTIAL FLOOR PLAN 1870C - PROGRESSIVE NAPA

FLOOR AREA TABLE	PLAN 1887D
LOWER FLOOR PLAN	1887 SQ. FT.
TOTAL	1887 SQ. FT.
GARAGE	429 SQ. FT.
COVERED ENTRY	27 SQ. FT.
REAR PATIO	102 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

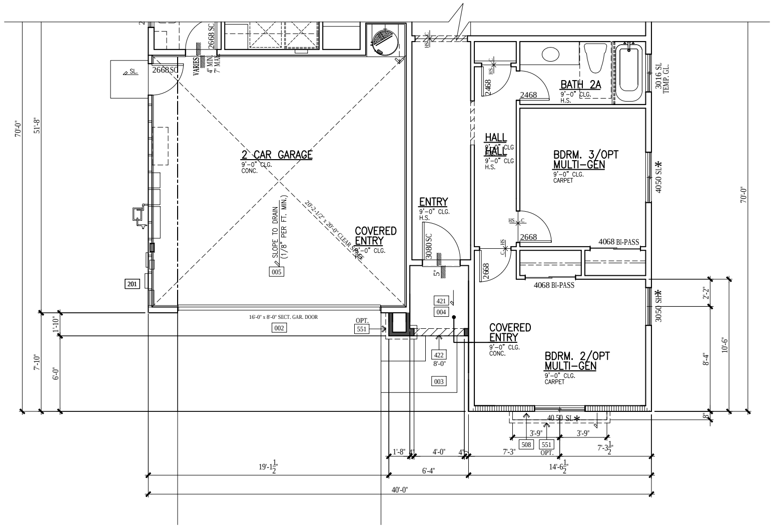
REFER TO BASE PLAN SHEET A1.1.1
FOR ADDITIONAL NOTES AND DIMENSIONS.

FLOOR AREA TABLE	PLAN 1887C
LOWER FLOOR PLAN	1887 SQ. FT.
TOTAL	1887 SQ. FT.
GARAGE	429 SQ. FT.
COVERED ENTRY	27 SQ. FT.
REAR PATIO	102 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT: HEIGHT PER PLAN
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)



PARTIAL FLOOR PLAN 1870D - COTTAGE

SCALE: 1/4" = 1'-0"

'B' MODERN, 'C' PROGRESSIVE NAPA, 'D' COTTAGE, 'E' PROGRESSIVE FARMHOUSE

PLAN 1887
REGENT PARK at Clovis
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'XX' Lots)

REVISIONS

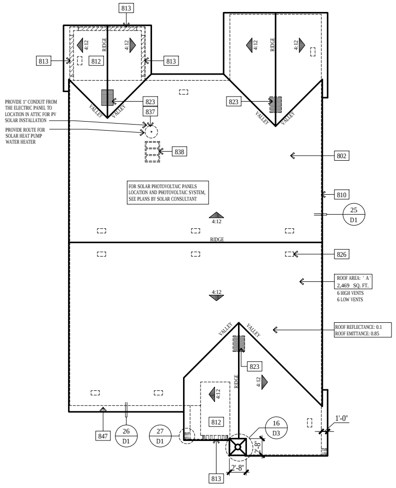
NO.	DATE	DESCRIPTION

PLAN 1887B, C, D & E
ADDENDA FLOOR PLANS

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	xx-xx-xx
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023010
CAD FILE NAME :	A1.1.3

DATE: 02-23-23
SHEET: A1.1.3

2023011- PROGRESS SET 02-23-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1	2x6	NONE	1'-0"	TIGHT

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ATTIC VENTILATION CALCULATIONS

PLAN 1887A

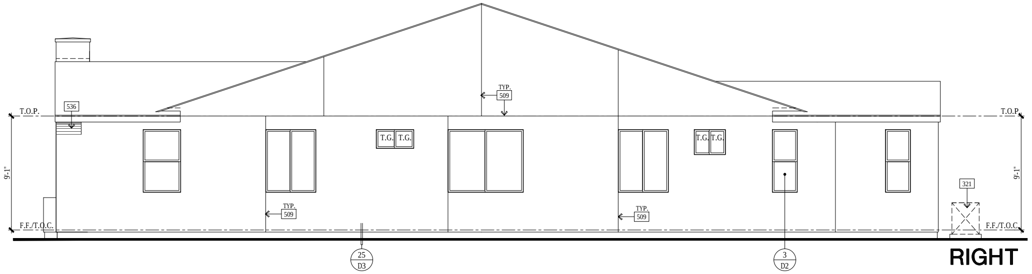
ROOF ATTIC AREA	A	2469	SQ. FT.	CALCULATION FACTOR:		1/300	
		355536	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1184	SQ. IN	TOTAL PROVIDED:	1176		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	592	SQ. IN	TOTAL HIGH PROVII	588		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	592	SQ. IN	TOTAL LOW PROVII	588		SQ. IN

HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN	X	6	588	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	588	SQ. IN

LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN	X	6	588	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	588	SQ. IN

ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - LOW PROFILE CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES



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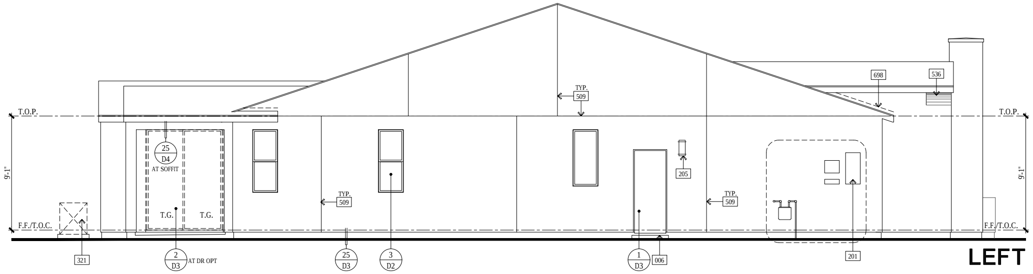

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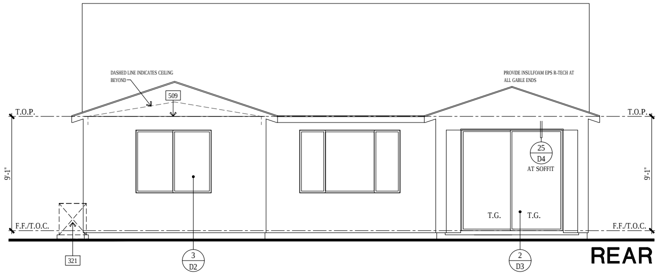
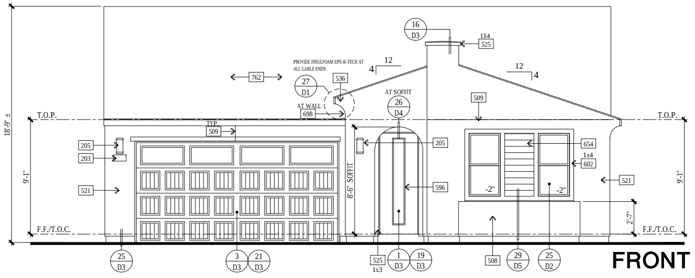


REAR



FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENI FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS P POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WI
321	AIR CONDITIONING CONDENSER LOCATION
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT
509	STUCCO CONTROL JOINT - SEE DETAIL 27/D6
516	DECORATIVE FOAM ACCENT - SEE DETAIL 24/D4
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
536	STUCCO OVER EAVE RIGID FOAM CORBEL - SIZE/SHAPE PER DETAIL
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
654	FIBER CEMENT SHIPLAP PANELING 5/8" THICK (OR EQUIVALENT). FINISH: SMOOTH TEXTURE. EXPOSURE 7" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	ROOF TO WALL G.I. FLASHING
701	G.I. FLASHING
762	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

AGENDA ITEM NO. 6.

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'xXX' Lots)

PLAN 1887
REGENT PARK at Clovis
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

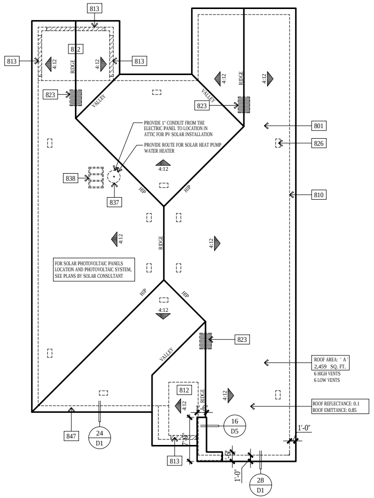
CONTEMPORARY SPANISH

PLAN 1887A EXTERIOR ELEVATIONS & ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	xx-xx-xx
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023010
CAD FILE NAME :	A1.4

DATE:	SHEET:
02-23-23	A1.4

2023011- PROGRESS SET 02-23-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	B	ELEVATION STYLE:	MODERN		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2x8	2x8	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

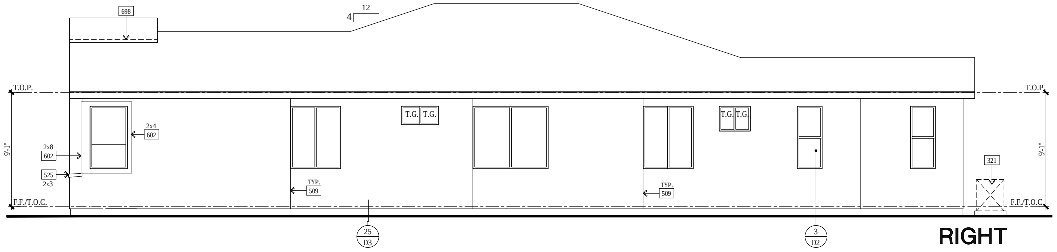
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"X30" CLEAR OPENING FOR ACCESS AND AIRFLOW CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	1887B
ROOF ATTIC AREA	A	2459	SQ. FT.	CALCULATION FACTOR:			1/300
		354096	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1178	SQ. IN	TOTAL PROVIDED:	1188		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	589	SQ. IN	TOTAL HIGH PROVII	594		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	589	SQ. IN	TOTAL LOW PROVII	594		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	6		594	SQ. IN
				TOTAL PROVIDED:		594	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	6		594	SQ. IN
				TOTAL PROVIDED:		594	SQ. IN



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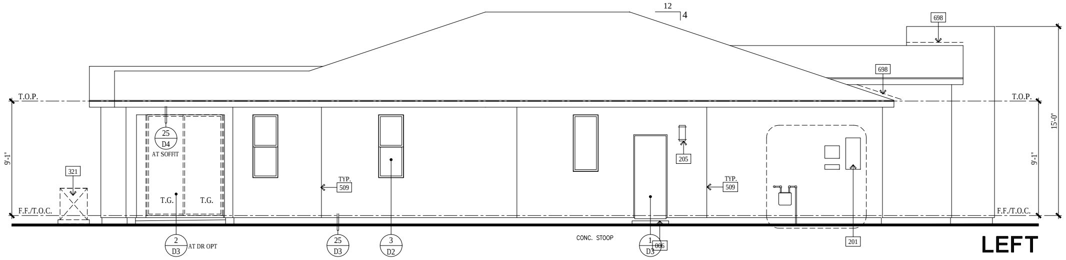

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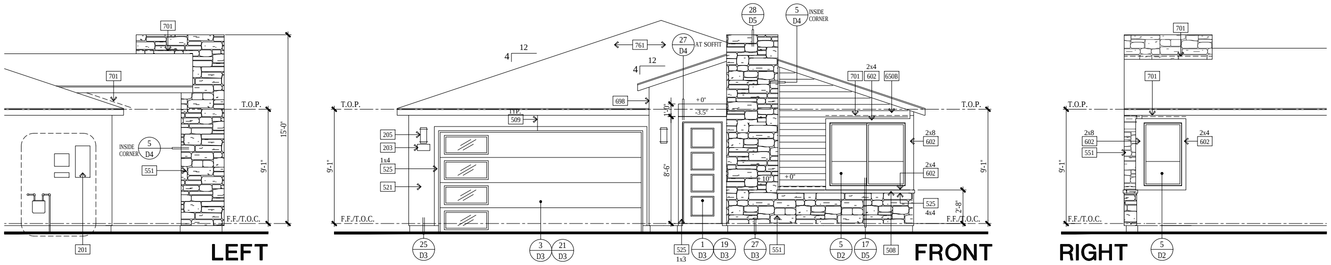
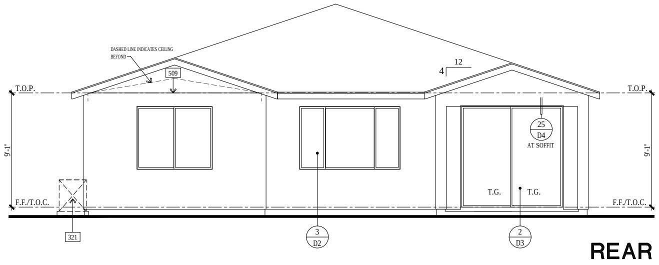


LEFT FRONT RIGHT

ELEVATIONS WITH OPTIONAL STONE



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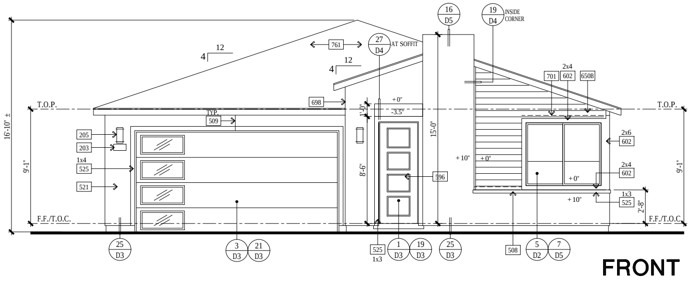


FRONT

SCALE: 1/4" = 1'-0"

MODERN

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENI FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS P POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT W
321	AIR CONDITIONING CONDENSER LOCATION
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT
509	STUCCO CONTROL JOINT - SEE DETAIL 24/D4
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	ROOF TO WALL G.I. FLASHING
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE - BY EAGLE ROOFING ICC# ESR 1900

AGENDA ITEM NO. 6.

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'xXX' Lots)

PLAN 1887
REGENT PARK at Clovis
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

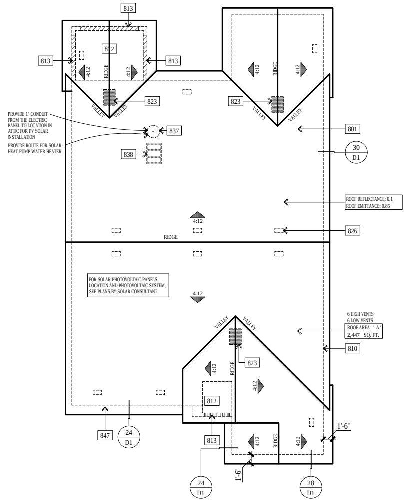
PLAN 1887B EXTERIOR ELEVATIONS & ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	xx-xx-xx
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023010
CAD FILE NAME :	13052A1.5

DATE:	SHEET:
02-23-23	A1.5

2023011- PROGRESS SET 02-23-2023

AGENDA ITEM NO. 6.



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: C		ELEVATION STYLE: PROGRESSIVE NAPA			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
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   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
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ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS							PLAN	1887C
ROOF ATTIC AREA	A	2447	SQ. FT.		CALCULATION FACTOR:			1/300
		352368	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	1174	SQ. IN		TOTAL PROVIDED:	1188		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	587	SQ. IN		TOTAL HIGH PROVII	594		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	587	SQ. IN		TOTAL LOW PROVII	594		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6		594	SQ. IN
					TOTAL PROVIDED:		594	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6		594	SQ. IN
					TOTAL PROVIDED:		594	SQ. IN

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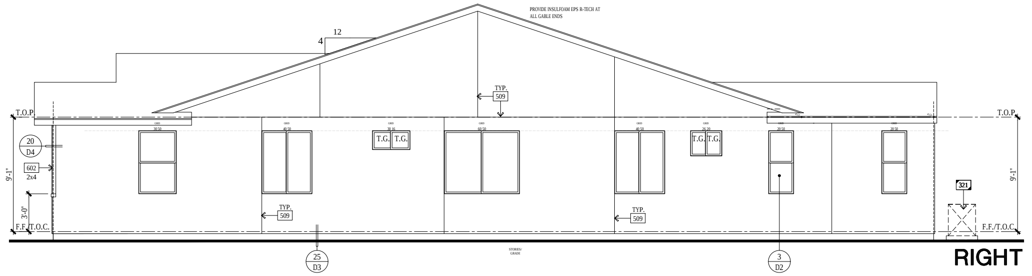

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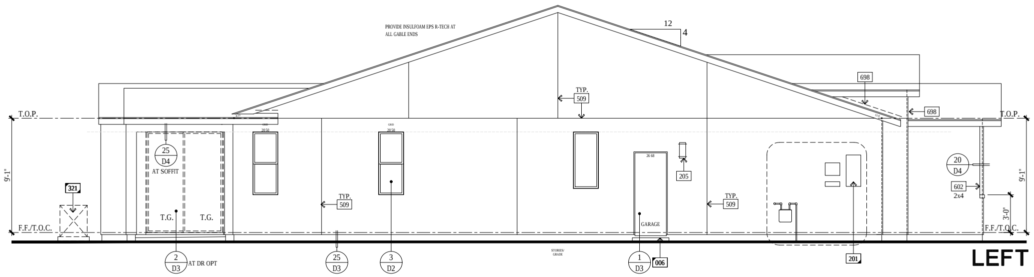

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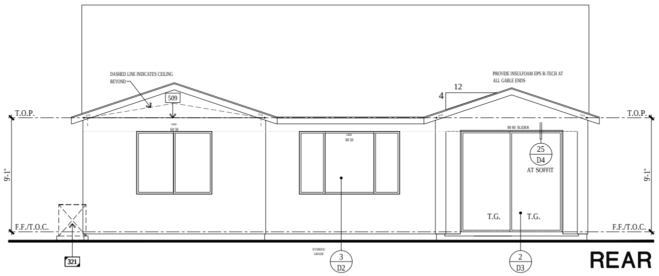

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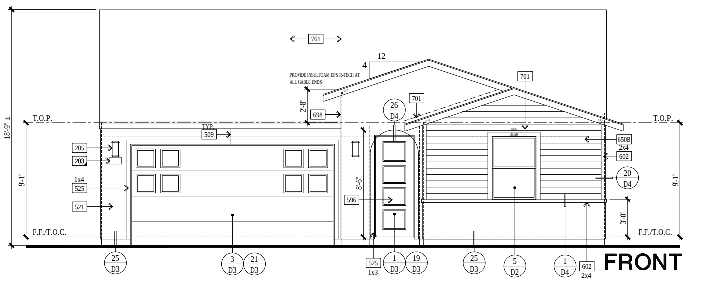

FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLA POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WITH
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 24/D4
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	ROOF TO WALL G.I. FLASHING
701	G.I. FLASHING
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NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'xXX' Lots)

PLAN 1887
REGENT PARK at Clovis
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

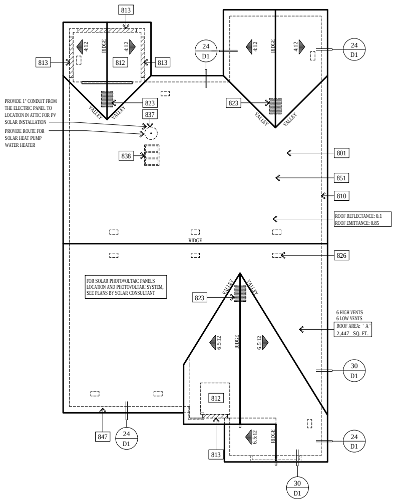
PROGRESSIVE NAPA

PLAN 1887C EXTERIOR ELEVATIONS & ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	xx-xx-xx
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023010
CAD FILE NAME :	A1.6
DATE: 02-23-23	SHEET: A1.6

2023011- PROGRESS SET 02-23-2023

AGENDA ITEM NO. 6.



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: D		ELEVATION STYLE: COTTAGE			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	3 / D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

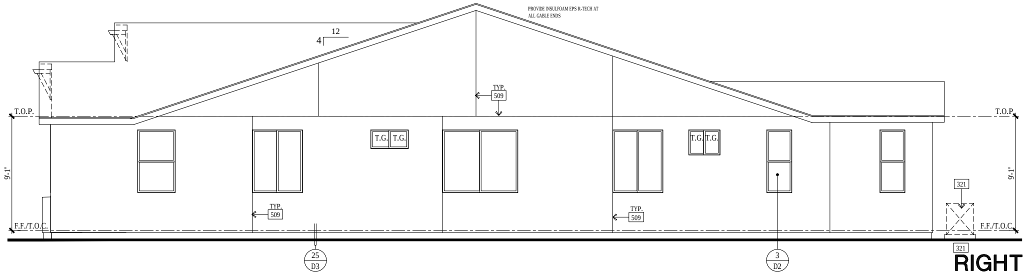
ATTIC VENTILATION CALCULATIONS

PLAN 1887D

ROOF ATTIC AREA	A	2447	SQ. FT.		CALCULATION FACTOR:	1/300	
		352368	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1174	SQ. IN		TOTAL PROVIDED:	1188	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	587	SQ. IN		TOTAL HIGH PROVII	594	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	587	SQ. IN		TOTAL LOW PROVII	594	SQ. IN

HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6	594	SQ. IN
					TOTAL PROVIDED:	594	SQ. IN

LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6	594	SQ. IN
					TOTAL PROVIDED:	594	SQ. IN



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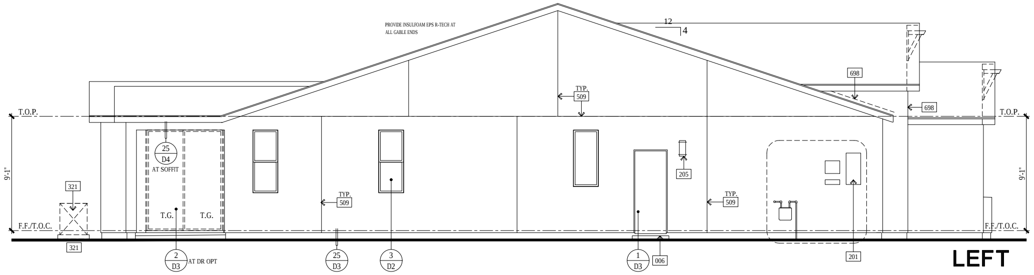

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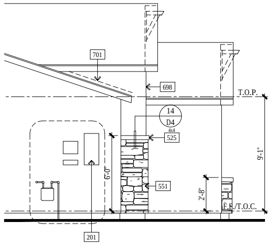

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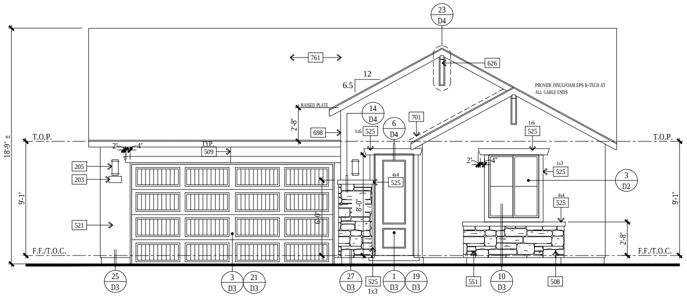

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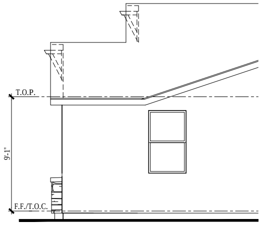

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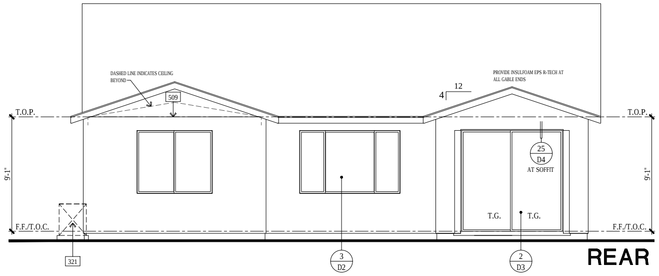

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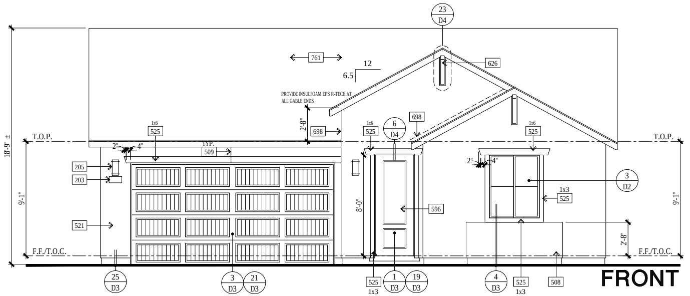


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENIN FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PL POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT
509	STUCCO CONTROL JOINT - SEE DETAIL 24/D4
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
626	OUTLOOKER ASSEMBLY - WOOD (SIZE PER ELEVATION)
698	ROOF TO WALL G.I. FLASHING
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE - BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2019 CRC R703.63

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'xXX' Lots)

PLAN 1887
REGENT PARK at Clovis
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

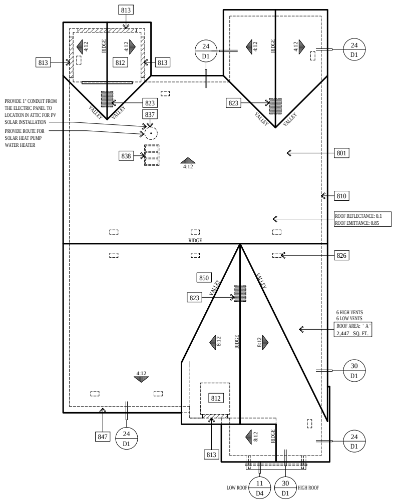
PLAN 1887D EXTERIOR ELEVATIONS & ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	xx-xx-xx
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023010
CAD FILE NAME :	A1.7
DATE: 02-23-23	SHEET: A1.7

COTTAGE

2023011- PROGRESS SET 02-23-2023

AGENDA ITEM NO. 6.



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: E ELEVATION STYLE: PROGRESSIVE FARMHOUSE

ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	3 / D1.1	2x6	2x6	1'-0" 1'-6"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
823	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS						PLAN	1887E
ROOF ATTIC AREA	A	2447	SQ. FT.		CALCULATION FACTOR:		1/300
		352368	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1174	SQ. IN		TOTAL PROVIDED:	1188	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	587	SQ. IN		TOTAL HIGH PROVI	594	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	587	SQ. IN		TOTAL LOW PROVI	594	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6	594	SQ. IN
					TOTAL PROVIDED:	594	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6	594	SQ. IN
					TOTAL PROVIDED:	594	SQ. IN

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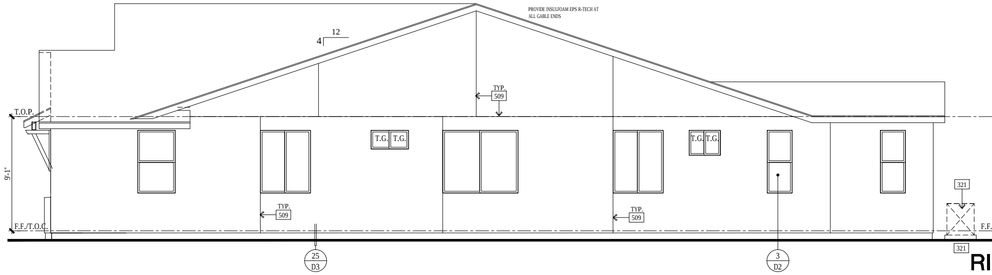

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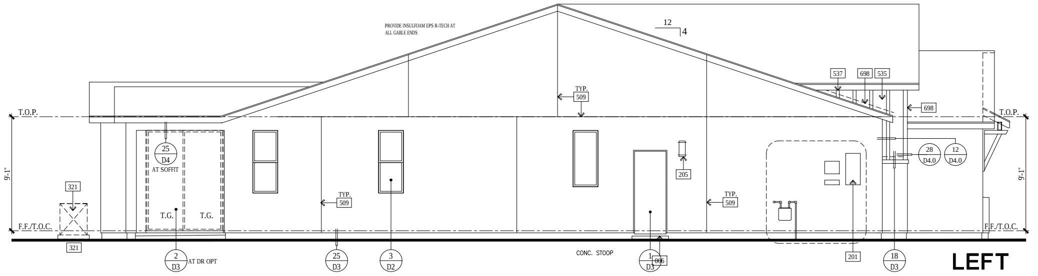

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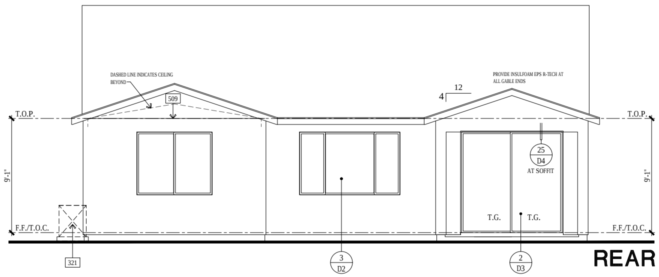

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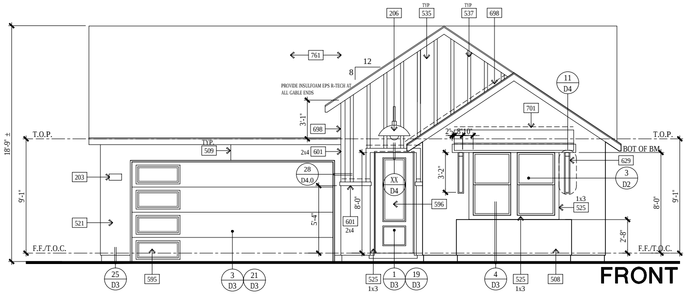


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENI FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS P POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WI
206	DECORATIVE WALL SCONCE - FIELD VERIFY HEIGHT WITH FIXTURE TY
321	AIR CONDITIONING CONDENSER LOCATION
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT
509	STUCCO CONTROL JOINT - SEE DETAIL 24/D4
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
535	CEMENTITOUS VERTICAL PANEL OVER 2 LAYERS BUILDING PAPER OVER 1/2" PLYWOOD SHEATHING OVER EPS FOAM BOARD OVER BUILDING PAPER. NOTE: EPS FOAM BOARD MAY BE OMITTED AT NON HABITABLE SPACES PROVIDED THE WALL PLANES OUT
537	1x3 WOD BATTS AT 16" O.C.
595	DECORATIVE GARAGE DOOR TEMPERED GLASS WINDOWS
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
601	WOOD TRIM - SIZE PER ELEVATION
629	KNEE BRACE-OUTLOOKER WOOD ASSEMBLY (SIZE PER DETAIL)
698	ROOF TO WALL G.I. FLASHING
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE - BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: 2 LAYERS OF OF GRADE 'D' BUILDING PAPER IS REQUIRED TO BE INSTALLED OVER ROOF WOOD SHEATHING. 2022 CRC R703.63

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'xXX' Lots)

PLAN 1887
REGENT PARK at Clovis
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

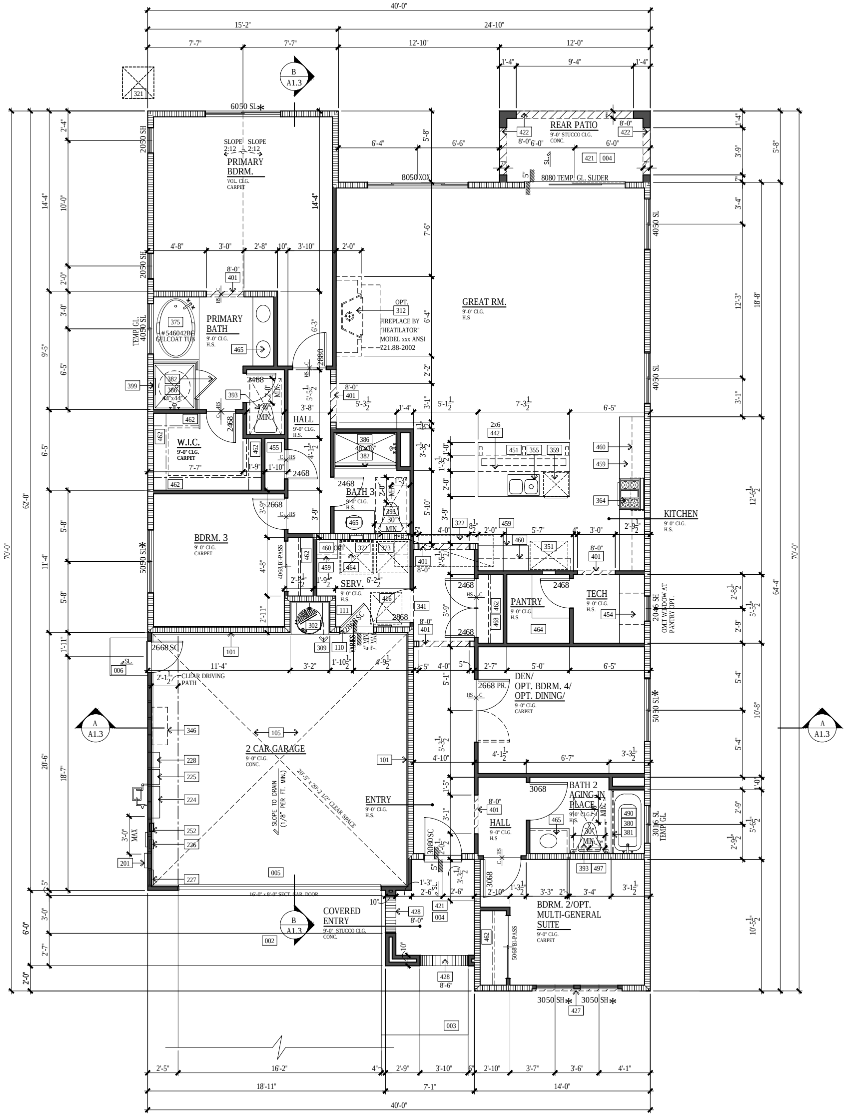
'E' PROGRESSIVE FARMHOUSE

PLAN 1887E EXTERIOR ELEVATIONS & ROOF PLAN

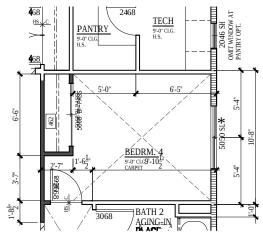
PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	xx-xx-xx
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023010
CAD FILE NAME :	A1.8

DATE:	SHEET:
02-23-23	A1.8

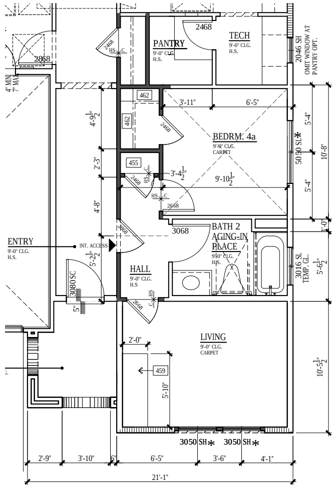
2023011- PROGRESS SET 02-23-2023



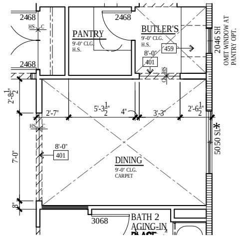
FLOOR PLAN



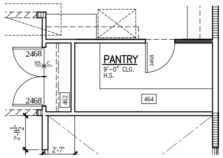
OPT. BDRM. 4 ILO DEN



OPT. MULTI-GENERAL SUITE ILO DEN AND BDRM. 2



OPT. DINING RM. ILO DEN



OPT. PANTRY ILO TECH

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
101	GARAGE AND/OR CARPORT (WALL ASSEMBLY USED FOR SEPARATION) SHALL BE SEPARATED FROM THE RESIDENCE BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE
105	GARAGE AND/OR CARPORT ATTIC (CEILING ASSEMBLY USED FOR SEPARATION) SHALL BE SEPARATED FROM THE RESIDENCE'S ATTIC BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQUIVALENT.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	14"X14" PV CIRCUIT PANEL. NO PROTECTION REQUIRED
226	ACCESS PANEL
227	BACKUP SUB PANEL
228	SPLICE BOX
252	SOLAR READY BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER. (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
309	TEMPERATURE AND PRESSURE RELIEF VALVE: DISCHARGE LINE TO THE OUTSIDE PER CPC SECTION 608.5
312	METAL FIREPLACE (ELECTRIC APPLIANCE) - HEIGHT PER PLAN - INSTALL PER MANUFACTURER'S INSTRUCTIONS. MANUFACTURER, MODEL NUMBER AND APPROVAL LISTING PER PLAN.
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) IN ATTIC ON 6' X 12' PLATFORM
336	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH ROOF
341	14"x8" MAKE-UP AIR VENT - UNDER-CUT THE DOOR 1 INCH
344	WHOLE-BUILDING VENTILATION FAN PER ASHRAE 62.2, SECTION 4 PER CEnC 150.0(o).
346	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH FOOD DISPOSER
359	DISHWASHER
364	COOKTOP & EXHAUST HOOD WITH FAN AND LIGHT (EXHAUST VENT TO OUTSIDE). THE VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLE IS 30" UNPROTECTED, OR 24" PROTECTED., AND THE HORIZONTAL DIMENSION IS REQUIRED TO BE PER THE MARKING LISTED ON THE UNIT. 2022 CMC 921.3.2 & 921.4.3
372	WASHER SPACE WITH RECESSED WATER BOX AND DRAIN
373	DRYER SPACE
374	SHELF ABOVE - OPT. CABINETS (SEE INTERIOR ELEV.)
375	DROP-IN TUB - SIZE PER PLAN
380	TUB/ SHOWER
381	CURTAIN ROD
382	SHATTERPROOF SHOWER DOOR (MIN. 22" WIDTH)/ ENCLOSURE
386	SHOWER - PREFABRICATED STALL - 36"X60"X76" MODEL 1603DTS - GELCOAT SURFACE - BY AQUATIC. (MIN. 1,024 S.I. FLOOR AREA)
393	TOILET - PROVIDE MINIMUM 24"x30" CLEAR FLOOR AREA IN FRONT OF TOILET
399	24" x 16" SHAMPOO TRAY. BOTTOM OF TRAY AT 48" - SLOPE $\frac{1}{4}$" TO DRAIN.
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
416	30"x30" ATTIC ACCESS - DIMENSIONS ARE CLEAR - PER CEnC 150.0(a)1, ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS AND THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
442	2X PONY WALL - SIZE & HEIGHT PER PLAN
443	2x CRIPPLE WALL - SIZE PER PLAN
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY WITH WIRE SHELVING
454	DESK
455	LINEN
457	LINEN (LOW ONLY)
458	LINEN (UPPER ONLY)
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE - LOCATE POLE 66" A.F.F.; PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
463	DOUBLE SHELF & POLE
464	WIRE SHELF/SHELVES
465	VANITY
468	COAT CLOSET
490	BATHTUB REINFORCEMENT TO BE CONTINUOUS ON EACH SIDE OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES ABOVE THE BATHTUB RIM
497	WATER CLOSET REINFORCEMENT TO BE FLOOR-MOUNTED OR FOLDAWAY OR SIMILAR ALTERNATIVE GRAB BAR REINFORCEMENT TO BE PROVIDED IN ADDITION TO THE BACK WALL REINFORCEMENT. ACTUAL GRAB BARS NOT REQUIRED PER CODE

SEE SHEET A1.1.3 FOR ADDENDA FLOOR PLANS

NAILING SCHEDULE IS IN SHEET SD.2

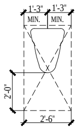
FLOOR PLAN LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.

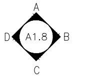
▬ = 2 x 4 D.F. #2 AT 16" O.C.

3050 SH*
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310
1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL



INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 2007A
FLOOR PLAN	2007 SQ. FT.
TOTAL	2007 SQ. FT.
GARAGE	433 SQ. FT.
COVERED ENTRY	54 SQ. FT.
REAR PATIO	68 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2007
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

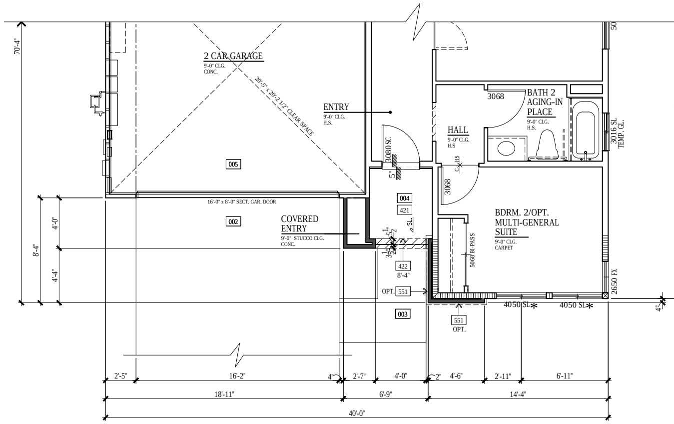
PLAN 2007A
FLOOR & FLOOR PLAN
OPTIONS

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	XX-XX-2023
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
03-02-23

A1.1.1

2023011.00 - PROGRESS SET 03-02-2023

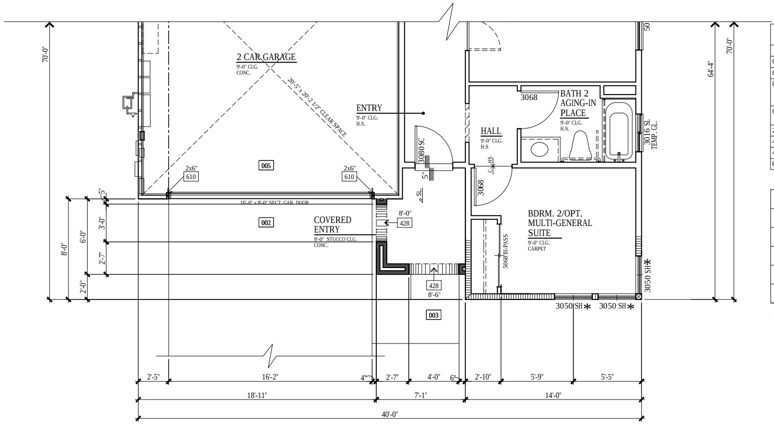


PARTIAL FLOOR PLAN 2007B - MODERN

FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12

FLOOR AREA TABLE	PLAN 2007B
FLOOR PLAN	2007 SQ. FT.
TOTAL	2007 SQ. FT.
GARAGE	433 SQ. FT.
COVERED ENTRY	40 SQ. FT.
REAR PATIO	68 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION



PARTIAL FLOOR PLAN 2007C - PROGRESSIVE NAPA

FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT: HEIGHT PER PLAN
610	WOOD POST - SIZE PER PLAN

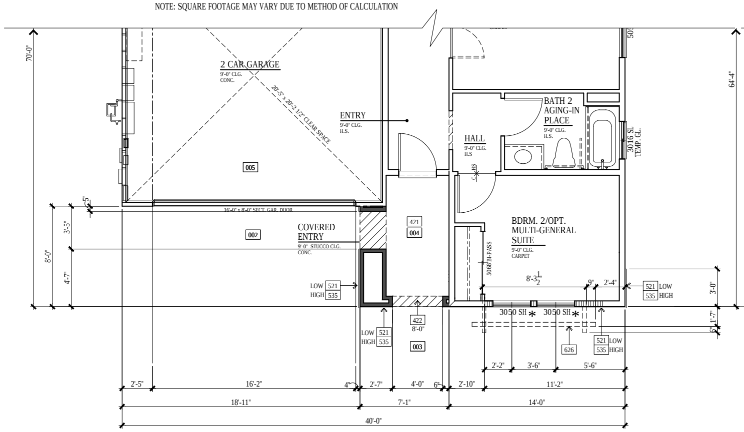
FLOOR AREA TABLE	PLAN 2007C
FLOOR PLAN	2007 SQ. FT.
TOTAL	2007 SQ. FT.
GARAGE	433 SQ. FT.
COVERED ENTRY	54 SQ. FT.
REAR PATIO	68 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

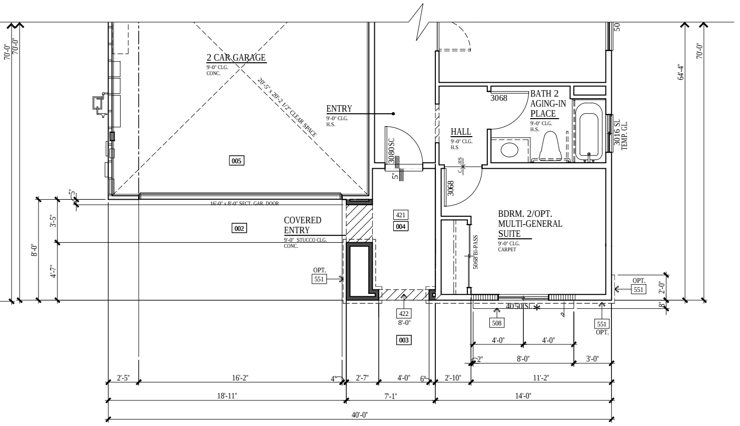
FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
535	BATT & BOARD WALL FINISH
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT
610	WOOD POST - SIZE PER PLAN
626	OUTLOOKER ASSEMBLY ABOVE - WOOD (SIZE PER ELEVATION)

FLOOR AREA TABLE	PLAN 2007E
FLOOR PLAN	2007 SQ. FT.
TOTAL	2007 SQ. FT.
GARAGE	433 SQ. FT.
COVERED ENTRY	68 SQ. FT.
REAR PATIO	68 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION



PARTIAL FLOOR PLAN 2007E - PROGRESSIVE FARMHOUSE



PARTIAL FLOOR PLAN 2007D - COTTAGE

FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT
610	WOOD POST - SIZE PER PLAN

FLOOR AREA TABLE	PLAN 2007D
FLOOR PLAN	2007 SQ. FT.
TOTAL	2007 SQ. FT.
GARAGE	433 SQ. FT.
COVERED ENTRY	68 SQ. FT.
REAR PATIO	68 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1.1
FOR ADDITIONAL NOTES AND DIMENSIONS.

SCALE: 1/4" = 1'-0"

B MDERN - C PROGRESSIVE NAPA - D COTTAGE - E PROGRESSIVE FARMHOUSE

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2007
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS		
NO.	DATE	DESCRIPTION

PLAN 2007B, C, D & E
ADDENDA FLOOR
PLANS

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	XX-XX-2023
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CAD FILE NAME :	

DATE:
03-02-23

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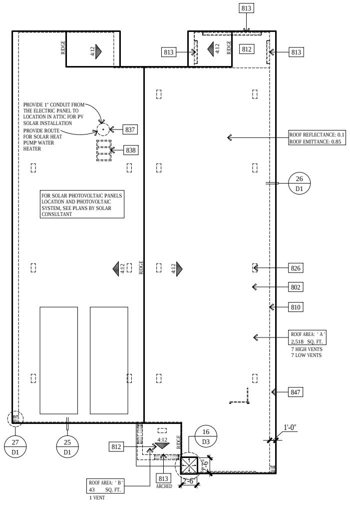


ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1	2x6	NONE	1'-0"	TIGHT

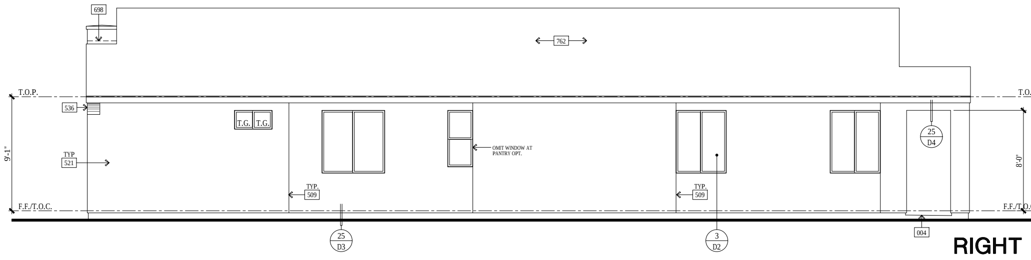
ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1



ATTIC VENTILATION CALCULATIONS						PLAN	2007A
ROOF ATTIC AREA	A	2518	SQ. FT.		CALCULATION FACTOR:		1/300
		362592	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1208	SQ. IN		TOTAL PROVIDED:	1372	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	604	SQ. IN		TOTAL HIGH PROVII	686	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	604	SQ. IN		TOTAL LOW PROVII	686	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN	X	7	686	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	686	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN	X	7	686	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	686	SQ. IN
ROOF ATTIC AREA	B	43	SQ. FT.		CALCULATION FACTOR:		1/150
		6192	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	41	SQ. IN		TOTAL PROVIDED:	98	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN	X	1	98	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	98	SQ. IN

ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - LOW PROFILE CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

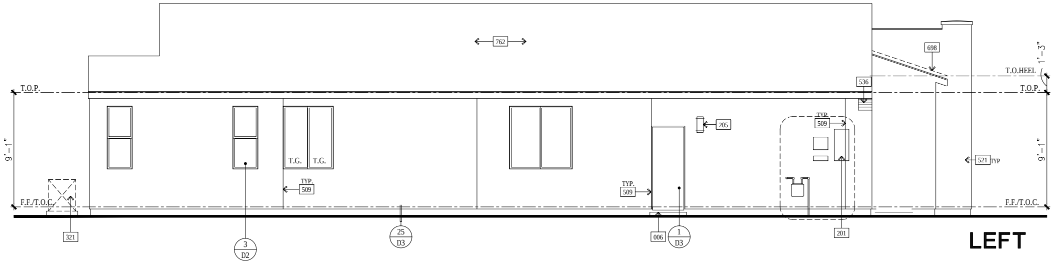
ELEVATION KEY NOTES

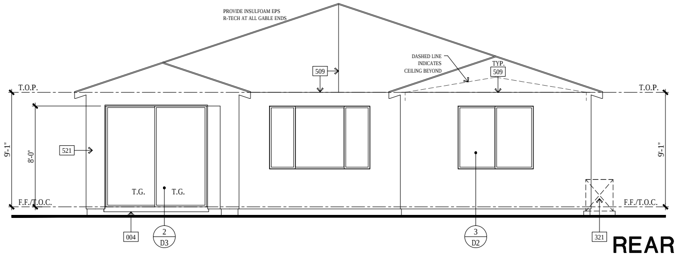
Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 27/D6
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
536	STUCCO OVER EAVE RIGID FOAM CORBEL - SIZE/SHAPE PER DETAIL
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
762	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE LOW PROFILE 'S' TILE

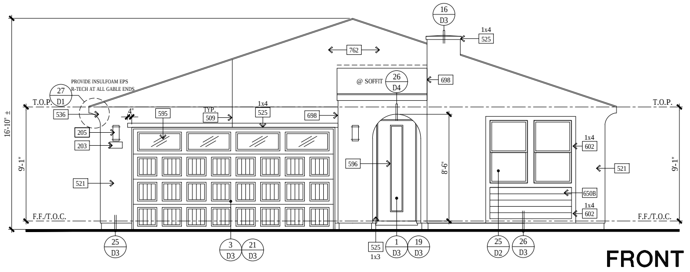
ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.







SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2007
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

'A' CONTEMPORARY SPANISH

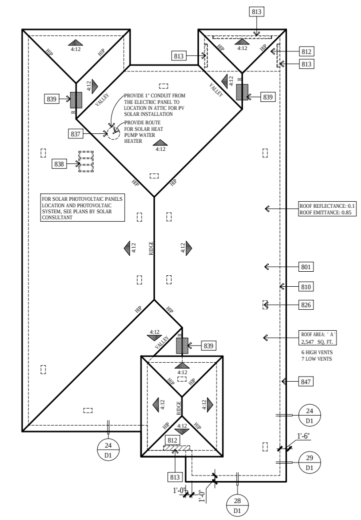
PLAN 2007A
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	XX-XX-2023
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
03-02-23

A1.4

2023011.00 - PROGRESS SET 03-02-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: B		ELEVATION STYLE: MODERN			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	 RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1.1	2x8	2x8	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

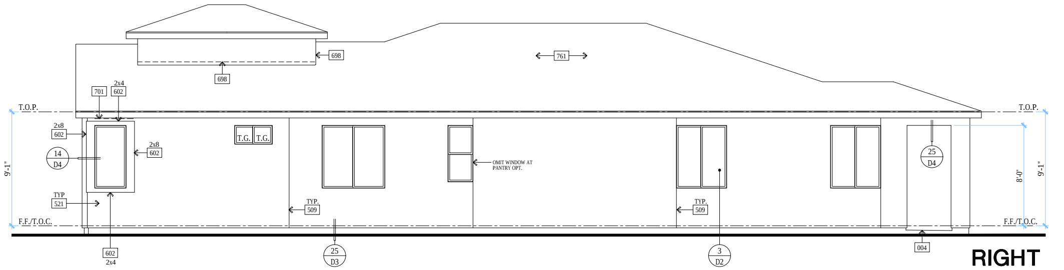
SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES



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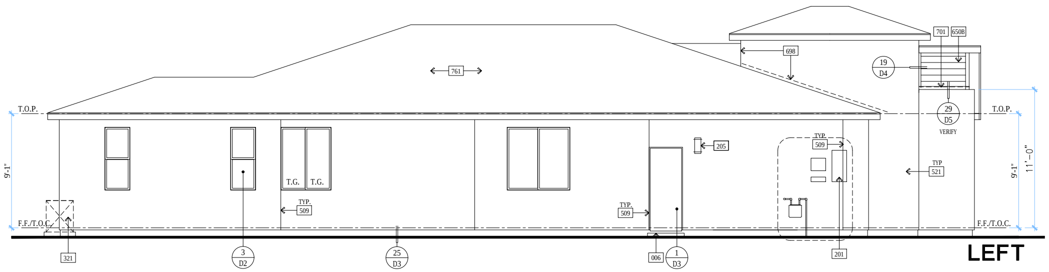

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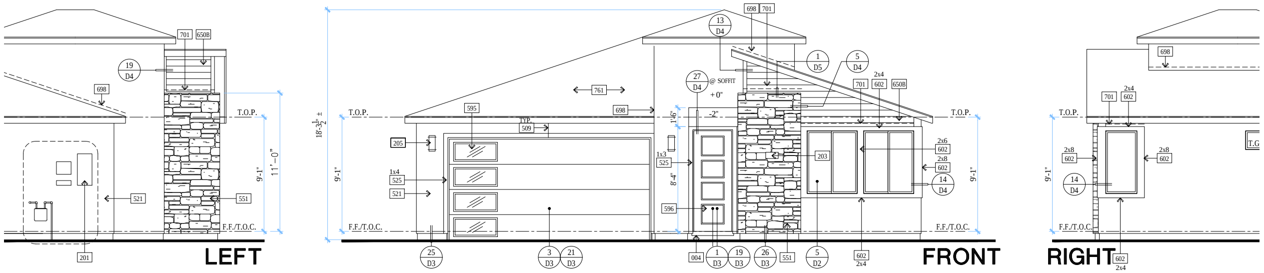


LEFT

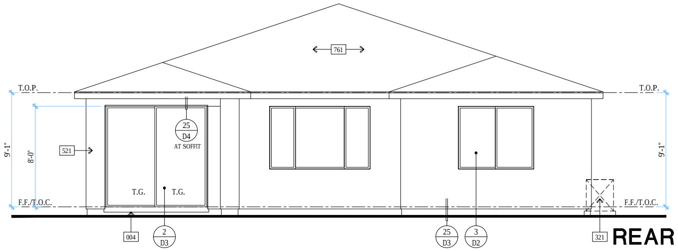
FRONT

RIGHT

ELEVATIONS WITH OPTIONAL STONE

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	2007B	
ROOF ATTIC AREA	A	2547	SQ. FT.		CALCULATION FACTOR:		1/300	
		366768	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	1222	SQ. IN		TOTAL PROVIDED:	1287		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	611	SQ. IN		TOTAL HIGH PROVI	594		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	611	SQ. IN		TOTAL LOW PROVI	693		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6		594	SQ. IN
					TOTAL PROVIDED:		594	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	7		693	SQ. IN
					TOTAL PROVIDED:		693	SQ. IN



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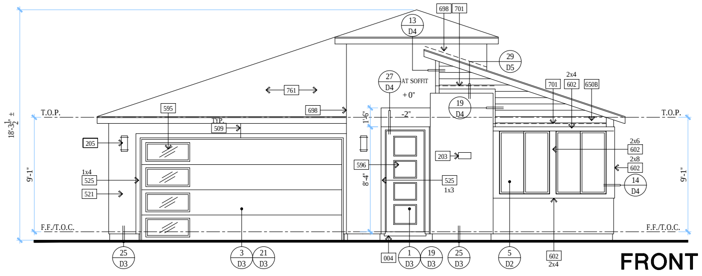


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 4" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
509	STUCCO CONTROL JOINT - SEE DETAIL 29/D5
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE FLAT TILE

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2007
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 2007B
EXTERIOR ELEVATIONS
OPTIONS & ROOF PLAN

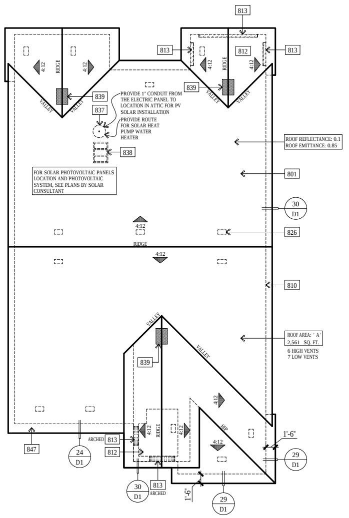
PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	XX-XX-2022
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

MODERN

DATE:
03-02-23

A1.5

2023011.00 - PROGRESS SET 03-02-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: C		ELEVATION STYLE: PROGRESSIVE NAPA			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
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4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
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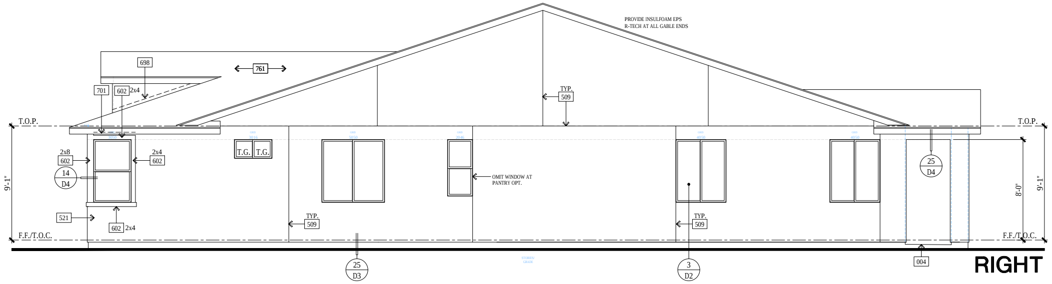
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS							PLAN	2007C
ROOF ATTIC AREA	A	2561	SQ. FT.		CALCULATION FACTOR:			1/300
		368784	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	1228	SQ. IN		TOTAL PROVIDED:	1287		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	614	SQ. IN		TOTAL HIGH PROVI	594		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	614	SQ. IN		TOTAL LOW PROVI	693		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6	594		SQ. IN
					TOTAL PROVIDED:	594		SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	7	693		SQ. IN
					TOTAL PROVIDED:	693		SQ. IN



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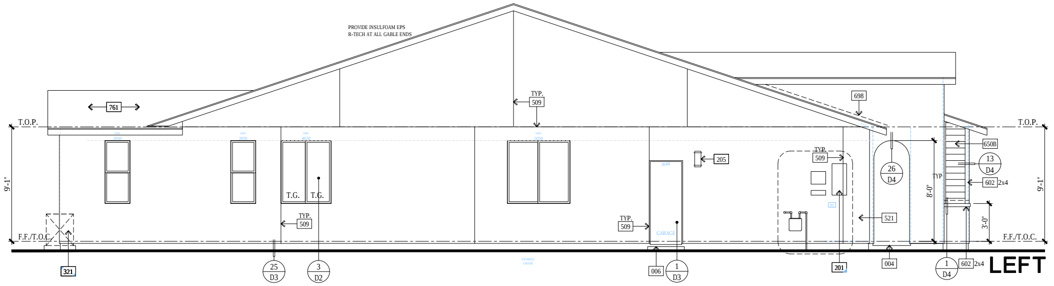

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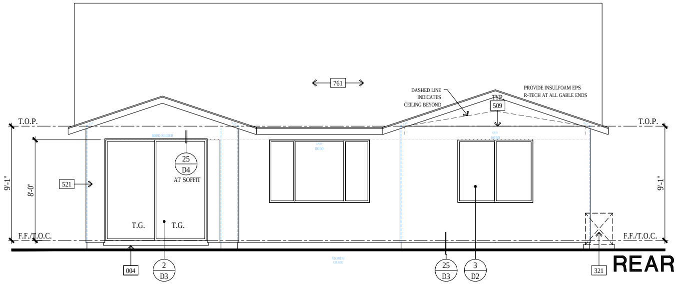

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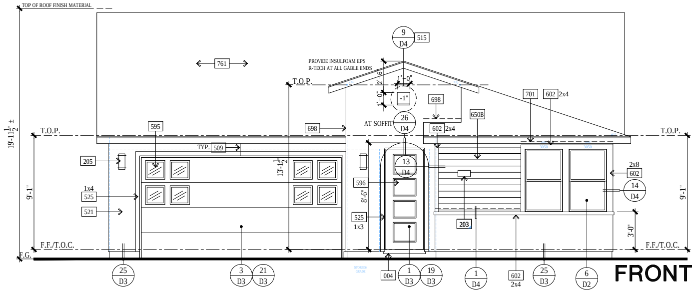


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 27/D6
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
536	STUCCO OVER EAVE RIGID FOAM CORBEL - SIZE/SHAPE PER DETAIL
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
762	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE LOW PROFILE 'S' TILE

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2007 CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

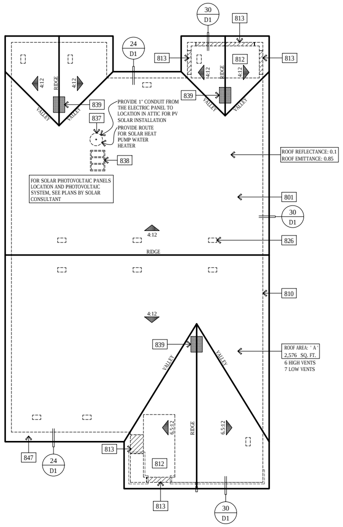
NO.	DATE	DESCRIPTION

PROGRESSIVE NAPA

PLAN 2007C
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	RA
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	XX-XX-2022
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	
DATE: 03-02-23	A1.6

2023011.00 - PROGRESS SET 03-02-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: D		ELEVATION STYLE: COTTAGE			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	3 D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

NO GRID

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ATTIC VENTILATION CALCULATIONS

PLAN 2007D

ROOF ATTIC AREA	A	2576	SQ. FT.	CALCULATION FACTOR:		1/300	
		370944	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1235	SQ. IN	TOTAL PROVIDED:	1287		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	618	SQ. IN	TOTAL HIGH PROVII	594		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	618	SQ. IN	TOTAL LOW PROVII	693		SQ. IN

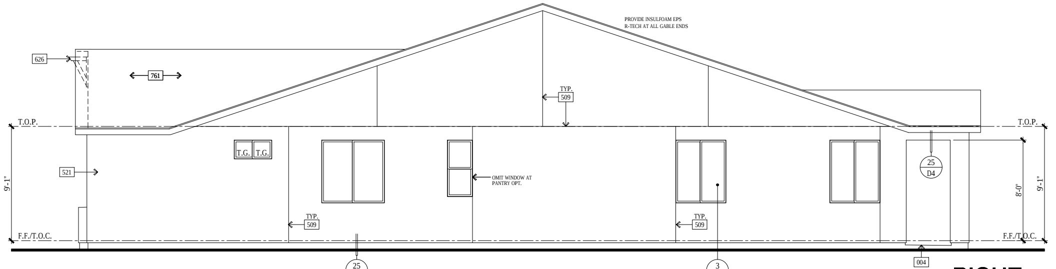
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	6	594	SQ. IN
					TOTAL PROVIDED:	594	SQ. IN

LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	7	693	SQ. IN
					TOTAL PROVIDED:	693	SQ. IN

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

Show Keynote



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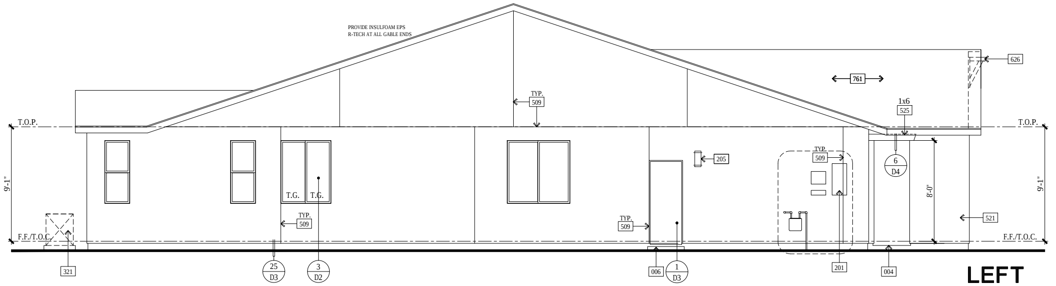

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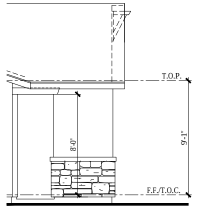
ELEVATION KEY NOTES

Name	NOTE
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 4" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 29/D5
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION) SEE DETAIL 17/D6
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
626	OUTLOOKER ASSEMBLY - WOOD (SIZE PER ELEVATION)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE FLAT TILE

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



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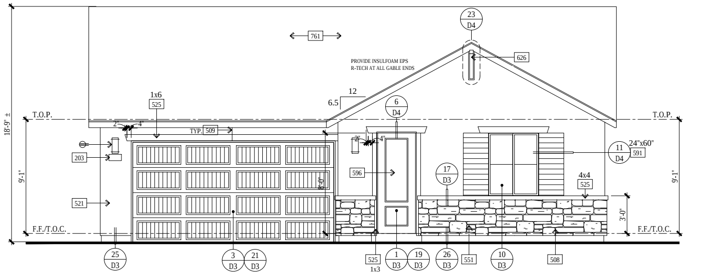
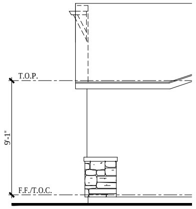


FRONT W/OPT. STONE VENEER



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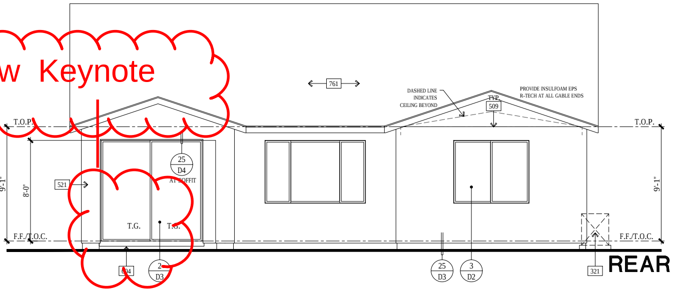

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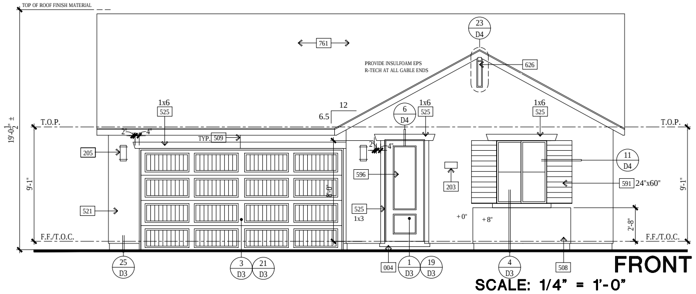


FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2007
CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 2007D
EXTERIOR ELEVATIONS
OPTIONS & ROOF PLAN

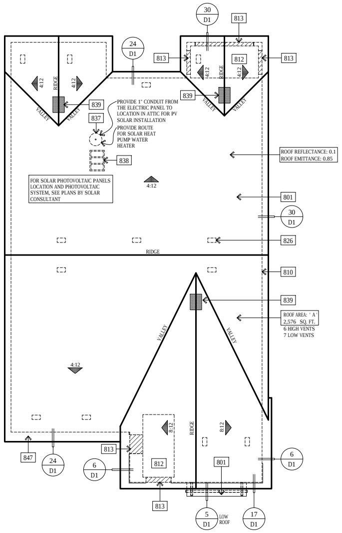
PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

COTTAGE

DATE:
03-02-23

A1.7

2023011.00 - PROGRESS SET 03-02-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: E		ELEVATION STYLE: PROGRESSIVE FARMHOUSE			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	3 D1.1	2x6	2x6	1'-0" 1'-6"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
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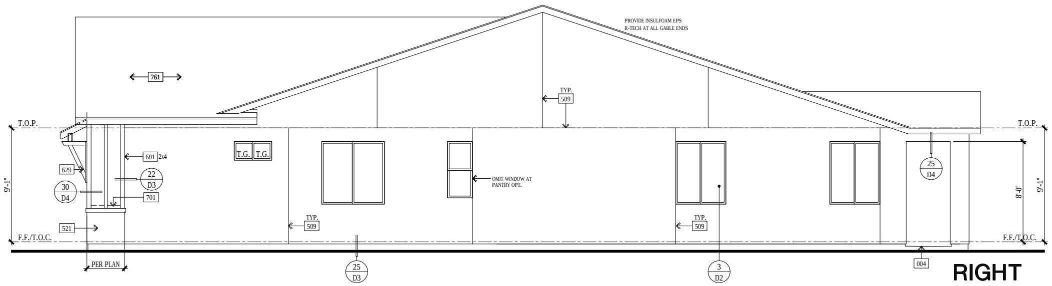
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS					PLAN	2007E	
ROOF ATTIC AREA	A	2576	SQ. FT.	CALCULATION FACTOR:		1/300	
		370944	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1235	SQ. IN	TOTAL PROVIDED:	1287		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	618	SQ. IN	TOTAL HIGH PROVII	594		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	618	SQ. IN	TOTAL LOW PROVII	693		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	6	594		SQ. IN
				TOTAL PROVIDED:	594		SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	7	693		SQ. IN
				TOTAL PROVIDED:	693		SQ. IN



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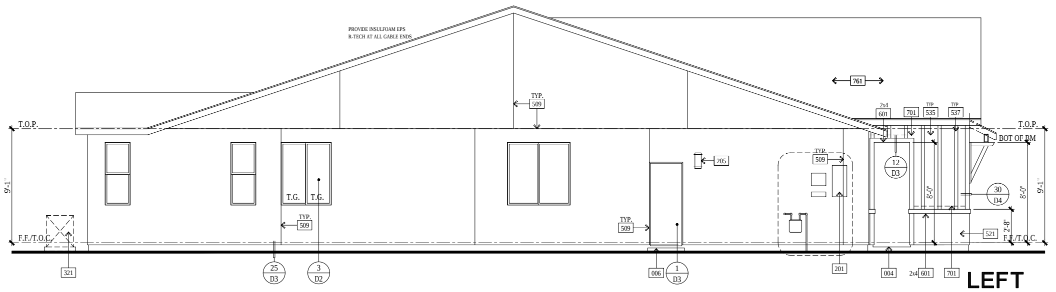

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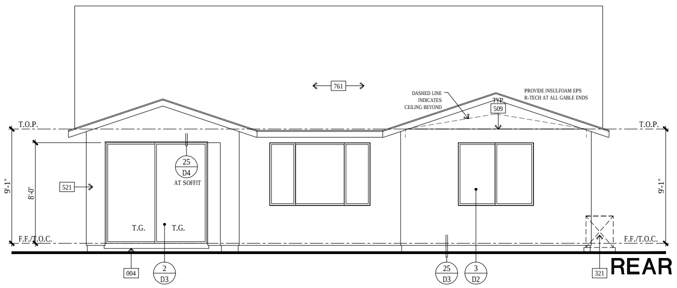

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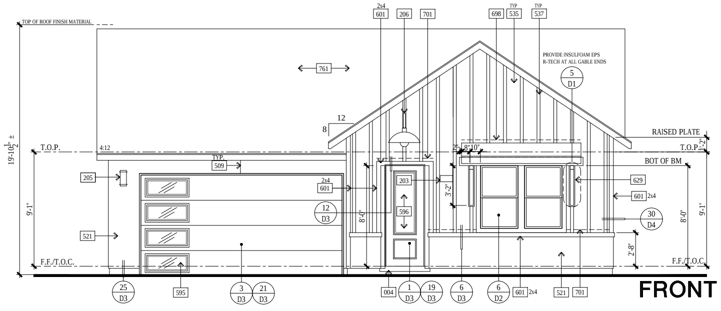


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 4" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 29/D5
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
535	CEMENTITOUS VERTICAL PANEL OVER 2 LAYERS BUILDING PAPER OVER 1/2" PLYWOOD SHEATHING OVER EPS FOAM BOARD OVER BUILDING PAPER. NOTE: EPS FOAM BOARD MAY BE OMITTED AT NON HABITABLE SPACES PROVIDED THE WALL PLANES OUT
537	1x3 WOD BATTS AT 16" O.C.
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION) SEE DETAIL 17/D6
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANEL
601	WOOD TRIM - SIZE PER ELEVATION
626	OUTLOOKER ASSEMBLY - WOOD (SIZE PER ELEVATION)
629	KNEE BRACE-OUTLOOKER WOOD ASSEMBLY (SIZE PER DETAIL)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE FLAT TILE

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2007
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

PROGRESSIVE FARMHOUSE

PLAN 2007E
EXTERIOR ELEVATIONS
OPTIONS & ROOF PLAN

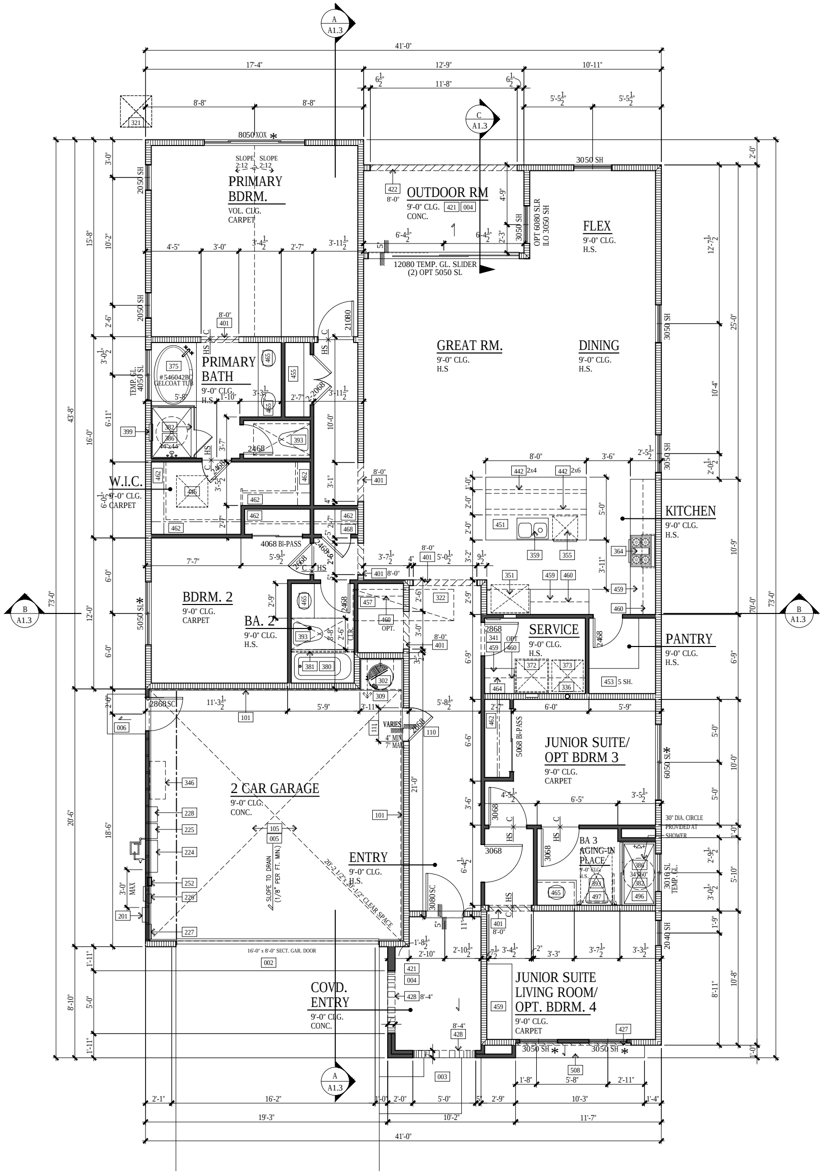
PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	XX-XX-2022
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
03-02-23

A1.8

2023011.00 - PROGRESS SET 03-02-2023

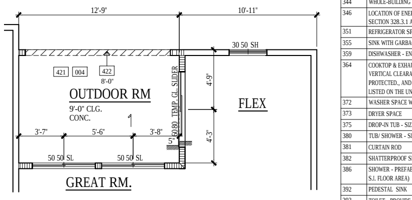
AGENDA ITEM NO. 6.



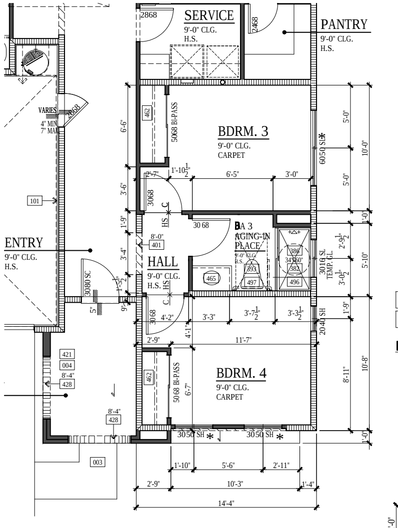
FLOOR PLAN

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6



6080 SLIDER DR. OPT ILO 3050 SH AT FLEX AND (2) 5050 SL WINDOWS OPTS ILO OF 12080 SLDR AT GREAT ROOM



BDRM #3 & BDRM #4 ILO OF JUNIOR SUITE & JUNIOR SUITE LIVING ROOM

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTI
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
101	GARAGE AND/OR CARPORT (WALL ASSEMBLY USED FOR SEPARATION) SHALL BE SEPARATED FROM THE RESIDENCE BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE
105	GARAGE AND/OR CARPORT ATTIC (CEILING ASSEMBLY USED FOR SEPARATION) SHALL BE SEPARATED FROM THE RESIDENCE'S ATTIC BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQUIVALENT.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	14"X14" PV CIRCUIT PANEL. NO PROTECTION REQUIRED
226	ACCESS PANEL
227	BACKUP SUB PANEL
228	SPLICE BOX
252	SOLAR READY BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER. (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
309	TEMPERATURE AND PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE OUTSIDE PER CPC SECTION 608.5
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) ATTIC INSALLATION
336	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH ROOF
341	14"x8" MAKE-UP AIR VENT ABOVE DOOR - UNDER-CUT THE DOOR 1 INCH
344	WHOLE-BUILDING VENTILATION FAN PER ASHRAE 62.2, SECTION 4 PER CEnC 150.0(o).
346	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
359	DISHWASHER - ENERGY STAR
364	COOKTOP & EXHAUST HOOD WITH FAN AND LIGHT (EXHAUST VENT TO OUTSIDE). THE VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLE IS 30" UNPROTECTED, OR 24" PROTECTED., AND THE HORIZONTAL DIMENSION IS REQUIRED TO BE PER THE MARKING LISTED ON THE UNIT. 2022 CMC 921.3.2 & 921.4.3
372	WASHER SPACE WITH RECESSED WATER BOX AND DBL. WIDE SMITTY PAN
373	DRYER SPACE
375	DROP-IN TUB - SIZE PER PLAN
380	TUB/ SHOWER - SIZE PER PLAN
381	CURTAIN ROD
382	SHATTERPROOF SHOWER DOOR (MIN. 22" WIDTH)/ ENCLOSURE
386	SHOWER - PREFABRICATED STALL (30" DIA CIRCLE PROVIDED) - SIZE PER PLAN. (MIN. 1,024 S.I. FLOOR AREA)
392	PEDESTAL SINK
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
399	24" x 16" SHAMPOO TRAY. BOTTOM OF TRAY AT 48" - SLOPE $\frac{1}{4}$" TO DRAIN.
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
416	30"x30" ATTIC ACCESS - DIMENSIONS ARE CLEAR - PER CEnC 150.0(a)1, ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS AND THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT: HEIGHT PER PLAN
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
442	2 x PONY WALL - SIZE PER PLAN
444	+34"- +38" HANDRAIL (SEE DETAIL H/D5)
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY WITH WIRE SHELVING
455	LINEN
457	LINEN (BASE CABINET ONLY)
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE
464	WIRE SHELF (OR SHELVES)
465	VANITY
468	COAT CLOSET
496	SHOWER REINFORCEMENT TO BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED. ACTUAL GRAB BARS NOT REQUIRED PER CODE
497	WATER CLOSET REINFORCEMENT TO BE FLOOR-MOUNTED OR FOLDAWAY OR SIMILAR ALTERNATIVE GRAB BAR REINFORCEMENT TO BE PROVIDED IN ADDITION TO THE BACK WALL REINFORCEMENT. ACTUAL GRAB BARS NOT REQUIRED PER CODE
508	WATERPROOF STUCCO SHELF - SLOPE 1/4" PER FOOT

SEE SHEET A1.1.2 FOR ADDENDA FLOOR PLANS

NAILING SCHEDULE IS IN SHEET SD.2

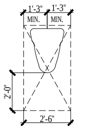
FLOOR PLAN LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.

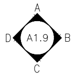
■ = 2 x 4 D.F. #2 AT 16" O.C.

3050 SH*
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310
1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL



INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 2162A
FLOOR PLAN	2162 SQ. FT.
TOTAL	2162 SQ. FT.
GARAGE	431 SQ. FT.
COVERED ENTRY/PORCH	79 SQ. FT.
OUTDOOR ROOM	89 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'-0"

CONTEMPORARY SPANISH

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2162
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 2162A
FLOOR PLAN &
0PTIONS

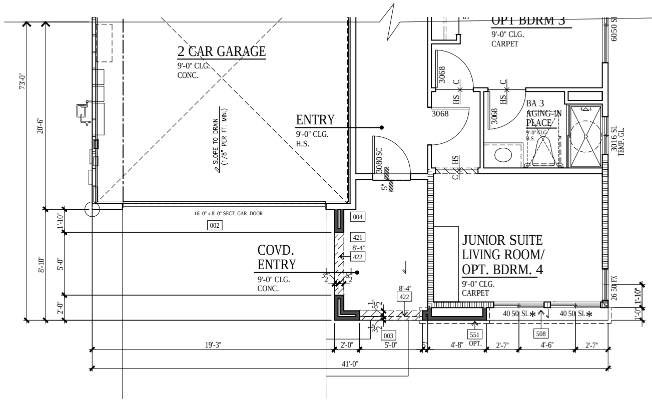
PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	RA
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	-
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023011.00
CAD FILE NAME :	A1.1.1

DATE:
03-07-23

SHEET:
A1.1.1

2023011.00 - PROGRESS SET 03-02-2023

AGENDA ITEM NO. 6.

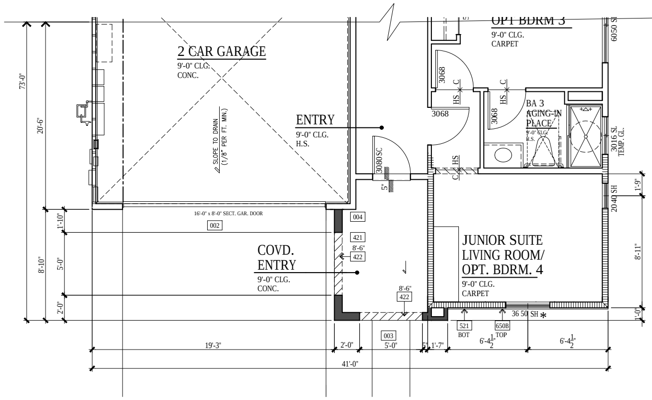


PARTIAL LOWER FLOOR PLAN 2162B - MODERN

FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMU[M] DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTI[ON]
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
508	WATERPROOFED STUCCO SHELF - SLOP-E 1/4" PER FOOT
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**

FLOOR AREA TABLE	PLAN 2162B
FLOOR PLAN	2162 SQ. FT.
TOTAL	2162 SQ. FT.
GARAGE	431 SQ. FT.
COVERED ENTRY/PORCH	79 SQ. FT.
OUTDOOR ROOM	89 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION



PARTIAL LOWER FLOOR PLAN 2162C - PROGRESSIVE NAPA

FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**

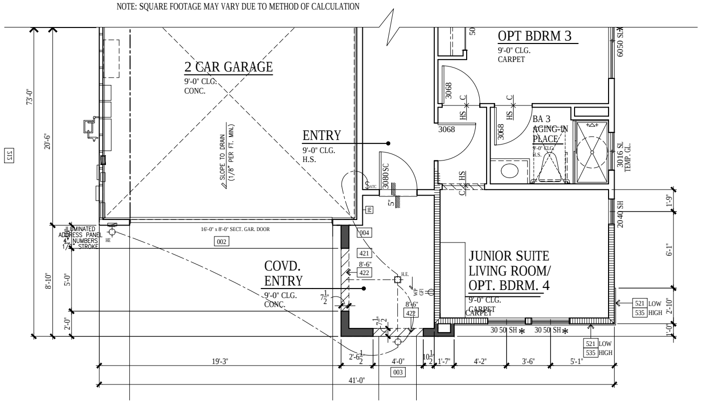
FLOOR AREA TABLE	PLAN 2162C
FLOOR PLAN	2162 SQ. FT.
TOTAL	2162 SQ. FT.
GARAGE	431 SQ. FT.
COVERED ENTRY/PORCH	79 SQ. FT.
OUTDOOR ROOM	89 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

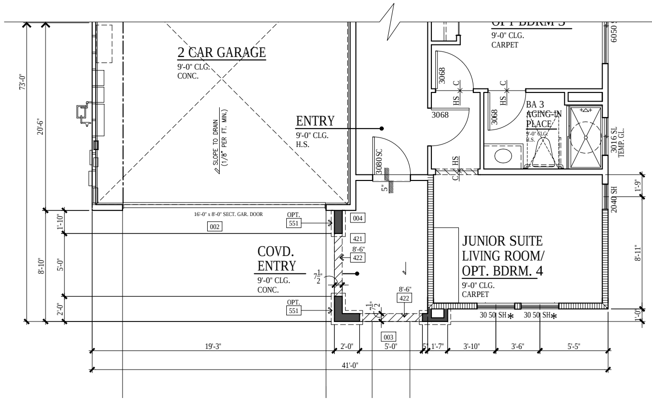
FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
535	BATTEN BOARD WALL FINISH
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT

FLOOR AREA TABLE	PLAN 2162E
FLOOR PLAN	2162 SQ. FT.
TOTAL	2162 SQ. FT.
GARAGE	431 SQ. FT.
COVERED ENTRY/PORCH	81 SQ. FT.
OUTDOOR ROOM	89 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION



PARTIAL LOWER FLOOR PLAN 2162E
CONTEMPORARY FARMHOUSE



PARTIAL LOWER FLOOR PLAN 2162D - COTTAGE

FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT

FLOOR AREA TABLE	PLAN 2162D
FLOOR PLAN	2162 SQ. FT.
TOTAL	2162 SQ. FT.
GARAGE	431 SQ. FT.
COVERED ENTRY/PORCH	81 SQ. FT.
OUTDOOR ROOM	89 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1.1 FOR ADDITIONAL NOTES AND DIMENSIONS.

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

B MODERN - C PROGRESSIVE NAPA - D COTTAGE - E PROGRESSIVE FARMHOUSE

REGENT PARK - PLAN 2162
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

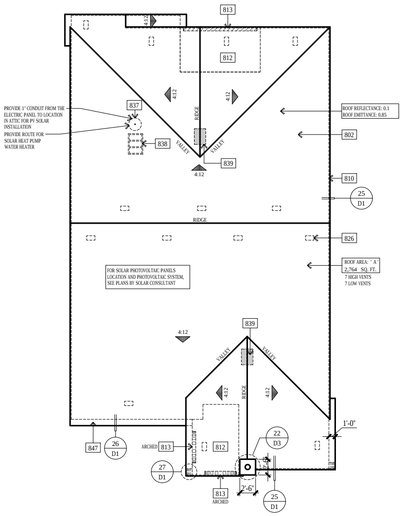
NO.	DATE	DESCRIPTION

PLAN 2162B, C, D& E
ADDENDA FLOOR
PLANS

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	RA
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	-
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023011.00
CAD FILE NAME :	A1.1.2

DATE:	SHEET:
03-07-23	A1.1.2

2023011.00 - PROGRESS SET 03-02-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.		
				EAVE	RAKE	
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1	2x6	NONE	1'-0"	TIGHT	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

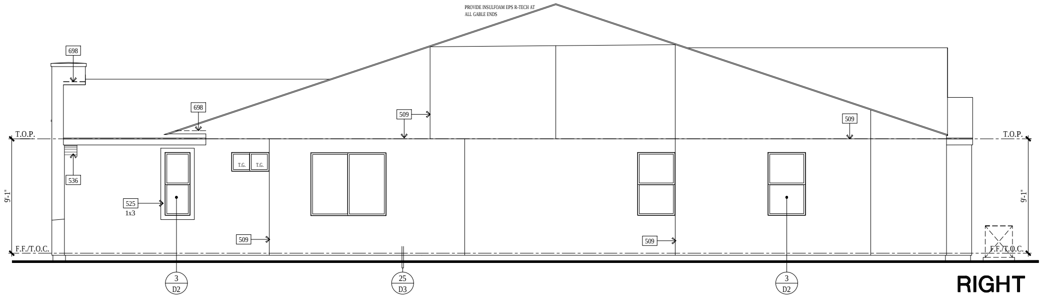
ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - LOW PROFILE CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	2162A
ROOF ATTIC AREA	A	2764	SQ. FT.	CALCULATION FACTOR:			1/300
		398016	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1326	SQ. IN	TOTAL PROVIDED:	1372		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	663	SQ. IN	TOTAL HIGH PROVII	686		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	663	SQ. IN	TOTAL LOW PROVII	686		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN X	7		686	SQ. IN
CONC.S-TILE				TOTAL PROVIDED:		686	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN X	7		686	SQ. IN
CONC.S-TILE				TOTAL PROVIDED:		686	SQ. IN

REGENT PARK RIVERSTONE 2020325.00 - P1870 (P1)



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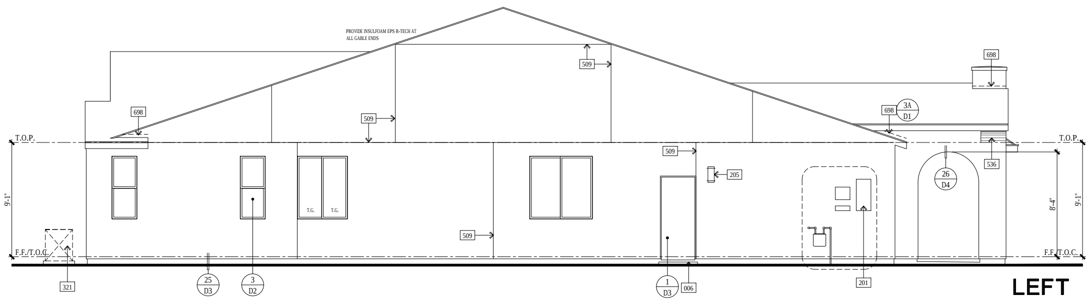

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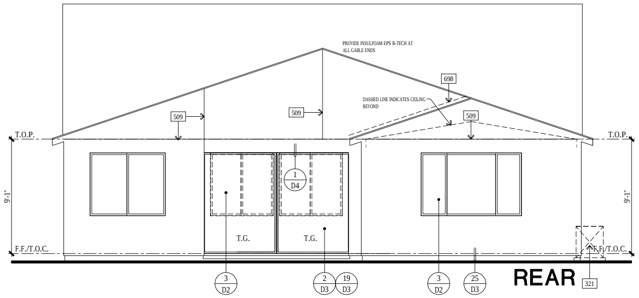
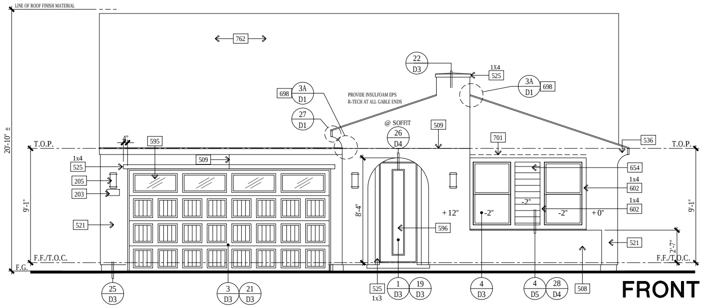


REAR



FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
508	WATERPROOFED STUCCO SHELF - SLOP-E 1/4" PER FOOT
509	STUCCO CONTROL JOINT - SEE DETAIL 27/D6
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
536	STUCCO OVER EAVE RIGID FOAM CORBEL - SIZE/SHAPE PER DETAIL
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
654	FIBER CEMENT SHIPLAP PANELING 5/8" THICK (OR EQUIVALENT). FINISH: SMOOTH TEXTURE. EXPOSURE 7" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
762	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE LOW PROFILE 'S' TILE

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2162
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

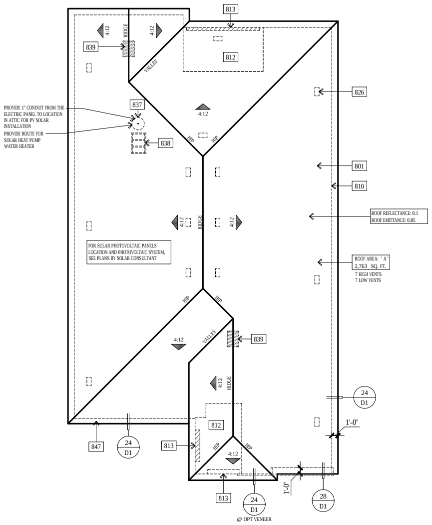
PLAN 2137A
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	RA
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
03-07-23

A1.4

2023011.00 - PROGRESS SET 03-02-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: B		ELEVATION STYLE: MODERN			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1.1	2x8	2x8	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

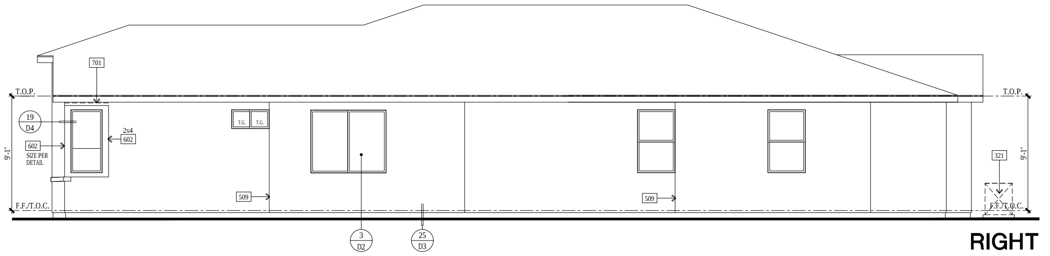
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	2162B
ROOF ATTIC AREA	A	2763	SQ. FT.	CALCULATION FACTOR:			1/300
		397872	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1325	SQ. IN	TOTAL PROVIDED:		1386	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	663	SQ. IN	TOTAL HIGH PROVI		693	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	663	SQ. IN	TOTAL LOW PROVI		693	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	7	693	SQ. IN
				TOTAL PROVIDED:		693	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	7	693	SQ. IN
				TOTAL PROVIDED:		693	SQ. IN



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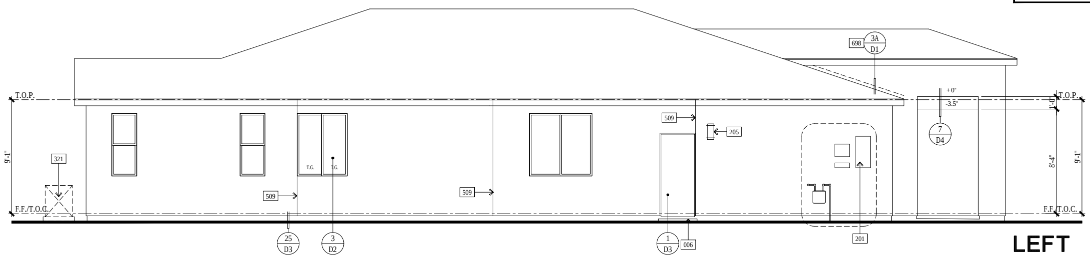

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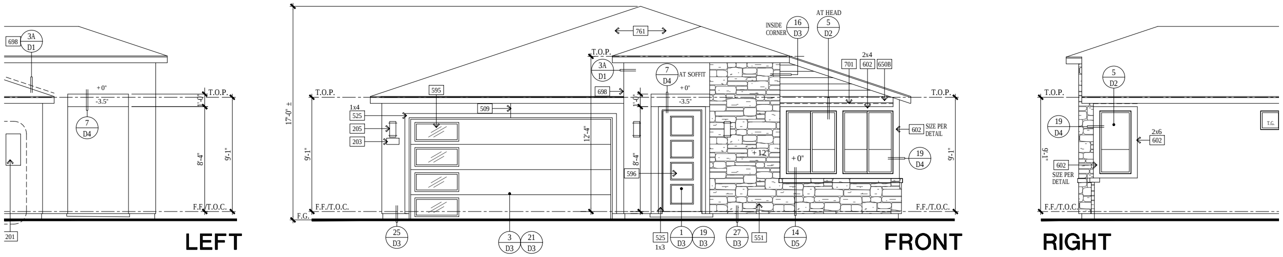
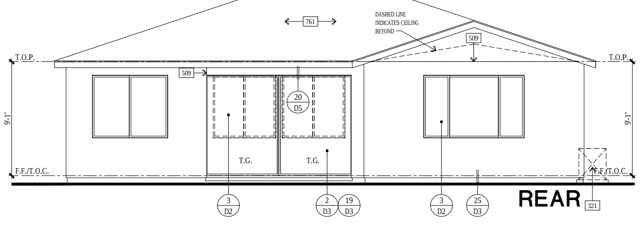


LEFT FRONT RIGHT

ELEVATIONS WITH OPTIONAL STONE



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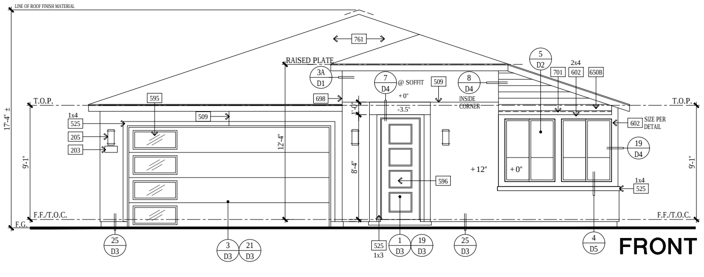


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 27/D6
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2162
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 2162B
EXTERIOR ELEVATIONS
& ROOF PLAN

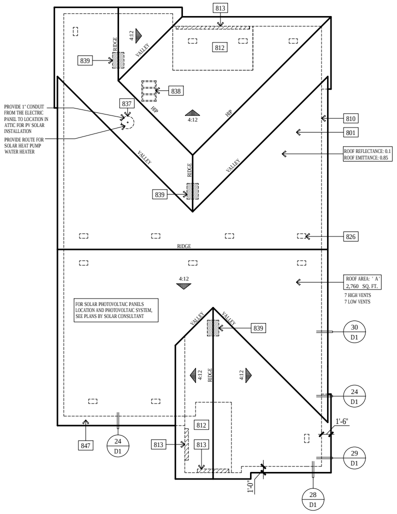
PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

MODERN

DATE:
03-07-23

A1.5

2023011.00 - PROGRESS SET 03-02-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: C		ELEVATION STYLE: PROGRESSIVE NAPA			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	 RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

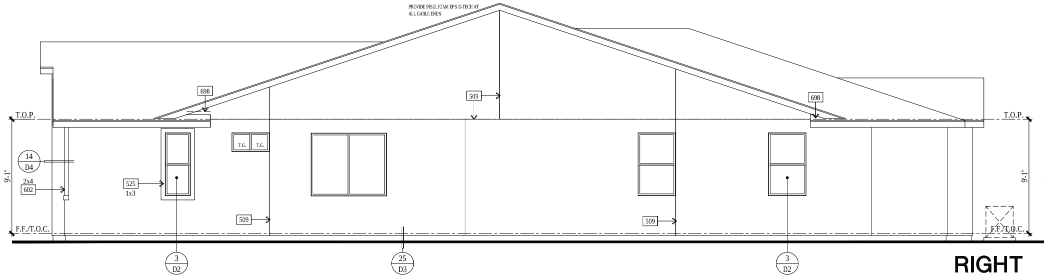
ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

PLAN 2162C

ROOF ATTIC AREA	A	2760	SQ. FT.		CALCULATION FACTOR:		1/300	
		397440	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	1324	SQ. IN		TOTAL PROVIDED:	1386		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	662	SQ. IN		TOTAL HIGH PROVII	693		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	662	SQ. IN		TOTAL LOW PROVII	693		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	7		693	SQ. IN
					TOTAL PROVIDED:		693	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	7		693	SQ. IN
					TOTAL PROVIDED:		693	SQ. IN



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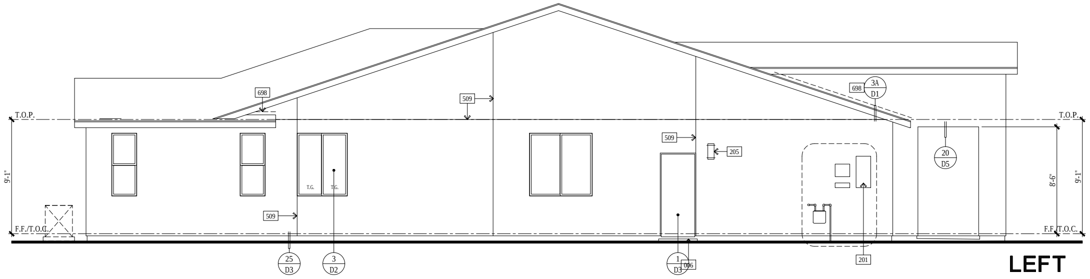

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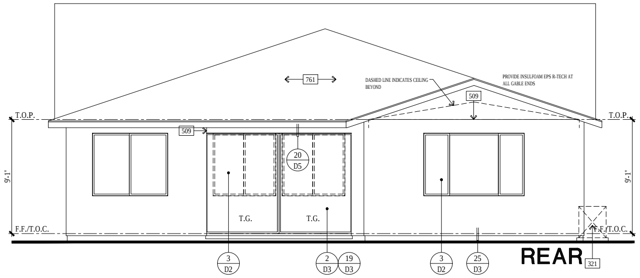

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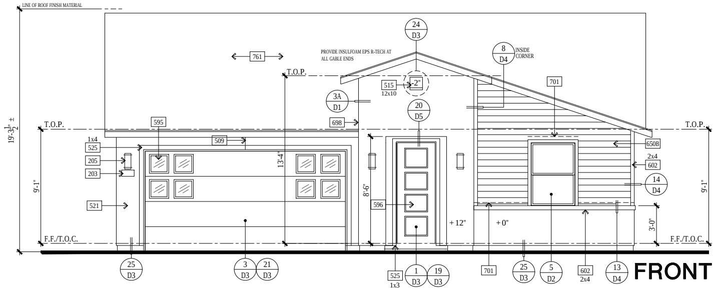


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 27/D6
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
515	STUCCO NICHE. SIZE PER ELEVATION - SLOPE SILL ¼" PER FT. MINIMUM
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS) **ICC-ES NER-405**
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2162
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PROGRESSIVE NAPA

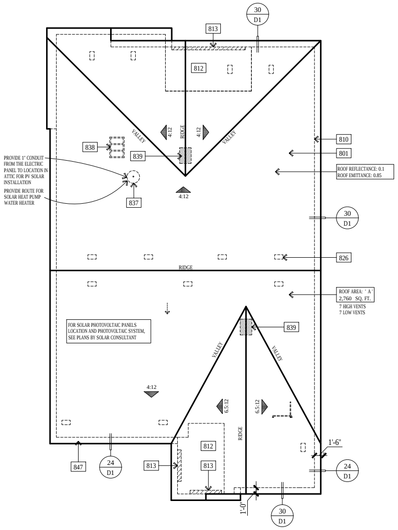
PLAN 2162C
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	RA
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
03-07-23

A1.6

2023011.00 - PROGRESS SET 03-02-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	D	ELEVATION STYLE:	COTTAGE		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	3 D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

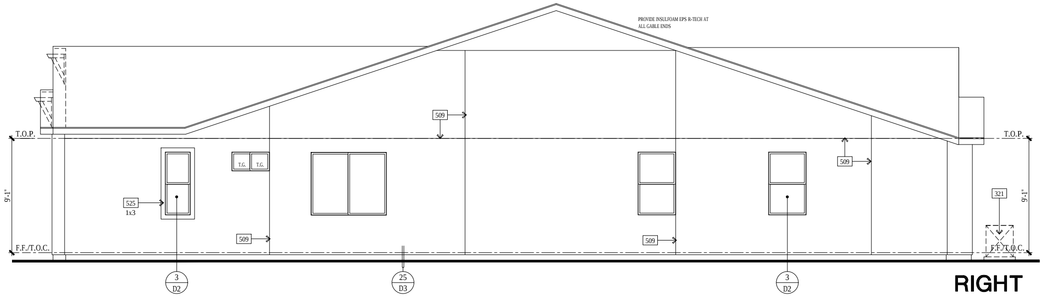
ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS							**PLAN**	2162D
ROOF ATTIC AREA	A	2760	SQ. FT.		**CALCULATION FACTOR:**			1/300
		397440	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	1324	SQ. IN		**TOTAL PROVIDED:**	1386		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	662	SQ. IN		**TOTAL HIGH PROVII**	693		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	662	SQ. IN		**TOTAL LOW PROVII**	693		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	7		693	SQ. IN
					TOTAL PROVIDED:		693	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	7		693	SQ. IN
					TOTAL PROVIDED:		693	SQ. IN

REGENT PARK RIVERSTONE 2020325.00 - P1870 (P1)



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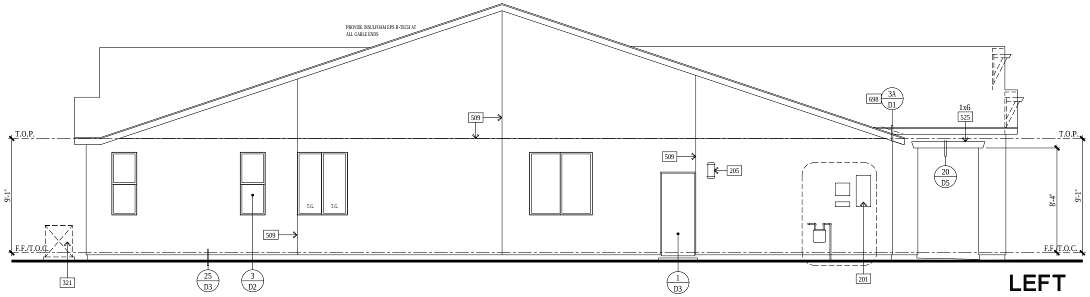

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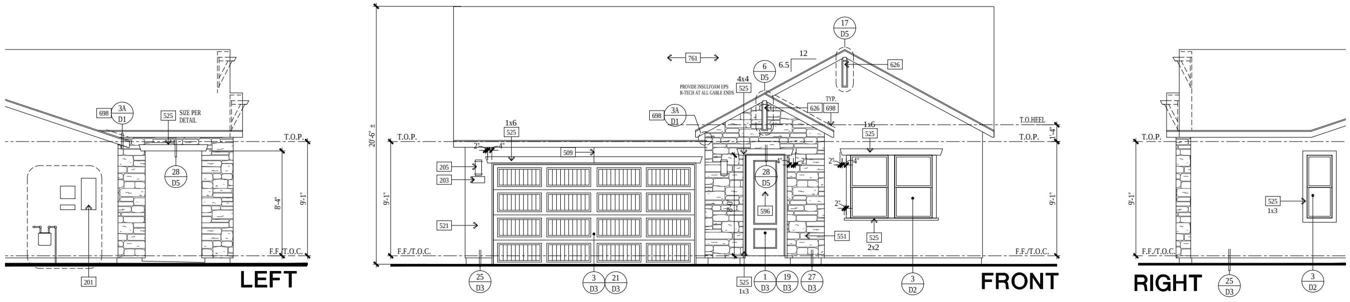
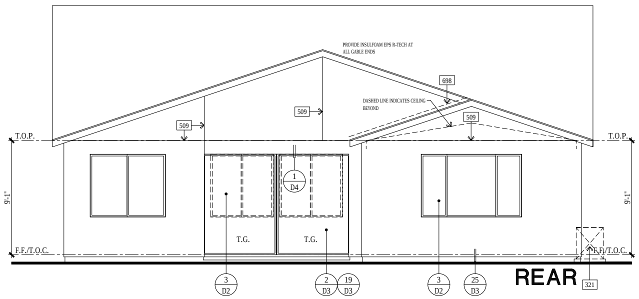


ELEVATIONS WITH OPTIONAL STONE



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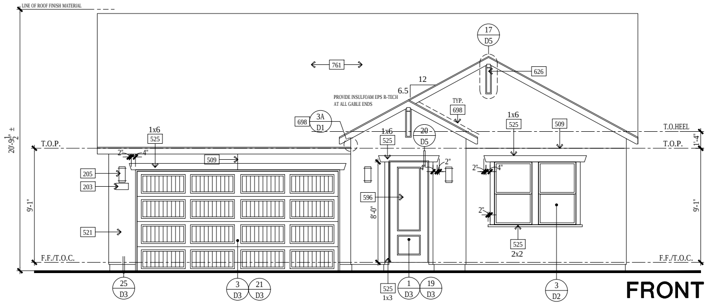


FRONT

SCALE: 1/4" = 1'-0"

COTTAGE

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 27/D6
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
515	STUCCO NICHE. SIZE PER ELEVATION - SLOPE SILL ¼" PER FT. MINIMUM
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
626	OUTLOOKER ASSEMBLY - WOOD (SIZE PER ELEVATION)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2162
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

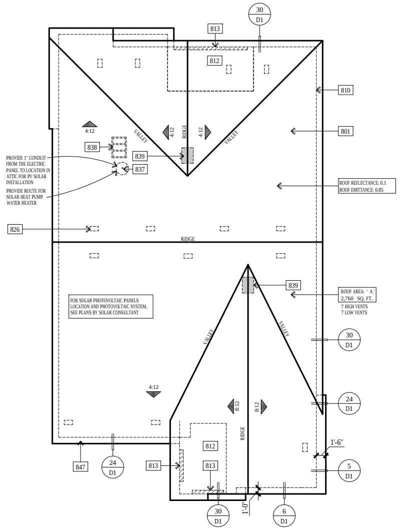
PLAN 2162D
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	RA
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
03-07-23

A1.7

2023011.00 - PROGRESS SET 03-02-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	E	ELEVATION STYLE:	PROGRESSIVE FARMHOUSE		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	3/D1.1	2x6	2x6	1'-0" 1'-6"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
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SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
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NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
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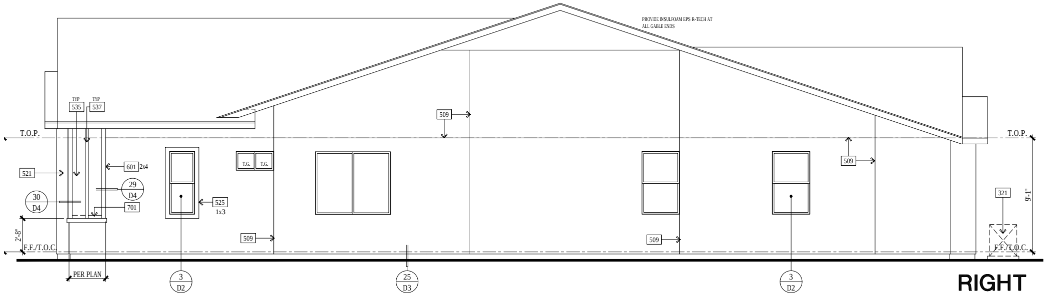
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES

ATTIC VENTILATION CALCULATIONS						PLAN	2162D
ROOF ATTIC AREA	A	2760	SQ. FT.	CALCULATION FACTOR:			1/300
		397440	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	1324	SQ. IN	TOTAL PROVIDED:	1386		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	662	SQ. IN	TOTAL HIGH PROVI	693		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	662	SQ. IN	TOTAL LOW PROVI	693		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA		QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	7	693		SQ. IN
				TOTAL PROVIDED:	693		SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA		QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN X	7	693		SQ. IN
				TOTAL PROVIDED:	693		SQ. IN

REGENT PARK RIVERSTONE 2020325.00 - P1870 (P1)



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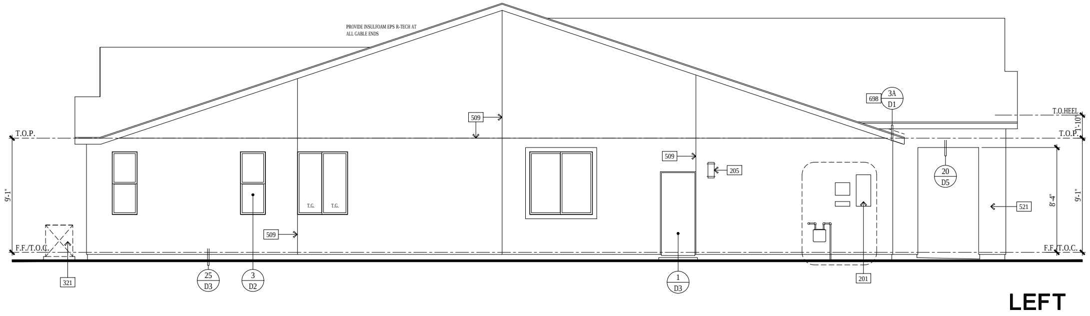

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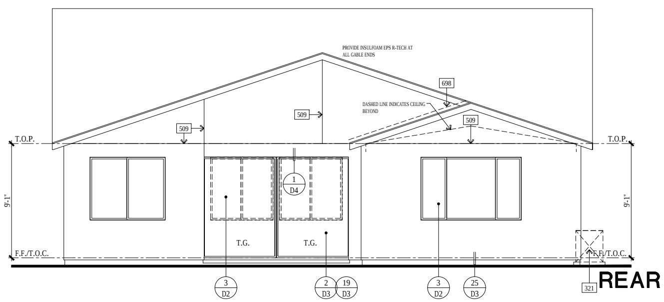

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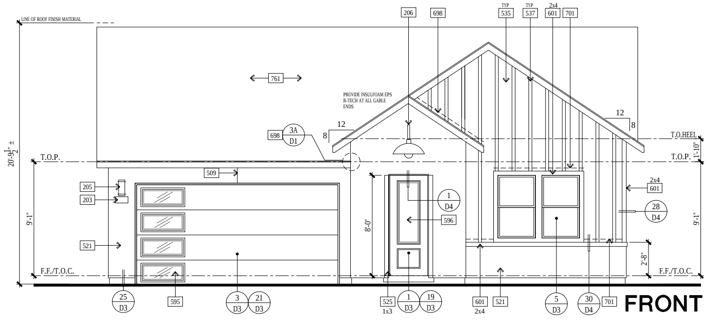


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT LOCATION - FIELD VERIFY HEIGHT WITH FIXTURE TYPE
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 27/D6
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
515	STUCCO NICHE. SIZE PER ELEVATION - SLOPE SILL ¼" PER FT. MINIMUM
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
535	CEMENTITOUS VERTICAL PANEL OVER 2 LAYERS BUILDING PAPER OVER 1/2" PLYWOOD SHEATHING OVER EPS FOAM BOARD OVER BUILDING PAPER. NOTE: EPS FOAM BOARD MAY BE OMITTED AT NON HABITABLE SPACES PROVIDED THE WALL PLANES OUT
537	1x3 WOD BATTS AT 16" O.C.
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE BY EAGLE ROOFING ICC# ESR 1900

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2162
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

E - PROGRESSIVE FARMHOUSE

PLAN 2137E
EXTERIOR ELEVATIONS
& ROOF PLAN

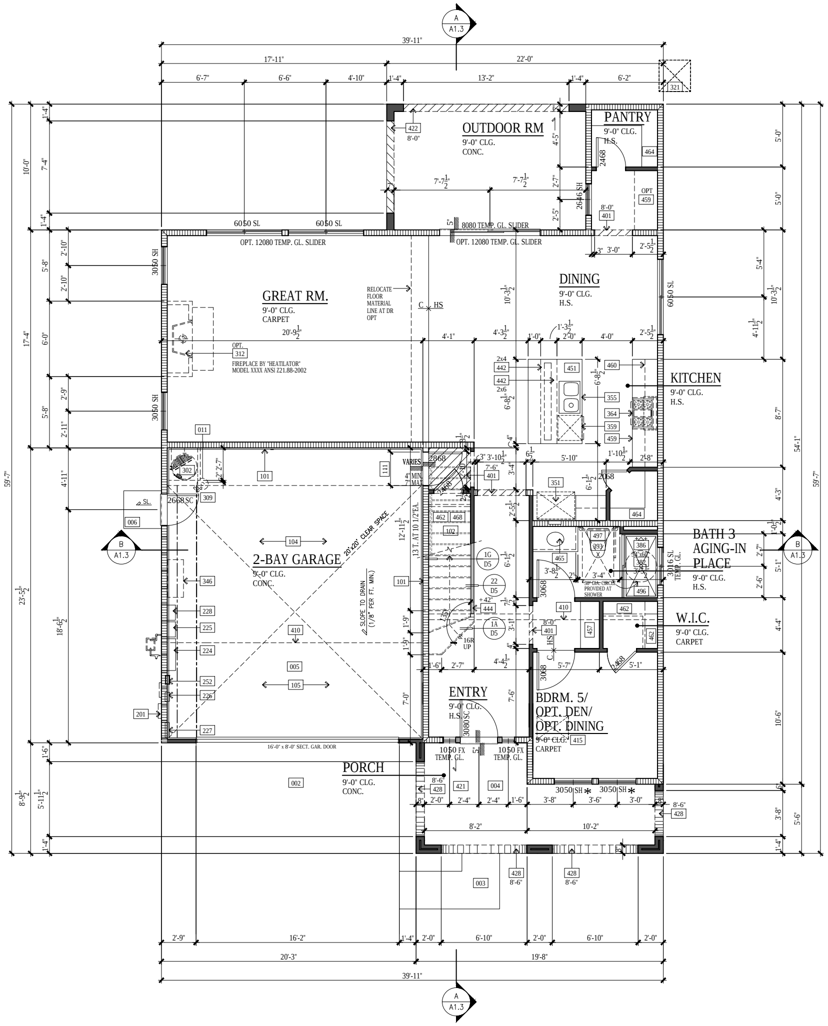
PROJECT MANAGER : CC
DESIGNER : AM
DRAWN BY : RA
REVIEWED BY : -
1ST BLDG. DEPT. SUBMITTAL :
ISSUED FOR CONSTRUCTION :
JOB NUMBER :
CAD FILE NAME :

DATE:
03-07-23

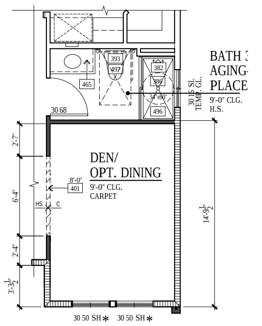
A1.8

2023011.00 - PROGRESS SET 03-02-2023

AGENDA ITEM NO. 6.



LOWER FLOOR PLAN



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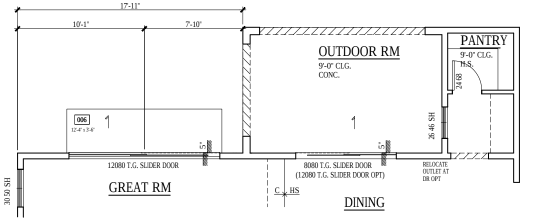
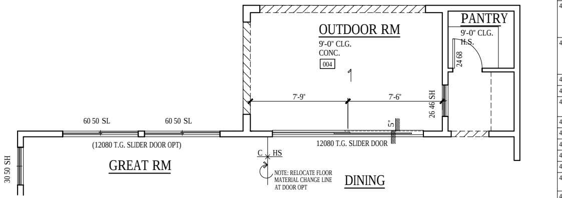


12080 T.G. SLIDER DR OPT AT GREAT RM ILO (2) 6050 SL WINDOWS



12080 T.G. SLIDER DR OPT AT DINING ILO 8080 SLDR

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMU DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECT
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
011	GALVANIZED STEEL PIPE BOLLARD W/CONCRETE FILL (SEE DETAIL 18/D5)
101	GARAGE AND/OR CARPORT SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE AND EXTENDED TO THE ROOF SHEATHING PER CRC SECTION R302.6.
102	ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD PER CRC SECTION R302.7.
104	GARAGE AND/OR CARPORT CEILING WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQ. STRUCTURE(S) SUPPORTING THE FLR./CLG. ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER CRC SEC. R302.6.
105	GARAGE AND/OR CARPORT ATTIC (CEILING ASSEMBLY USED FOR SEPARATION) SHALL BE SEPARATED FROM THE RESIDENCE'S ATTIC BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQUIVALENT.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	14"X14" PV CIRCUIT PANEL. NO PROTECTION REQUIRED
226	ACCESS PANEL
227	BACKUP SUB PANEL
228	SPLICE BOX
232	SERVICE ROOM FLOOR DRAIN - SEE DETAIL 23/D5
352	SOLAR READY BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER. (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
309	TEMPERATURE AND PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE OUTSIDE PER CPC SECTION 608.5
312	METAL FIREPLACE (ELECTRIC APPLIANCE) - HEIGHT PER PLAN - INSTALL PER MANUFACTURER'S INSTRUCTIONS. MANUFACTURER, MODEL NUMBER AND APPROVAL LISTING PER PLAN.
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) ATTIC INSALLATION
329	DUCT CHASE
336	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH ROOF
341	14"x8" MAKE-UP AIR VENT ABOVE DOOR - UNDER-CUT THE DOOR 1 INCH
344	WHOLE-BUILDING VENTILATION FAN PER ASHRAE 62.2, SECTION 4 PER CEnC 150.0(o).
346	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH FOOD DISPOSER
357	UTILITY SINK
359	DISHWASHER - ENERGY STAR
364	COOKTOP & EXHAUST HOOD WITH FAN AND LIGHT (EXHAUST VENT TO OUTSIDE). THE VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLE IS 30" UNPROTECTED, OR 24" PROTECTED., AND THE HORIZONTAL DIMENSION IS REQUIRED TO BE PER THE MARKING LISTED ON THE UNIT. 2022 CMC 921.3.2 & 921.4.3
372	WASHER SPACE WITH RECESSED WATER BOX AND DBL. WIDE SMITTY PAN
373	DRYER SPACE
375	DROP-IN TUB - SIZE PER PLAN
380	TUB/ SHOWER - 32"X60" MODEL 2603DT - GELCOAT SURFACE - BY AQUATIC. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
381	CURTAIN ROD
382	SHATTERPROOF ENCLOSURE/SHOWER DOOR (MIN. 22" WIDTH)
386	SHOWER - PREFABRICATED STALL - SIZE PER PLAN. (30" DIA CIRCLE PROVIDED) VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
415	22"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)2 - SEE DETAIL 25/D5
416	30"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)2 - SEE DETAIL 25/D5
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
442	2X PONY WALL - SIZE & HEIGHT PER PLAN
443	2X CRIPPLE WALL - SIZE PER PLAN
444	+ 34"- + 38" HANDRAIL (SEE DETAIL 1/D5)
445	+ 42" GUARD GYP BD WALL (SEE DETAIL 1F/D5)
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY WITH WIRE SHELVING
457	LINEN (BASE CABINET ONLY)
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE - LOCATE POLE 66" A.F.F.; PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
464	WIRE SHELF (OR SHELVES)
465	VANITY
468	COAT CLOSET
496	SHOWER REINFORCEMENT TO BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED. ACTUAL GRAB BARS NOT REQUIRED PER CODE
497	WATER CLOSET REINFORCEMENT TO BE FLOOR-MOUNTED OR FOLDAWAY OR SIMILAR ALTERNATIVE GRAB BAR REINFORCEMENT TO BE PROVIDED IN ADDITION TO THE BACK WALL REINFORCEMENT. ACTUAL GRAB BARS NOT REQUIRED PER CODE

SEE SHEET A1.1.2 FOR ADDENDA FLOOR PLANS

NAILING SCHEDULE IS IN SHEET SD.2

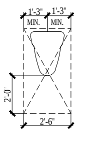
FLOOR PLAN LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.

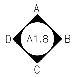
▬ = 2 x 4 D.F. #2 AT 16" O.C.

3050 SH✱
TEMP. GL.

(✱) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310
1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL



INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 2432A
FIRST FLOOR	1238 SQ. FT.
SECOND FLOOR	1194 SQ. FT.
TOTAL	2432 SQ. FT.
2-BAY GARAGE	488 SQ. FT.
CALIFORNIA ROOM	158 SQ. FT.
PORCH	137 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2432
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

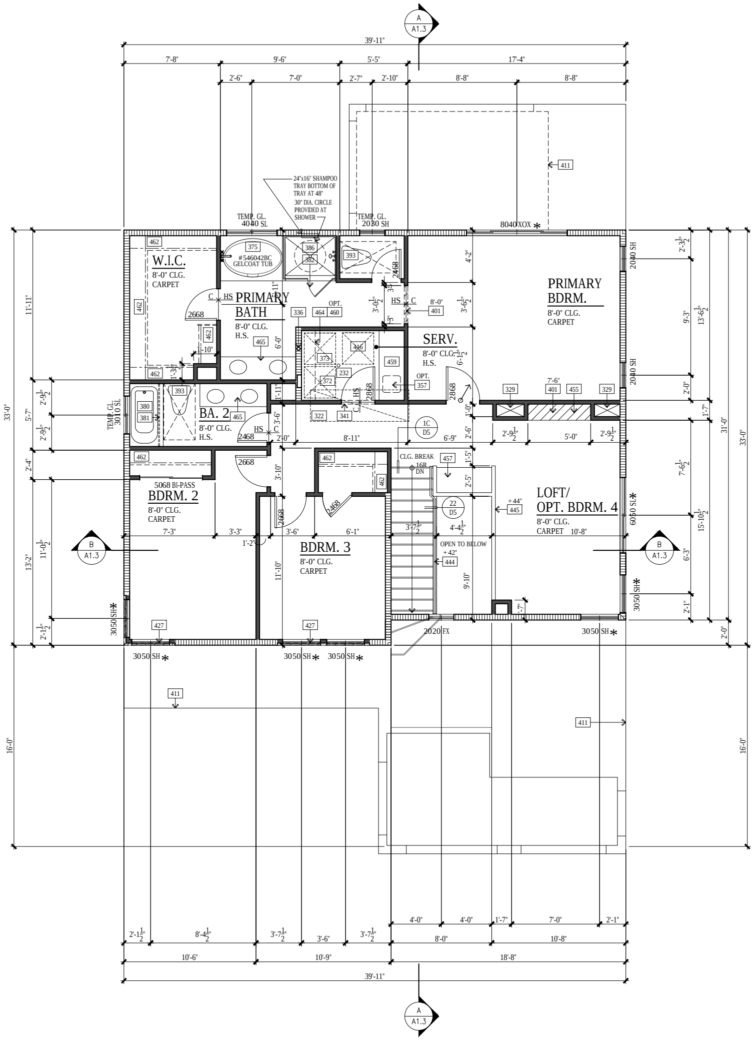
PLAN 2432A
FLOOR PLAN AND
OPTION

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	-
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023011.00
CAD FILE NAME :	A1.1.1

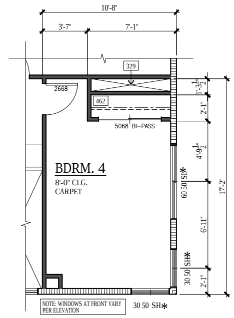
DATE: 03-09-23

SHEET: A1.1.1

2023011.00 - PROGRESS SET 03-09-2023



UPPER FLOOR PLAN



OPTIONAL BEDRM. 4
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FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMU DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVI FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIREC
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENIN PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
011	GALVANIZED STEEL PIPE BOLLARD W/CONCRETE FILL (SEE DETAIL 18/D5)
101	GARAGE AND/OR CARPORT SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE AND EXTENDED TO THE ROOF SHEATHING PER CRC SECTION R302.6.
102	ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD PER CRC SECTION R302.7.
104	GARAGE AND/OR CARPORT CEILING WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQ. STRUCTURE(S) SUPPORTING THE FLR./CLG. ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER CRC SEC. R302.6.
105	GARAGE AND/OR CARPORT ATTIC (CEILING ASSEMBLY USED FOR SEPARATION) SHALL BE SEPARATED FROM THE RESIDENCE'S ATTIC BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQUIVALENT.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	14"X14" PV CIRCUIT PANEL. NO PROTECTION REQUIRED
226	ACCESS PANEL
227	BACKUP SUB PANEL
228	SPLICE BOX
232	SERVICE ROOM FLOOR DRAIN - SEE DETAIL 23/D5
352	SOLAR READY BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER. (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
309	TEMPERATURE AND PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE OUTSIDE PER CPC SECTION 608.5
312	METAL FIREPLACE (ELECTRIC APPLIANCE) - HEIGHT PER PLAN - INSTALL PER MANUFACTURER'S INSTRUCTIONS. MANUFACTURER, MODEL NUMBER AND APPROVAL LISTING PER PLAN.
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) ATTIC INSALLATION
329	DUCT CHASE
336	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH ROOF
341	14"x8" MAKE-UP AIR VENT ABOVE DOOR - UNDER-CUT THE DOOR 1 INCH
344	WHOLE-BUILDING VENTILATION FAN PER ASHRAE 62.2, SECTION 4 PER CEnC 150.0(o).
346	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH FOOD DISPOSER
357	UTILITY SINK
359	DISHWASHER - ENERGY STAR
364	COOKTOP & EXHAUST HOOD WITH FAN AND LIGHT (EXHAUST VENT TO OUTSIDE). THE VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLE IS 30" UNPROTECTED, OR 24" PROTECTED., AND THE HORIZONTAL DIMENSION IS REQUIRED TO BE PER THE MARKING LISTED ON THE UNIT. 2022 CMC 921.3.2 & 921.4.3
372	WASHER SPACE WITH RECESSED WATER BOX AND DBL. WIDE SMITTY PAN
373	DRYER SPACE
375	DROP-IN TUB - SIZE PER PLAN
380	TUB/ SHOWER - 32"X60" MODEL 2603DT - GELCOAT SURFACE - BY AQUATIC. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
381	CURTAIN ROD
382	SHATTERPROOF ENCLOSURE/SHOWER DOOR (MIN. 22" WIDTH)
386	SHOWER - PREFABRICATED STALL - SIZE PER PLAN. (30" DIA CIRCLE PROVIDED) VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
415	22"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)2 - SEE DETAIL 25/D5
416	30"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR. ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE PER CENC 150.0(A)2 - SEE DETAIL 25/D5
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MINIMUM)
428	ARCHED STUCCO SOFFIT - SEE EXTERIOR ELEVATION
442	2X PONY WALL - SIZE & HEIGHT PER PLAN
443	2X CRIPPLE WALL - SIZE PER PLAN
444	+34"- +38" HANDRAIL (SEE DETAIL 1/D5)
445	+42" GUARD GYP BD WALL (SEE DETAIL 1F/D5)
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE TO ISLAND
453	PANTRY WITH WIRE SHELVING
457	LINEN (BASE CABINET ONLY)
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE - LOCATE POLE 66" A.F.F.; PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
464	WIRE SHELF (OR SHELVES)
465	VANITY
468	COAT CLOSET
496	SHOWER REINFORCEMENT TO BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED. ACTUAL GRAB BARS NOT REQUIRED PER CODE
497	WATER CLOSET REINFORCEMENT TO BE FLOOR-MOUNTED OR FOLDAWAY OR SIMILAR ALTERNATIVE GRAB BAR REINFORCEMENT TO BE PROVIDED IN ADDITION TO THE BACK WALL REINFORCEMENT. ACTUAL GRAB BARS NOT REQUIRED PER CODE

AGENDA ITEM NO. 6.

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2432
CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

SEE SHEETS A1.1.3 & A1.1.4 FOR ADDENDA FLOOR PLANS

NAILING SCHEDULE IS IN SHEET SD.2

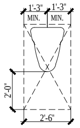
FLOOR PLAN LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.

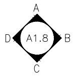
■ = 2 x 4 D.F. #2 AT 16" O.C.

3050 SH*
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310
1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL



INTERIOR ELEVATION KEY

FLOOR AREA TABLE	PLAN 2432A
FIRST FLOOR	1238 SQ. FT.
SECOND FLOOR	1194 SQ. FT.
TOTAL	2432 SQ. FT.
2-BAY GARAGE	488 SQ. FT.
CALIFORNIA ROOM	158 SQ. FT.
PORCH	137 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SCALE: 1/4" = 1'-0"

CONTEMPORARY SPANISH

PLAN 2432A
FLOOR PLAN AND
OPTION

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	-
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023011.00
CAD FILE NAME :	A1.1.2

DATE:	SHEET:
03-09-23	A1.1.2

2023011.00 - PROGRESS SET 03-09-2023

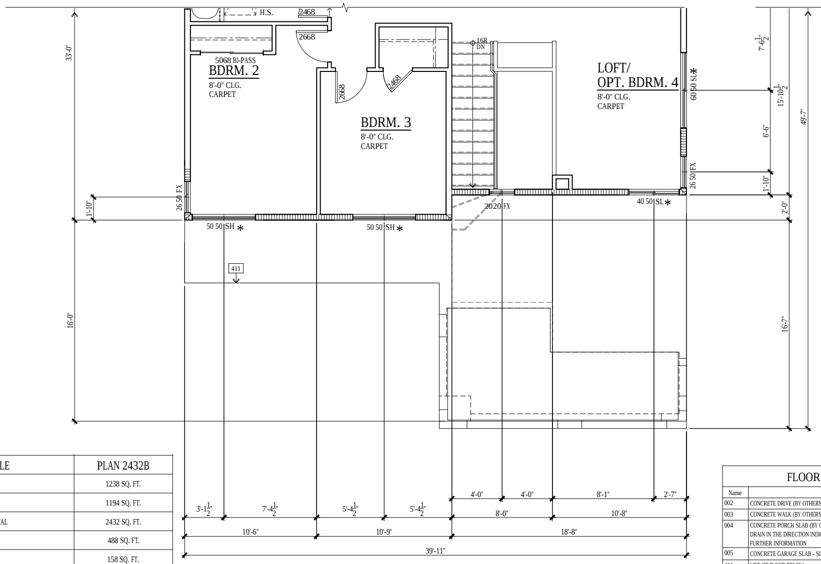
ARCHITECTS . PLANNERS . DESIGNERS

AGENDA ITEM NO. 6.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

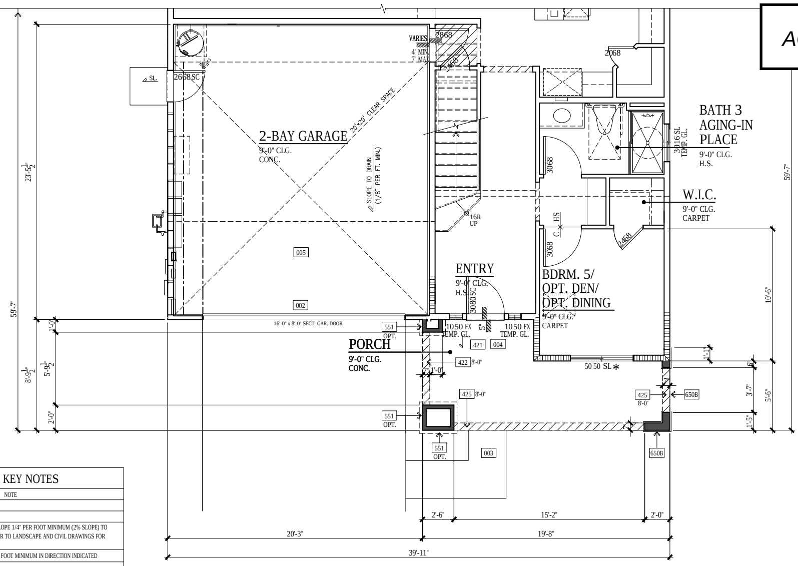
TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.



FLOOR AREA TABLE	PLAN 2432B
FIRST FLOOR	1238 SQ. FT.
SECOND FLOOR	1194 SQ. FT.
TOTAL	2432 SQ. FT.
2-BAY GARAGE	488 SQ. FT.
CALIFORNIA ROOM	158 SQ. FT.
PORCH	137 SQ. FT.

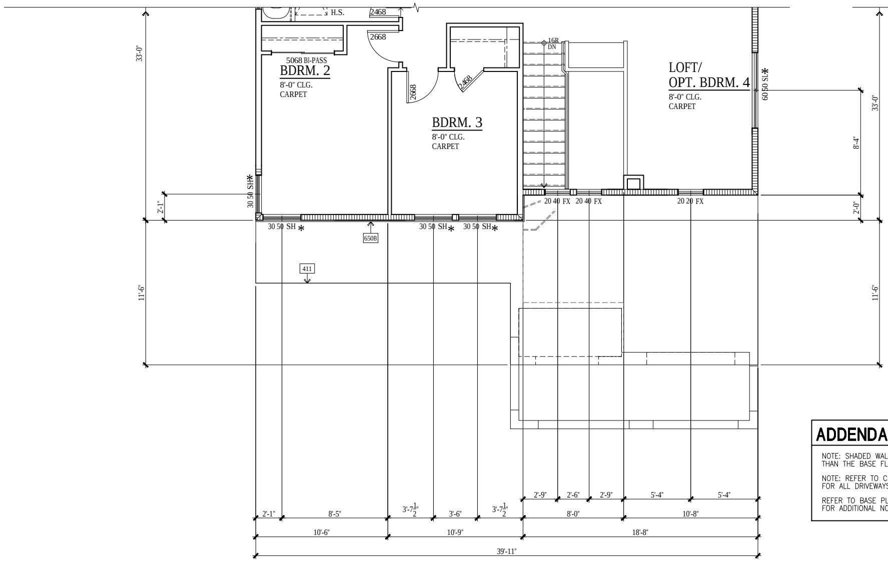
NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

PARTIAL UPPER FLOOR PLAN 2432B - MODERN



FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
411	LINE OF FLOOR BELOW
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
425	WOOD SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)

PARTIAL LOWER FLOOR PLAN 2432B - MODERN

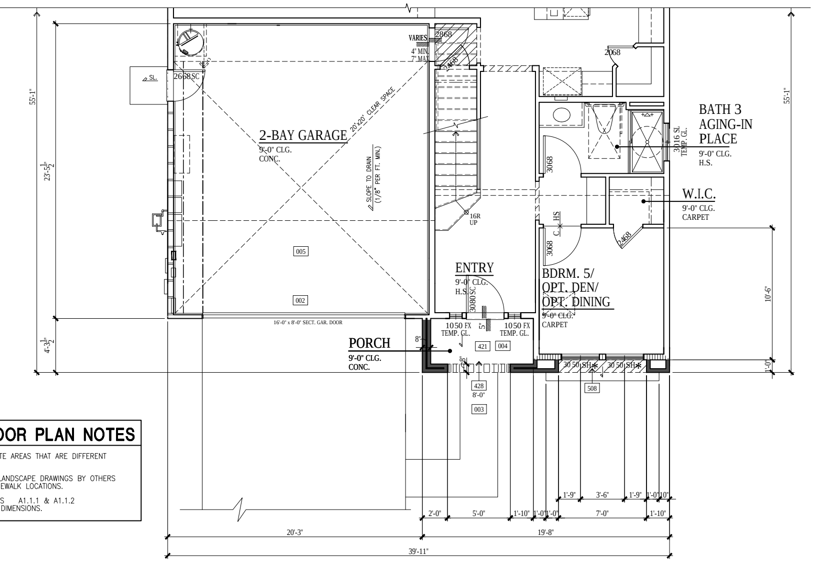


ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEETS A1.1.1 & A1.1.2 FOR ADDITIONAL NOTES AND DIMENSIONS.



FLOOR AREA TABLE	PLAN 2432C
FIRST FLOOR	1238 SQ. FT.
SECOND FLOOR	1194 SQ. FT.
TOTAL	2432 SQ. FT.
2-BAY GARAGE	488 SQ. FT.
CALIFORNIA ROOM	158 SQ. FT.
PORCH	40 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

PARTIAL UPPER FLOOR PLAN 2432C - PROGRESSIVE NAPA

FLOOR PLAN KEY NOTES	
Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
411	LINE OF FLOOR BELOW
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
508	WATERPROOFED STUCCO SHELF - SLOP-E 1/4" PER FOOT
605B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)

PARTIAL LOWER FLOOR PLAN 2432C - PROGRESSIVE NAPA

SCALE: 1/4" = 1'-0"

'B' MODERN AND 'C' PROGRESSIVE NAPA

REGENT PARK - PLAN 2432
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

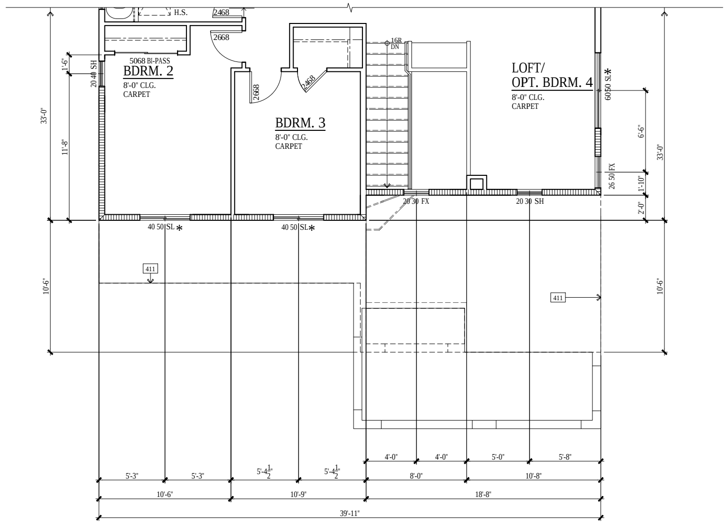
NO.	DATE	DESCRIPTION

PLAN 2399B & C
ADDENDA FLOOR
PLANS

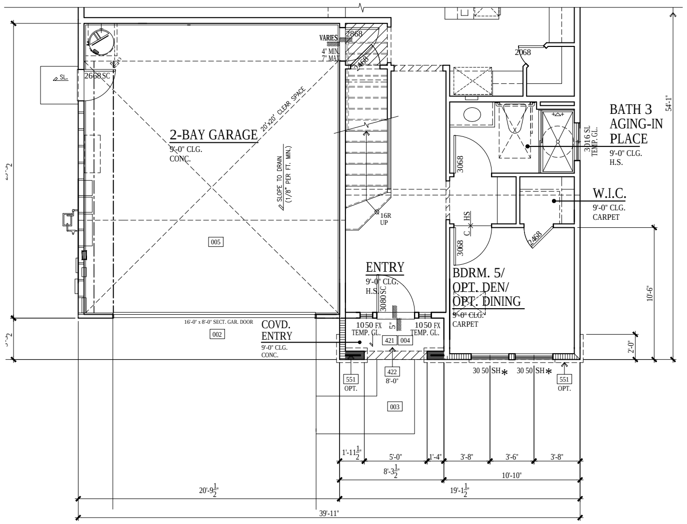
PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	-
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023011.00
CAD FILE NAME :	A1.1.3

DATE:	SHEET:
03-09-23	A1.1.3

2023011.00 - PROGRESS SET 03-09-2023



PARTIAL UPPER FLOOR PLAN 2432D



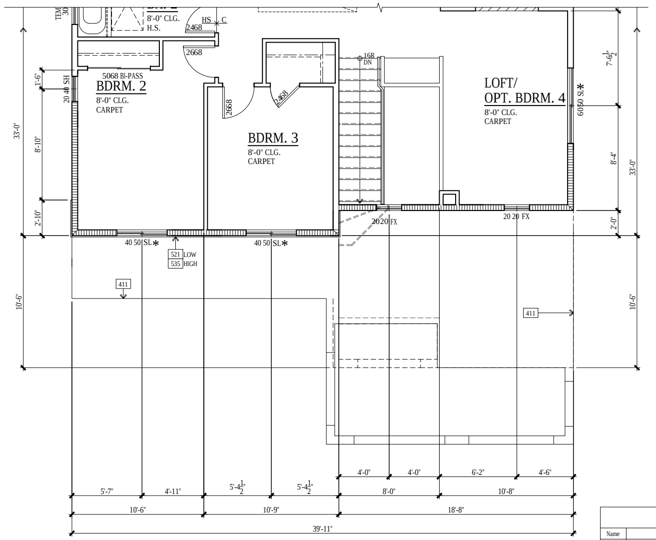
PARTIAL LOWER FLOOR PLAN 2432D

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE $\frac{1}{8}$" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
411	LINE OF FLOOR BELOW
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12

FLOOR AREA TABLE	PLAN 2432D
FIRST FLOOR	1238 SQ. FT.
SECOND FLOOR	1194 SQ. FT.
TOTAL	2432 SQ. FT.
2-BAY GARAGE	488 SQ. FT.
CALIFORNIA ROOM	158 SQ. FT.
PORCH	27 SQ. FT.

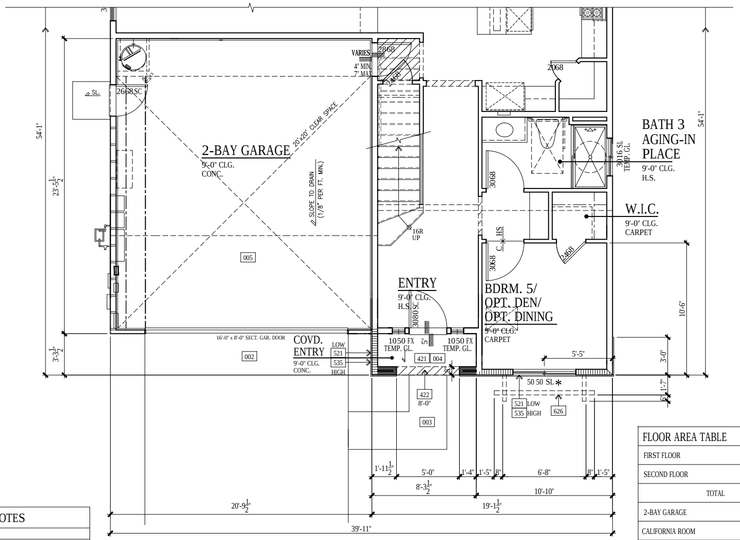
NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION



PARTIAL UPPER FLOOR PLAN 2432E

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE $\frac{1}{8}$" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
411	LINE OF FLOOR BELOW
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
535	CEMENTITOUS VERTICAL PANEL OVER 2 LAYERS BUILDING PAPER OVER 1/2" PLYWOOD SHEATHING OVER EPS FOAM BOARD OVER BUILDING PAPER. NOTE: EPS FOAM BOARD MAY BE OMITTED AT NON HABITABLE SPACES PROVIDED THE WALL PLANES OUT
626	OUTLOOKER ASSEMBLY ABOVE - WOOD (SIZE PER ELEVATION)



PARTIAL LOWER FLOOR PLAN 2432E

FLOOR AREA TABLE	PLAN 2432E
FIRST FLOOR	1238 SQ. FT.
SECOND FLOOR	1194 SQ. FT.
TOTAL	2432 SQ. FT.
2-BAY GARAGE	488 SQ. FT.
CALIFORNIA ROOM	158 SQ. FT.
PORCH	27 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEETS A1.1.1 & A1.1.2 FOR ADDITIONAL NOTES AND DIMENSIONS.

SCALE: 1/4" = 1'-0"

'D' COTTAGE - E PROGRESSIVE FARMHOUSE

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2432
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

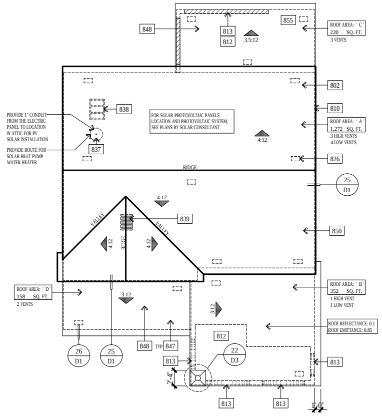
PLAN 2432D
ADDENDA FLOOR
PLANS

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	-
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023011.00
CAD FILE NAME :	A1.1.4

DATE:	SHEET:
03-09-23	A1.1.4

2023011.00 - PROGRESS SET 03-09-2023

AGENDA ITEM NO. 6.



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	A	ELEVATION STYLE:	CONTEMPORARY SPANISH			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.		
				EAVE	RAKE	
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1	2x6	NONE	1'-0"	TIGHT	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

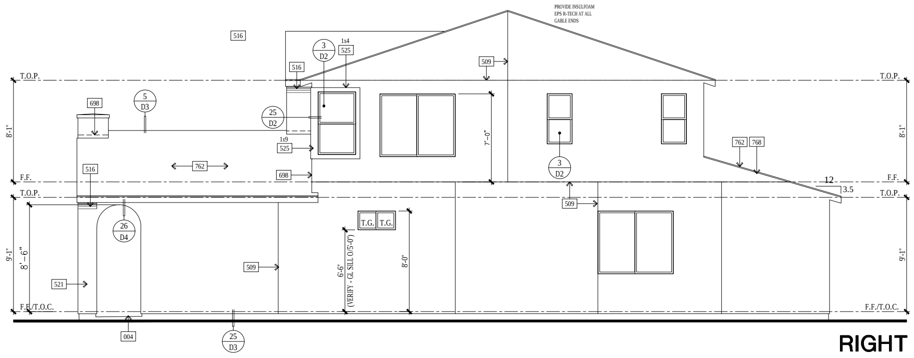
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - LOW PROFILE CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES
848	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS					PLAN	2432A	
ROOF ATTIC AREA	A	1272	SQ. FT.		CALCULATION FACTOR:	1/300	
		183168	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	610	SQ. IN		TOTAL PROVIDED:	686	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	305	SQ. IN		TOTAL HIGH PROVII	294	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	305	SQ. IN		TOTAL LOW PROVII	392	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN	X	3	294	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	294	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN	X	4	392	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	392	SQ. IN
ROOF ATTIC AREA	B	352	SQ. FT.		CALCULATION FACTOR:	1/300	
		50688	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	168	SQ. IN		TOTAL PROVIDED:	196	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	84	SQ. IN		TOTAL HIGH PROVII	98	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	84	SQ. IN		TOTAL LOW PROVII	98	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT -LOW PROFILE	-	98	SQ. IN	X	1	98	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	98	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.S-TILE	-	98	SQ. IN	X	1	98	SQ. IN
					TOTAL PROVIDED:	98	SQ. IN
ROOF ATTIC AREA	C	220	SQ. FT.		CALCULATION FACTOR:	1/150	
		31680	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	211	SQ. IN		TOTAL PROVIDED:	294	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN	X	3	294	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	294	SQ. IN
ROOF ATTIC AREA	D	158	SQ. FT.		CALCULATION FACTOR:	1/150	
		22752	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	152	SQ. IN		TOTAL PROVIDED:	196	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - LOW PROFILE	-	98	SQ. IN	X	2	196	SQ. IN
CONC.S-TILE					TOTAL PROVIDED:	196	SQ. IN



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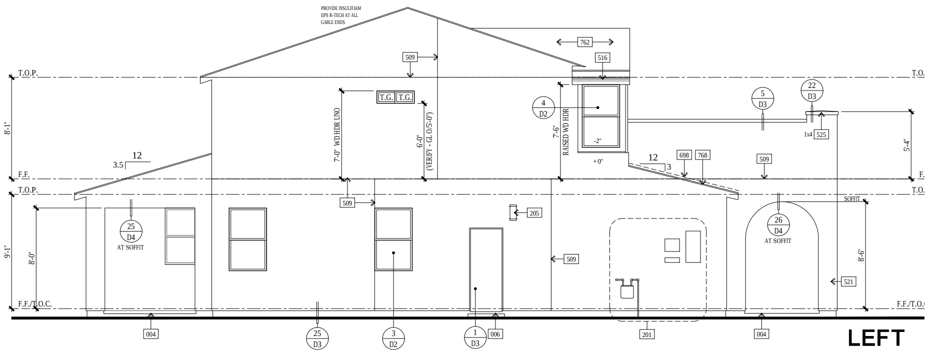

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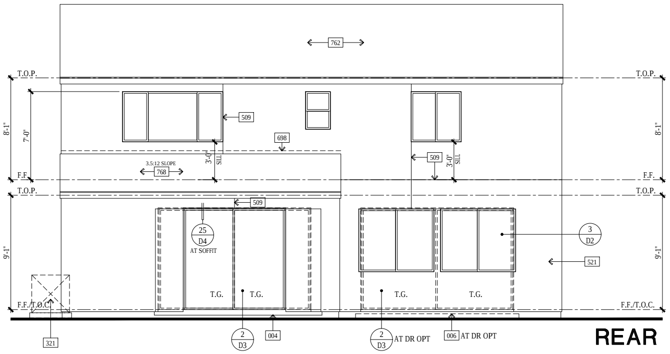

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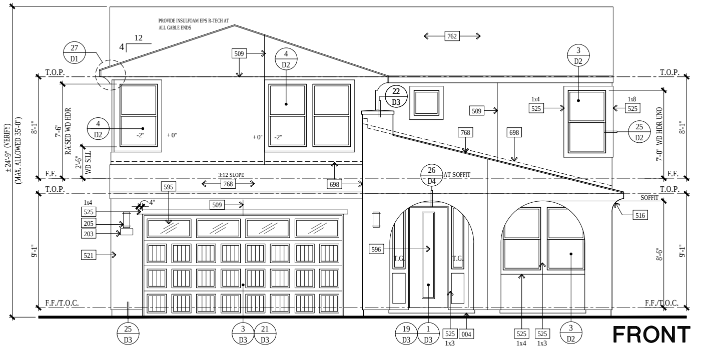


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWING INFORMATION
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING (PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 4" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 28/D5
516	DECORATIVE EAVE FOAM ACCENT PER DETAIL
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
762	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE LOW PROFILE 'S' TILE
768	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2432
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

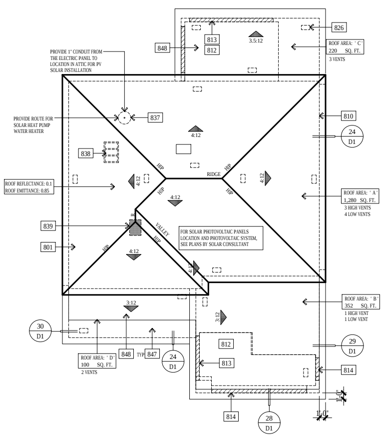
PLAN 2432A EXTERIOR ELEVATIONS & ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	-
ISSUED FOR CONSTRUCTION :	-
JOB NUMBER :	2023011.00
CAD FILE NAME :	A1.4

DATE: 03-09-23

SHEET: A1.4

2023011.00 - PROGRESS SET 03-09-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: B		ELEVATION STYLE: MODERN			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1.1	2x8	2x8	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

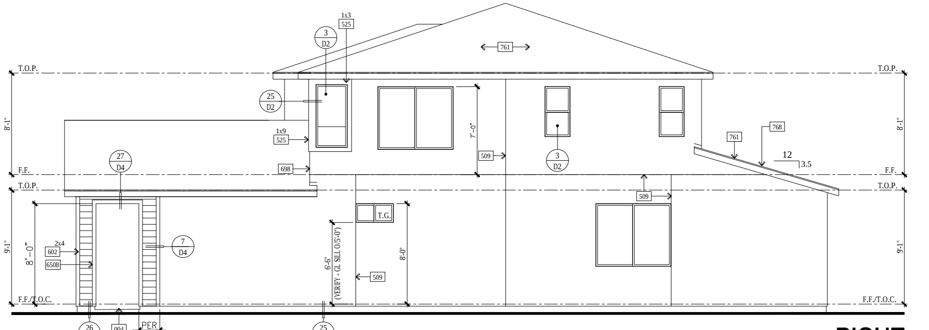
Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
814	WOOD SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES
848	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ROOF ATTIC AREA	D	158	SQ. FT.		CALCULATION FACTOR:			1/150
		22752	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	152	SQ. IN		TOTAL PROVIDED:	198		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	2		198	SQ. IN
					TOTAL PROVIDED:		198	SQ. IN

ATTIC VENTILATION CALCULATIONS

PLAN 2432B

ROOF ATTIC AREA	A	1280	SQ. FT.		CALCULATION FACTOR:			1/300
		184320	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	614	SQ. IN		TOTAL PROVIDED:	693		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	307	SQ. IN		TOTAL HIGH PROVII	297		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	307	SQ. IN		TOTAL LOW PROVII	396		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3		297	SQ. IN
					TOTAL PROVIDED:		297	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	4		396	SQ. IN
					TOTAL PROVIDED:		396	SQ. IN
ROOF ATTIC AREA	B	352	SQ. FT.		CALCULATION FACTOR:			1/300
		50688	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	168	SQ. IN		TOTAL PROVIDED:	198		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	84	SQ. IN		TOTAL HIGH PROVII	99		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	84	SQ. IN		TOTAL LOW PROVII	99		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1		99	SQ. IN
					TOTAL PROVIDED:		99	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1		99	SQ. IN
					TOTAL PROVIDED:		99	SQ. IN
ROOF ATTIC AREA	C	220	SQ. FT.		CALCULATION FACTOR:			1/150
		31680	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	211	SQ. IN		TOTAL PROVIDED:	297		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	3		297	SQ. IN
					TOTAL PROVIDED:		297	SQ. IN



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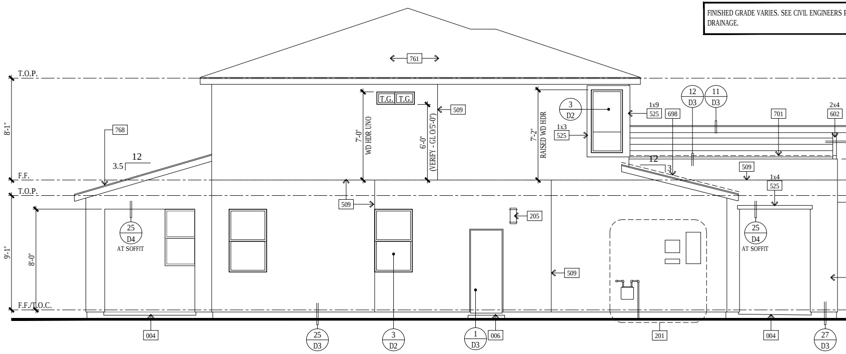

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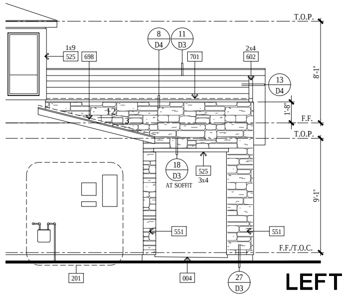

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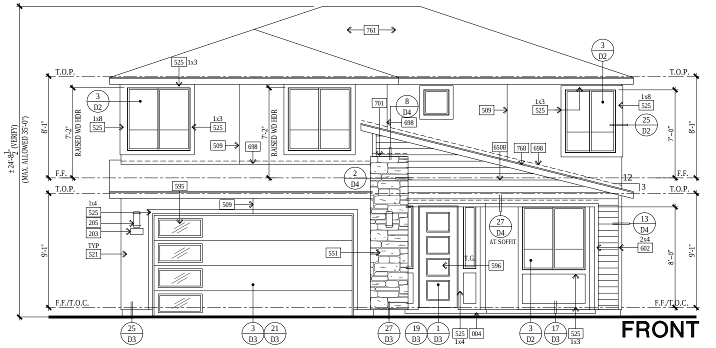

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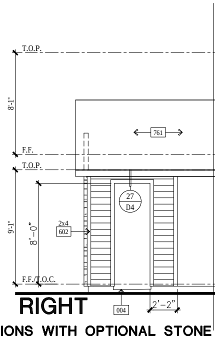

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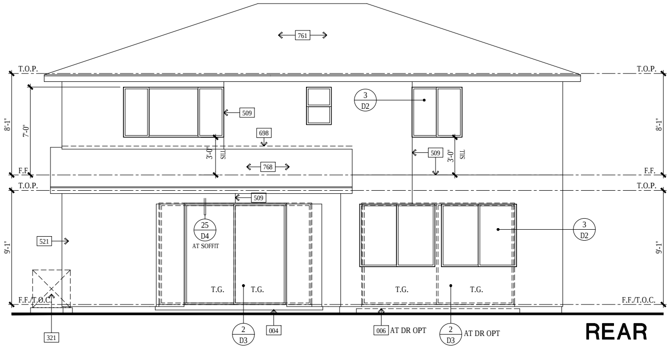
ELEVATIONS WITH OPTIONAL STONE



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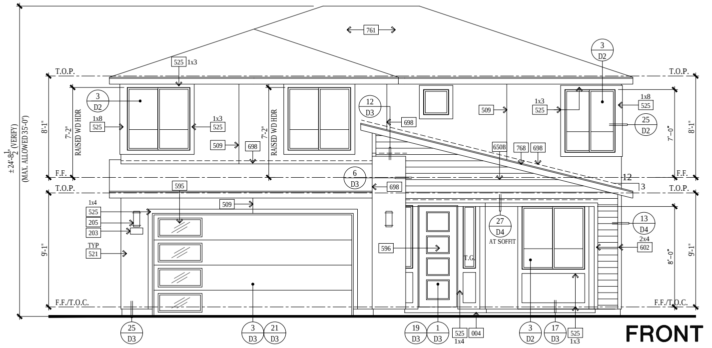


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING (U.N.O.)- SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 4" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
509	STUCCO CONTROL JOINT - SEE DETAIL 28/D5
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE FLAT TILE
768	NOTE: 3.5:12 OR LESS ROOF SLOPES TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2432
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 2432B
EXTERIOR ELEVATIONS
& ROOF PLAN

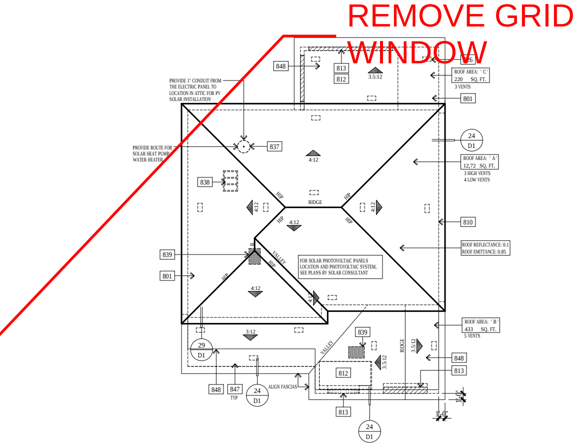
PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

MODERN

DATE:
03-09-23

A1.5

2023011.00 - PROGRESS SET 03-09-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	C	ELEVATION STYLE:	PROGRESSIVE NAPA		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

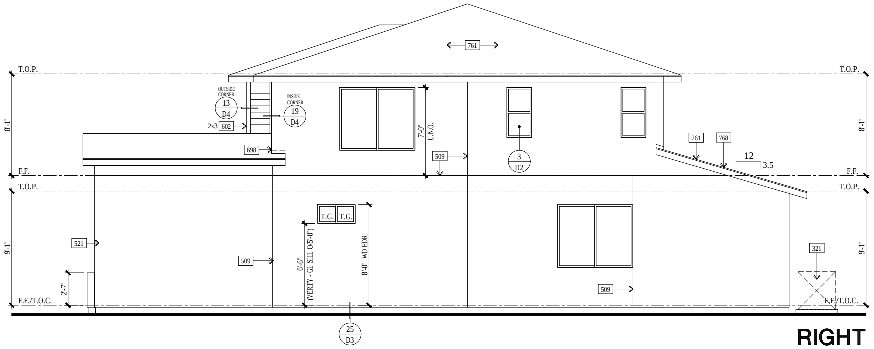
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES
848	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ATTIC VENTILATION CALCULATIONS

ATTIC VENTILATION CALCULATIONS						PLAN	2432C	
ROOF ATTIC AREA	A	1272	SQ. FT.		CALCULATION FACTOR:		1/300	
		183168	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	610	SQ. IN		TOTAL PROVIDED:	693		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	305	SQ. IN		TOTAL HIGH PROVII	297		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	305	SQ. IN		TOTAL LOW PROVII	396		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3	297		SQ. IN
					TOTAL PROVIDED:	297		SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	4	396		SQ. IN
					TOTAL PROVIDED:	396		SQ. IN
ROOF ATTIC AREA	B	433	SQ. FT.		CALCULATION FACTOR:		1/150	
		62352	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	433	SQ. IN		TOTAL PROVIDED:	495		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	5	495		SQ. IN
					TOTAL PROVIDED:	495		SQ. IN
ROOF ATTIC AREA	C	220	SQ. FT.		CALCULATION FACTOR:		1/150	
		31680	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	211	SQ. IN		TOTAL PROVIDED:	297		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA		
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	3	297		SQ. IN
					TOTAL PROVIDED:	297		SQ. IN



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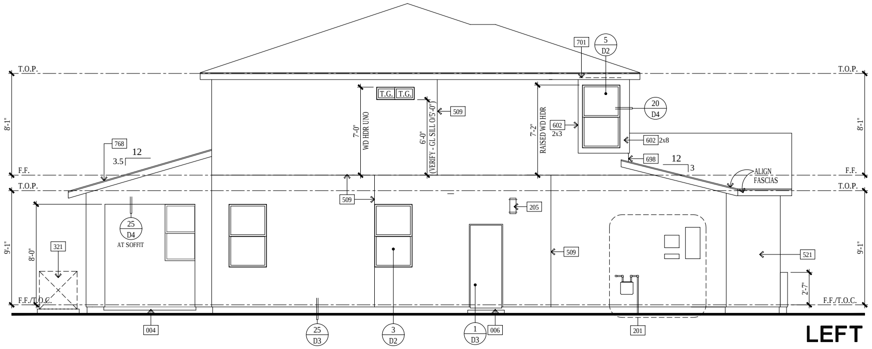

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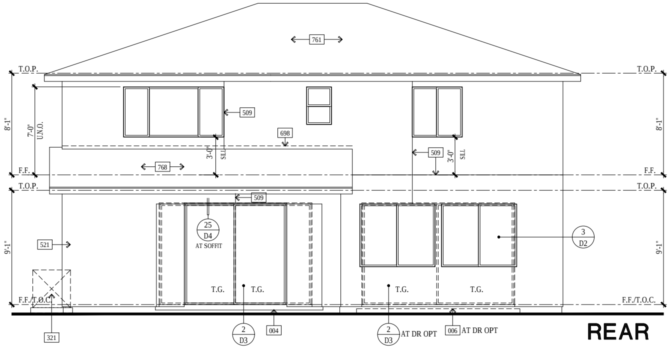

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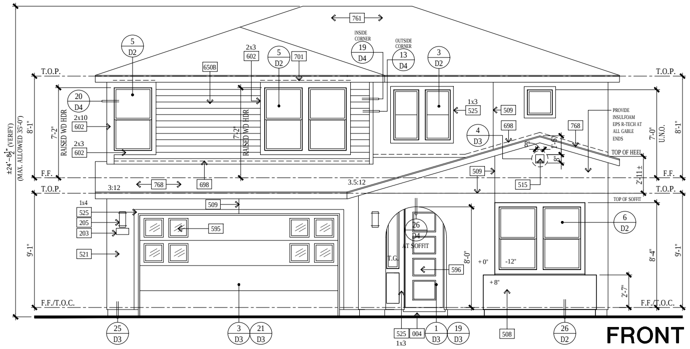


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING (U.N.O.)- SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 4" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
321	AIR CONDITIONING CONDENSER LOCATION
508	WATERPROOFED STUCCO SHELF - SLOP-E 1/4" PER FOOT
509	STUCCO CONTROL JOINT - SEE DETAIL 28/D5
515	STUCCO NICHE. SIZE PER ELEVATION - SLOPE SILL ¼" PER FT. MINIMUM
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE FLAT TILE
768	NOTE: ROOF SLOPES LESS THAN 4:12 TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2432
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

PROGRESSIVE NAPA

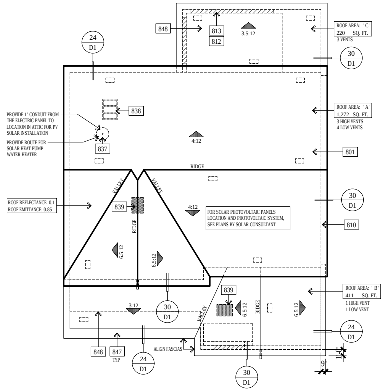
PLAN 2399C
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
03-09-23

A1.6

2023011.00 - PROGRESS SET 03-09-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: D		ELEVATION STYLE: COTTAGE			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC # ESR-1900	3/D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

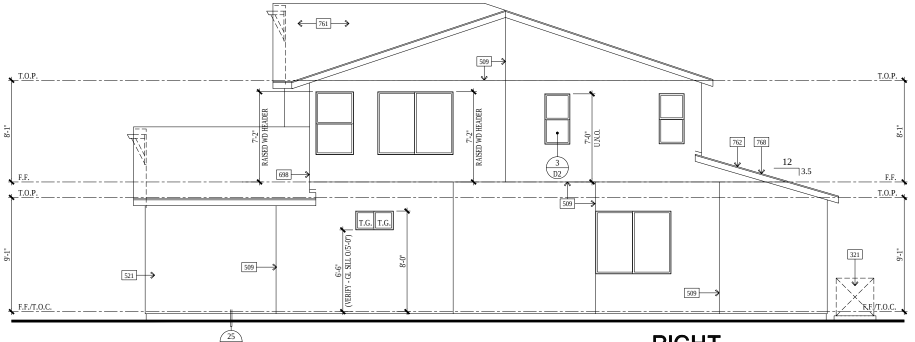
Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES
848	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ROOF ATTIC AREA	C	220	SQ. FT.		CALCULATION FACTOR:		1/150	
		31680	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	211	SQ. IN		TOTAL PROVIDED:	297		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	3		297	SQ. IN
					TOTAL PROVIDED:		297	SQ. IN

ATTIC VENTILATION CALCULATIONS

PLAN 2432D

ROOF ATTIC AREA	A	1272	SQ. FT.		CALCULATION FACTOR:		1/300	
		183168	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	610	SQ. IN		TOTAL PROVIDED:	693		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	305	SQ. IN		TOTAL HIGH PROVI	297		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	305	SQ. IN		TOTAL LOW PROVI	396		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3		297	SQ. IN
					TOTAL PROVIDED:		297	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	4		396	SQ. IN
					TOTAL PROVIDED:		396	SQ. IN
ROOF ATTIC AREA	B	411	SQ. FT.		CALCULATION FACTOR:		1/300	
		59184	SQ. IN					
MIN. VENTILATION REQUIRED:	TOTAL	197	SQ. IN		TOTAL PROVIDED:	198		SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	99	SQ. IN		TOTAL HIGH PROVI	99		SQ. IN
MIN. VENTILATION REQUIRED:	LOW	99	SQ. IN		TOTAL LOW PROVI	99		SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1		99	SQ. IN
					TOTAL PROVIDED:		99	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY		FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1		99	SQ. IN



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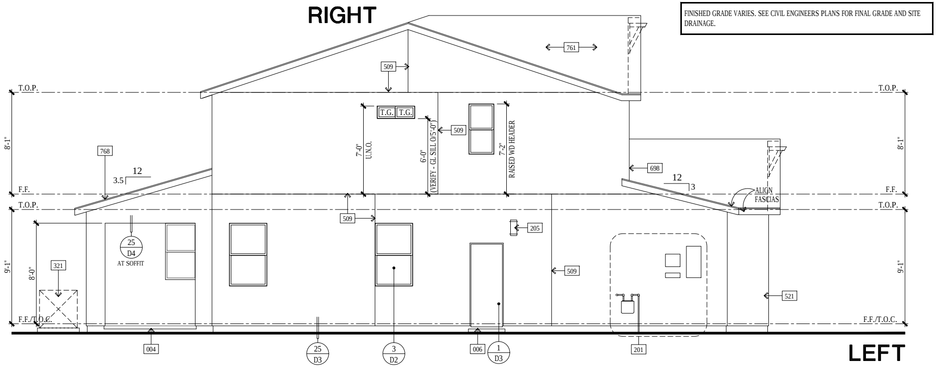

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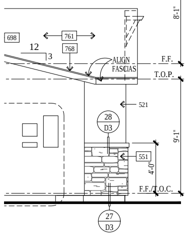

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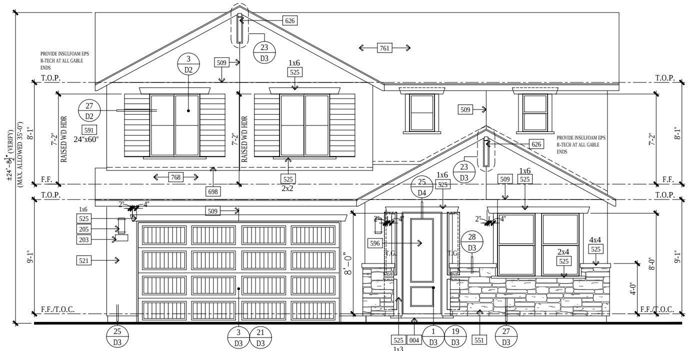
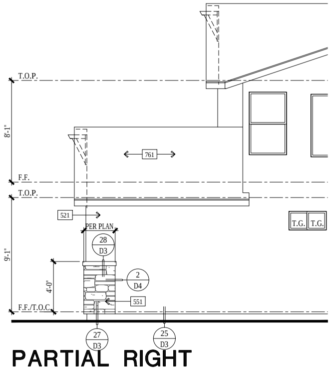


FRONT W/OPT. STONE VENEER



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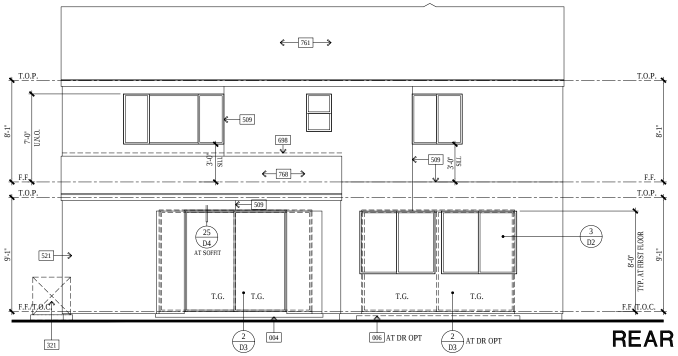

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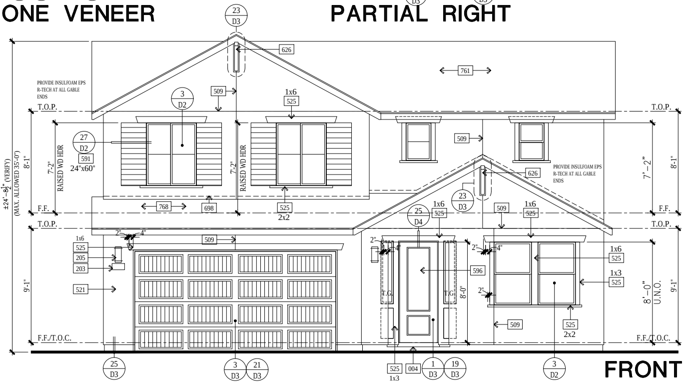


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING (U.N.O.)- SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 4" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
509	STUCCO CONTROL JOINT - SEE DETAIL 28/D5
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION) SEE DETAIL 17/D6
626	OUTLOOKER ASSEMBLY - WOOD (SIZE PER ELEVATION)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE FLAT TILE
768	NOTE: ROOF SLOPES LESS THAN 4:12 TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2432
CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 2432D
EXTERIOR ELEVATIONS
& ROOF PLAN

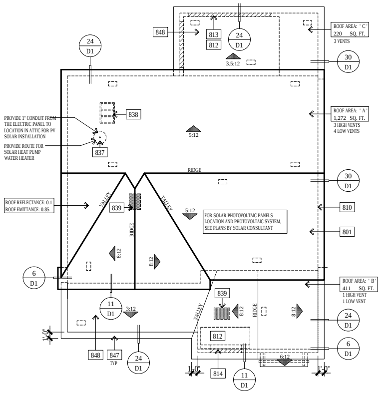
PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
03-09-23

A1.7

COTTAGE

2023011.00 - PROGRESS SET 03-09-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	E	ELEVATION STYLE:	PROGRESSIVE FARMHOUSE			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.		
				EAVE	RAKE	
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	3 D1.1	2x6	2x6	1'-0" 1'-6"	1'-0"	

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

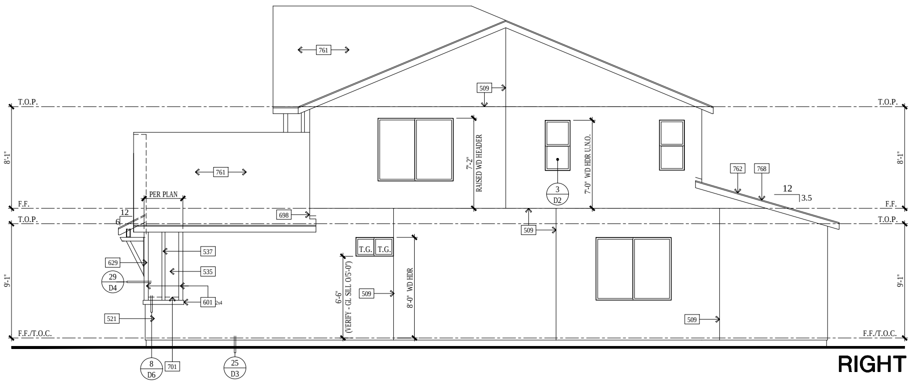
ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
814	WOOD SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLTAIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES
848	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ATTIC VENTILATION CALCULATIONS

PLAN 2432E

ROOF ATTIC AREA	A	1272	SQ. FT.		CALCULATION FACTOR:	1/300	
		183168	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	610	SQ. IN		TOTAL PROVIDED:	693	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	305	SQ. IN		TOTAL HIGH PROVI	297	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	305	SQ. IN		TOTAL LOW PROVI	396	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3	297	SQ. IN
					TOTAL PROVIDED:	297	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	4	396	SQ. IN
					TOTAL PROVIDED:	396	SQ. IN
ROOF ATTIC AREA	B	411	SQ. FT.		CALCULATION FACTOR:	1/300	
		59184	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	197	SQ. IN		TOTAL PROVIDED:	198	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	99	SQ. IN		TOTAL HIGH PROVI	99	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	99	SQ. IN		TOTAL LOW PROVI	99	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1	99	SQ. IN
					TOTAL PROVIDED:	99	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1	99	SQ. IN
ROOF ATTIC AREA	C	220	SQ. FT.		CALCULATION FACTOR:	1/150	
		31680	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	211	SQ. IN		TOTAL PROVIDED:	297	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	3	297	SQ. IN
					TOTAL PROVIDED:	297	SQ. IN



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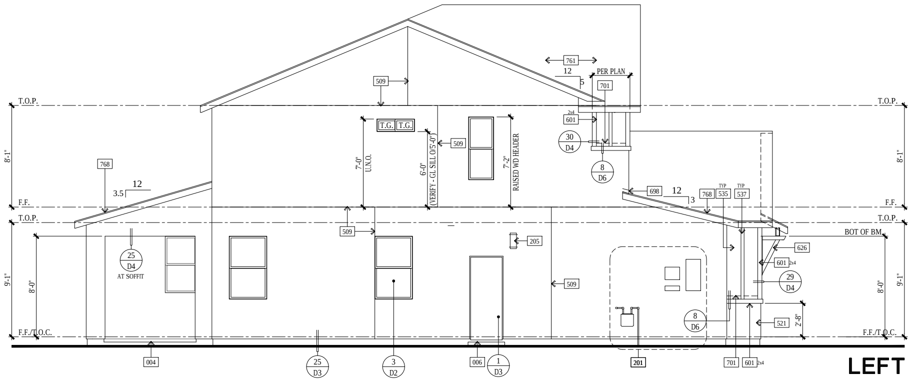

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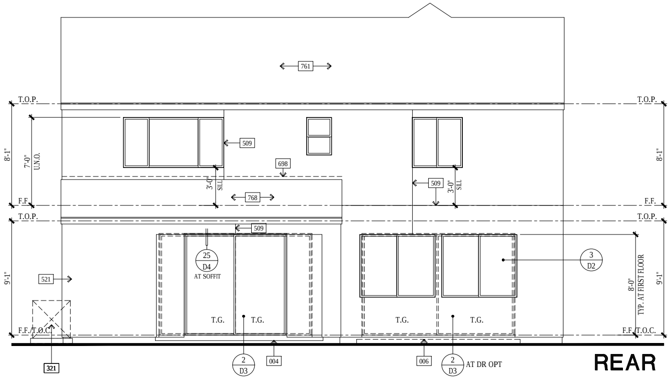

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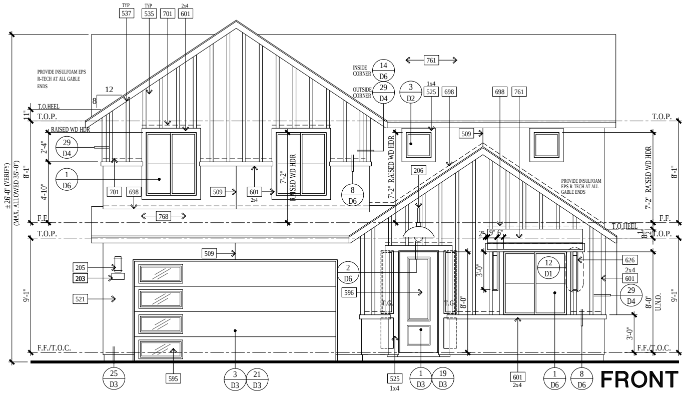


FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING (U.N.O.)- SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 4" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
509	STUCCO CONTROL JOINT - SEE DETAIL 28/D5
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
535	CEMENTITOUS VERTICAL PANEL OVER 2 LAYERS BUILDING PAPER OVER 1/2" PLYWOOD SHEATHING OVER EPS FOAM BOARD OVER BUILDING PAPER. NOTE: EPS FOAM BOARD MAY BE OMITTED AT NON HABITABLE SPACES PROVIDED THE WALL PLANES OUT
537	1x3 WOD BATTS AT 16" O.C.
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANEL
626	OUTLOOKER ASSEMBLY - WOOD (SIZE PER ELEVATION)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE FLAT TILE
768	NOTE: ROOF SLOPES WITH LESS THAN 4:12 TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D.

REGENT PARK - PLAN 2432
CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

PROGRESSIVE FARMHOUSE

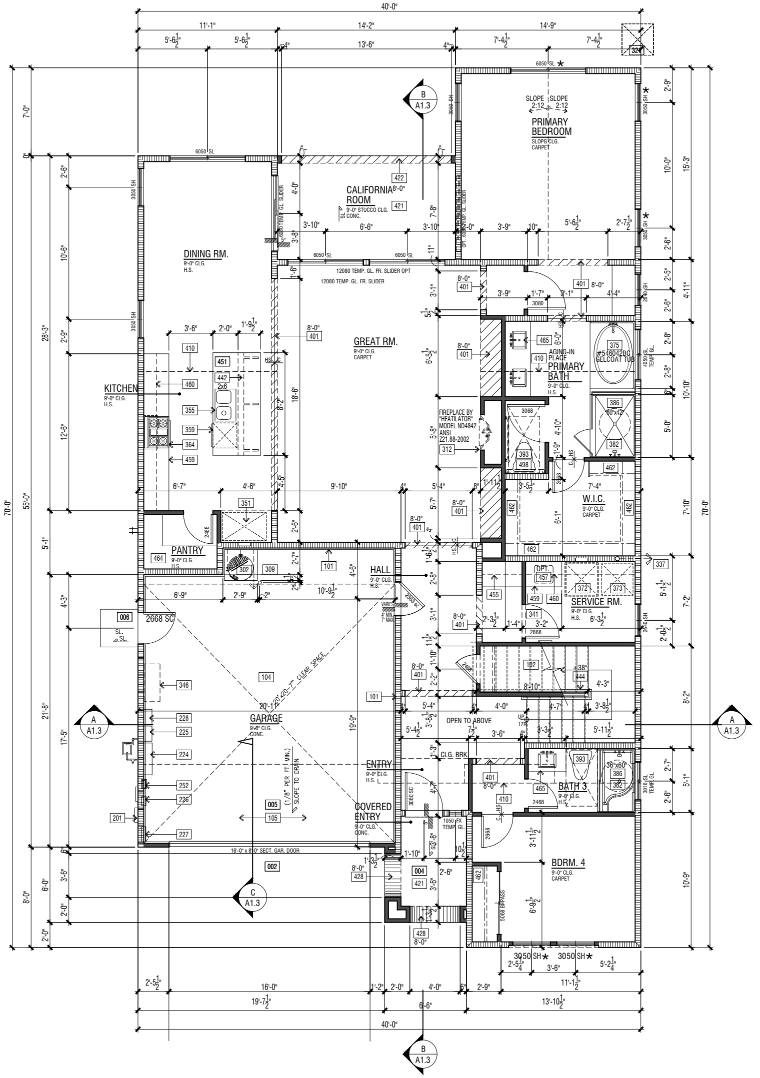
PLAN 2432E
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	AM
DRAWN BY :	MH
REVIEWED BY :	-
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

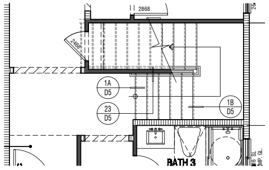
DATE:
03-09-23

A1.8

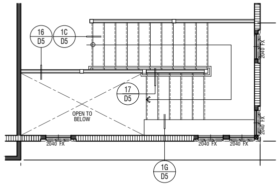
2023011.00 - PROGRESS SET 03-09-2023



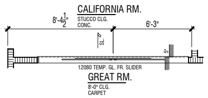
LOWER FLOOR PLAN



STAIRS AT 1ST FLOOR



STAIRS AT 2ND FLOOR



FR. SLIDER OPT.

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
12. IN UPPER FLOOR PLANS, ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE THE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. CRC R312.2
13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

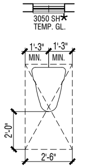
FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
101	GARAGE AND/OR CARPORT SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE AND EXTENDED TO THE ROOF SHEATHING PER CRC SECTION R302.6.
102	ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD PER CRC SECTION R302.7.
104	GARAGE AND/OR CARPORT WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQ. STRUCTURE(S) SUPPORTING THE FLR./CLG. ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER CRC SEC. R302.6.
105	GARAGE AND/OR CARPORT ATTIC (CEILING ASSEMBLY USED FOR SEPARATION) SHALL BE SEPARATED FROM THE RESIDENCE'S ATTIC BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQUIVALENT.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
111	EGRESS DOOR TO PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
224	LOCATION OF SYSTEM ISOLATION/TRANSFER SWITCH (MOUNTED NOT RECESSED). INSTALL WITHIN 3 FEET OF MAIN PANEL BOARD PER CENC 150.0(S)4
225	14"X14" PV CIRCUIT PANEL. NO PROTECTION REQUIRED
226	ACCESS PANEL
227	BACKUP SUB PANEL
228	SPLICE BOX
302	HYBRID ELECTRIC HEAT PUMP WATER HEATER. (18" PLATFORM NOT REQUIRED BUT MAY BE PROVIDED FOR CONDENSATE LINE DRAINAGE PURPOSES). PROTECT FROM DAMAGE PER CPC SECTION 507.13.1. SEISMIC PROVISIONS PER CPC SECTION 507.2. WATER SYS. PIPING & INSUL. FOR PIPING AND TANKS PER Cenc 150.0 (i) & WATER HEATING SYSTEMS PER Cenc 150.0(n)
309	TEMPERATURE AND PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE OUTSIDE PER CPC SECTION 608.5
312	METAL FIREPLACE (ELECTRIC APPLIANCE) - HEIGHT PER PLAN - INSTALL PER MANUFACTURER'S INSTRUCTIONS. MANUFACTURER, MODEL NUMBER AND APPROVAL LISTING PER PLAN. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. (2016 CAL GREEN BLDG STANDARDS 4.503
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) ATTIC INSALLATION
337	5" DIA. G.I. DRYER VENT WITH APPROVED LINT TRAP - VENT THROUGH WALL
341	14"x8" MAKE-UP AIR VENT ABOVE DOOR - UNDER-CUT THE DOOR 1 INCH
346	LOCATION OF ENERGY STORAE SYSTEM (ESS) PER CENC. 150.0(S). LOCATION PER CRC SECTION 328.3.1 AND R328.4
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
352	SOLAR READY BOX
355	SINK WITH FOOD DISPOSER
357	UTILITY SINK
359	DISHWASHER - ENERGY STAR
364	COOKTOP & EXHAUST HOOD WITH FAN AND LIGHT (EXHAUST VENT TO OUTSIDE). THE VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLE IS 30" UNPROTECTED, OR 24" PROTECTED., AND THE HORIZONTAL DIMENSION IS REQUIRED TO BE PER THE MARKING LISTED ON THE UNIT. 2022 CMC 921.3.2 & 921.4.3
372	WASHER SPACE WITH RECESSED WATER BOX AND DBL. WIDE SMITTY PAN
373	DRYER SPACE
375	DROP-IN TUB: SIZE PER PLAN
380	TUB/ SHOWER - 32"X60" MODEL 2603DT - GELCOAT SURFACE - BY AQUATIC. VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
381	CURTAIN ROD
382	SHATTERPROOF SHOWER DOOR (MIN. 22" WIDTH)/ ENCLOSURE
386	SHOWER - PREFABRICATED STALL - SIZE PER PLAN. (30" DIA CIRCLE PROVIDED) VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
392	PEDESTAL SINK
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
399	24" x 16" SHAMPOO TRAY. BOTTOM OF TRAY AT 48" - SLOPE ½" TO DRAIN.
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
416	30"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR - PER CENC 150.0(A)1, ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS AND THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MIN.)
428	ARCHED SOFFIT: HEIGHT PER PLAN
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
444	+34"- +38" HANDRAIL (SEE DETAIL 1H/D5)
445	+42" GUARD (SEE DETAIL 16/D5)
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVOCE TO ISLAND
453	PANTRY WITH WIRE SHELVING
455	LINEN
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE - LOCATE POLE 66" A.F.F.; PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
464	WIRE SHELF (OR SHELVES)
465	VANITY
496	SHOWER REINFORCEMENT TO BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED. ACTUAL GRAB BARS NOT REQUIRED PER CODE
498	WATER CLOSET REINFORCEMENT TO BE INSTALLED ON BOTH SIDES WALLS OF THE FIXTURE, OR ON ONE SIDE WALL AND THE BACK WALL. ACTUAL GRAB BARS NOT REQUIRED PER CODE

FLOOR PLAN LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.

▬ = 2 x 4 D.F. #2 AT 16" O.C.



(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310

1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR

REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL

BATHROOM #4 OPTION INCLUDED OR
M BDRM #2 W/BATH 4a INCLUDED

BATHROOM #4 OPTION INCLUDED

FLOOR AREA TABLE	PLAN 3056A
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

FLOOR AREA TABLE	PLAN 3056A
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
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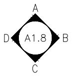
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

SEE SHEET A1.1.3 & A1.1.4 FOR ADDENDA FLOOR PLANS

NAILING SCHEDULE IS IN SHEET SD.2



INTERIOR ELEVATION KEY

NAILING SCHEDULE IS LOCATED ON SHEET SD.2

WALL LEGEND

═	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	▩	SHELF ABOVE
▭	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'XX2' Lots)

PLAN 3056
REGENT PARK at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

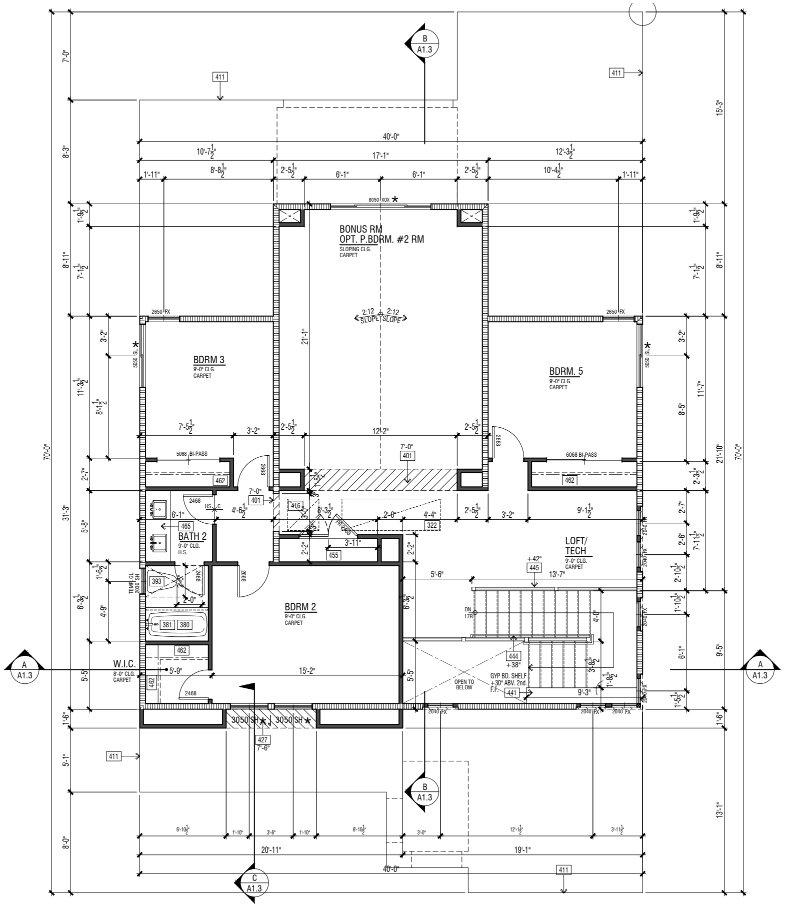
PLAN 3056A
FLOOR PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MM
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

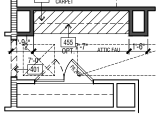
DATE:
04-03-23

A1.1.1

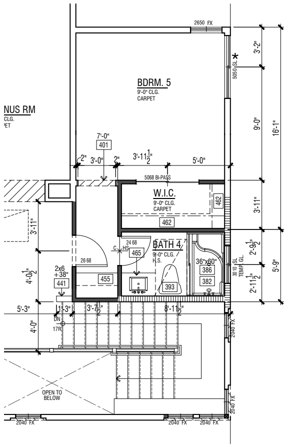
2023011- PROGRESS SET 04-03-2023



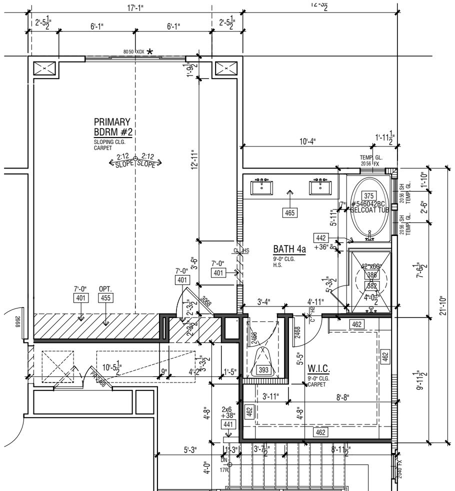
UPPER FLOOR PLAN



LINEN OPT. AT PRIMARY BDRM #2 ILO BONUS RM



BDRM 5 W/OPT. BATH 4 ILO LOFT



PRIMARY BDRM #2 OPT. ILO BONUS RM, BDRM 5 & LOFT

FLOOR PLAN NOTES

1. REFER TO ARCHITECTURAL SYMBOL LEGEND ON SHEET C1 FOR ADDITIONAL INFORMATION AND CLEARANCES
2. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 AND VENTILATION PER R806.
3. CRAWL SPACES: ACCESS PER CRC R408.4 AND VENTILATION PER R408.1.
4. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC 311.
5. GLAZING PER CRC R303.1, R301.2.1.2 & R308.
6. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
7. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 506.0.
8. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
9. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 305.
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1.
11. THE SILL HEIGHT IS NOT TO EXCEED 44" FROM THE BOTTOM OF THE CLEAR OPENING IN SLEEPING ROOMS. CRC R31.0.1
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13. A SHEETROCK NAILING INSPECTION IN REQUIRED. CRC R109.1.4.2
14. GLAZING IN A HAZARDOUS LOCATION IS REQUIRED TO BE GLAZED WITH SAFETY MATERIAL. CRC R308
15. VERTICAL CLEARANCE ABOVE THE COOKTOP TO COMBUSTIBLES IS 30" UNPROTECTED, OR 24" PROTECTED, AND THE HORIZONTAL DIMENSIONS IS REQUIRED TO BE PER THE PERMANENT MARKING LISTED ON THE UNIT. CMC 916.1 & 916.2
16. THE WALL SURFACE BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS SUBJECT TO WATER SPLASH ARE CONSTRUCTED OF MATERIALS NOT ADVERSELY AFFECTED BY WATER. NOTE THE USE OF FIBER CEMENT, FIBER MAT, REINFORCED CEMENT OR GLASS MAT GYPSUM BACKERS ON THE FLOOR PLAN. NOTE THAT WATER RESISTANT GYPSUM BOARD IS NO LONGER PERMITTED TO BE USED IN THESE LOCATIONS. CRC R702.4.2
17. NOTE THAT ALL ATTIC ACCESS OPENINGS ARE GASKETED TO PREVENT AIR LOSS. CEC 150.0(a)
18. A MINIMUM 30" DIA. CIRCLE IS PROVIDED AT THE SHOWER FLOOR. THE MINIMUM FLOOR AREA OF THE SHOWER COMPARTMENT IS 1024 SQUARE INCHES. CPC 408.6

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE 1/8" PER FOOT MINIMUM IN DIRECTION INDICATED
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING - SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
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104	GARAGE AND/OR CARPORT WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQ. STRUCTURE(S) SUPPORTING THE FLR./CLG. ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER CRC SEC. R302.6.
110	PROVIDE SOLID WOOD DOOR, OR SOLID OR HONEYCOMB CORE STEEL DOORS, NOT LESS THAN 1-3/8" THICK, OR 20 MINUTE FIRE RATED DOOR. DOORS SHALL BE SELF CLOSING AND SELF LATCHING PER CRC SECTION R302.5.1.
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
305	TANKLESS WATER HEATER - MODEL RINNAI (R75LS) - INSTALL PER MANUFACTURER'S INSTRUCTIONS
309	TEMPERATURE AND PRESSURE RELIEF VALVE. DISCHARGE LINE TO THE OUTSIDE OUTSIDE PER CPC SECTION 608.5
312	METAL FIREPLACE (GAS APPLIANCE) - HEIGHT PER PLAN - INSTALL PER MANUFACTURER'S INSTRUCTIONS. MANUFACTURER, MODEL NUMBER AND APPROVAL LISTING PER PLAN. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. (2016 CAL GREEN BLDG STANDARDS 4.503
321	AIR CONDITIONING CONDENSER LOCATION
322	FORCED AIR UNIT (FAU) ATTIC INSALLATION
341	14"x8" MAKE-UP AIR VENT ABOVE DOOR - UNDER-CUT THE DOOR 1 INCH
351	REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
355	SINK WITH GARBAGE DISPOSER
357	UTILITY SINK
359	DISHWASHER - ENERGY STAR
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372	WASHER SPACE WITH RECESSED WATER BOX AND DBL. WIDE SMITTY PAN
373	DRYER SPACE
375	DROP-IN TUB: SIZE PER PLAN
380	TUB/ SHOWER - 32"X60" MODEL 2603DT - GELCOAT SURFACE - BY AQUATIC
381	CURTAIN ROD
382	SHATTERPROOF SHOWER DOOR (MIN. 22" WIDTH)/ ENCLOSURE
386	SHOWER - PREFABRICATED STALL - SIZE PER PLAN. (30" DIA CIRCLE PROVIDED) VERIFY UNIT DIMENSIONS WITH MANUFACTURER PRIOR TO FRAMING. PROVIDE FURRING AS NECESSARY.
392	PEDESTAL SINK
393	TOILET - PROVIDE MINIMUM 24" X 30" CLEAR FLOOR AREA IN FRONT OF TOILET
399	24" x 16" SHAMPOO TRAY. BOTTOM OF TRAY AT 48" - SLOPE ¼" TO DRAIN.
401	INTERIOR SOFFIT(S)/ DROPPED CEILING(S): HEIGHT PER PLAN
410	LINE OF FLOOR ABOVE
411	LINE OF FLOOR BELOW
416	30"X30" ATTIC ACCESS - DIMENSIONS ARE CLEAR - PER CENC 150.0(A)1, ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS AND THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
427	STUCCO SOFFIT OVER WATERPROOFED STUCCO SHELF - SLOPE FRAMING FOR DRAINAGE (1/4" PER FOOT MIN.)
428	ARCHED SOFFIT: HEIGHT PER PLAN
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
444	+34"- +38" HANDRAIL (SEE DETAIL 1H/D5)
445	+42" GUARD (SEE DETAIL 16/D5)
451	KITCHEN ISLAND - PROVIDE APPROVED UNDERGROUND CONDUIT FOR ELECTRIC SERVOCE TO ISLAND
453	PANTRY WITH WIRE SHELVING
455	LINEN
459	BASE CABINET
460	UPPER CABINET
462	WIRE SHELF AND POLE - LOCATE POLE 66" A.F.F.; PROVIDE 2x6 BLOCKING WITHIN STUD BAY AT EACH END & AT CENTER OF POLE FOR HARDWARE. VERIFY SHELF BRACKET LOCATIONS & PROVIDE CONCEALED 2x BLOCKING ACCORDINGLY
464	WIRE SHELF (OR SHELVES)
465	VANITY

SEE SHEET A1.1.3 & A1.1.4 FOR ADDENDA FLOOR PLANS

NAILING SCHEDULE IS IN SHEET SD.2

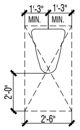
FLOOR PLAN LEGEND

▥ = 2 x 6 D.F. #2 AT 16" O.C.

▬ = 2 x 4 D.F. #2 AT 16" O.C.

3050 SH★
TEMP. GL.

(*) INDICATES WINDOW REQUIRED FOR EMERGENCY ESCAPE AND RESCUE WINDOW TO MEET THE REQUIREMENTS OF CRC R310
1. 5.7 SQUARE FEET NET CLEAR OPENING SIZE REQUIRED FOR MINIMUM EGRESS
2. 24 INCHES MINIMUM OPENING HEIGHT DIMENSION
3. 20 INCHES MINIMUM NET CLEAR OPERABLE WIDTH DIMENSION
4. 44 INCHES MAXIMUM NET HEIGHT OF WINDOW SILL FROM FINISH FLOOR



REQUIRED FLOOR CLEARANCES AT WATER CLOSETS -TYPICAL

BATHROOM #4 OPTION INCLUDED OR
M BDRM #2 W/BATH 4a INCLUDED

BATHROOM #4 OPTION INCLUDED

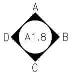
FLOOR AREA TABLE	PLAN 3056A
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

STANDARD BASE PLAN

FLOOR AREA TABLE	PLAN 3056A
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION



INTERIOR ELEVATION KEY

NAILING SCHEDULE IS LOCATED ON SHEET SD.2

WALL LEGEND

▭	LOW WALL	▨	SOFFIT LIMITS
▬	2 x 4 STUD WALL	▩	SHELF ABOVE
▭	2 x 6 STUD WALL	▥	ARCHED SOFFIT LIMITS

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XXXX2' Lots)

PLAN 3056
REGENT PARK at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

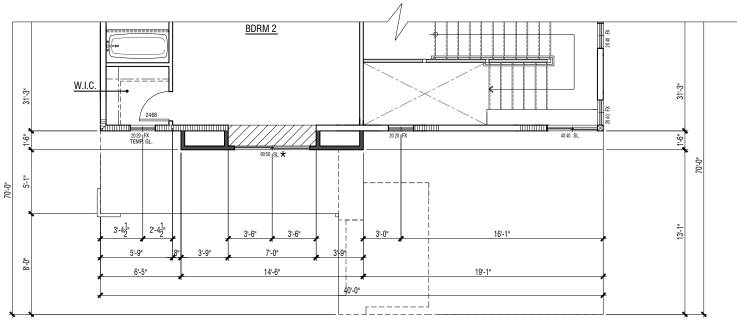
PLAN 3056A
FLOOR PLAN &
OPTIONS

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MM
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

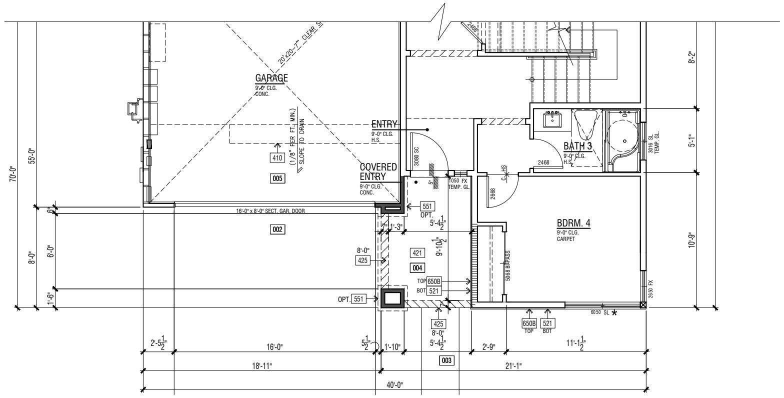
DATE:
04-03-23

A1.1.2

2023011- PROGRESS SET 04-03-2023



PARTIAL UPPER FLOOR PLAN 3056B - MODERN



PARTIAL LOWER FLOOR PLAN 3056B - MODERN

BATHROOM #4 OPTION INCLUDED OR PRIMARY BDRM #2 W/BATH 4a INCLUDED

BATHROOM #4 OPTION INCLUDED

FLOOR AREA TABLE	PLAN 3056B
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	70 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

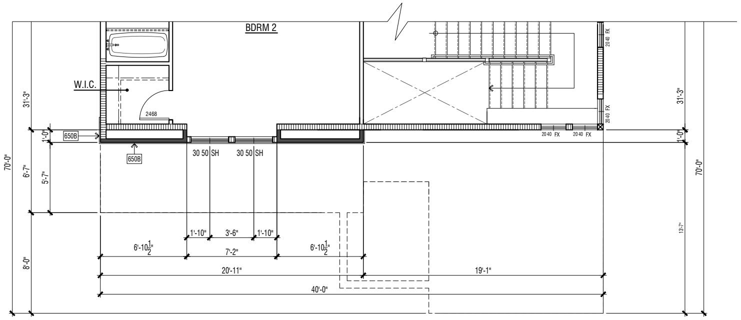
STANDARD BASE PLAN

FLOOR AREA TABLE	PLAN 3056B
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	70 SQ. FT.

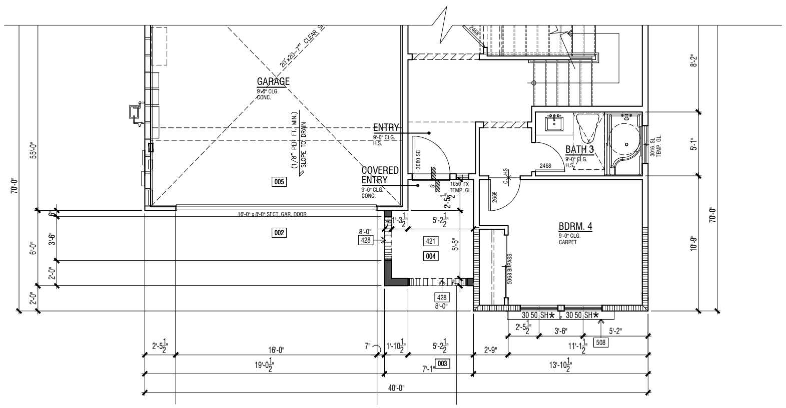
NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
421	STUCCO CEILING: HEIGHT PER PLAN
425	WOOD SOFFIT: HEIGHT PER PLAN
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
446	+42" GUARD (SEE DETAIL 11/D4)
514	WATERPROOFED STONE VENEER SHELF - SLOPE 1/4" PER FOOT
521	STUCCO - INSTALL PER MANUFACTURER'S LISTING BY: OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568



PARTIAL UPPER FLOOR PLAN 3056C - PROGRESSIVE NAPA



PARTIAL LOWER FLOOR PLAN 3056C - PROGRESSIVE NAPA

BATHROOM #4 OPTION INCLUDED OR PRIMARY BDRM #2 W/BATH 4a INCLUDED

BATHROOM #4 OPTION INCLUDED

FLOOR AREA TABLE	PLAN 3056C
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	55 SQ. FT.

STANDARD BASE PLAN

FLOOR AREA TABLE	PLAN 3056C
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	55 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ADDENDA FLOOR PLAN NOTES

NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

REFER TO BASE PLAN SHEET A1.1.1 & A1.1.2 FOR ADDITIONAL NOTES AND DIMENSIONS.

ADDENDA FLOOR PLAN NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
401	INTERIOR SOFFIT(S)/DROPPED CEILING(S): HEIGHT PER PLAN
421	STUCCO CEILING: HEIGHT PER PLAN
428	ARCHED STUCCO SOFFIT: HEIGHT PER PLAN
441	GYP. BD. SHELF/LOW WALL - WIDTH AND HEIGHT PER PLAN
479	GYP. BD. SEAT - WIDTH AND HEIGHT PER PLAN
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT

SCALE: 1/4" = 1'-0"

'B' MODERN - 'C' PROGRESSIVE NAPA

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XXXX2' Lots)

PLAN 3056
REGENT PARK at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

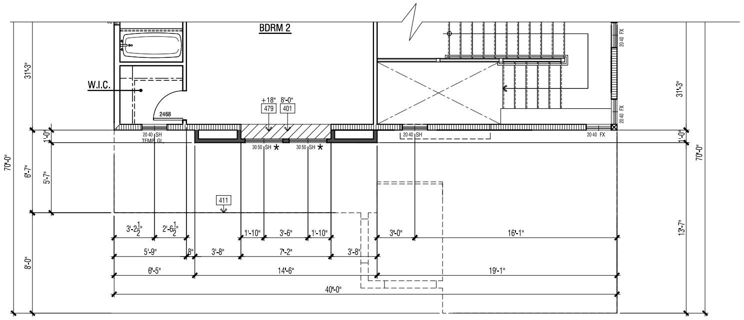
PLAN 3056B & C
ADDENDA FLOOR PLANS

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

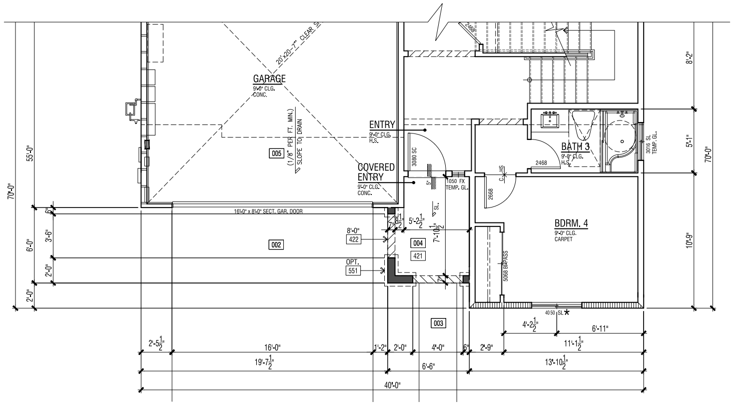
DATE:
04-03-23

A1.1.3

2023011- PROGRESS SET 04-03-2023



PARTIAL UPPER FLOOR PLAN 3056D - COTTAGE



PARTIAL LOWER FLOOR PLAN 3056D - COTTAGE

BATHROOM #4 OPTION INCLUDED OR PRIMARY
BDRM #2 W/BATH 4a INCLUDED

BATHROOM #4 OPTION INCLUDED

FLOOR AREA TABLE	PLAN 3056D
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

STANDARD BASE PLAN

FLOOR AREA TABLE	PLAN 3056D
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

ADDENDA FLOOR PLAN NOTES

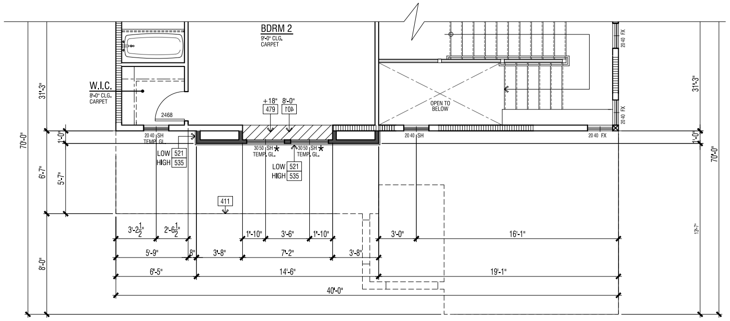
NOTE: SHADED WALLS INDICATE AREAS THAT ARE DIFFERENT THAN THE BASE FLOOR PLAN

NOTE: REFER TO CIVIL AND LANDSCAPE DRAWINGS BY OTHERS FOR ALL DRIVEWAYS AND SIDEWALK LOCATIONS.

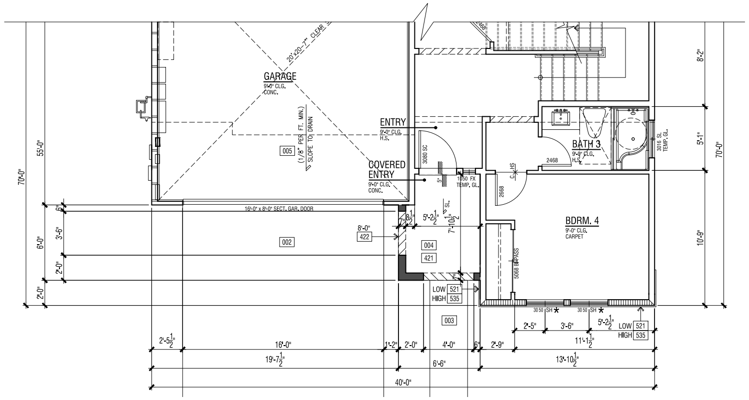
REFER TO BASE PLAN SHEET A1.1.1 & A1.1.2 FOR ADDITIONAL NOTES AND DIMENSIONS.

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
401	INTERIOR SOFFIT(S)/DROPPED CEILING(S): HEIGHT PER PLAN
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
479	GYP. BD. SEAT - WIDTH AND HEIGHT PER PLAN
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT



PARTIAL UPPER FLOOR PLAN 3056E
PROGRESSIVE FARMHOUSE



PARTIAL LOWER FLOOR PLAN 3056E
PROGRESSIVE FARMHOUSE

STANDARD BASE PLAN

FLOOR AREA TABLE	PLAN 3056E
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

BATHROOM #4 OPTION INCLUDED OR PRIMARY
BDRM #2 W/BATH 4a INCLUDED

BATHROOM #4 OPTION INCLUDED

FLOOR AREA TABLE	PLAN 3056E
LOWER FLOOR PLAN	1811 SQ. FT.
UPPER FLOOR PLAN	1245 SQ. FT.
TOTAL	3056 SQ. FT.
GARAGE	474 SQ. FT.
CALIFORNIA ROOM	117 SQ. FT.
COVERED ENTRY/PORCH	52 SQ. FT.

FLOOR PLAN KEY NOTES

Name	NOTE
002	CONCRETE DRIVE (BY OTHERS)
003	CONCRETE WALK (BY OTHERS)
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
005	CONCRETE GARAGE SLAB - SLOPE ⅛" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
401	INTERIOR SOFFIT(S)/DROPPED CEILING(S): HEIGHT PER PLAN
421	STUCCO CEILING: HEIGHT PER PLAN
422	STUCCO SOFFIT: HEIGHT PER PLAN
479	GYP. BD. SEAT - WIDTH AND HEIGHT PER PLAN
521	STUCCO - INSTALL PER MANUFACTURER'S LISTING BY: OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC-ES ESR-1194 - STUCCO TYPE I OR 11 PORTLAND CEMENT
535	CEMENTITOUS VERTICAL PANEL OVER 2 LAYERS BUILDING PAPER OVER 1/2" PLYWOOD SHEATHING OVER EPS FOAM BOARD OVER BUILDING PAPER. NOTE: EPS FOAM BOARD MAY BE OMITTED AT NON HABITABLE SPACES PROVIDED THE WALL PLANES OUT
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'XX2' Lots)

PLAN 3056
REGENT PARK at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

'D' COTTAGE - 'E' PROGRESSIVE FARMHOUSE

PLAN 3056D & E
ADDENDA FLOOR PLANS

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
04-03-23

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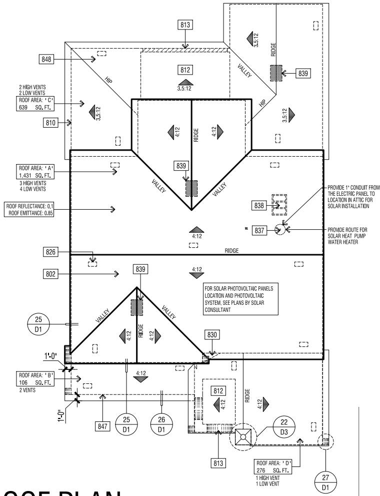
2023011- PROGRESS SET 04-03-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: A   ELEVATION STYLE: CONTEMPORARY SPANISH

ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
LOW PROFILE CONCRETE ' S ' TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1	2x6	NONE	1'-0"	TIGHT

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
    - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
    - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

4\. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)

5\. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.

6\. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.

7\. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

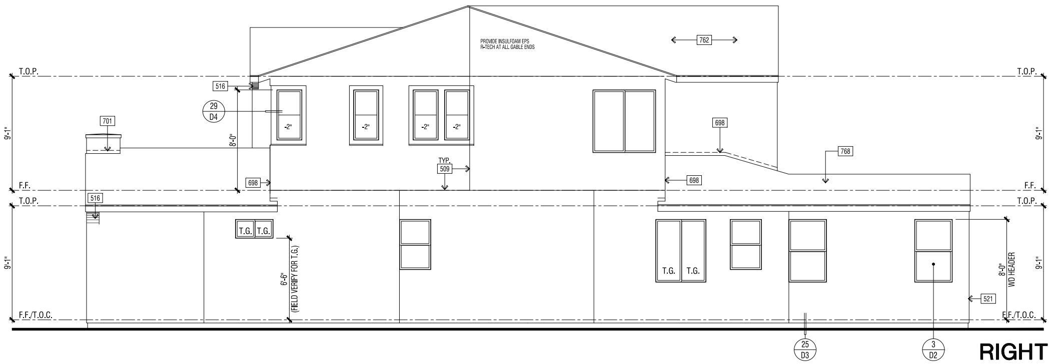
SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

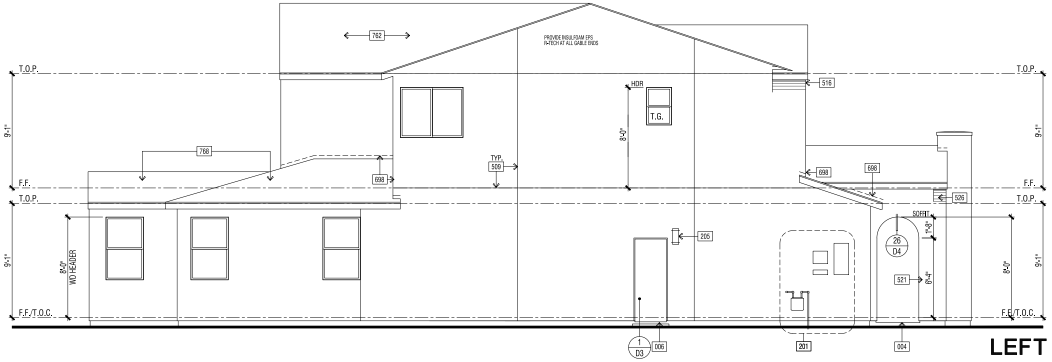
NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
802	CLASS 'A' ROOFING - CONCRETE - 'S' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
830	G.I. METAL CRICKET - SLOPE 1/4" PER FOOT MINIMUM
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES
	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.



RIGHT



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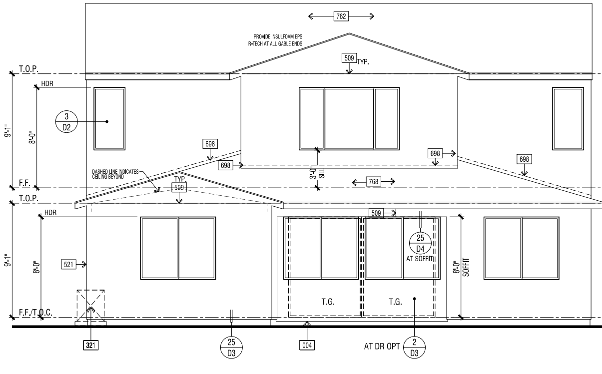
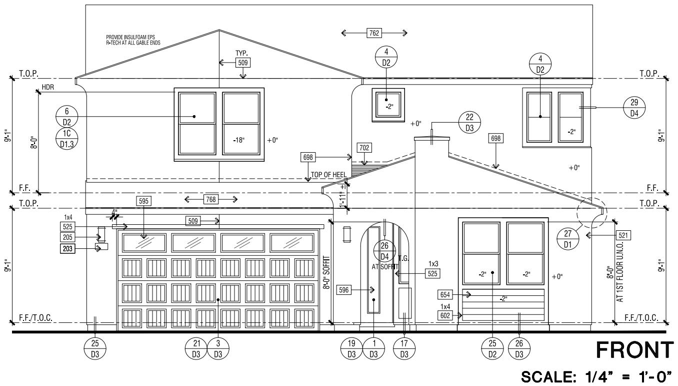


REAR



FRONT

SCALE: 1/4" = 1'-0"

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING (U.N.O.)- SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 30/D4
516	DECORATIVE EAVE FOAM ACCENT PER DETAIL
521	OMEGA DIAMOND WALL ONE COAT (R4) ICC-ES ESR-1194 STUCCO TYPE I OR 11 PORTLAND CEMENT. INSTALL PER MANUFACTURER'S LISTING
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
595	TEMPERED GLASS WINDOWS AT GARAGE DOOR
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANELS
602	WOOD TRIM(S) - SIZE PER ELEVATION
654	FIBER CEMENT SHIPLAP PANELING 5/8" THICK (OR EQUIVALENT). FINISH: SMOOTH TEXTURE. EXPOSURE 7" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
702	G.I. METAL CRICKET - SLOPE 1'4" PER FOOT MINIMUM
762	EAGLE ROOFING ICC# ESR 1900, CLASS 'A', 9 PSF - CONCRETE LOW PROFILE 'S' TILE
768	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'XX2' Lots)

PLAN 3056
REGENT PARK at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

CONTEMPORARY SPANISH

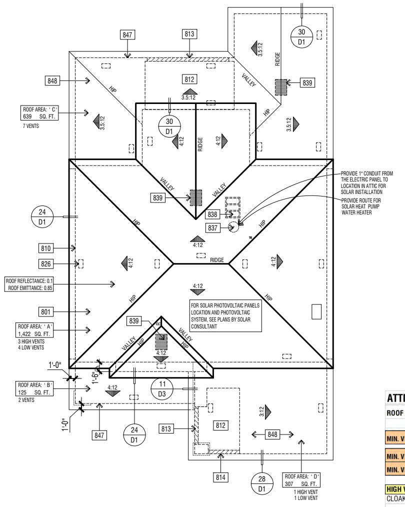
PLAN 3020A
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	XX-XX-XX
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
04-03-23

A1.4

2023011- PROGRESS SET 04-03-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: B		ELEVATION STYLE: MODERN			
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1 / D1.1	2x8	2x8	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

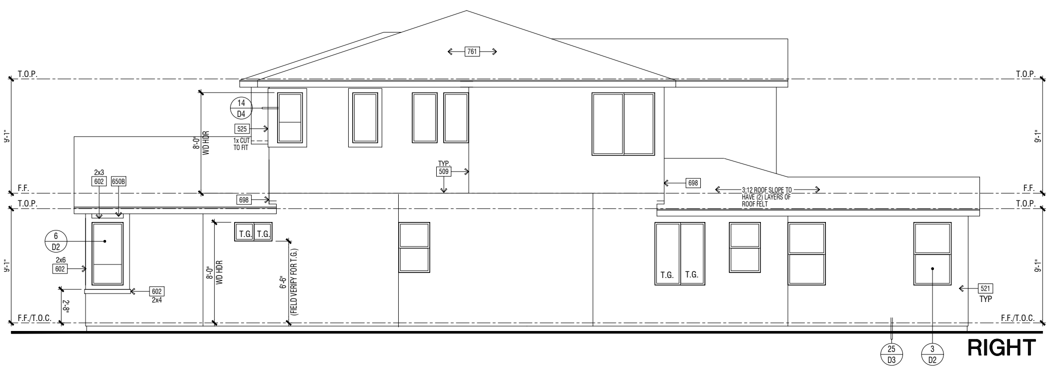
ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
814	WOOD SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES
848	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ATTIC VENTILATION CALCULATIONS

PLAN 3056B

ROOF ATTIC AREA	A	1422	SQ. FT.		CALCULATION FACTOR:	1/300	
		204768	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	684	SQ. IN		TOTAL PROVIDED:	693	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	342	SQ. IN		TOTAL HIGH PROVII	297	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	342	SQ. IN		TOTAL LOW PROVII	396	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	3	297	SQ. IN
					TOTAL PROVIDED:	297	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC. FLAT TILE	-	99	SQ. IN	X	4	396	SQ. IN
					TOTAL PROVIDED:	396	SQ. IN
ROOF ATTIC AREA	B	125	SQ. FT.		CALCULATION FACTOR:	1/150	
		18000	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	120	SQ. IN		TOTAL PROVIDED:	198	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	2	198	SQ. IN
					TOTAL PROVIDED:	198	SQ. IN
ROOF ATTIC AREA	C	639	SQ. FT.		CALCULATION FACTOR:	1/150	
		92016	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	613	SQ. IN		TOTAL PROVIDED:	693	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	7	693	SQ. IN
					TOTAL PROVIDED:	693	SQ. IN
ROOF ATTIC AREA	D	307	SQ. FT.		CALCULATION FACTOR:	1/300	
		44208	SQ. IN				
MIN. VENTILATION REQUIRED:	TOTAL	148	SQ. IN		TOTAL PROVIDED:	198	SQ. IN
MIN. VENTILATION REQUIRED:	HIGH	74	SQ. IN		TOTAL HIGH PROVII	99	SQ. IN
MIN. VENTILATION REQUIRED:	LOW	74	SQ. IN		TOTAL LOW PROVII	99	SQ. IN
HIGH VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1	99	SQ. IN
					TOTAL PROVIDED:	99	SQ. IN
LOW VENTILATION METHOD	SIZE	FREE AREA			QUANTITY	FREE VENT AREA	
CLOAKED VENT - CONC.FLAT TILE	-	99	SQ. IN	X	1	99	SQ. IN
					TOTAL PROVIDED:	99	SQ. IN



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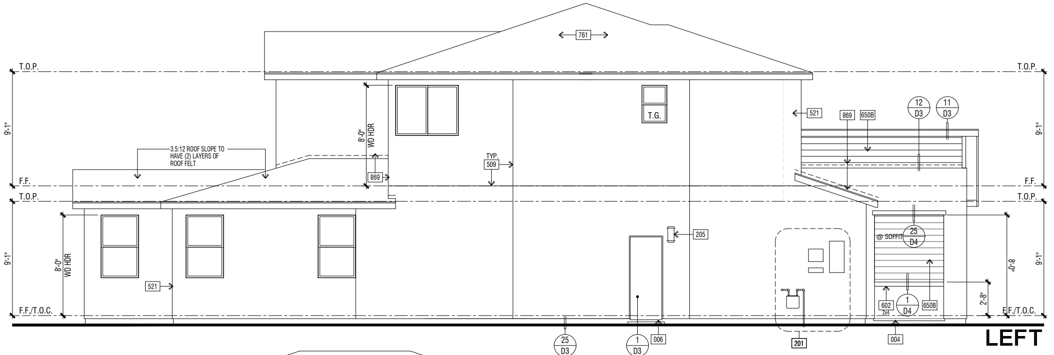

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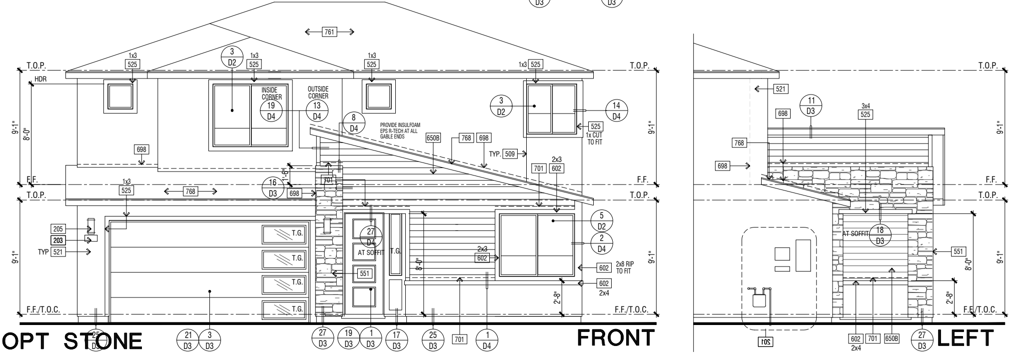
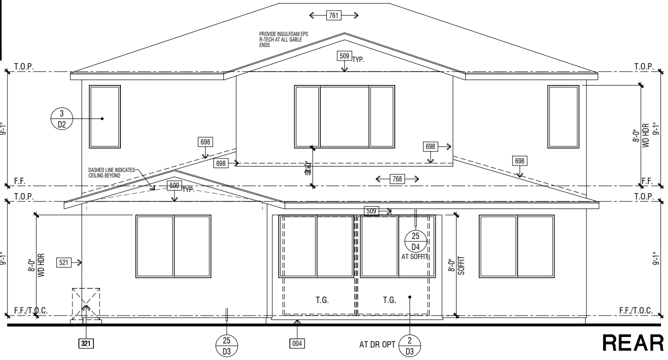


ELEVATIONS W/OPT STONE

FRONT

LEFT



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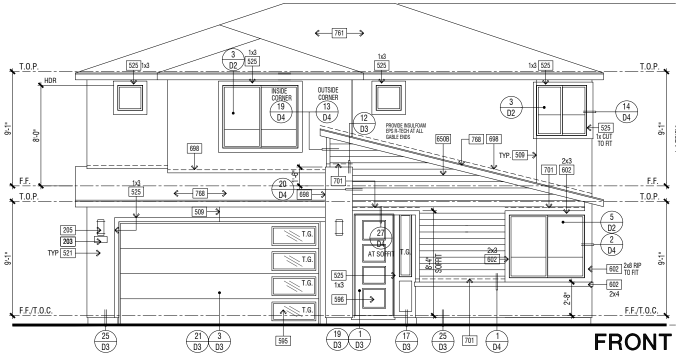


FRONT

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) SLOPE 1/4" PER FOOT MINIMUM IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
509	STUCCO CONTROL JOINT - SEE DETAIL 30/D4
521	STUCCO - INSTALL PER MANUFACTURER'S LISTING BY: OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC-ES ESR-1194 - STUCCO TYPE I OR 11 PORTLAND CEMENT
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE - BY EAGLE ROOFING ICC# ESR 1900
768	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

MODERN SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

WILSON HOMES

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XXXX2' Lots)

PLAN 3056
REGENT PARK at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

DO NOT SCALE PLANS

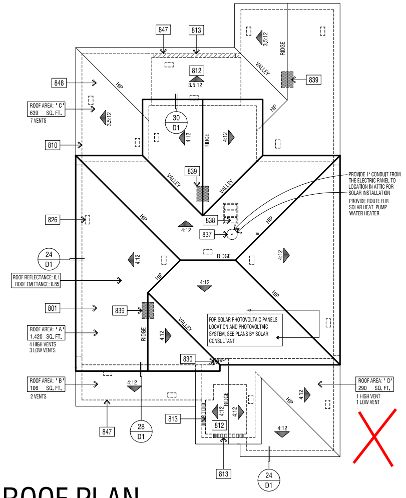
REVISIONS

NO.	DATE	DESCRIPTION

PLAN 3056B
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	
DATE: 04-03-23	A1.5

2023011- PROGRESS SET 04-03-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	C	ELEVATION STYLE:	PROGRESSIVE NAPA		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	OVERHANG DIM. - U.N.O. RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	1/D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

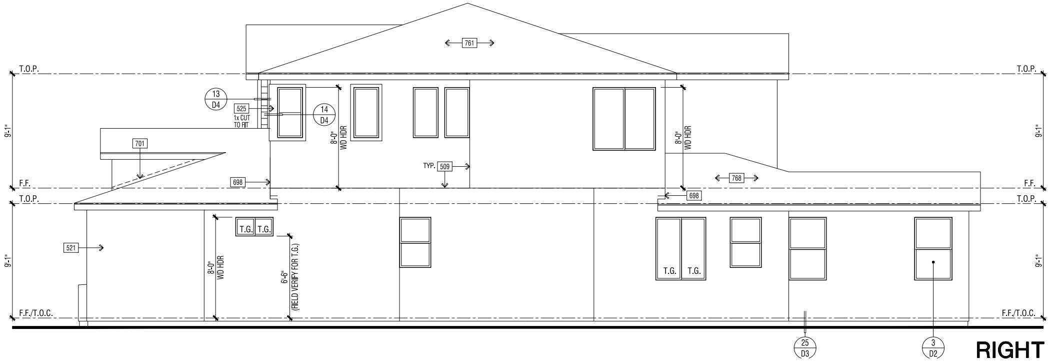
SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. REFER TO SOLAR CONSULTANT PLANS UNDER SEPARATE SUBMITTAL FOR SOLAR PHOTOVOLTAIC POWER SYSTEM DESIGN, PANEL LOCATIONS AND SIZES, AND ALL OTHER DESIGN REQUIREMENTS.

NOTE THAT NO MECHANICAL,PLUMBING EXHAUST VENTS, ROOF ATTIC VENTS WILL BE PERMITTED WITHIN THE SOLAR ZONE AREA. WHERE APPLICABLE, CONSIDERATION AND COORDINATION WITH SOLAR PANEL LOCATIONS SHOULD BE TAKEN INTO ACCOUNT WHEN PLACING THE DRYER VENT TERMINATION. REF CA ENERGY CODE SECTION 110.10 AND CBC SECTION 3111.2.1

ROOF PLAN KEY NOTES

Name	NOTE
801	CLASS 'A' ROOFING - CONCRETE - 'FLAT' TILE - BY EAGLE ROOFING ICC# ESR 1900
810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
826	ROOF VENT - O'HAGIN "XL SERIES" CLOAKED VENT (ICC # NER-9650A)
830	G.I. METAL CRICKET - SLOPE 1/4" PER FOOT MINIMUM
837	PROVIDE 1" CONDUIT FROM THE ELECTRIC PANEL TO LOCATION IN ATTIC FOR PV SOLAR INSTALLATION. PROVIDE ROUTE FOR SOLAR HEAT PUMP WATER HEATER
838	PHOTOVOLATIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES
848	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.



RIGHT

ELEVATION KEY NOTES

Name	NOTE
004	CONCRETE PORCH SLAB (BY OTHERS) - SLOPE 1/4" PER FOOT MINIMUM (2% SLOPE) TO DRAIN IN THE DIRECTION INDICATED. REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR FURTHER INFORMATION
006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING (U.N.O.)- SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
321	AIR CONDITIONING CONDENSER LOCATION
508	WATERPROOFED STUCCO SHELF - SLOPE 1/4" PER FOOT
509	STUCCO CONTROL JOINT - SEE DETAIL 30/D4
515	STUCCO NICHE. SIZE PER ELEVATION - SLOPE SILL ¼" PER FT. MINIMUM
521	STUCCO - INSTALL PER MANUFACTURER'S LISTING BY: OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC-ES ESR-1194 - STUCCO TYPE I OR 11 PORTLAND CEMENT
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
602	WOOD TRIM(S) - SIZE PER ELEVATION
650B	FIBER CEMENT LAP SIDING - 5/16" THICK 'HARDIPLANK' (OR EQUIVALENT. FINISH: SELECT CEDARMILL. EXPOSURE: 6" (INSTALLATION PER MANUFACTURER'S INSTRUCTIONS)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
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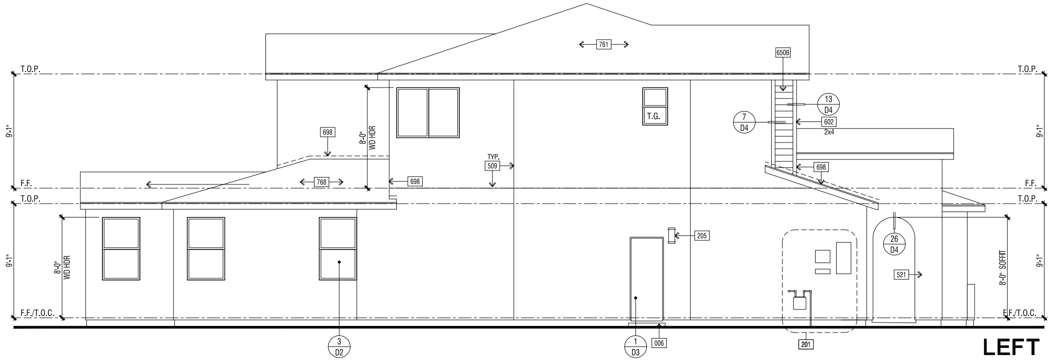
761	ROOFING - CONCRETE - FLAT TILE - BY EAGLE ROOFING ICC# ESR 1900
768	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.
830	G.I. METAL CRICKET - SLOPE 1/4" PER FOOT MIN.

ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.



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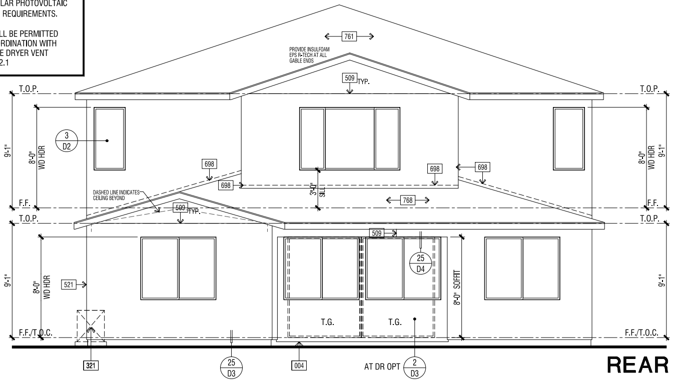

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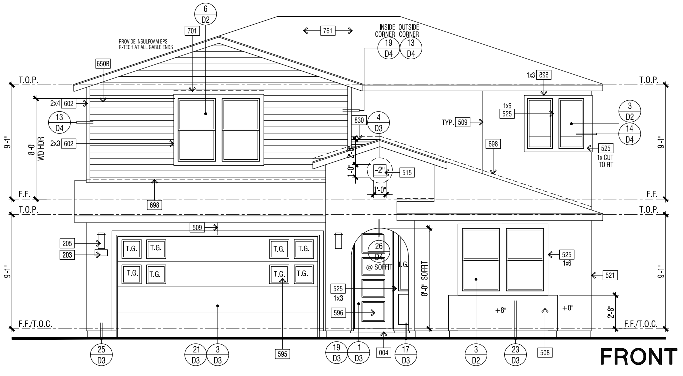


FRONT

SCALE: 1/4" = 1'-0"

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

PLAN 3056
REGENT PARK at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'XX2' Lots)

REVISIONS

NO.	DATE	DESCRIPTION

PROGRESSIVE NAPA

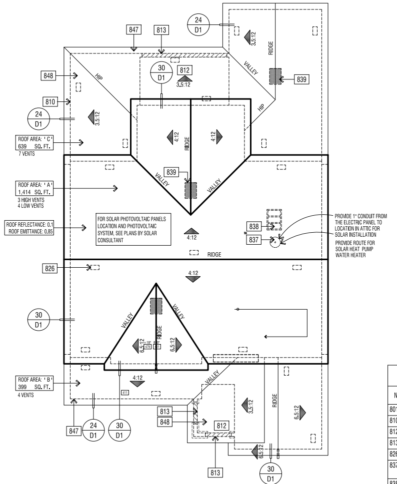
PLAN 3056C
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	XX-XX-XX
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
04-03-23

A1.6

2023011- PROGRESS SET 04-03-2023



ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE:	D	ELEVATION STYLE:	COTTAGE		
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	3 / D1.1	2x6	2x6	1'-0"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
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4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
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7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

SOLAR PHOTOVOLTAIC SYSTEMS

1. SOLAR PHOTOVOLTAIC POWER SYSTEMS SHALL BE PROVIDED IN ACCORDANCE WITH CEnC. SECTION 150.1(b)1. INSTALLATION PER CRC SECTION 324.3 THROUGH R324.8 AND THE CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
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ROOF PLAN KEY NOTES

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810	LINE OF WALL BELOW
812	STUCCO CEILING
813	STUCCO SOFFIT
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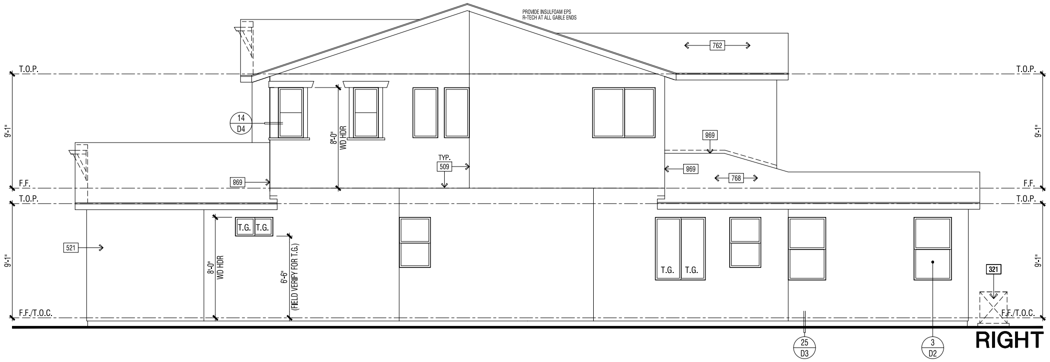
838	PHOTOVOLATIC SOLAR ARRAY
839	MIN. 22"x30" OPENING IN CALIFORNIA ROOF FRAMING CONDITIONS FOR ATTIC ACCESS AND CROSS VENTILATION - CONTRACTOR TO VERIFY AIRFLOW TO ALL ATTIC AREAS
847	PROVIDE NON-COMBUSTIBLE FIREBLOCKING (10 FEET ON CENTER) AT CONCEALED SPACE AT EAVES
848	NOTE: LESS THAN 4:12 ROOF SLOPE TO HAVE (2) LAYERS OF ROOF FELT APPLIED SHINGLE FASHION - TYP.



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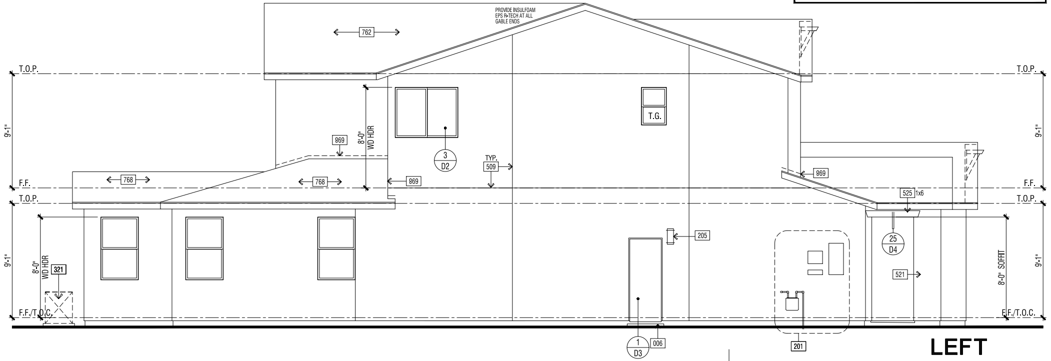

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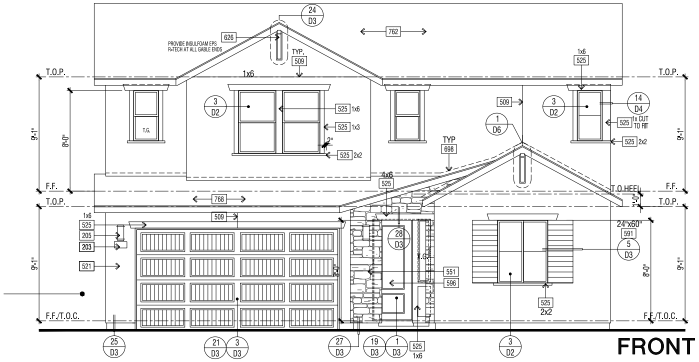
ELEVATIONS WITH OPT STONE



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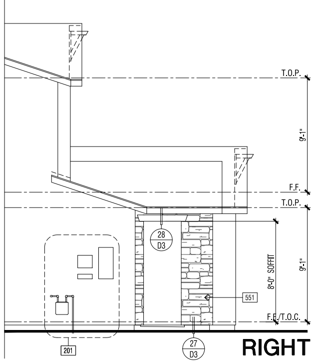

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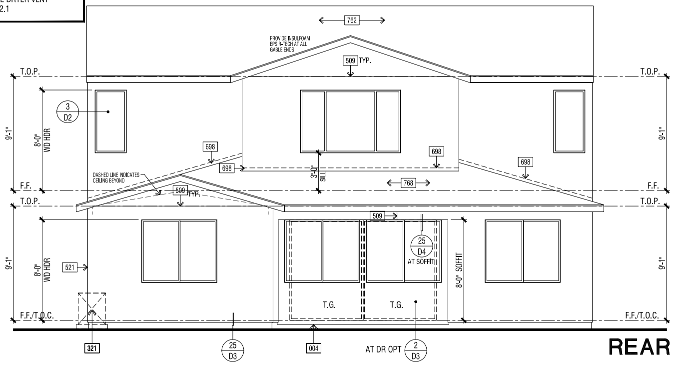

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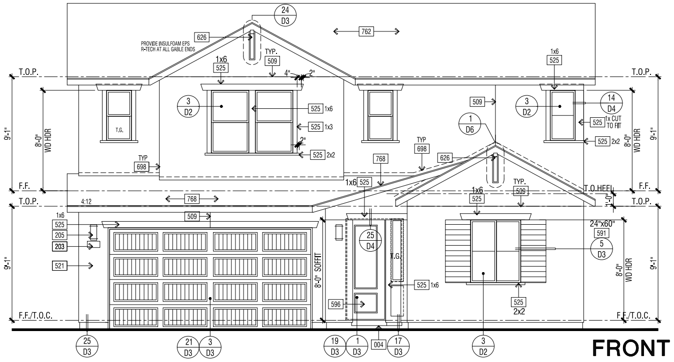

FRONT

ELEVATION KEY NOTES

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006	CONCRETE STOOP - 36" DEEP AND 2" WIDER THAN THE DOOR OPENING (U.N.O.)- SLOPE 1/4" PER FOOT MINIMUM TO DRAIN IN DIRECTION INDICATED
201	UTILITY EQUIPMENT AND SERVICE PANELS - VERIFY LOCATION
203	ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.
205	ACCENT EXTERIOR WALL LIGHT
321	AIR CONDITIONING CONDENSER LOCATION
509	STUCCO CONTROL JOINT - SEE DETAIL 30/D4
521	STUCCO - INSTALL PER MANUFACTURER'S LISTING BY: OMEGA DIAMOND WALL ONE COAT STUCCO (R4) ICC-ES ESR-1194 - STUCCO TYPE I OR 11 PORTLAND CEMENT
525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
551	MANUFACTURED ADHERED STUCCO STONE VENEER - INSTALL PER MANUFACTURER'S INSTRUCTIONS. BY 'EL DORADO STONE' ICC-ES ER-3568. ADHERED MASONRY VENEER REQUIREMENTS PER CRC SECTION R703.12
591	DECORATIVE SHUTTER (SIZE AND STYLE PER ELEVATION) SEE DETAIL 17/D6
626	OUTLOOKER ASSEMBLY - WOOD (SIZE PER ELEVATION)
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
701	G.I. FLASHING
761	ROOFING - CONCRETE - FLAT TILE - BY EAGLE ROOFING ICC# ESR 1900
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ANY OPERABLE WINDOW WITH A SILL THAT IS LOCATED LESS THAN 24" ABOVE FINISHED FLOOR AND MORE THAN 72" ABOVE FINISHED GRADE OR OTHER SURFACE BELOW AT THE EXTERIOR, MUST BE PROTECTED BY A GUARD OR, HAVE A FIXED GLASS. THE GUARD MAY NOT HAVE OPENINGS THAT A SPHERE 4" IN DIAMETER CAN PASS THROUGH. 2022 CBC 1405.13.2

NOTE: WATER-RESISTIVE BARRIER APPLIED OVER WOOD-BASE SHEATHING SHALL HAVE 2 LAYERS OF GRADE 'D' PAPER APPLIED SHINGLE FASHION. 2022 CRC R703.7.3

FINISHED GRADE VARIES. SEE CIVIL ENGINEERS PLANS FOR FINAL GRADE AND SITE DRAINAGE.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'XX2' Lots)

PLAN 3056
REGENT PARK at CLOVIS
CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

COTTAGE SCALE: 1/4" = 1'-0"

PLAN 3056D
EXTERIOR ELEVATIONS
& ROOF PLAN

PROJECT MANAGER :	CC
DESIGNER :	-
DRAWN BY :	MH
REVIEWED BY :	WHA CC
1ST BLDG. DEPT. SUBMITTAL :	XX-XX-XX
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	
CAD FILE NAME :	

DATE:
04-03-23

A1.7

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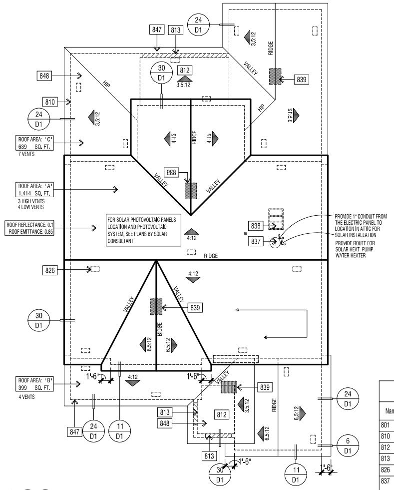

ROOF PLAN

SCALE: 1/8" = 1'-0"

ELEVATION REFERENCE: E	ELEVATION STYLE: PROGRESSIVE FARMHOUSE				
ROOF MATERIAL	STANDARD ROOF DETAIL U.N.O.	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O.	
				EAVE	RAKE
CONCRETE FLAT TILE "EAGLE ROOFING" ICC# ESR-1900	3/D1.1	2x6	2x6	1'-0" 1'-6"	1'-0"

ROOF PLAN NOTES

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ATTIC ACCESS PER CRC SECTION R807.
4. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:
   - IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING
   - NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION OF MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OF HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.
4. CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 ½:12 OR GREATER. FOR ROOF SLOPES FROM 2 ½: 12 TO 4:12, DOUBLE UNDERLAYMENT APPLICATION AS REQUIRED IN ACCORDANCE WITH R905.3.3. (R905.3.2 CRC)
5. WOOD BATTENS ARE REQUIRED ON CONCRETE AND CLAY TILE ROOFS WHERE SLOPES EXCEED 7:12 PER TILE ROOFING INSTITUTE INSTALLATION MANUAL.
6. WHEN ROOF WITH DIFFERENT PITCHES INTERSECT, THE FRAMER OR TRUSS MANUFACTURER MUST ADD A HEEL TO THE STEEPER PITCH TO ALIGN WITH THE EAVE OF THE LOWER PITCH.
7. ROOF SHALL HAVE MIN. AGED SOLAR REFLECTANCE OF 0.20, MIN. THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 16 FOR STEEPED-SLOPED ROOFS. FOR LOW-SLOPED ROOFS, ROOF SHALL HAVE A MIN. AGED SOLAR REFLECTANCE OF 0.63 THERMAL EMITTANCE OF 0.75, OR AGED SOLAR REFLECTANCE INDEX (SRI) OF 75 OR MORE PER CEnC150.2(B)1I

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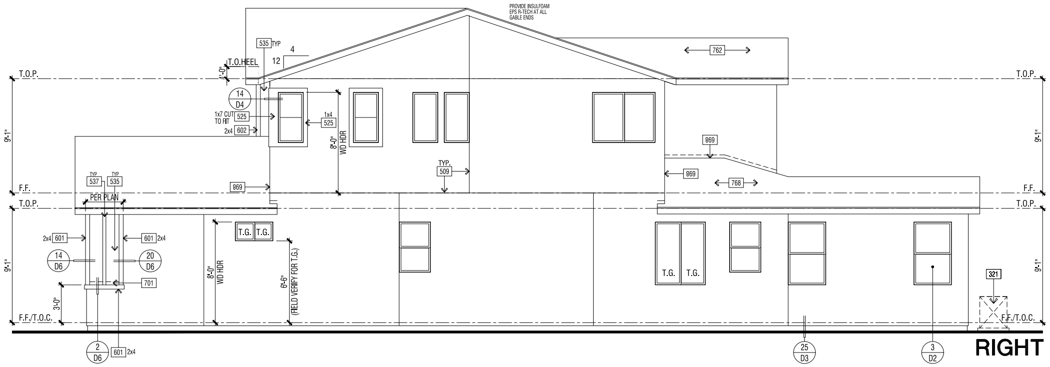

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525	STUCCO OVER RIGID FOAM TRIM - FOAM SHAPE PER ELEVATION
535	CEMENTITOUS VERTICAL PANEL OVER 2 LAYERS BUILDING PAPER OVER 1/2" PLYWOOD SHEATHING OVER EPS FOAM BOARD OVER BUILDING PAPER. NOTE: EPS FOAM BOARD MAY BE OMITTED AT NON HABITABLE SPACES PROVIDED THE WALL PLANES OUT
537	1x3 WOD BATTS AT 16" O.C.
596	FRONT DOOR WITH TEMPERED OBSCURE GLASS PANEL
602	WOOD TRIM - SIZE PER ELEVATION
698	G.I. FLASHING AND COUNTER-FLASHING AT RAKE WALLS AND ROOF TO WALL CONNECTIONS
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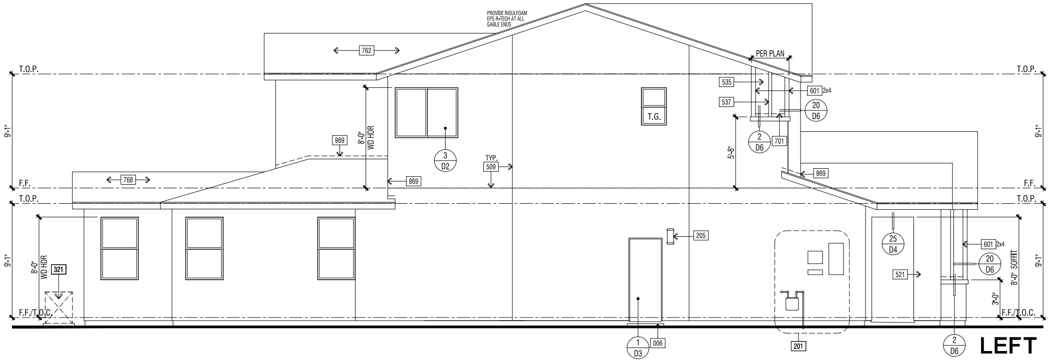


LEFT

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

TRACT NUMBER: 6205
PROJECT TYPE: S.F.D. (XX'XX2' Lots)

PLAN 3056
REGENT PARK at CLOVIS

CLOVIS, CALIFORNIA

WILSON HOMES
FRESNO, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

PLAN 3056E
EXTERIOR ELEVATIONS
& ROOF PLAN

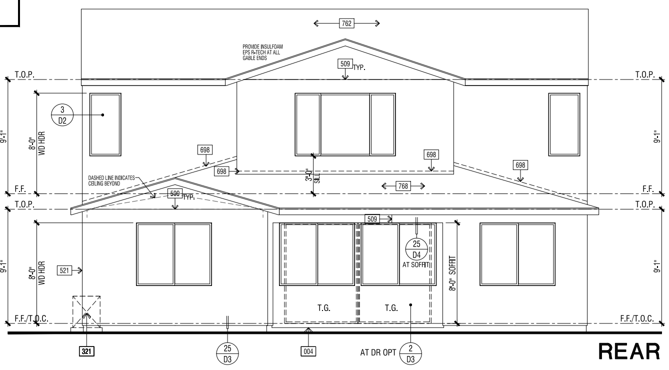
PROJECT MANAGER : CC
DESIGNER : -
DRAWN BY : MH
REVIEWED BY : WHA CC
1ST BLDG. DEPT. SUBMITTAL : XX-XX-XX
ISSUED FOR CONSTRUCTION :
JOB NUMBER :
CAD FILE NAME :

DATE:
04-03-23

A1.8

'E' PROGRESSIVE FARMHOUSE
SCALE: 1/4" = 1'-0"

2023011- PROGRESS SET 04-03-2023



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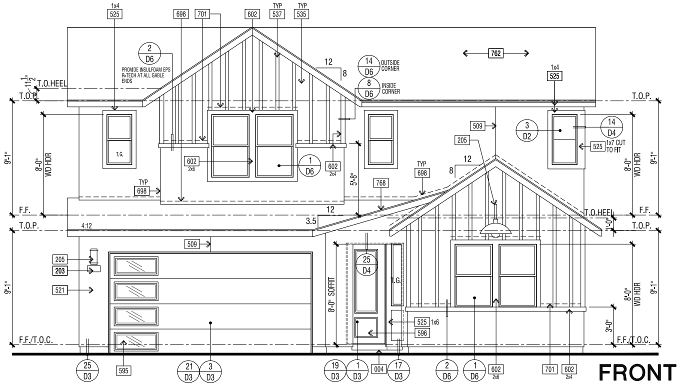
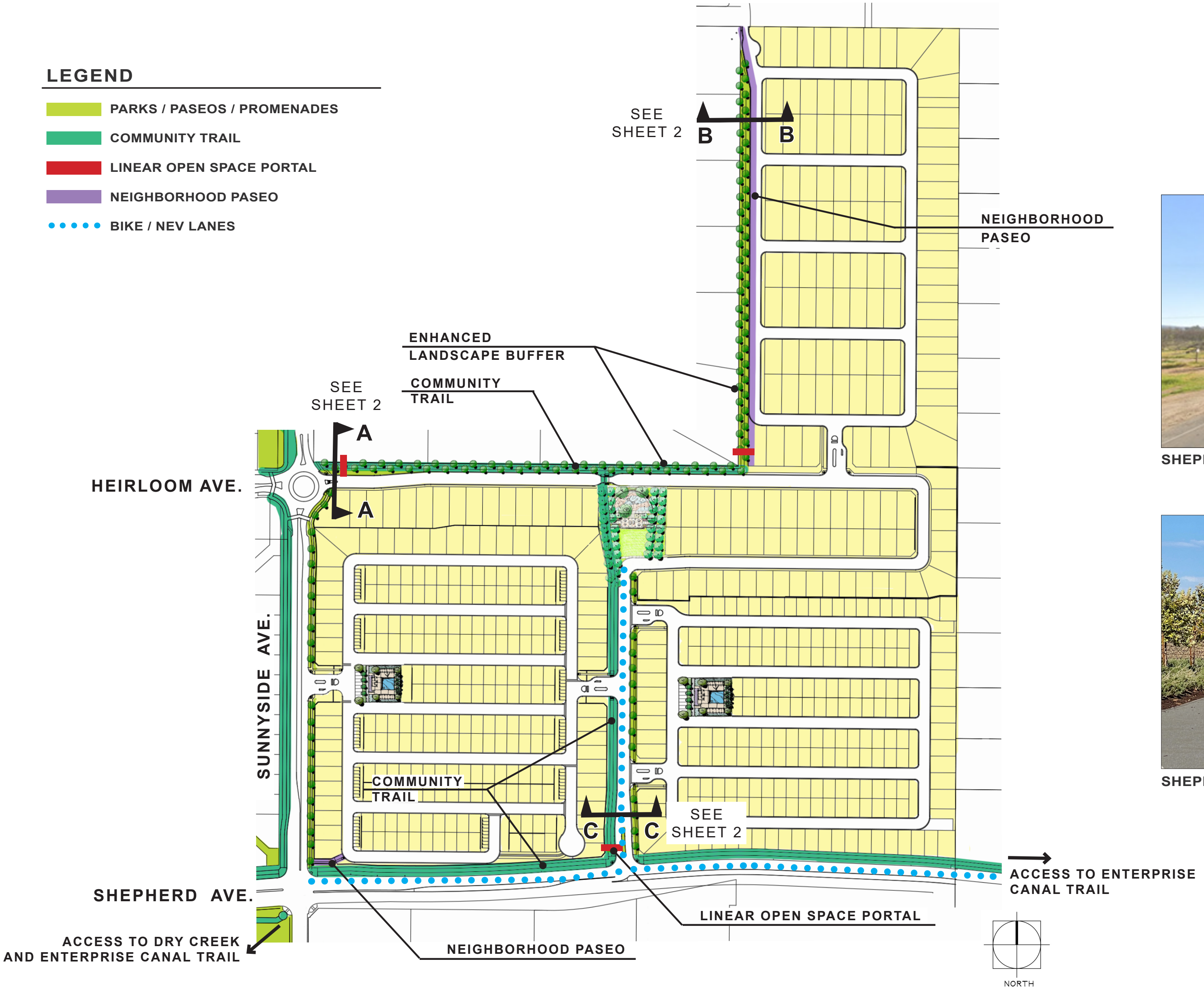


FRONT

AGENDA ITEM NO. 6.

LEGEND

🟩 PARKS / PASEOS / PROMENADES
🟩 COMMUNITY TRAIL
🟥 LINEAR OPEN SPACE PORTAL
🟪 NEIGHBORHOOD PASEO
••••• BIKE / NEV LANES



SHEPHERD AVENUE - BEFORE

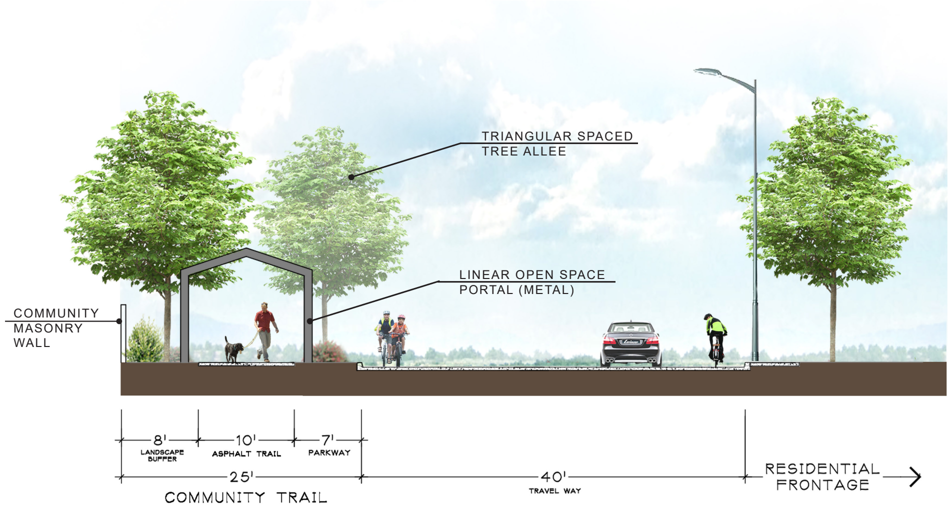
SHEPHERD AVENUE - AFTER

Tract 6205 - Sunnyside and Shepherd
Wilson Homes

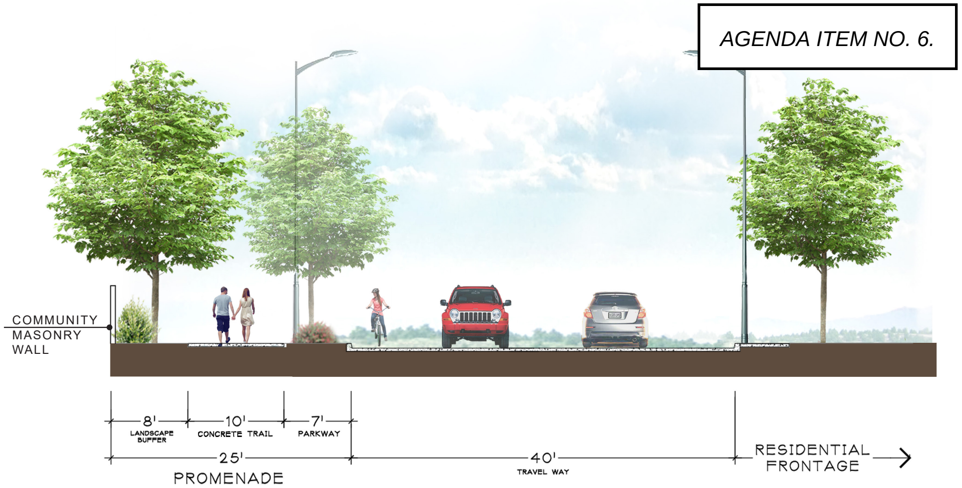
ATTACHMENT 16

SITE PLAN

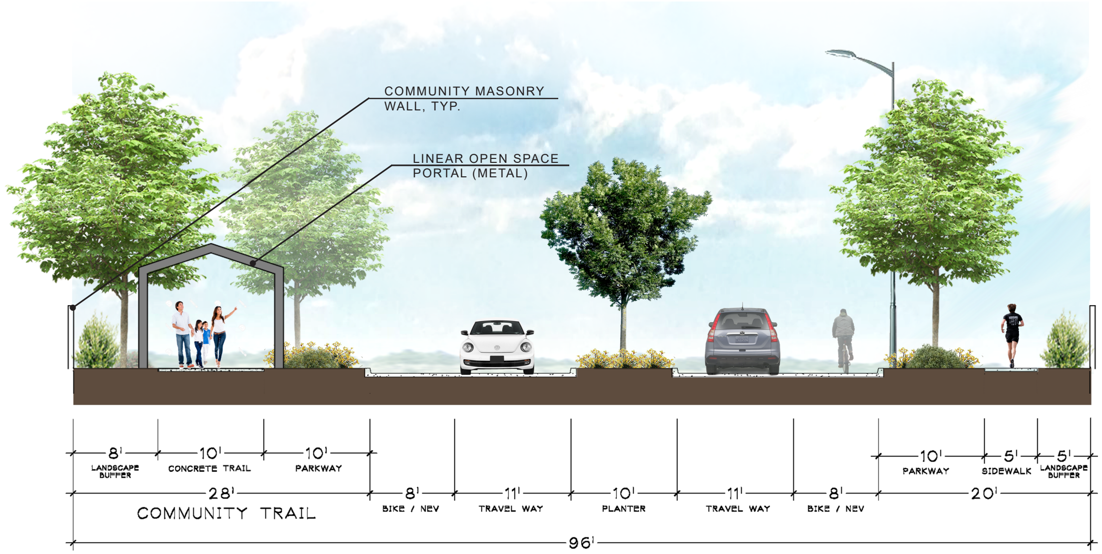
BROUSSARD ASSOCIATES
landscape architects



SECTION A-A



SECTION B-B



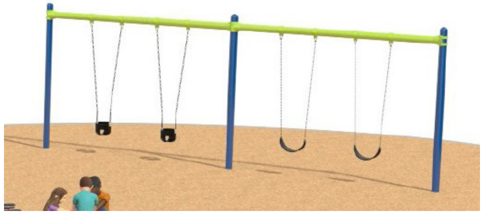
SECTION C-C

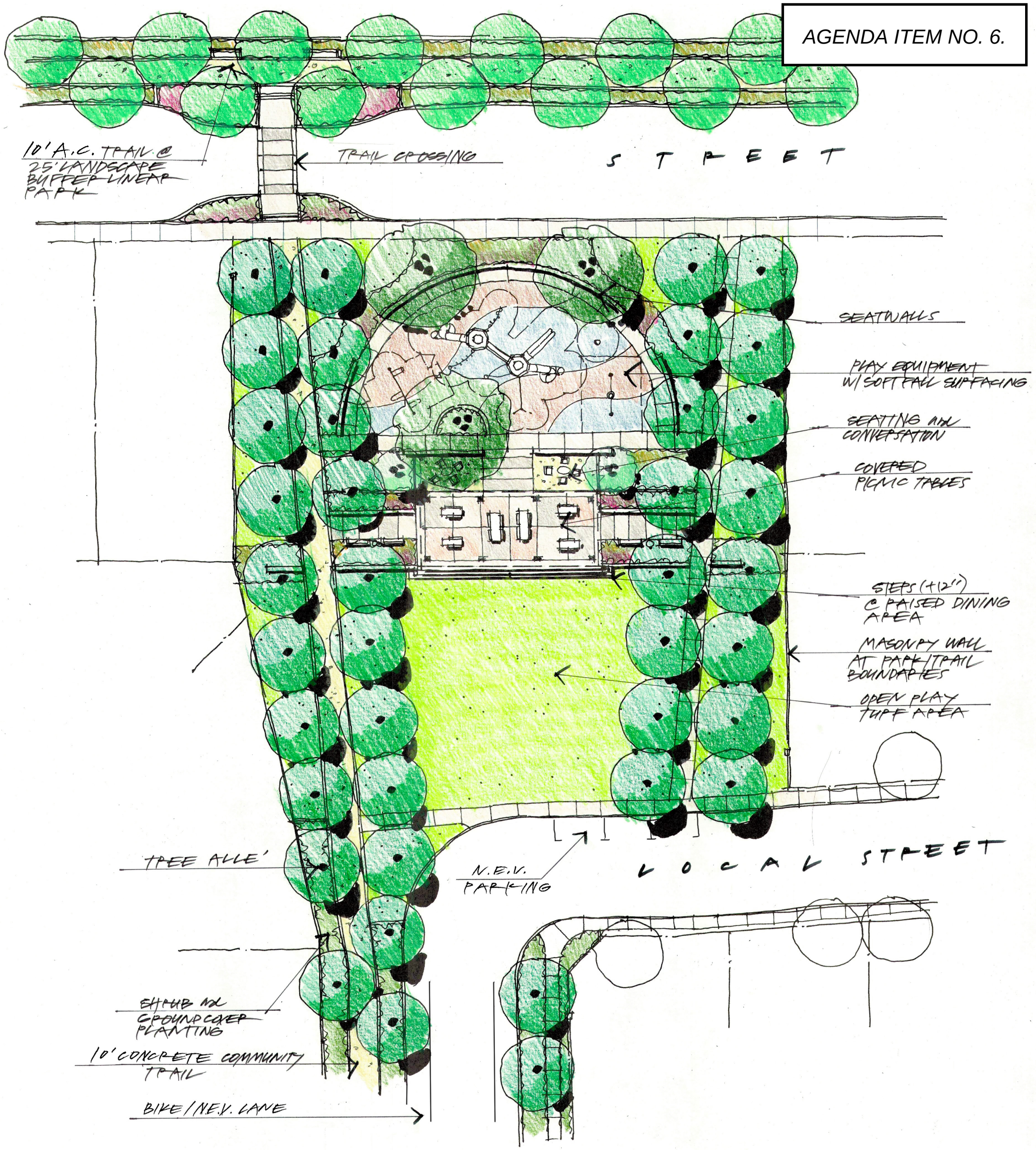
Tract 6205 - Sunnyside and Shepherd
Wilson Homes

LINEAR OPEN SPACE EXHIBIT

BROUSSARD ASSOCIATES
landscape architects

AGENDA ITEM NO. 6.





Tract 6205 - Sunnyside and Shepherd
Wilson Homes

NEIGHBORHOOD PARK CONCEPT

BROUSSARD ASSOCIATES
landscape architects

DRAFT ENVIRONMENTAL IMPACT REPORT

FOR THE

SHEPHERD NORTH PROJECT

Volume I - DEIR

JULY 2023

Prepared for:

City of Clovis | Planning Division
1033 Fifth Street
Clovis, CA 93612
Phone: 559.324.2340

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

ATTACHMENT 17

AGENDA ITEM NO. 6.

DRAFT ENVIRONMENTAL IMPACT REPORT

FOR THE

SHEPHERD NORTH PROJECT

Volume I - DEIR

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Prepared for:

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AGENDA ITEM NO. 6.

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Note: Figures are located at the end of the chapters.

Appendices

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INTRODUCTION

The City of Clovis, as the lead agency, determined that the proposed Shepherd North Project is a "project" within the definition of CEQA. CEQA requires the preparation of an environmental impact report (EIR) prior to approving any project, which may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

The EIR contains a description of the Project, description of the environmental setting, identification of Project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This EIR identifies issues determined to have no impact or a less than significant impact and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the Notice of Preparation (NOP) were considered in preparing the analysis in this EIR.

PROJECT DESCRIPTION

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM).

The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Development Area will accommodate up to 605 residential units. Specifically, the northern portion of the Development Area is planned to include the development of up to 101 single-family residences with lot sizes ranging from approximately 5,400 square feet to 15,900 square feet. The southern portion of the Development Area is planned for smaller lot single-family residences, with lot sizes ranging from approximately 1,980 to 3,800 square feet, and with larger corner lots that are approximately 4,200 to 7,500 square feet.

The proposed Project includes open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south.

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.[1]
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.
    - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR addresses environmental impacts associated with the proposed Project that are known to the City of Clovis, were raised during the NOP process, or raised during preparation of the Draft EIR. This Draft EIR discusses impacts associated with aesthetics, agricultural resources, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gas and climate resources, hazards and hazardous materials, hydrology and water quality, land use, population and housing, noise, public services and recreation, transportation and circulation, and utilities and service systems.

The following are topics of public concern or potential controversy that have become known to the City staff based on public input, known regional issues, and staff observations:

- Agricultural: conversion of farmland, impacts to adjacent farmland;
- Air Quality/Greenhouse Gas Emissions/Energy: construction emissions, operations emissions, health risks, ambient air quality, emissions reduction, vegetation barriers/urban greening, clean lawn/garden equipment, District rules/regulations,
- Biological: Swainson's hawk and other raptors;
- Hazards/Hazardous Materials: Use or storage of hazardous materials and wastes, underground petroleum storage tanks, protection of groundwater, proper destruction of wells and septic tanks, appropriate construction equipment operations and maintenance,
- Hydrology/Water Supply Concerns: well water recharge/groundwater, irrigation, water supply; non-potable water supply, flood control/drainage, impervious surfaces, storm drainage easements;
- Land Use and Planning: Affordable housing;
- Noise: Compliance with the Noise Element, elevated noise levels;

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[1] It should be noted that the term 'Project Area' is used interchangeably with 'Project Site', throughout this EIR.

- Traffic: Need for a traffic study, additional traffic, need for street improvements, need for improvements on internal roads and access to Fowler/Behymer; vehicle miles traveled, intersections Herndon Avenue/Fowler, and SR168/Shepherd Avenue, multimodal transportation, bicycle and pedestrian facilities, public transportation, connectivity between residential and commercial/retail uses, feasible mitigation, EV charging;
- Utilities: Costs of utility expansion, cumulative impacts.

ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require an EIR to describe a reasonable range of alternatives to the Project or to the location of the Project, which would reduce or avoid significant impacts and which could feasibly accomplish the basic objectives of the proposed Project. Three alternatives to the proposed Project were developed based on input from City staff and the technical analysis performed to identify the environmental effects of the proposed Project. The alternatives analyzed in this EIR include the following three alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Mixed Use Alternative:** Under this alternative, the proposed Project would be developed at a higher density for the residential uses, and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium high density residential use, 10 acres would be developed with 195 apartments under the high density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.
- **Reduced Density Alternative:** Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.
- **Reduced Sphere of Influence Alternative:** Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

Alternatives are described in detail in Chapter 5. Table ES-1 provides a comparison of the alternatives using a qualitative matrix that compares each alternative relative to the other Project alternatives.

TABLE ES-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	NO PROJECT (NO BUILD) ALTERNATIVE	INCREASED DENSITY MIXED USE ALTERNATIVE	REDUCED DENSITY ALTERNATIVE	REDUCED SPHERE OF INFLUENCE ALTERNATIVE
Aesthetics and Visual Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Agricultural Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Air Quality	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)

ENVIRONMENTAL ISSUE	NO PROJECT (NO BUILD) ALTERNATIVE	INCREASED DENSITY MIXED USE ALTERNATIVE	REDUCED DENSITY ALTERNATIVE	REDUCED SPHERE OF INFLUENCE ALTERNATIVE
Cultural and Tribal Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Geology and Soils	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Hydrology and Water Quality	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Land Use, Population, and Housing	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Noise	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Public Services and Recreation	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Transportation and Circulation	Less (Best)	Greater (4th Best)	Equal (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT
LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

As Table ES-1 presents a comparison of the alternative Project impacts with those of the proposed Project. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Density Alternative would be the environmentally superior alternative because all environmental issues would have reduced impacts compared to the proposed Project. It is noted that the Reduced Density Alternative does not fully meet all of the Project objectives.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

In accordance with the CEQA Guidelines, this EIR focuses on the significant effects on the environment. The CEQA Guidelines defines a significant effect as a substantial adverse change in the physical conditions which exist in the area affected by the proposed Project. A less than significant effect is one in which there is no long or short-term significant adverse change in environmental conditions. Some impacts are reduced to a less than significant level with the implementation of mitigation measures and/or compliance with regulations.

The environmental impacts of the proposed Project, the impact level of significance prior to mitigation, the proposed mitigation measures and/or adopted policies and standard measures that are already in place to mitigate an impact, and the impact level of significance after mitigation are summarized in Table ES-2.

TABLE ES-2: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
AESTHETICS AND VISUAL RESOURCES			
Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character.	LS	*None required.*	LS
Impact 3.1-2: Project implementation may substantially damage scenic resources within a State Scenic Highway.	LS	*None required.*	LS
Impact 3.1-3: Project implementation may result in light and glare impacts.	LS	*Conditions of Approval will require compliance with the Development Standards for lighting, landscaping, and building design, which would collectively minimize the visual impacts to the greatest extent feasible as the site transitions from agricultural to urban/suburban uses.*	LS
AGRICULTURAL RESOURCES			
Impact 3.2-1: The proposed Project has the potential to result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses.	LS	*None required.*	LS
Impact 3.2-2: The proposed Project has the potential to conflict with existing zoning for agricultural use, or Williamson Act Contracts.	LS	*None required.*	LS
Impact 3.2-3: The proposed Project has the potential to result in conflicts with adjacent agricultural lands or indirectly cause conversion of agricultural lands.	LS	*None required*	LS
AIR QUALITY (This project will comply with all existing regulations, rules, standards, and specifications that are already in place, including from SJVAPCD, CARB, etc.)			

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.3-1: Project operation would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan.	LS	*Conditions of Approval will require compliance with the APCD Rules and regulations, which would collectively minimize the air quality impacts from construction and operation to the greatest extent feasible as the site transitions from agricultural to urban/suburban uses.*	LS
Impact 3.3-2: Proposed Project construction activities would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan.	LS	*Conditions of Approval will require compliance with the APCD Rules and regulations, which would collectively minimize the air quality impacts from construction and operation to the greatest extent feasible as the site transitions from agricultural to urban/suburban uses.*	LS
Impact 3.3-3: The proposed Project would not generate carbon monoxide hotspot impacts.	LS	*None required.*	--
Impact 3.3-4: The proposed Project has the potential for public exposure to toxic air contaminants.	LS	*None required.*	--
Impact 3.3-5: The proposed Project would not cause exposure to other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
BIOLOGICAL RESOURCES			
Impact 3.4-1: The proposed Project has the potential to have a direct or indirect effect on special-status invertebrate species.	LS	*None required.*	--
Impact 3.4-2: The proposed Project has the potential to have direct or indirect effects on special-status reptile and amphibian species.	LS	*None required.*	--
Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species.	PS	***Mitigation Measure 3.4-1****: The Project applicant shall implement the following measure to avoid or minimize impacts on other protected bird species that may occur on the site:* • *Preconstruction surveys for active nests of special-status birds shall be conducted by a qualified biologist in all areas of suitable habitat within 500 feet of project disturbance. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 15 to August 31) in a given area.* • *If any active nests, or behaviors indicating that active nests are present, are observed, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. The size of the buffer shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines, based on these same considerations, that a change in buffer size would not be likely to adversely affect the nest. If buffers are adjusted, monitoring will be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist has determined that the young have fledged or the nest site is otherwise no longer in use.*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.4-4: The proposed Project has the potential to result in direct or indirect effects on special-status mammal species.	PS	***Mitigation Measure 3.4-2**: Prior to grading of each Project Development phase, the Project applicant shall conduct a survey of the area to be graded for bat roosts, and if present, the Project applicant shall implement the following measures to avoid or minimize impacts on special-status bats:* • *If removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31), surveys for active maternity roosts shall be conducted by a qualified biologist. The surveys shall be conducted from dusk until dark.* • *If a special-status bat maternity roost is located, appropriate buffers around the roost sites shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from habitat removal or other project activities. The size of the buffer shall depend on the species, roost location, and specific construction activities to be performed in the vicinity. No project activity shall commence within the buffer areas until the end of the pupping season (August 1) or until a qualified biologist conforms the maternity roost is no longer active.* • *If a non-maternal roost is located, eviction and exclusion techniques shall be conducted as recommended by the qualified biologist. Methods may include opening the roosting area to change the air flow and lighting, installing one-way doors, or other appropriate methods that allow the bats to exit and find a new roost. After eviction is believed to be completed, acoustic monitoring, and an evening emergence survey shall be performed by the qualified biologist to ensure eviction is complete. For tree removal, a two-step tree removal process involving removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree.*	LS
Impact 3.4-5: The proposed Project has the potential for direct or indirect effects on candidate, sensitive, or special-status plant species.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.4-6: The proposed Project has the potential to effect protected wetlands and jurisdictional waters.	LS	*None required.*	--
Impact 3.4-7: The proposed Project has the potential to result in adverse effects on riparian habitat or a sensitive natural community.	LS	*None required.*	--
Impact 3.4-8: The proposed Project has the potential to result in interference with the movement of native fish or wildlife species or with established wildlife corridors or impede the use of native wildlife nursery sites.	LS	*None required.*	--
Impact 3.4-9: The proposed Project has the potential to conflict with an adopted Habitat Conservation Plan.	LS	*None required*	--
Impact 3.4-10: The proposed Project has the potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LS	*None required.*	--
CULTURAL AND TRIBAL RESOURCES			
Impact 3.5-1: Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5	LS	***Mitigation Measure 3.5-1:*** *If subsurface deposits believed to be cultural, historical, archaeological, tribal, and/or human in origin are discovered during construction and/or ground disturbance, all work must halt within a 100-foot radius of the discovery. A Native American Representative from traditionally and culturally affiliated Native American Tribes that requested consultation shall be immediately contacted and invited to assess the significance of the find and make recommendations for further evaluation and treatment, as necessary. If deemed necessary by the City, a qualified cultural resources specialist meeting the Secretary of Interior's Professional Qualifications Standards for Archaeology, may also assess the significance of the find in joint consultation with Native American Representatives to ensure that Tribal values are considered. Work at the discovery location cannot resume until it is determined by the City, in consultation with culturally affiliated tribes, that the find is not a tribal cultural resource, or that the find is a tribal cultural resource and all necessary investigation and evaluation of the discovery under the*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		requirements of the CEQA, including AB 52, has been satisfied. The qualified cultural resources specialist shall have the authority to modify the no-work radius as appropriate, using professional judgement. *The following notifications and measures shall apply to potential unique archaeological resources and potential historical resources of an archaeological nature (as opposed to tribal cultural resources), depending on the nature of the find:* • *If the professional archaeologist determines that the find does not represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature, work may resume immediately, and no agency notifications are required.* • *If the professional archaeologist determines that the find does represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature from any time period or cultural affiliation, he or she shall immediately notify the City and applicable landowner. The professional archaeologist and a representative from the City shall consult to determine whether any unique archaeological resources or historical resources of an archaeological nature are present, in part based on a finding of eligibility for inclusion in the NRHP or CRHR. If it is determined that unique archaeological resources or historical resources of an archaeological nature are present, the qualified archaeologist shall develop mitigation or treatment measures for consideration and approval by the City. Mitigation shall be developed and implemented in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section 15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If approved by the City, such measures shall be implemented and completed prior to commencing further work for which grading or building permits were issued, unless otherwise directed by the City. Avoidance or preservation of unique archaeological resources or historical resources of an archaeological nature shall not be required where such avoidance or preservation in place would preclude the construction of important*	

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		structures or infrastructure or require exorbitant expenditures, as determined by the City. Where avoidance or preservation are not appropriate for these reasons, the professional archaeologist, in consultation with the City, shall prepare a detailed recommended a treatment plan for consideration and approval by the City, which may include data recovery. If employed, data recovery strategies for unique archaeological resources that do not also qualify as historical resources of an archaeological nature shall follow the applicable requirements and limitations set forth in Public Resources Code Section 21083.2. Data recovery will normally consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of recovering important scientific data contained within the unique archaeological resource or historical resource of an archaeological nature. The data recovery plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. If data recovery is determined by the City to not be appropriate, then an equally effective treatment shall be proposed and implemented. Work may not resume within the no-work radius until the City, in consultation with the professional archaeologist, determines that the site either: 1) does not contain unique archaeological resources or historical resources of an archaeological nature; or 2) that the preservation and/or treatment measures have been completed to the satisfaction of the City. • *If the find includes human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations*	

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (§5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.	
Impact 3.5-2: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries.	LS	*Reference Mitigation Measure 3.5-1*	LS
Impact 3.5-3: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or a resource determined by the lead agency.	LS	*Reference Mitigation Measure 3.5-1*	LS
GEOLOGY AND SOILS			
Impact 3.6-1: The proposed Project may expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides.	LS	*None required.*	LS
Impact 3.6-2: Implementation and construction of the proposed Project may result in substantial soil erosion or the loss of topsoil.	LS	*None required.*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.6-3: The proposed project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse.	LS	*None required*	LS
Impact 3.6-4: The proposed Project has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.	LS	*None required*	LS
Impact 3.6-5: The proposed Project does not have the potential to have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water	LS	*None Required.*	--
Impact 3.6-6: The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	LS	***Mitigation Measure 3.6-1:*** *Prior to approval of a grading permit, the Project proponent shall ensure that grading and improvement plans include the following note: "If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology."*	LS
Impact 3.6-7: The proposed Project has the potential to result in the loss of availability of a locally-important mineral resource recovery site or known mineral resource of value to the region and the residents of the state.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY (This project will comply with all existing regulations, rules, standards, and specifications that are already in place, including from SJVAPCD, CARB, etc.)			
Impact 3.7-1: Project implementation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	LS	*None Required.*	--
Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources.	LS	*None required.*	--
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	PS	***Mitigation Measure 3.8-1****: Prior to the acceptance of improvements, the Project proponent shall hire a licensed well contractor to obtain a well abandonment permit from Fresno County Department of Public Health Environmental Health Division, and properly abandon the on-site wells, pursuant to review and approval of the City Engineer and the Fresno County Department of Public Health Environmental Health Division.* ***Mitigation Measure 3.8-2***: *The Project proponent shall hire a qualified consultant to perform additional testing prior to the issuance of grading permits for construction activities in the following areas that have been deemed to have potentially hazardous conditions present:* • *The area near the three ASTs and four 55-gallon drums (see Figure 3.8-1 of the Draft EIR).* • *The areas where USTs may exist, including near the former warehouse and former residences.*	LS

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Environmental Impact	*Level of Significance Without Mitigation*	*Mitigation Measure*	*Resulting Level of Significance*
		- *The soils in the area where farming equipment and above ground tanks have been used, and near the former warehouse and former residences (see Figure 3.8-1 of the Draft EIR).* - *The area near the four pole-mounted transformers (see Figure 3.8-1 of the Draft EIR).* *The intent of the additional testing is to investigate whether any of the areas, facilities, or soils contain hazardous materials. All activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The ACBM and lead shall be disposed of properly at an appropriate offsite disposal facility. If surface staining is found on the Project site, a hazardous waste specialist shall be engaged to further assess the stained area.* *Should further soil sampling be required in any stained areas, evenly distributed soil samples shall be conducted for analysis of pesticides and heavy metals. The samples shall be submitted for laboratory analysis of pesticides and heavy metals per DTSC and EPA protocols. The results of the soil sampling shall be submitted to the Fresno County Department of Public Health Environmental Health Division. If elevated levels of pesticides or heavy metals are detected during the laboratory analysis of the soils, a soil cleanup and remediation plan shall be prepared and implemented prior to the commencement of grading activities.* *Further, in the event of a future release/leak of insulating fluids from any of the four pole-mounted transformers, PG&E shall be contacted regarding the testing of the transformers for PCB fluids or for their removal/replacement.*	
Impact 3.8-2: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.8-3: Potential to result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	LS	*None required.*	--
Impact 3.8-4: The Project is not located within an airport land use plan, two miles of a public airport or public use airport and, would not result in a safety hazard for people residing or working in the project area.	LS	*None required.*	--
Impact 3.8-5: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LS	*None required.*	--
Impact 3.8-6: Potential to expose people or structures to a risk of loss, injury or death from wildland fires.	LS	*None required.*	--
HYDROLOGY AND WATER QUALITY (This project will comply with all existing regulations, rules, standards, and specifications that are already in place, including from FID, FMFCD, RWQCB, etc.)			
Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements.	LS	*None required.*	--
Impact 3.9-2: The proposed Project has the potential to substantially deplete groundwater supplies or interfere substantially with groundwater recharge.	LS	*None required.*	--
Impact 3.9-3: The proposed Project has the potential to alter the existing drainage pattern in a manner which would result in substantial erosion, siltation, flooding or polluted runoff.	LS	*None required.*	--
Impact 3.9-4: The proposed Project has the potential to otherwise substantially degrade water quality.	LS	*None required.*	--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.9-5: The proposed Project would place housing or structures that could impede/redirect flows within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.	LS	*None required.*	--
Impact 3.9-6: The proposed Project has the potential to expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, seiche, tsunami, or mudflow.	LS	*None required.*	--
LAND USE AND POPULATION			
Impact 3.10-1: The proposed Project would not physically divide an established community.	LS	*None required.*	--
Impact 3.10-2: The proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect.	LS	*None required.*	--
Impact 3.10-3: The proposed Project would not induce substantial population growth in an area.	LS	*None required.*	--
Impact 3.10-4: The proposed Project would not displace substantial numbers of people or existing housing.	LS	*None required.*	--
NOISE			
Impact 3.11-1: Operational Noise- The proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan	PS	***Mitigation Measure 3.11-1:*** *A 6-foot-tall barrier shall be constructed along the south boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue, in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual*	LS

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LS – less than significant
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SU – significant and unavoidable

Environmental Impact	*Level of Significance Without Mitigation*	*Mitigation Measure*	*Resulting Level of Significance*
or noise ordinance, or applicable standards of other agencies.		*warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department.* ***Mitigation Measure 3.11-2:*** *The Project developer will ensure that any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.*	
Impact 3.11-2: Construction Noise- The proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	PS	***Mitigation Measure 3.11-3:*** *Construction activities shall adhere to the requirements of the City of Clovis Municipal Code with respect to hours of operation. This requirement shall be noted in the improvements plans prior to approval by the City's Public Utilities Department.* ***Mitigation Measure 3.11-4:*** *The contractor shall ensure that the following noise attenuating strategies are implemented during project construction:* • *During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices.* • *Idling equipment shall be turned off when not in use.* • *Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.*	LS
Impact 3.11-3: Cumulative Noise- The proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	LS	*None required.*	--
Impact 3.11-4: The proposed Project has the potential to generate excessive groundborne vibration or groundborne noise levels.	LS	*None required.*	--
Impact 3.11-5: For a Project located within the vicinity of a private airstrip or an airport land use	LS	*None required.*	--

CC – cumulatively considerable
LCC – less than cumulatively considerable
LS – less than significant
PS – potentially significant
B – beneficial impact
SU – significant and unavoidable

ENVIRONMENTAL IMPACT	LEVEL OF SIGNIFICANCE WITHOUT MITIGATION	MITIGATION MEASURE	RESULTING LEVEL OF SIGNIFICANCE
plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels.			
PUBLIC SERVICES AND RECREATION			
Impact 3.12-1: The proposed Project has the potential to require the construction of police department facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-2: The proposed Project has the potential to require the construction of fire department facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-3: The proposed Project has the potential to require the construction of school facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-4: The proposed Project has the potential to have effects on other public facilities.	LS	*None required.*	--
Impact 3.12-5: The proposed Project has the potential to require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts.	LS	*None required.*	--
Impact 3.12-6: The proposed Project has the potential to increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated.	LS	*None required.*	--

CC – cumulatively considerable	*LCC – less than cumulatively considerable*	*LS – less than significant*
PS – potentially significant	*B – beneficial impact*	*SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
TRANSPORTATION AND CIRCULATION			
Impact 3.13-1: Project implementation would not result in VMT increases that are greater than 87 percent of Baseline conditions.	PS	*Implement Project Design Measures.*	SU
Impact 3.13-2: Project implementation may conflict with a program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities.	LS	*None required.*	--
Impact 3.13-3: Project implementation may increase hazards due to a design feature, incompatible uses, or inadequate emergency access.	LS	*None required.*	--
UTILITIES (This project will comply with all existing regulations, rules, standards, and specifications that are already in place, including from FID, FMFCD, RWQCB, etc.)			
Impact 3.14-1: The proposed Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the providers existing commitments.	LS	*None required.*	--
Impact 3.14-2: The proposed Project would not require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects.	LS	*None required.*	--
Impact 3.14-3: The proposed Project has the potential to require or result in the construction of new water treatment facilities or expansion of existing water facilities, the construction of which could cause significant environmental effects.	LS	*None required.*	--

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.14-4: The proposed Project does not have the potential to have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years.	LS	*None required.*	--
Impact 3.14-5: The proposed Project has the potential to require or result in the construction of new stormwater drainage facilities, the construction of which could cause significant environmental effects.	LS	*None required.*	--
Impact 3.14-6: The proposed Project has the potential to be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and comply with federal, State, and local statutes and regulations related to solid waste.	LS	*None required.*	--
CUMULATIVE IMPACTS			
Impact 4.1: Cumulative Degradation of the Existing Visual Character of the Region	LS and LCC	*None required.*	--
Impact 4.2: Cumulative Damage to Scenic Resources within a State Scenic Highway	LS and LCC	*None required.*	--
Impact 4.3: Cumulative Impact on Light and Glare	LS and LCC	*None required.*	--
Impact 4.4: Cumulative Impact on Agricultural Resources	LS and LCC	*None required.*	--
Impact 4.5: Cumulative Impact on the Region's Air Quality	LS and LCC	*None required.*	--
Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special Status Species	LS and LCC	*None required.*	--
Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural and Tribal Resources	LS and LCC	*None required.*	--

CC – cumulatively considerable	*LCC – less than cumulatively considerable*	*LS – less than significant*
PS – potentially significant	*B – beneficial impact*	*SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 4.8: Cumulative Impact on Geologic and Soils Resources	LS and LCC	*None required.*	--
Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions	LS and LCC	*None required.*	--
Impact 4.10: Cumulative Impact on the Inefficient, Wasteful, or Unnecessary Use of Energy Resources	LS and LCC	*None required.*	--
Impact 4.11: Cumulative Impact Related to Hazards and Hazardous Materials	LS and LCC	*None required.*	--
Impact 4.12: Cumulative Increases in Peak Stormwater Runoff from the Project site	LS and LCC	*None required.*	--
Impact 4.13: Cumulative Impacts Related to Degradation of Water Quality	LS and LCC	*None required.*	--
Impact 4.14: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge	LS and LCC	*None required.*	--
Impact 4.15: Cumulative Impacts Related to Flooding	LS and LCC	*None required.*	--
Impact 4.16: Cumulative Impact on Communities and Local Land Uses	LS and LCC	*None required.*	--
Impact 4.17: Cumulative Impacts on Population and Housing	LS and LCC	*None required.*	--
Impact 4.18: Cumulative Exposure of Existing and Future Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development	LS and LCC	*None required.*	--
Impact 4.19: Cumulative Impact on Public Services and Recreation	LS and LCC	*None required.*	--
Impact 4.20: Under Cumulative conditions, Project implementation would not result in VMT increases that are greater than 87 percent of Baseline conditions	PS	*Implement Project Design measures.*	CC and SU
Impact 4.21: Under Cumulative conditions, the proposed Project would not conflict with a	LS and LCC	*None required.*	--

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities, or increase hazards due to a design feature, incompatible uses, or inadequate emergency access			
Impact 4.22: Cumulative Impact on Wastewater Utilities	LS and LCC	*None required.*	--
Impact 4.23: Cumulative Impact on Water Utilities	LS and LCC	*None required.*	--
Impact 4.24: Cumulative Impact on Stormwater Facilities	LS and LCC	*None required.*	--
Impact 4.25: Cumulative Impact on Solid Waste Facilities	LS and LCC	*None required.*	--
Impact 4.26: Cumulative Impact from Electrical, Natural Gas, or Telecommunications Facilities	LS and LCC	*None required.*	--

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LCC – less than cumulatively considerable
LS – less than significant
PS – potentially significant
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SU – significant and unavoidable

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1.1 PURPOSE AND INTENDED USES OF THE EIR

The City of Clovis, as the lead agency, determined that the proposed Shepherd North Project is a "project" within the definition of CEQA. CEQA requires the preparation of an environmental impact report (EIR) prior to approving any project, which may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

The City of Clovis, as the lead agency, has prepared this Draft EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from implementation of the proposed Project. The environmental review process enables interested parties to evaluate the proposed Project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the proposed Project. This EIR will be used by the City of Clovis to determine whether to approve, modify, or deny the proposed Project and associated approvals in light of the Project's environmental effects. The EIR will be used as the primary environmental document to evaluate full development, all associated infrastructure improvements, and permitting actions associated with the proposed Project. All of the actions and components of the proposed Project are described in detail in Chapter 2.0, Project Description.

1.2 TYPE OF EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project-level EIR, which is described in State CEQA Guidelines § 15161 as: "The most common type of EIR (which) examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation."

1.3 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the proposed Project or an aspect of the proposed Project (CEQA Guidelines Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). The following agencies are considered "Responsible Agencies" or "Trustee

Agencies" for the proposed Project, and may be required to issue permits or approve certain aspects of the proposed Project:

- Fresno Local Agency Formation Commission (LAFCo) – SOI Amendment, Annexation, and Detachment from the Fresno County Fire Protection District and the Kings River Conservation District;
- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits; and
- Fresno Metropolitan Flood Control District – Review of stormwater facilities, grading, and street improvements.

1.4 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION

The City of Clovis circulated a Notice of Preparation (NOP) of an EIR for the proposed Project on May 9, 2022 to the State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, Organizations and Interested Persons. A public scoping meeting was held on May 25, 2022 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and comments received on the NOP by interested parties are presented in Appendix A.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the proposed Project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City of Clovis will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period. Additionally, the City of Clovis will file the Notice of Availability with the County Clerk and have it published in a newspaper of regional circulation to begin the local public review period.

PUBLIC NOTICE/PUBLIC REVIEW

The City of Clovis will provide a public notice of availability for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA, the review period for this Draft EIR is forty-five (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

Attn: George González, MPA | Senior Planner
City of Clovis | Planning Division
1033 Fifth Street
Clovis, CA 93612
Phone: 559.324.2383
Email: georgeg@cityofclovis.com

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments received at a public hearing during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete," the City Council may certify the Final EIR in accordance with CEQA. The rule of adequacy generally holds that an EIR can be certified if:

1) The EIR shows a good faith effort at full disclosure of environmental information; and

2) The EIR provides sufficient analysis to allow decisions to be made regarding the proposed Project in contemplation of environmental considerations.

The level of detail contained throughout this EIR is consistent with Section 15151 of the CEQA Guidelines and recent court decisions, which provide the standard of adequacy on which this document is based. The Guidelines state as follows:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.*

Following review and consideration of the Final EIR, the City may take action to approve, modify, or reject the Project. A Mitigation Monitoring and Reporting Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines

Section 15097 for mitigation measures that have been incorporated into or imposed upon the Project to reduce or avoid significant effects on the environment. This Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during Project implementation, in a manner that is consistent with the EIR.

1.5 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the proposed Project, environmental and planning documentation prepared for recent projects located within the City of Clovis, applicable local and regional planning documents, and responses to the Notice of Preparation (NOP).

This Draft EIR is organized in the following manner:

EXECUTIVE SUMMARY

This Executive Summary summarizes the characteristics of the proposed Project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the proposed Project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed Project.

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, and identifies the scope and organization of the Draft EIR.

CHAPTER 2.0 – PROJECT DESCRIPTION

Chapter 2.0 provides a detailed description of the proposed Project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, related improvements, and a list of related agency action requirements.

CHAPTER 3.0 – ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the proposed Project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this section:

- Aesthetics and Visual Resources
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Resources
- Geology, Soils, and Minerals
- Greenhouse Gases, Climate Change, and Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use, Population, and Housing
- Noise
- Public Services and Recreation
- Transportation and Circulation
- Utilities
- Wildfire

CHAPTER 4.0 – OTHER CEQA-REQUIRED TOPICS

Chapter 4.0 evaluates and describes the following CEQA required topics: impacts considered less-than-significant, significant and irreversible impacts, growth-inducing effects, cumulative, and significant and unavoidable environmental effects.

CHAPTER 5.0 – ALTERNATIVES TO THE PROJECT

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the proposed Project, which could feasibly attain the basic objectives of the proposed Project and avoid and/or lessen any significant environmental effects of the proposed Project. Chapter 5.0 provides a comparative analysis between the environmental impacts of the proposed Project and the selected alternatives.

CHAPTER 6 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the EIR, by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as technical material prepared to support the analysis.

1.6 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City of Clovis received eleven (11) written comment letters on the NOP for the proposed Project. Copies of the letters is provided in Appendix A of this Draft EIR. The commenting agency/citizen is provided below. The City also held a public scoping meeting on May 25, 2022.

1. Native American Heritage Commission (May 10, 2022)
2. Department of Toxic Substances Control (May 18, 2022)
3. Robert Shuman (May 25, 2022)
4. Jared Callister (May 25, 2022)
5. State Water Resources Control Board (June 6, 2022)
6. California Department of Conservation (May 26, 2022)
7. County of Fresno (June 2, 2022)
8. Fresno Irrigation District (June 7, 2022)
9. Fresno Metropolitan Flood Control District (June 10, 2022)
10. California Department of Transportation (June 10, 2022)
11. San Joaquin Valley Air Pollution Control District (June 10, 2022)

1.7 POTENTIAL AREAS OF CONCERN

The following are topics of public concern or potential controversy that have become known to the City staff based on public input, known regional issues, and staff observations:

- Agricultural: conversion of farmland, impacts to adjacent farmland, cumulative loss of farmland, compatibility with Williamson Act contracts, impacts on agricultural operations, mitigation measures for agricultural impacts;
- Air Quality/Greenhouse Gas Emissions/Energy: project related air emissions, construction emissions, operations emissions, quantification of emissions, health risk screening/assessment, ambient air quality, emissions reduction, vegetation barriers/urban greening, clean lawn/garden equipment, District rules/regulations,
- Biological: Swainson's hawk and other raptors;
- Hazards/Hazardous Materials: Use or storage of hazardous materials and wastes, underground petroleum storage tanks, protection of groundwater, proper destruction of wells and septic tanks, appropriate construction equipment operations and maintenance,
- Hydrology/Water Supply Concerns: well water recharge/groundwater, irrigation, water supply; non-potable water supply, flood control/drainage, impervious surfaces, storm drainage easements;
- Land Use and Planning: Affordable housing;
- Noise: Compliance with the Noise Element, elevated noise levels;

- Traffic: Need for a traffic study, additional traffic, need for street improvements, need for improvements on internal roads and access to Fowler/Behymer; vehicle miles traveled, intersections Herndon Avenue/Fowler, and SR168/Shepherd Avenue, multimodal transportation, bicycle and pedestrian facilities, public transportation, connectivity between residential and commercial/retail uses, feasible mitigation, EV charging;
- Utilities: Costs of utility expansion, cumulative impacts.

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2.1 PROJECT LOCATION

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 2.0-3 illustrates the Annexation Area.

2.2 PROJECT SITE DEFINED

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.[1]
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.
    - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

2.3 PROJECT SETTING

EXISTING SITE CONDITIONS

The Project site is approximately 155 acres and includes 39 Assessor parcels (APNs), as depicted in Figure 2.0-5.

SITE TOPOGRAPHY

The Project site is relatively flat and is approximately 385 feet above mean sea level. Reference is made to Figure 2.0-4. USGS Topographic Map.

EXISTING SITE USES

The Development Area primarily contains farmland (orchard). Three residential dwellings and a warehouse were removed in approximately 2020. Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the

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[1] It should be noted that the term 'Project Area' is used interchangeably with 'Project Site', throughout this EIR.

southwestern corner of the area, one located in the northwestern corner of the area and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

> Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
>
> Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Figure 2.0-6 provides an aerial map of the Project site.

EXISTING SURROUNDING USES

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

EXISTING GENERAL PLAN LAND USE DESIGNATIONS AND ZONING

The following section outlines the City and County General Plan land use designations and zoning for the Project site. The Project site is currently outside of the jurisdiction of the City of Clovis, and therefore does not have a City of Clovis zoning designation.

City of Clovis

The City of Clovis General Plan was adopted on August 25, 2014. Figure 2.0-7 depicts the land use designations for the Project site and the surrounding areas under the adopted City of Clovis General Plan. The Project site is designated as Rural Residential (RR) under the City of Clovis General Plan.

Rural Residential (RR): Very low-density residential uses and small-scale agricultural operations. Rural residential uses may be dispersed uniformly across the land or be sited so to leave more acreage for

orchards, pastures, or other agricultural or open space activities. The allowable maximum density for this land use designation is one dwelling unit per two acres.

Fresno County

Figure 2.0-8 identifies the Fresno County land use designations and zoning for the Project site and the surrounding area. The Development Area is designated as Low Density Residential by the County's General Plan Land Use Map and is zoned AL-20 (Limited Agricultural) by the County. This land use designation is an urban holding land use designation by Fresno County.

The Non-Development Area is designated as Rural Residential by the County's General Plan Land Use Map and is zoned RR (Rural Residential) by the County. This land use designation is an urban land use designation. . At the time Fresno County created the Rural Residential land use designation and assigned that land use designation to areas within the county, the Fresno County General Plan was segregated into two segments; *Non Intensive* and *Intensive,* development polices. The Fresno County General Plan *Non Intensive* section defines county goals and polices regarding agriculture, open space and riverine area protection, mineral extraction, etc. Whereas the *Intensive* section of the plan defines County goals and policies regarding residential development, directing urban development to cites, lands in city fringe areas as well as unincorporated communities.

The Development Area is bounded on the north and east by *Rural Residential* developments classified as *Intensive* development in the County General Plan. To the west and south are *Low Density Residential* uses. The Development Area is an island surrounded by *Intensive* development.

2.4 PROJECT GOALS AND OBJECTIVES

A clear statement of objectives and the underlying purpose of the proposed Project are discussed per CEQA Guidelines Section 151024(b).

PROJECT OBJECTIVES

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.

The quantifiable objectives include the development of up to 605 single-family residential units. The quantifiable objectives include the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping to serve the residential uses.

The goals of the proposed development are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice to modestly increase urban density*.

- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

2.5 PROJECT ENTITLEMENTS

GENERAL PLAN AMENDMENT

The proposed Project will require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium High Density (MH) for the Development Area to accommodate the proposed development density.

- **Medium High Density (MH).** This designation identifies areas appropriate small lot single family detached homes, townhouses, duplexes, and apartments. The allowable density range is 7.1 to 15.0 units per acre.

The proposed General Plan land use designations for the Project site is shown on Figure 2.0-9.

PRE-ZONING

The Project site is currently located outside of the Clovis city limits, and therefore does not have City-designated zoning. The proposed Project includes a request for Development Area pre-zoning (which is consistent with the proposed General Plan Land Uses):

Development Area: The pre-zoning request is for R-1-PRD zoning designations over these lots.

- **Single-Family Planned Residential Development Zoning (R-1-PRD).** This designation identifies areas appropriate for single-family small lot uses, including attached and detached single-family structures on small lots. The allowable density range is 4.1 to 15.0 units per acre, with the level of density determined by compliance with performance standards. The R-1-PRD district required a planned development permit. The R-1-PRD district is consistent with the Medium and Medium-High Density Residential land use designations of the General Plan.

The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-10.

TENTATIVE SUBDIVISION MAP

The proposed Project includes a Tentative Subdivision Map for the Development Area that is planned for development in phases. The Tentative Map covers approximately 77 acres within three Assessor parcels (APNs); 557-021-20, -19, and -21.

The Tentative Subdivision Map will result in the subdivision of a total of approximately 77 acres into up to 605 single-family residential units, with an additional 52 out lots for roads, utilities, greenspace, landscaping, and pedestrian paths. The Project objectives also include the installation of new public roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping.

PLANNED DEVELOPMENT PERMIT

The proposed Project includes a Planned Development Permit (PDP) for the Development Area of the Project, which will incorporate a program of enhanced amenities (e.g., additional open space, park improvements and/or trail development). The PDP may allow for modifications to the applicable development standards, such as lot coverage, setbacks and building heights.

Figure 2.0-11a, 2.0-11b, and 2.0-11c illustrate the proposed site plans for the Development Area.

ANNEXATION/REORGANIZATION

The proposed Project includes an annexation of three APNs totaling approximately 77 acres. This acreage includes the Development Area.

RESIDENTIAL SITE PLAN REVIEW

The proposed Project includes a Residential Site Plan Review (RSPR) for the Development Area as a condition of a subdivision map implementing provisions of zoning.

SPHERE OF INFLUENCE EXPANSION

The proposed Project includes an amendment of the City's SOI to include the entirety of the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno Local Agency Formation Commission (LAFCO) and the County of Fresno.

2.6 DEVELOPMENT PROJECT CHARACTERISTICS

The proposed Project is primarily a residential development anticipated to provide up to 605 residential units. The Development Project would provide open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. Other uses to support and compliment the proposed residential development include public utility infrastructure, public and private roadways, curb/gutters/sidewalks, other pedestrian facilities, private parking, street lighting, and street signage.

Housing development will depend on market conditions and demand. The plan for infrastructure allows for development to occur in phases to respond to the market conditions and demand.

RESIDENTIAL DEVELOPMENT

The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Development Area will accommodate up to 605 residential units. Specifically, the northern portion of the Development Area is planned to include the development of up to 101 single-family residences with lot sizes ranging from approximately 5,400 square feet to 15,900 square feet. The southern portion of the Development Area is planned for smaller lot single-family residences, with lot sizes ranging from approximately 1,980 to 3,800 square feet, and with larger corner lots that are approximately 4,200 to 7,500 square feet. Figure 2.0-11a, 2.0-11b and 2.0-11c illustrate the Project site plans.

GREENSPACE

The proposed Project includes open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks . The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south.

CIRCULATION

The proposed Project includes a hierarchy of roadways to accommodate the capacity needs of the existing street network as well as provide additional vehicular access to the Development Area. North Sunnyside Avenue and East Shepherd Avenue are the main arterial roadways providing access to the Development Area.

The neighborhoods within the Development Area will include a network of public and private residential streets to provide an efficient flow of traffic through the area. Sidewalks will also be included per the City standards.

UTILITIES AND PLANNED INFRASTRUCTURE IMPROVEMENTS

The construction of on-site infrastructure improvements would be required to accommodate development of the Development Area, as described below.

Water System

The Project site will be served by a new potable and non-potable water distribution system. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and

Central Valley Project. The City's Water Reuse Facility produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

Wastewater System

The Project site will be served by a new wastewater collection system installed within proposed public utilities easements. The proposed wastewater conveyance facilities will connect to the existing sewer mains as part of the City of Clovis collection and treatment system. Wastewater treatment will be provided at the existing Fresno-Clovis Regional Wastewater Treatment Plant in the City of Fresno. By agreement with the City of Fresno, the City of Clovis is entitled to a maximum capacity of 9.3 million gallons per day (mgd). The Fresno-Clovis Regional Wastewater Treatment Plant has a maximum capacity of 80 mgd and is owned by Fresno and Clovis, and is operated by the City of Fresno. If required, the City has the capability to acquire additional capacity at the Wastewater Treatment Plant. Wastewater treatment will also be provided by the City's Water Reuse Facility. The plant serves the new growth areas of the City in the southeast, northwest, and ultimately the northeast urban centers. The plant is designed to accommodate future expansion and will ultimately treat 8.4 mgd.

Storm Drainage

The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. Stormwater throughout the City is collected in FMFCD's basins.

Regulated Public Utilities

Electrical, provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along E. Shepherd Avenue and from existing residential development surrounding the Project site. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Utility improvements would be installed in conjunction with planned street improvements.

2.7 ALTERNATIVES

Four alternatives to the proposed Project were developed based on input from City staff. The alternatives that are anticipated to be analyzed in the EIR include the following four alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Mixed Use Alternative:** Under this alternative, the proposed Project would be developed at a higher density for the residential uses, and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium high density residential use, 10 acres would be developed with 195

apartments under the high density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.

- **Reduced Density Alternative:** Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.
- **Reduced Sphere of Influence Alternative:** Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future if desired by those residents.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives.

INCREASED DENSITY MIXED USE ALTERNATIVE

Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 80 percent of the Development Area (62 acres) would be developed with 605 residential units (9.75 du/ac). This would still fall under the Medium High Density (MH) 7.1–15.0 du/ac land use category. The remaining 15 acres of the Development Area would be developed with a mix of commercial and higher density residential. The mixed-use area would have 10 acres for High Density (H) 15.1–25.0 du/ac. The alternative assumes 195 apartments constructed at a density of 19.5 du/ac. There would also be 5 acres of Neighborhood Commercial (NC) (Max FAR 0.50). This area would be developed as a neighborhood-scale shopping facility. The FAR would allow for 108,000 square feet of commercial. It is anticipated that the commercial would include an anchor store such as a small supermarket with a wide range of ancillary uses including banks, restaurants, service businesses, and other related activities are generally found in these planned commercial centers.

REDUCED DENSITY ALTERNATIVE

Under this alternative, the proposed Project would have a reduced density in the Development Area that would fall under the Very Low Density (VL) 0.6–2.0 du/ac land use. The alternative assumes 150 residential units at approximately 2 du/ac. This use is described as large lot single family residences and appurtenant structures within an identifiable residential neighborhood. This alternative would include neighborhood parks and all the infrastructure necessary to connect to City services.

REDUCED SPHERE OF INFLUENCE ALTERNATIVE

Under this alternative, the proposed Project would only expand the Sphere of Influence and annex the Developed Area and would exclude the 78-acre Sphere of Influence (SOI) expansion to the north and east of the Development Area. Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate that possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

2.8 USES OF THE EIR AND REQUIRED AGENCY APPROVALS

This EIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed Project.

CITY OF CLOVIS

The City of Clovis will be the Lead Agency for the proposed Project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Actions that would be required from the City include, but are not limited to the following:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of City of Clovis General Plan Amendment (Land Use Element);
- Approval of City of Clovis Zoning Pre-zoning;
- Approval of Residential Site Plan Review;
- Approval of Vesting Tentative Tract Maps;
- Approval of Planned Development Permit;
- Approval of SOI Expansion and Authorization to submit SOI Amendment request to Fresno LAFCo and County of Fresno;
- Approval of Annexation of the Development Area and Inhabited Area and Authorization to submit Annexation request to Fresno LAFCo and County of Fresno;
- Approval of future Final Maps;
- Approval of future Planned Development Permit;
- Approval of future Grading Plans;
- City review, approval, of construction and utility plans; and
- Approval of future Building Permits.

OTHER GOVERNMENTAL AGENCY APPROVALS

The following agencies may be required to issue permits or approve certain aspects of the proposed Project. Other governmental agencies that may require approval include, but are not limited to, the following:

- Fresno Local Agency Formation Commission (LAFCo) – SOI Amendment, Annexation, and Detachment from the Fresno County Fire Protection District and the Kings River Conservation District;
- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits; and
- Fresno Metropolitan Flood Control District – review of stormwater facilities, grading, and street improvements.

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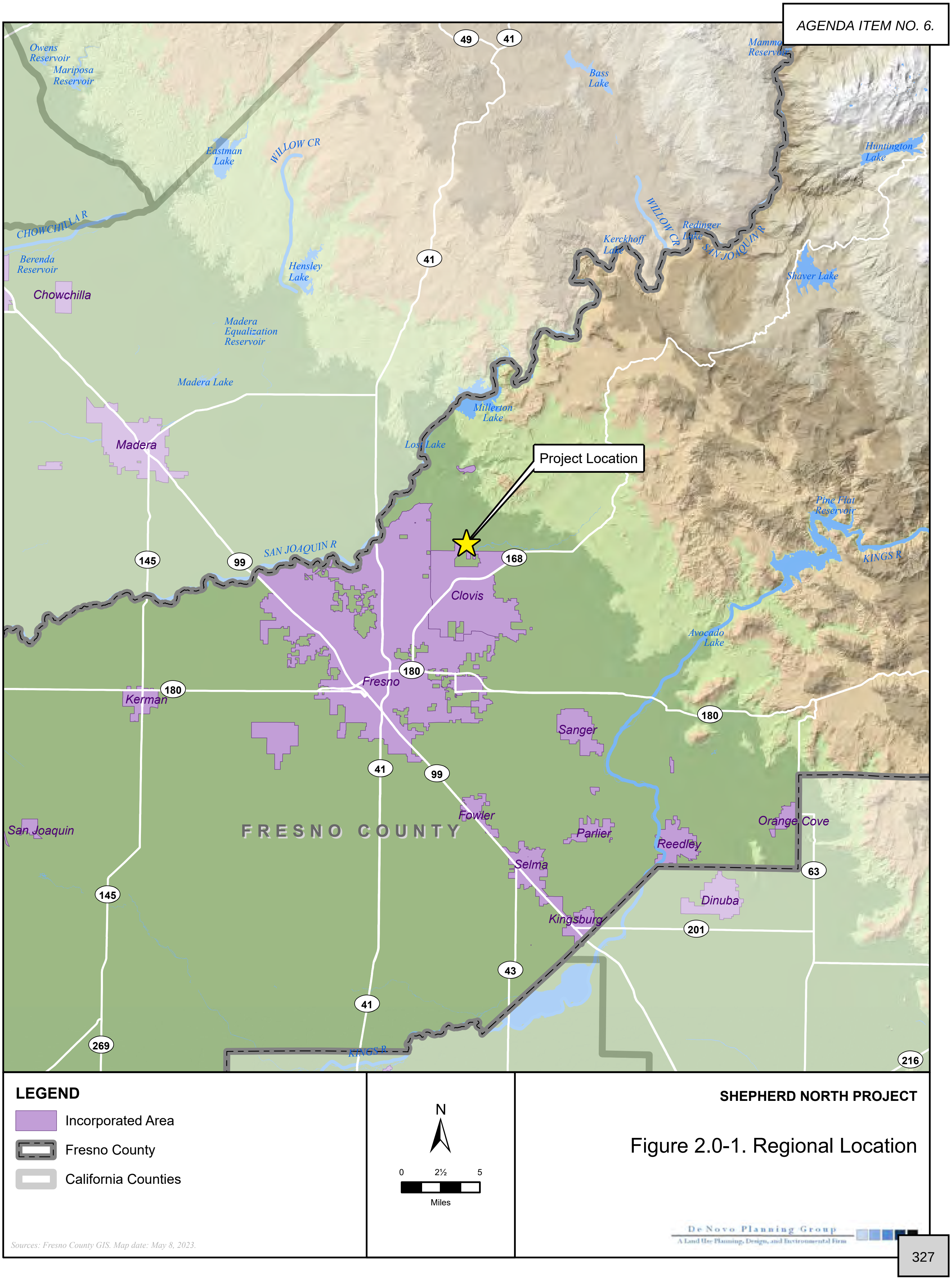

Sources: Fresno County GIS. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 2.0-1. Regional Location

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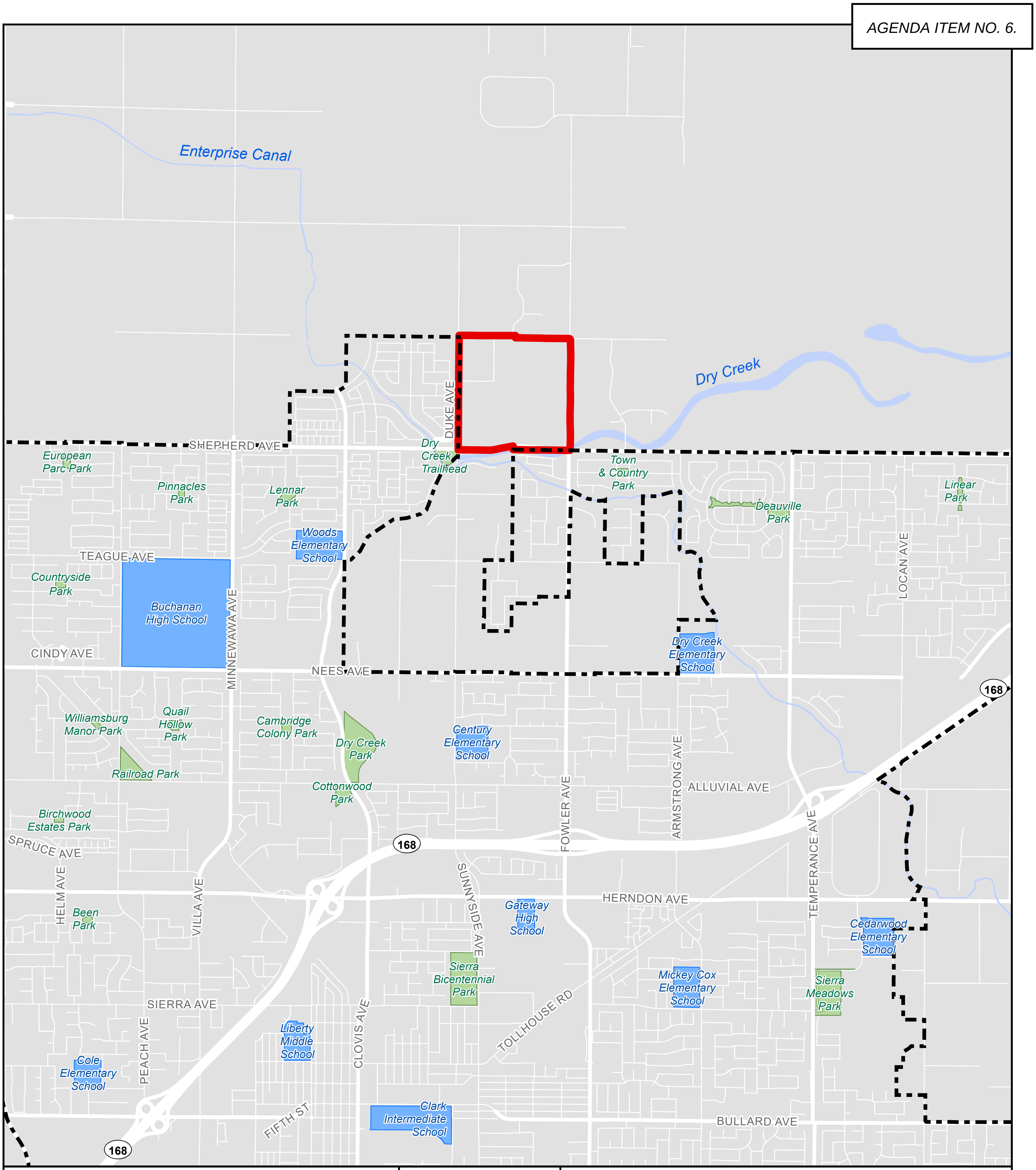

LEGEND

🟥 Project Boundary

⬚ Clovis City Limits

🟩 Park

🟦 School

Sources: Fresno County GIS. Map date: May 8, 2023.

N

0 1,000 2,000

Feet

SHEPHERD NORTH PROJECT

Figure 2.0-2. Vicinity Map

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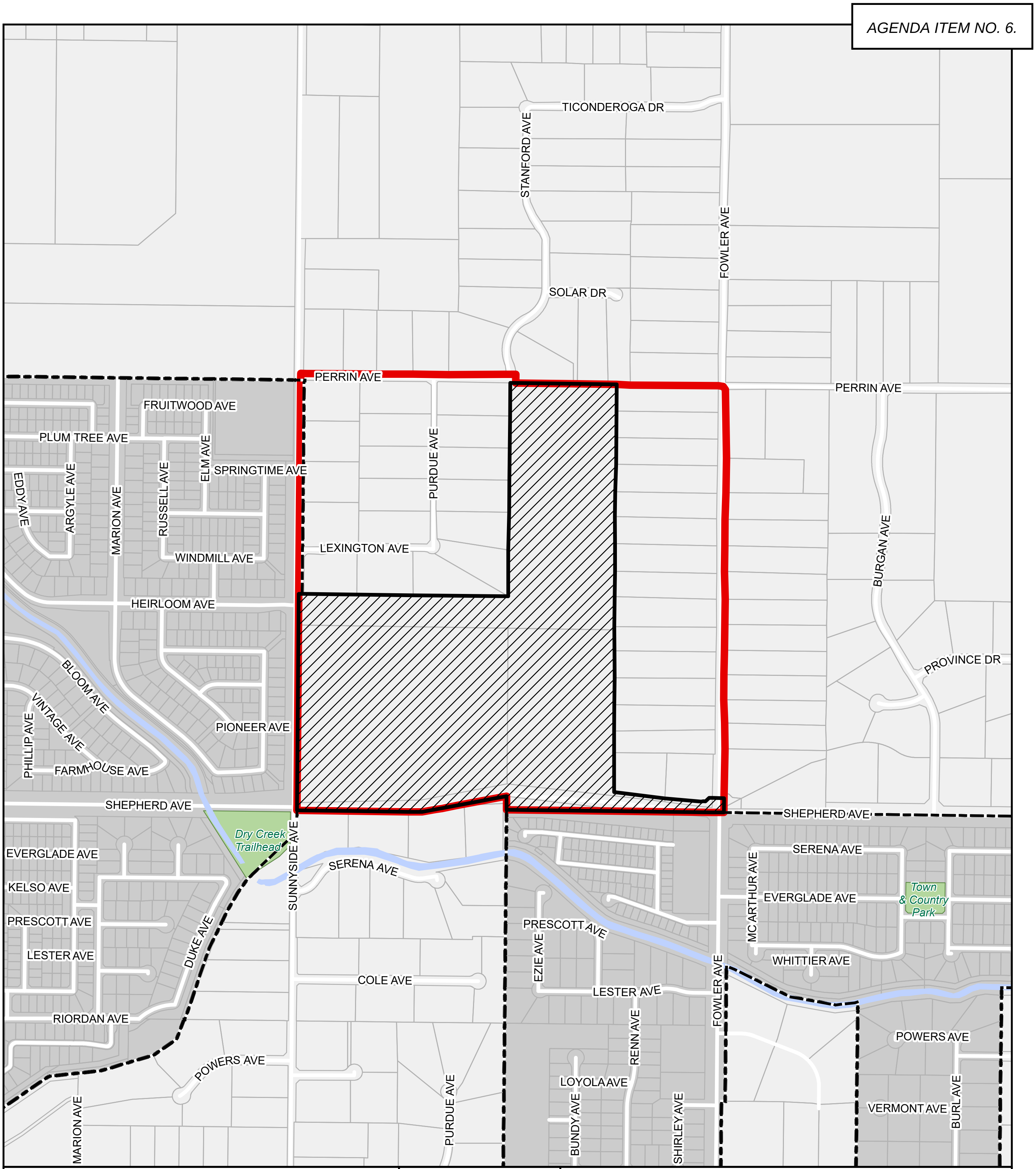

LEGEND

🟥 Project Boundary

▨ Developement Area

▒ Clovis City Limits

N

0 200 400

Feet

SHEPHERD NORTH PROJECT

Figure 2.0-3. Annexation Map

Sources: Fresno County GIS. Map date: May 8, 2023.

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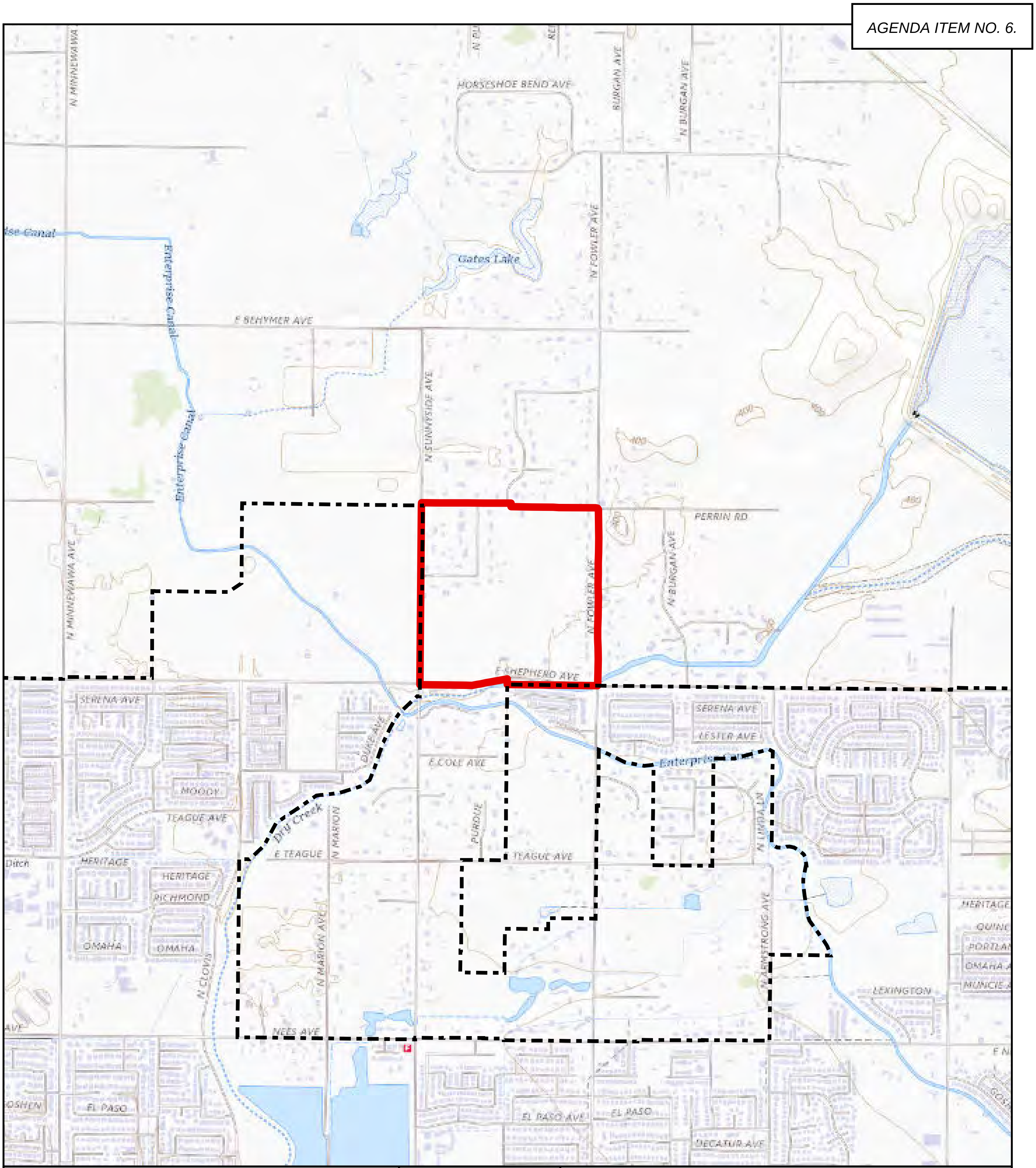

LEGEND

🟥 Project Boundary

⬚ Clovis City Limits

N

0 400 800

Feet

SHEPHERD NORTH PROJECT

Figure 2.0-4. USGS Topographic Map

Sources: Fresno County GIS; ArcGIS Online USGS Topographic Map Service.
Map date: May 8, 2023.

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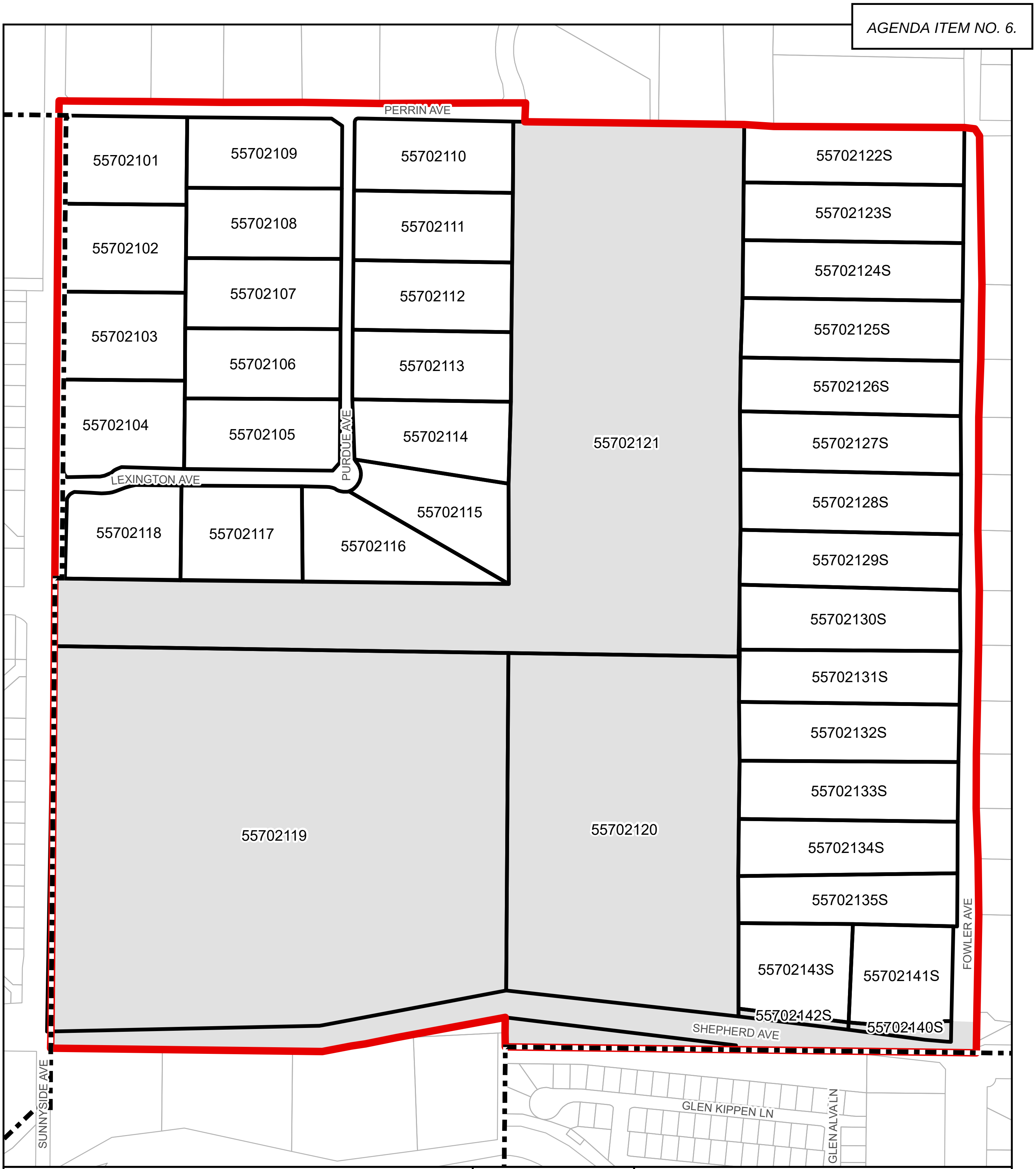

LEGEND

□ Project Parcel

🟥 Project Boundary

⬚ Clovis City Limits

▨ Developement Area

Sources: Fresno County GIS. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 2.0-5. Accessor Parcel Map

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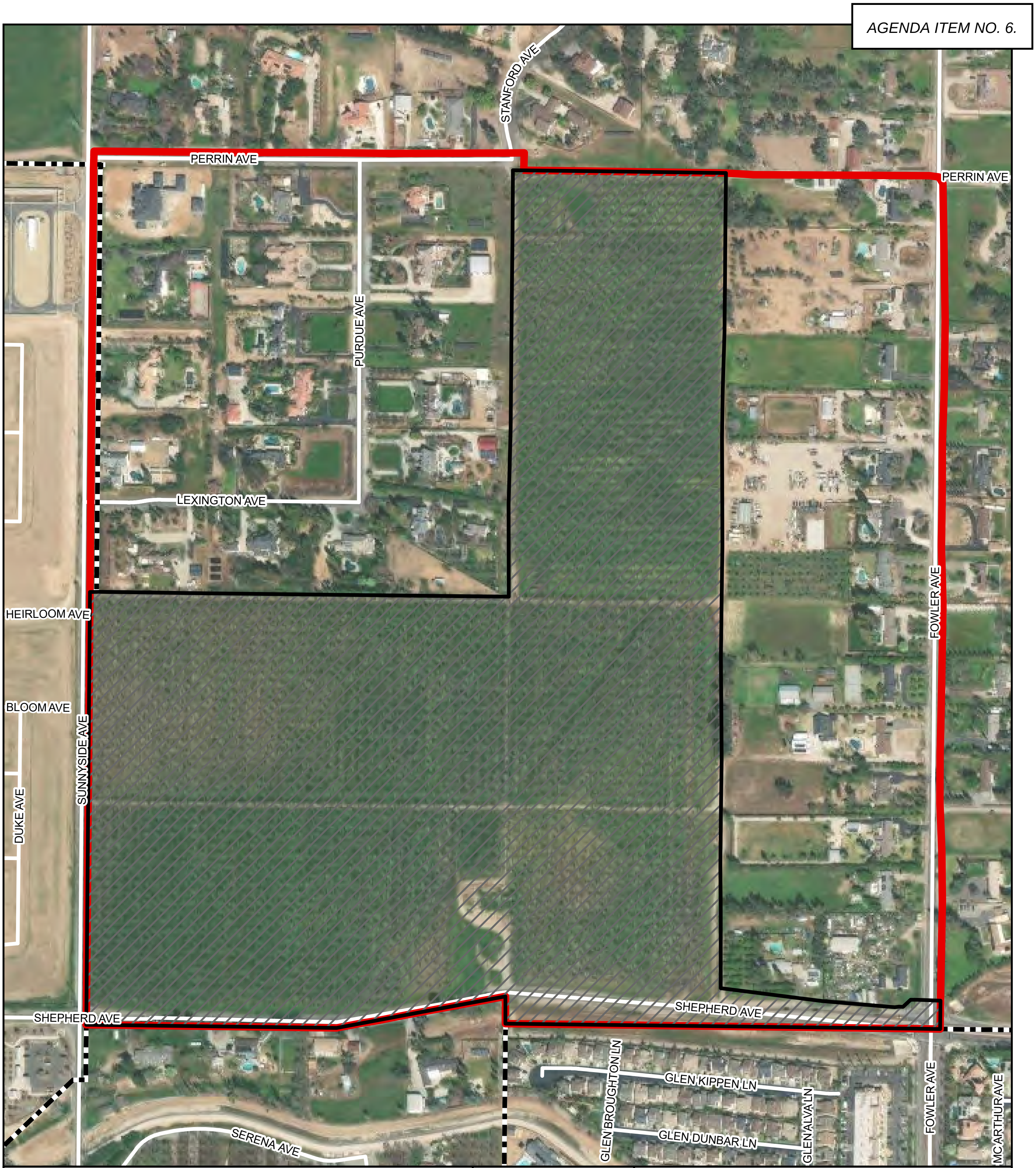

LEGEND

🟥 Project Boundary

▨ Developement Area

⬚ Clovis City Limits

N

0 100 200

Feet

SHEPHERD NORTH PROJECT

Figure 2.0-6. Aerial of Project Site

Sources: Fresno County GIS; ArcGIS Online World Imagery Map Service(04/08/2022).
Map date: May 8, 2023.

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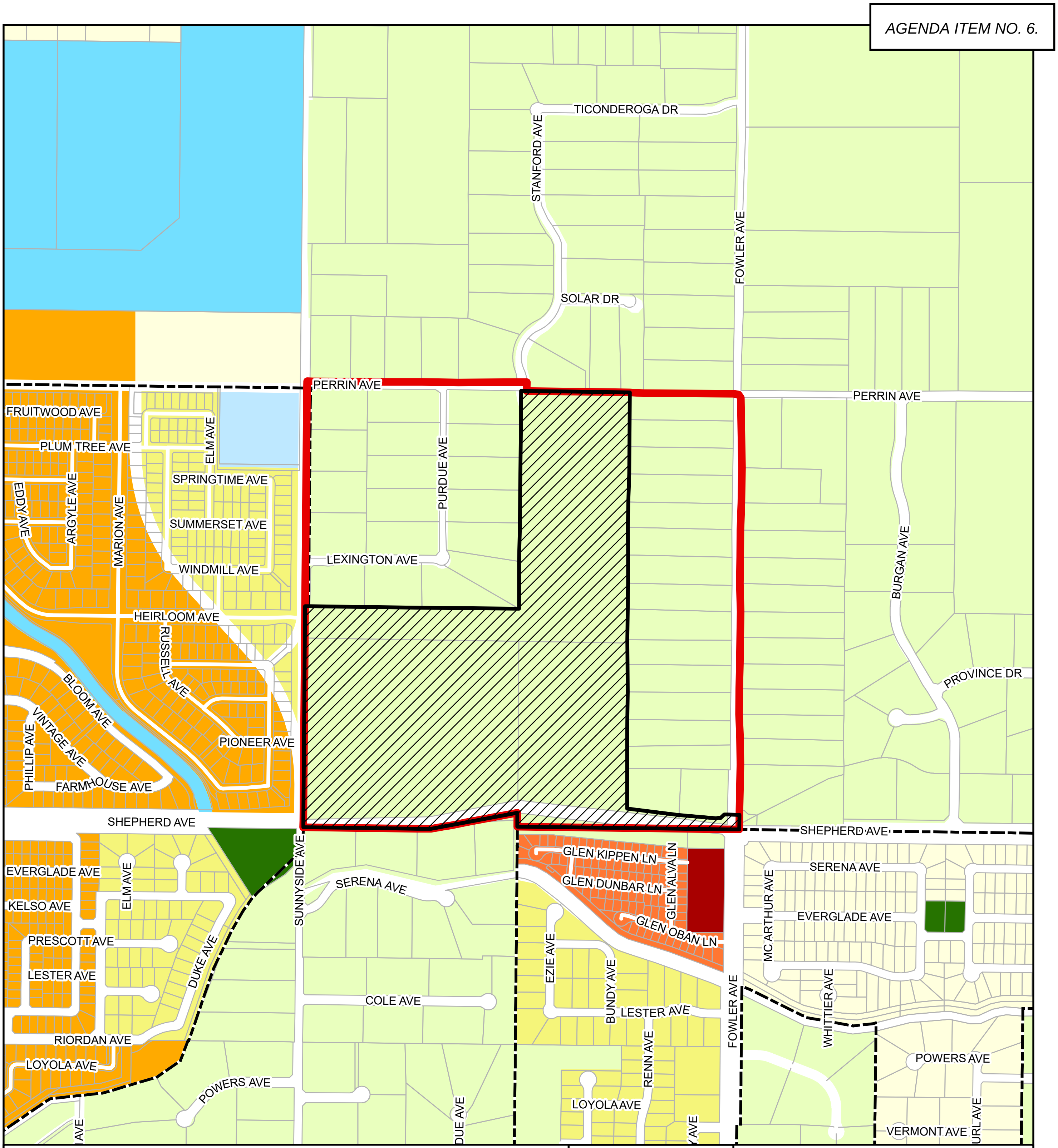

LEGEND

- ▭ Project Boundary
- ▨ Developement Area
- ┅ Clovis City Limits

City of Clovis General Plan Land Use

- 🟩 RR: Rural Residential
- ▢ VL: Very Low Density Residential
- 🟨 L: Low Density Residential
- 🟧 M: Medium Density Residential
- 🟧 MH: Medium High Density Residential
- 🟥 GC: General Commercial
- 🟦 P: Public/Quasi-Public Facilities
- 🟩 PK: Park
- 🟦 W: Water

Sources: Fresno County GIS. Map date: May 8, 2023.

N

0 200 400

Feet

SHEPHERD NORTH PROJECT

Figure 2.0-7. City of Clovis General Plan Land Use Designations

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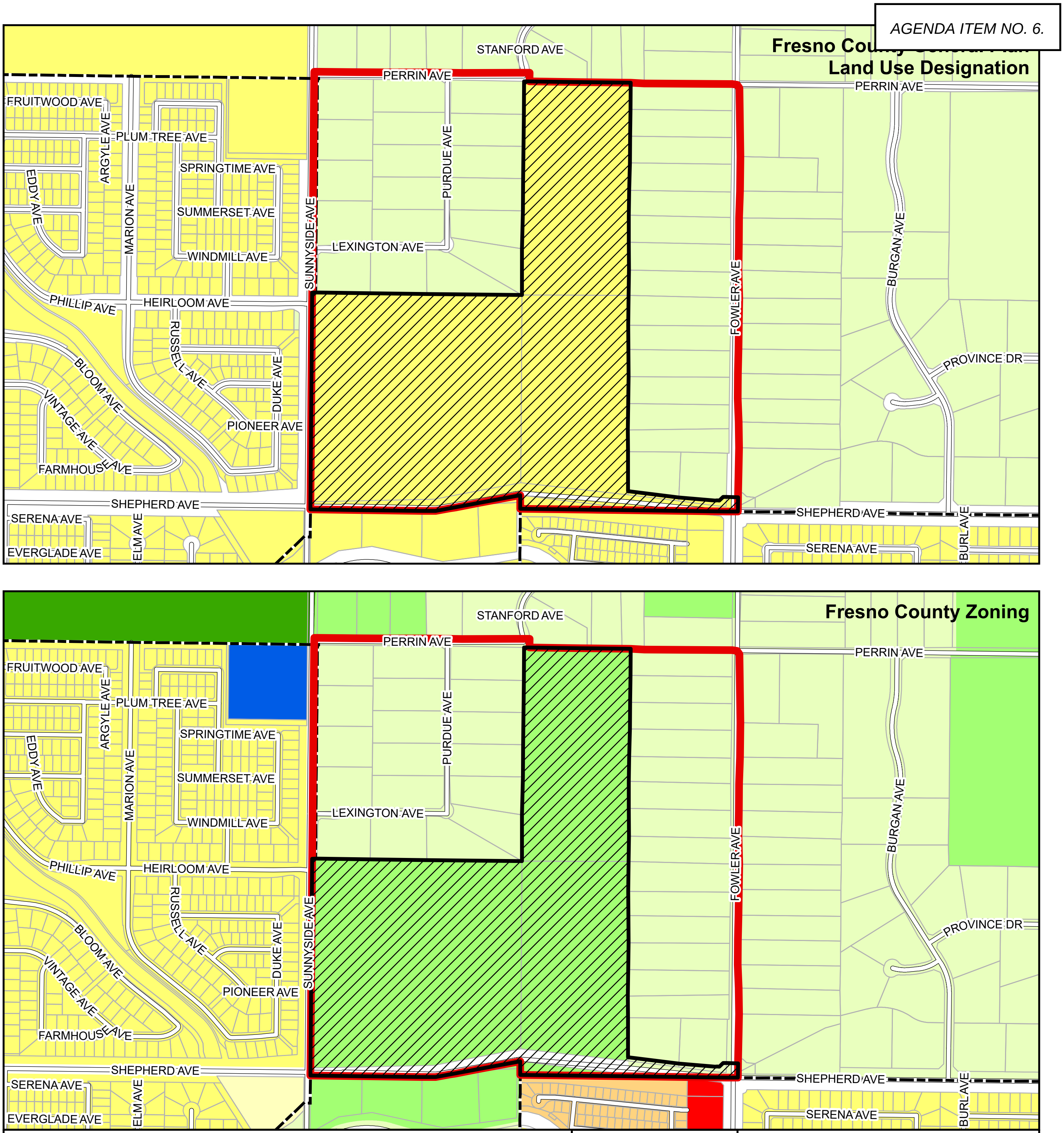

LEGEND

🟥 Project Boundary

▨ Developement Area

╌ Clovis City Limits

Fresno County General Plan Land Use

🟩 Rural Residential

🟨 Low Density Residential

Fresno County Zoning

🟩 AE20

🟩 AL20

🟥 C-2

🟦 P-F

🟨 R-1

🟨 R-1-7500

🟨 R-1-PRD

🟧 R-2

🟨 R-A

🟩 RR

N

0 200 400

Feet

SHEPHERD NORTH PROJECT

Figure 2.0-8. Fresno County General Plan Land Use and Zoning Designations

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Sources: Fresno County GIS. Map date: May 8, 2023.

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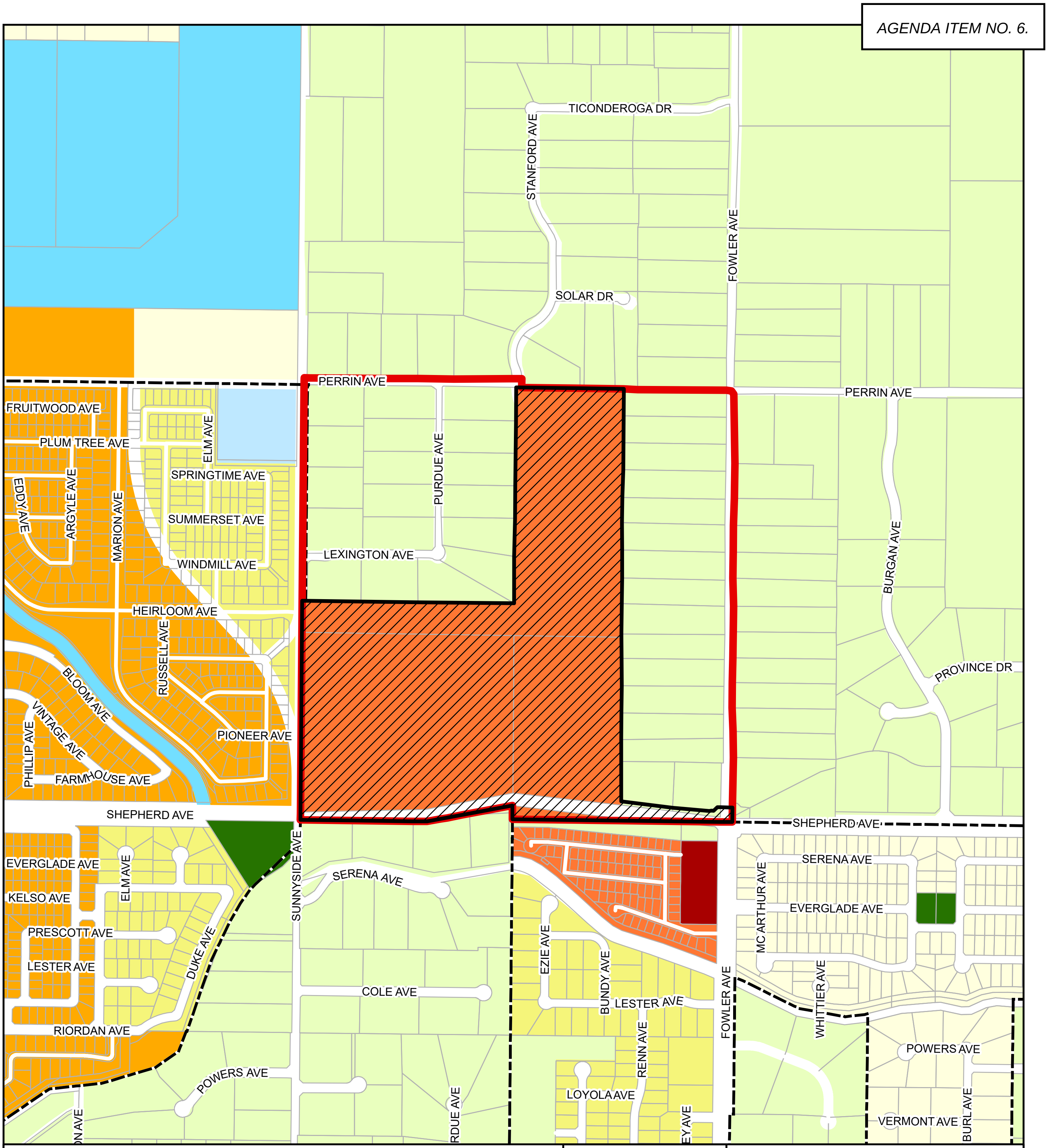

LEGEND

▭ Project Boundary
▨ Developement Area
┅ Clovis City Limits

City of Clovis General Plan Land Use

🟩 RR: Rural Residential
⬜ VL: Very Low Density Residential
🟨 L: Low Density Residential
🟧 M: Medium Density Residential
🟧 MH: Medium High Density Residential
🟥 GC: General Commercial
🟦 P: Public/Quasi-Public Facilities
🟩 PK: Park
🟦 W: Water

N

0 200 400
Feet

Sources: Fresno County GIS. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 2.0-9. Proposed General Plan Land Use Designations

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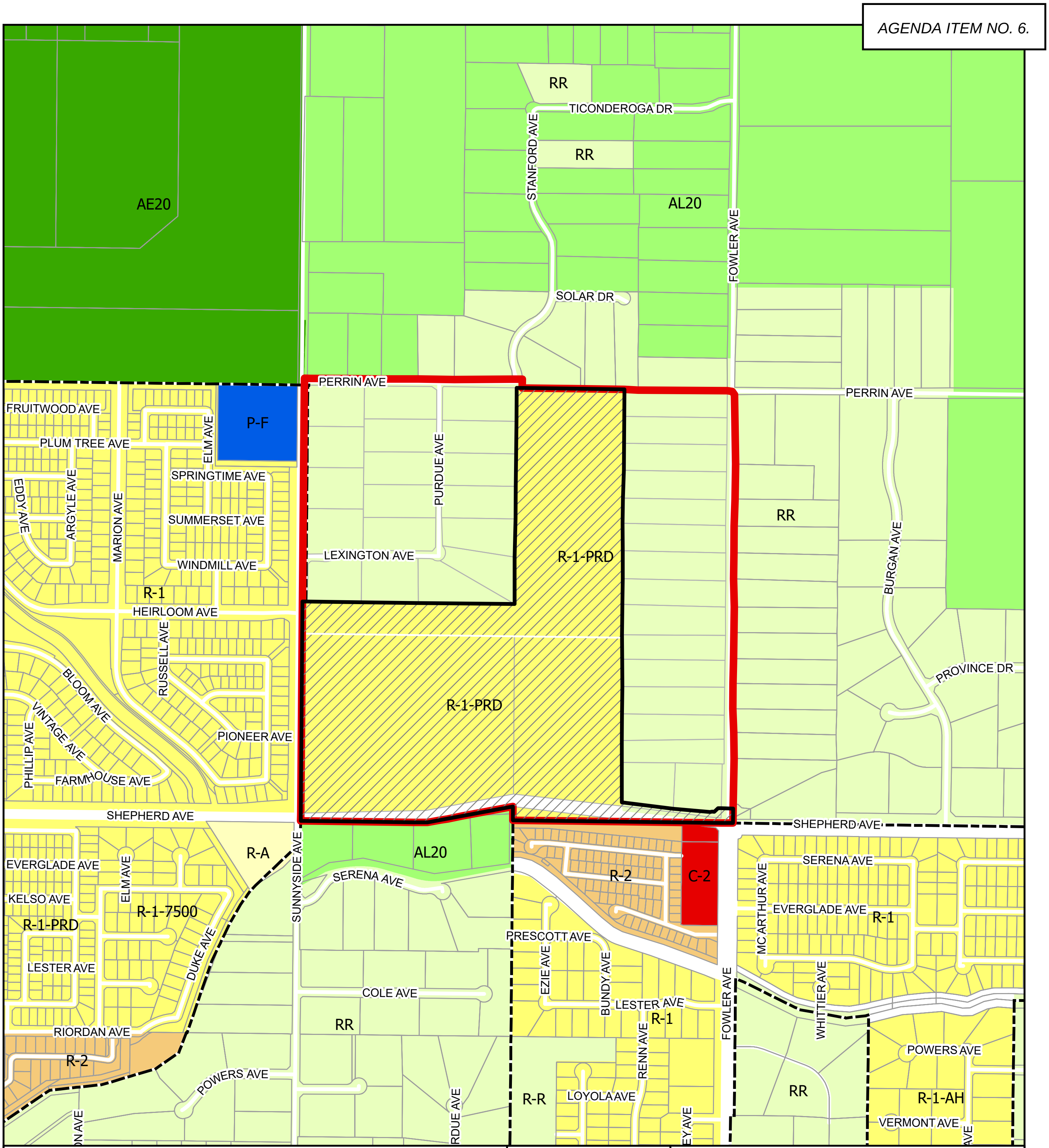

LEGEND

- ▭ Project Boundary
- ▨ Developement Area
- ⬚ Clovis City Limits

City of Clovis Zoning

- 🟥 C-2
- 🟦 P-F
- 🟨 R-1
- 🟨 R-1-7500
- 🟨 R-1-AH
- 🟨 R-1-PRD
- 🟧 R-2
- 🟨 R-A
- 🟩 R-R

Fresno County Zoning

- 🟩 AE20
- 🟩 AL20
- 🟩 R-R

N

0 200 400
Feet

Sources: Fresno County GIS. Map date: May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 2.0-10. Proposed Zoning

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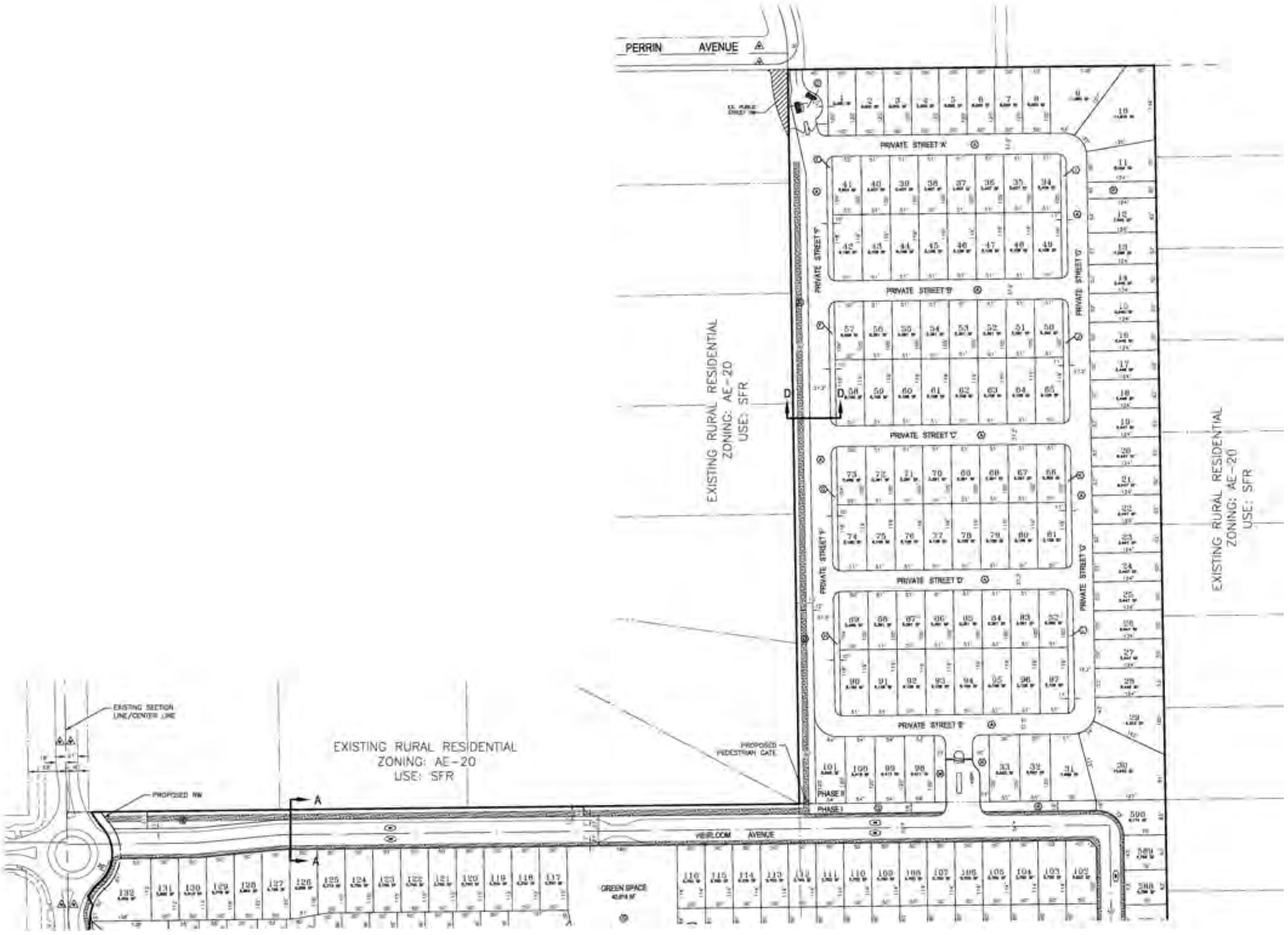

SHEPHERD NORTH PROJECT

Figure 2.0-11a. Tentative Subdivision Map North

Sources: Harbour Associates. Map date: May 8, 2023.

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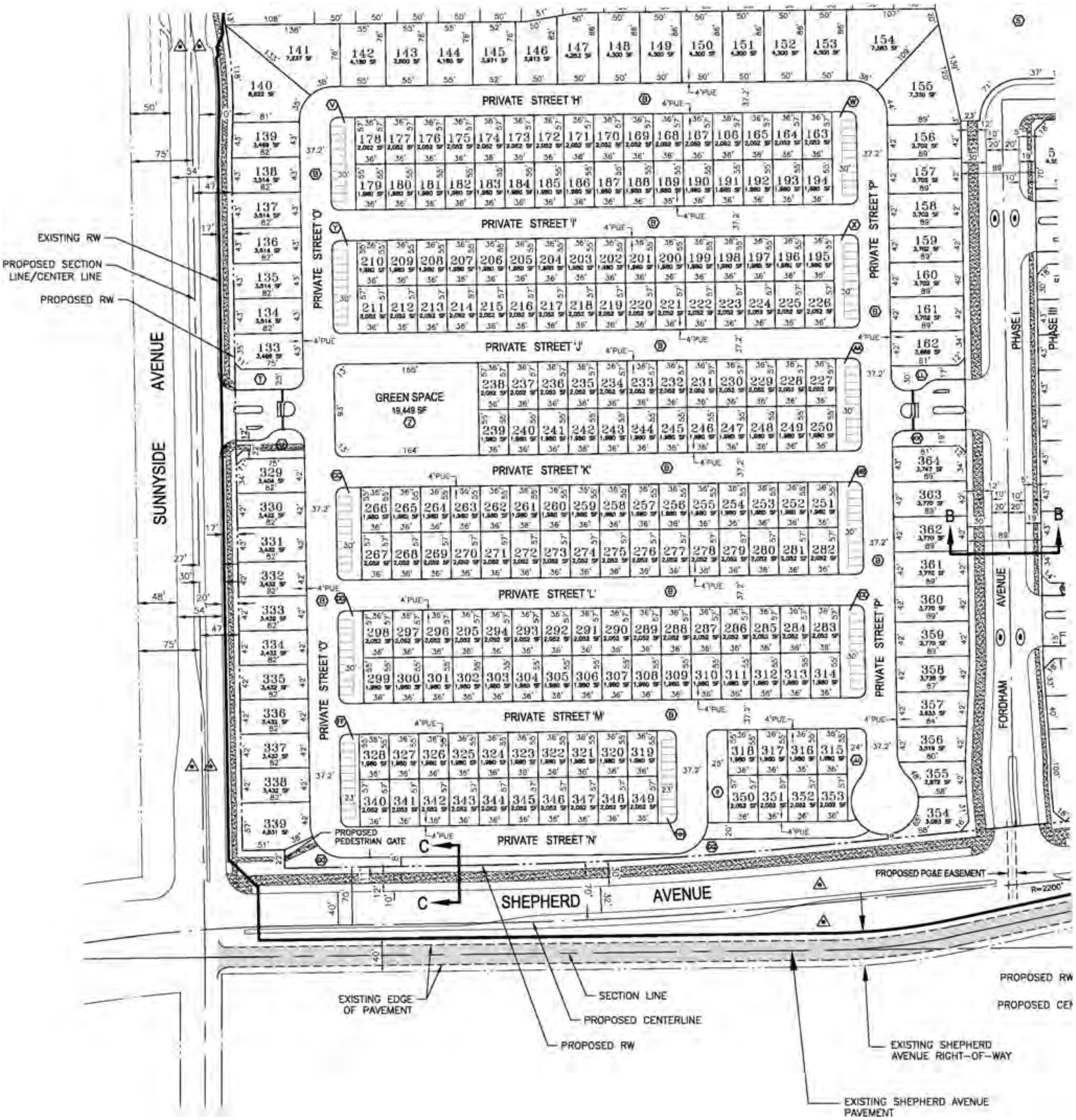

SHEPHERD NORTH PROJECT

Figure 2.0-11b. Tentative Subdivision Map Southwest

Sources: Harbour Associates. Map date: May 8, 2023.

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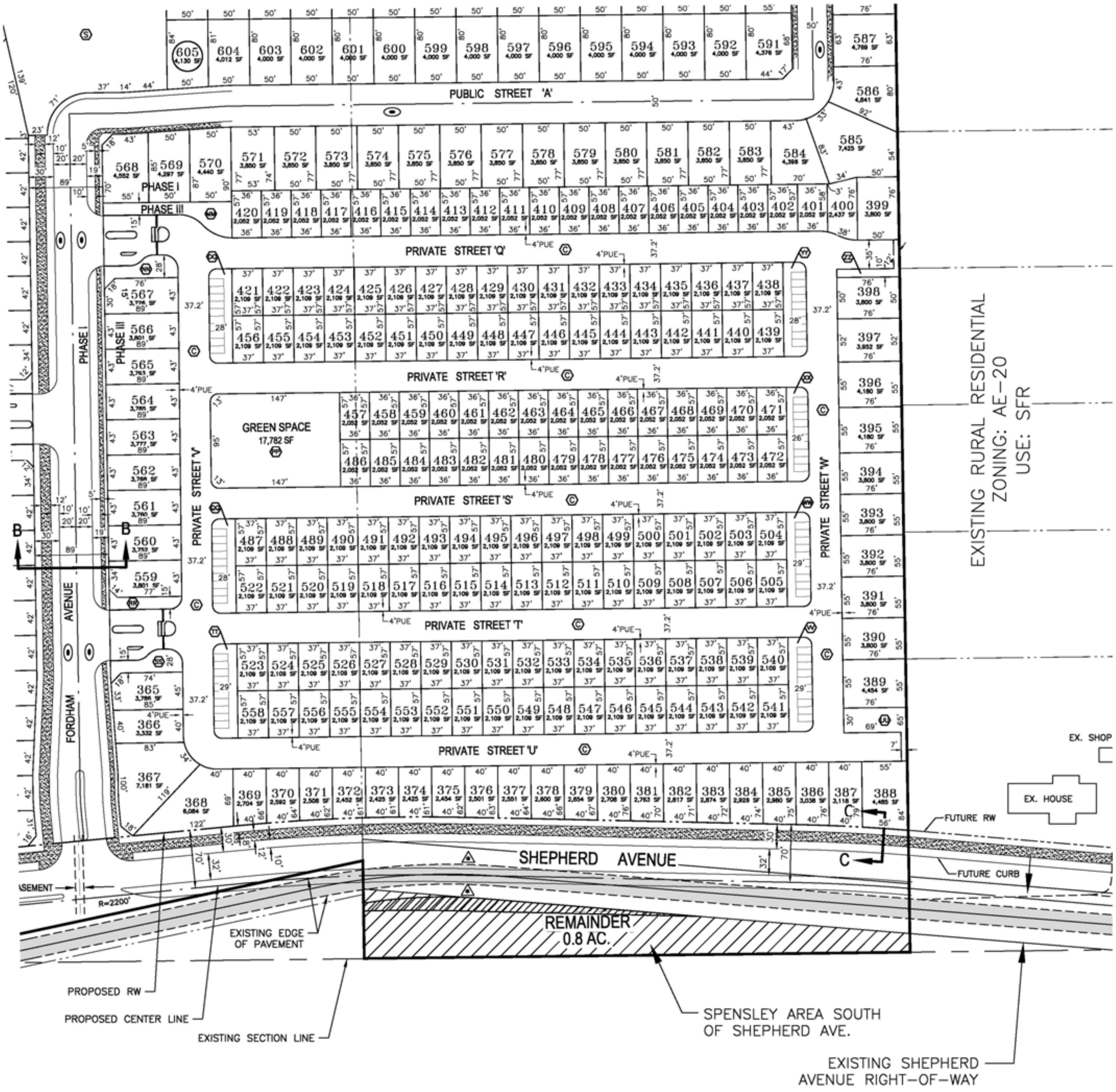

SHEPHERD NORTH PROJECT

Figure 2.0-11c. Tentative Subdivision Map Southeast

Sources: Harbour Associates. Map date: May 8, 2023.

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AESTHETICS AND VISUAL RESOURCES 3.1

The City of Clovis possesses multiple scenic resources, and there are also scenic resources within the unincorporated areas of Fresno County. These resources enhance the quality of life for Clovis residents, and provide for outdoor recreational uses. Landscapes can be defined as a combination of four visual elements: landforms, water, vegetation, and man-made structures. Scenic resource quality is an assessment of the uniqueness or desirability of a visual element. This section provides a background discussion of the scenic highways and corridors, and natural scenic resources such as creeks, wildlife areas, and prominent visual features found in the Project site. This section is organized with an existing setting, regulatory setting, and impact analysis.

This section was prepared based on existing reports and literature for Clovis and the surrounding areas in Fresno County. Additional sources of information included the California Department of Transportation's (Caltrans) Designated Scenic Route map for Fresno County.

There were no comments received during the NOP comment period related to this environmental topic.

3.1.1 ENVIRONMENTAL SETTING

REGIONAL SCENIC RESOURCES

Visual resources are generally classified into two categories: scenic views and scenic resources. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually mid-ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor. Scenic resources are specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements.

Aesthetically significant features occur in a diverse array of environments within the region, ranging in character from urban centers to rural agricultural lands to natural water bodies. Features of the built environment that may also have visual significance include individual or groups of structures that are distinctive due to their aesthetic, historical, social, or cultural significance or characteristics. Examples of the visually significant built environment may include bridges or overpasses, architecturally appealing buildings or groups of buildings, landscaped freeways, and a location where a historic event occurred.

SCENIC HIGHWAYS AND CORRIDORS

Scenic highways and corridors make major contributions to the quality of life enjoyed by the residents of a region. The development of community pride, the enhancement of property values, and the protection of aesthetically-pleasing open spaces reflecting a preference for the local lifestyle are all ways in which scenic corridors are valuable to residents.

Scenic highways and corridors can also strengthen the tourist industry. For many visitors, highway corridors will provide their only experience of the region. Enhancement and protection of these corridors ensures that the tourist experience continues to be a positive one and, consequently, provides support for the tourist-related activities of the region's economy.

Scenic Highways

A scenic highway is generally defined by Caltrans as a public highway that traverses an area of outstanding scenic quality, containing striking views, flora, geology, or other unique natural attributes. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

No officially designated State scenic highways are located in the City of Clovis. The nearest “eligible” State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The Project site is not visible from this roadway segment.

Scenic Corridors

A scenic corridor is the view from the road that may include a distant panorama and/or the immediate roadside area. A scenic corridor encompasses the outstanding natural features and landscapes that are considered scenic. It is the visual quality of the man-made or natural environments within a scenic corridor that are responsible for its scenic value. Commonly, the physical limits of a scenic corridor are broken down into foreground views (zero to one quarter mile) and distant views (over one quarter mile). In addition to distinct foreground and distant views, the visual quality of a scenic corridor is defined by special features, which include:

- Focal points - prominent natural or man-made features which immediately catch the eye.
- Transition areas - locations where the visual environment changes dramatically.
- Gateways - locations which mark the entrance to a community or geographic area.

The adopted 1993 Clovis General Plan discusses scenic “landscape features” in its Open Space and Conservation Element. The element identifies Clovis, Shaw, and Herndon Avenues as gateways to the community and important visual links to Old Town Clovis from the greater Fresno Area. The Open Space and Conservation Element states that “the identity of the gateways will be established through landscape design and features reflecting the historic and ‘small town’ atmosphere.” Although the three identified corridors are quite long and contain substantial segments that do not provide scenic vistas, the corridors physically and visually tie the community together. Other arterial roadways that travel east-to-west through the City of Clovis, such as Shepherd, Bullard, and Ashlan Avenues, span the community’s suburban/rural interface and can also be considered scenic corridors under the Open Space and Conservation Element. These roadways provide a scenic and character transition through the nearly built-out core of Central Clovis into its pastoral agrarian areas to the north, east, and south. Segments of these roadways in the Sphere of Influence are in transition from agrarian to urban.

Of the roadways discussed above, Shepherd Avenue is located immediately south of the Project site and is developed to urban standards with few exceptions from Friant Rd to the west to the intersection of St. Rt. 168 to the east. Specifically, the General Plan EIR identifies views of the rolling grassy hills near the Friant-Kern Canal, pastoral agrarian areas, and the Sierra Nevada foothills to the east from the Shepherd Avenue corridor to be highly valued by visitors and residents of Clovis should be preserved and protected.

LIGHT AND GLARE

During the day, sunlight reflecting from structures is a primary source of glare, while nighttime light and glare can be divided into both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination. This ambient light environment can be accentuated during periods of low clouds or fog.

The variety of urban land uses in the City of Clovis are the main source of daytime and nighttime light and glare. They are typified by single and multi-family residences, commercial structures, industrial areas, and streetlights. These areas and their associated human activities (inclusive of vehicular traffic) characterize the existing light and glare environment present during daytime and nighttime hours in the urbanized portions of the City. Sources of light and glare in the City of Clovis include building (interior and exterior), security, sign illumination, and parking-area lighting. Other sources of nighttime light and glare include streetlights and vehicular traffic along surrounding roadways. Additionally, The General Plan EIR (page 5.1-10) notes that there is a significant amount of ambient lighting comes from surrounding communities and roadways. Because the City of Clovis is adjacent to highly urbanized portions of the City of Fresno to the west and south, ambient light in the community is substantially impacted by land uses in Fresno. Large, light-intensive institutions and facilities near the City’s boundary include Fresno Yosemite International Airport and CSU Fresno. Nevertheless, areas within the City Limits and SOI, which account for nearly half of the entire Planning Area of the City of Clovis, are mainly rural residential and agricultural land and have very few sources of light and glare, allowing for clear day and nighttime views. This is the case of the Project site given that it is in the northern portion of Clovis, which is distant from the more urban and densely populated areas of Fresno and Clovis.

Sources of glare in urbanized portions of the City come from light reflecting off surfaces, including glass, and certain siding and paving materials, as well as metal roofing. The urbanized areas of Clovis contain sidewalks and paved parking areas which reflect street and vehicle lights. The existing light environment found in the Project site is considered typical of suburban areas.

Sky glow is the effect created by light reflecting into the night sky. Sky glow is of particular concern in areas surrounding observatories, where darker night sky conditions are necessary, but is also of concern in more rural or natural areas where a darker night sky is either the norm or is important to wildlife. Due to the urban nature of the City limits, a number of existing light sources affect residential areas and illuminate the night sky. Isolating impacts of particular sources of light or glare is therefore not appropriate or feasible for the proposed Project.

3.1 AESTHETICS AND VISUAL RESOURCES

VISUAL CHARACTER AND SCENIC RESOURCES

Visual Character

The City of Clovis is in California's San Joaquin Valley, and like most communities in the region, features a flat landscape organized around an orthogonal system of roadways. Due to its rapid growth in recent years and its adjacency to the City of Fresno, Clovis has a largely suburban character. A majority of the City's land area is devoted to low density residential neighborhoods. However, because the community has grown from a small farming town and is still surrounded by agricultural land uses on three sides, it retains a rural atmosphere. The suburban/rural interface is most prominent on the City's eastern, southeastern, and southern edges. In these locations, new housing subdivisions are sited between working farms and large residential estate lots of two to five acres. The SOI beyond the City's Limits to the east, northeast, and north is dominated by agricultural uses and undeveloped open spaces. The Project site is located in the north, and the immediately surrounded area is best characterized as a mix of agricultural, suburban residential, and large estate lots with existing residences.

Other Scenic Resources Areas

The foothills and the mountains of the Sierra include a scenic backdrop for the City. The Sierra Nevada also provides a broad array of recreational opportunities to residents of Clovis and is directly accessible from the City via SR-168 or the "Sierra Freeway," which is a limited access roadway in urbanized Fresno and Clovis that bisects the City of Clovis. Natural resources in the Sierra Nevada foothills near Clovis include Millerton Lake State Recreation Area 14 miles to the north and Pine Flat Lake 30 miles to the east. The City itself contains no substantial, undeveloped natural resources other than the grasslands in its northeastern quadrant, north of Shepherd Avenue and Tollhouse Road/SR-168. Outside of this area, there are only remnants of native habitats and vegetation communities. However, irrigation canals throughout the City provide a scenic quality to the rural character of the region. Clovis also features numerous improved parks and green space areas that offer greenery and recreational opportunities to residents, such as the botanical gardens and a network of multipurpose trails. These open spaces also provide visual buffers that break up the monotony of the built environment.

Rolling grassy hills are in the City's northeastern quadrant, north of Shepherd Avenue and Tollhouse Road/SR-168 near the Friant-Kern Canal. These hills are outside the City and SOI boundaries. Grade separations along the Sierra Highway (SR-168), generally located at major interchanges, create some artificial changes in topography that offer limited views of the Sierra Nevada to the east. However, the remainder of the Clovis area is relatively flat and provides clear views of the Sierra Nevada. Agricultural lands have become important visual resources that contribute to the community identity of Clovis, and the Central Valley region. Agricultural lands provide for visual relief form urbanized areas and act as community separators to nearby urban areas.

PROJECT SITE

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.
    - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The Development Area primarily contains farmland (orchard). Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

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The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

- Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
- Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Rural residential parcels have no required standards for uniform or complimentary landscaping. As such, Rural Residential developments have a mixture of highly manicured landscaping to little or no formal landscaping. Simply, the Rural Residential areas do not have landscaping which creates a wide spectrum of aesthetically pleasing landscape themes to unattractive unkept with little or no aesthetic value.

Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

There are minimal existing light sources on and adjacent to the Project site. Light sources are limited to the existing residential homes, roadway, and accessory agricultural structures adjacent to the Project Site.

The project site is located between the Northwest and the Northeast Urban Center area of the City of Clovis. The Northeast Urban Center area is mainly undeveloped and used primarily for agricultural and rural residential uses. The City of Clovis General Plan notes that the Northeast Urban Center is also relatively flat and offers the most direct and unobstructed views of the Sierra Nevada and foothills toward the northeast along State Route (SR)-168. The Northwest Urban center is currently urbanizing at a rapid pace, as intended by the General Plan.

Lastly, as noted before, the General Plan EIR identifies Shepherd Avenue as a scenic corridor, specifically referring to views of the rolling grassy hills near the Friant-Kern Canal, pastoral agrarian areas to the north, and the Sierra Nevada foothills to the east. Shepherd Avenue runs directly across the south boundary of the project site, however, the highest scenic qualities along Shepherd Avenue occur to the east of the Project site in the areas that are largely undeveloped with residences. It is noted that the General Plan EIR concluded that adoption of the General Plan, which contemplated urbanization of the agricultural lands within the General Plan study area, was a less than significant environmental impact.

3.1.2 REGULATORY SETTING

STATE

California Scenic Highway Program

The intent of the California Scenic Highway Program is "to protect and enhance California's natural scenic beauty and to protect the social and economic values provided by the State's scenic resources." Caltrans administers the program, which was established in 1963 and is governed by the California Streets and Highways Code §260 et seq. The goal of the program is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of the adjacent land. Caltrans has compiled a list of state highways that are designated as scenic and county highways that are officially designated or eligible for designation as scenic. Scenic highway designation can provide several types of benefits to the region. Scenic areas are protected from encroachment of inappropriate land uses, free of billboards, and are generally required to maintain existing contours and preserve important vegetative features. Only low-density development is allowed on steep slopes and along ridgelines on scenic highways, and noise setbacks are required for residential development.

To obtain an official "Scenic Highway" designation, the State and Caltrans require a responsible local agency or Local Governing Body (LGB) to prepare a scenic corridor protection plan. In the Clovis area, Fresno County is the LGB. Corridor protection programs are required to contain the following five elements, which have been included in the Fresno County's policies:

- Regulations of land use and density of development;
- Detailed land and site planning;
- Control of outdoor advertising;
- Careful attention to and control of earthmoving and landscaping; and
- The design and appearance of structures and equipment.[1]

According to the Caltrans Scenic Highway Programs website, Caltrans monitors state-designated scenic routes in order to ensure each local jurisdiction's consistency with State guidelines. Specifically, Caltrans District Scenic Highway Coordinator (DSHC) will review a scenic highway for compliance every five years, but can recommend the revocation of scenic designation at any time. To enforce the program, the DSHC will contact the responsible local agency or LGB, in this case, Fresno County. The LGB must either respond by submitting its current Corridor Protection Program or a letter of intent to request a revocation of the scenic designation. The DSHC reviews the

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[1] Scenic Highways Program website, List of eligible and officially designated State Scenic Highways (XLSX), https:// Scenic Highways | Caltrans, accessed on February 9, 2021.

submittal and takes corrective action to resolve any issues of non-compliance, certifies compliance, or recommends revocation of scenic designation.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to an evaluation of the visual quality of the Project site. The General Plan policies applicable to the Project are identified below:

Policies: Land Use Element

- LU-Policy 3.6. Mix of housing types and sizes. Development is encouraged to provide a mix of housing types, unit sizes, and densities at the block level. To accomplish this, individual projects five acres or larger may be developed at densities equivalent to one designation higher or lower than the assigned designation, provided that the density across an individual project remains consistent with the General Plan.
- LU-Policy 4.3. Future environmental clearance. The city shall monitor development and plan for additional environmental clearance as development levels approach those evaluated in the General Plan EIR.
- LU-Policy 4.4. Farmland conservation. Participate in regional farmland conservation, including the establishment of comprehensive agricultural preserves or easements, through efforts such as the Fresno County Model Farmland Conservation Program or the San Joaquin Valley Greenprint.

Policies: Circulation Element

- CIR-Policy 3.10 Pedestrian access and circulation. Entrances at signalized intersections should provide sidewalks on both sides of the entrance that connect to an internal pedestrian pathway to businesses and throughout nonresidential parking lots larger than 50 spaces.
- CIR-Policy 3.11 Right-of-way design. Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community’s appearance and encourage non-motorized transportation.
- CIR-Policy 3.12 Residential orientation. Where feasible, residential development should face local and collector streets to increase visibility and safety of travelers along the streets, and encourage pedestrian and bicycle access.
- CIR-Policy 5.3 Pathways. Encourage pathways and other pedestrian amenities in Urban Centers and new development 10 acres or larger.

Policies: Open Space and Conservation Element

- OSC-Policy 1.1 Parkland standard. Provide a minimum of 4 acres of public parkland for every 1,000 residents.

- OSC-Policy 1.3. New parks and recreation facilities. Provide a variety of parks and recreation facilities in underserved and growing areas of the community.
- OSC-Policy 1.5. Multipurpose open space. Design public facilities as multipurpose open space and recreation to serve the community's infrastructure needs while preserving and enhancing open space and water features. Prioritize the use of existing basins for existing areas, and for future areas prioritize the development of separate park facilities available year round.
- OSC-Policy 2.2. New development. Encourage new development to incorporate on-site natural resources and low impact development techniques.
- OSC-Policy 2.3. Visual resources. Maintain public views of open spaces, parks, and natural features. Enhance views along roadways and trails. Preserve Clovis' viewshed of the surrounding foothills and orient new development to capitalize on views of the Sierra Nevada.
- OSC-Policy 3.4. Drought-tolerant landscaping. Promote water conservation through the use of drought-tolerant landscaping on existing and new residential properties. Require drought-tolerant landscaping for all new commercial and industrial development and city-maintained landscaping, unless used for recreation purposes.

City of Clovis Zoning Ordinance

Chapter 9.28 Landscaping Standards, of the City Development Code contains standards and provisions related to landscaping design requirements that would apply to the proposed Project. The primary intent of Chapter 9.28 Landscaping Standards, is to enhance the appearance of all development by providing standards relating to the quality, quantity, and functional aspects of landscaping and landscape screening; protect public health, safety, and welfare by minimizing the impact of all forms of physical and visual pollution, controlling soil erosion, screening incompatible land uses, preserving the integrity of existing residential neighborhoods, and enhancing pedestrian and vehicular traffic and safety; and decrease the use of water for landscaping purposes by requiring the efficient use of irrigation, appropriate plant materials, and regular maintenance of landscaped areas.

Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting, which requires that light be shielded so that light does not spill onto adjacent properties; are architecturally integrated with the character of on-site and adjacent structures; and incorporate appropriate height, intensity, and scale to the uses they are serving.

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on aesthetics if it will:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; and/or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The evaluation of aesthetics and aesthetic impacts is highly subjective, yet it requires the application of a process that objectively identifies the visual features of the existing environment and their importance. The characterization of aesthetics involves establishing existing visual character, including resources and scenic vistas unique to the Project site and vicinity. Visual resources are determined by identifying existing landforms (e.g. topography and grading), views (e.g. scenic resources such as natural features or urban characteristics), viewing points/locations, and existing light and glare (e.g. nighttime illumination). Changes to the existing aesthetic environment that would result due to implementation of the proposed Project are identified and qualitatively evaluated based on the proposed modifications to the existing setting and the viewer’s sensitivity. Project-related impacts are compared to the context of the existing setting, using the thresholds listed above. The following impact analysis addresses thresholds of significance.

IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas and resources or substantial degradation of visual character. (Less than Significant)

The proposed Project involves the expansion of the City’s Sphere of Influence (SOI) to add approximately 155 acres into the City of Clovis’ SOI, including the annexation/reorganization of the proposed 77-acre Development Area to develop 605 single-family detached units, open space totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements. As mentioned previously, the non-Development Area includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development and no new development or improvements are proposed as part of this proposed Project for the Non-development Area. Therefore, the existing visual character of the Non-development Area would not change as part of this proposed Project.

Development of the proposed Project would convert the 77-acre Development Area from its existing use as primarily agricultural land (pecan orchard) to a residential neighborhood. The neighborhoods within the Development Area would include a network of streets to provide an efficient flow of traffic through the area. Other uses to support and compliment the proposed residential development include underground (non-visible) wet and dry utility infrastructure, roadways with curb/gutters/sidewalks, bicycle/pedestrian facilities, street lighting, and street signage.

The Project site is not designated as a scenic vista by the City of Clovis General Plan or the Fresno County General Plan, nor does it contain any unique or distinguishing features that would qualify the site for designation as a scenic vista. However, the City's General Plan EIR considers Shepherd Avenue a scenic corridor under the General Plan Open Space and Conservation Element. The City's General Plan EIR notes that new development will impact current views of open space, which are primarily vistas of agricultural fields and orchards. These public views are primarily available to motorists traveling along roadways which bound the Development Area. Implementation of the proposed Project would change the existing visual character of the Development Area from a primarily agricultural site to a developed suburban neighborhood. These impacts related to a change in visual character may be considered "attractive" to one viewer and "unattractive" to other viewers. It is noted that the Clovis General Plan EIR concluded that adoption of the General plan which contemplated urbanization of the agricultural lands within the General Plan study area, was a less than significant environmental impact.

Policy 2.3 of the Clovis General Plan Update's Open Space and Conservation Element gives substantial consideration to the preservation of scenic vistas, corridors, and scenic resources, such as maintaining public views of open spaces, parks, and natural features; enhancing views along roadways and trails; preserving Clovis' viewshed of the surrounding foothills; and orienting new development to capitalize on views of the Sierra Nevada. Chapter 9 of the Clovis Development Code also establishes requirements for fences, walls, and hedges to ensure that these elements minimize screening of scenic views and sunlight by outlining provisions such as height limitations, design and construction materials, site plan review requirements, allowable fencing materials, etc. per Section 9.24.060 (Fences, Walls, and Hedges); and screening and buffering requirements of adjoining land uses, utility equipment, and refuse areas are detailed in Section 9.24.090 (Screening and Buffering). Development in accordance to these code requirements would ensure that the implantation of the proposed Project would not have a substantial adverse impact on scenic vistas, corridors, or resources in the City of Clovis.

The Project site currently consists primarily of agricultural lands, primarily a pecan orchard that is currently being removed due to the tree mortality, the agricultural land provides visual relief from urban and suburban developments, and helps to define the character of a region. The proposed Project would develop the last remaining property in agricultural use in an area surrounded by urban and Rural Residential uses. Supporting infrastructure would be extended to the area, which would result in the permanent loss of these agricultural uses. Under some circumstances, loss of agricultural lands could have an adverse cumulative impact on the overall visual character and quality of a region. As noted above, however, the pecan orchard portion of the Project site is an island of agricultural land use surrounded by developed homes to the east, north, and south, and an entitled residential subdivision to the west. What this means is that the pecan orchard is a relic agricultural piece of property that has remained intact and operational despite the properties in the immediate surrounding aesthetically changing to suburban residential aesthetic. The proposed Project would change the existing aesthetic of the Project site to be consistent with the urban landscaping theme established for Shepherd Avenue by the City of Fresno and its urban projects as well as the City of Clovis and its urban projects that generally continues that urban landscaping theme along Shepherd Avenue. With few exceptions, both cities have required residential projects to construct a uniform 6 ft. tall concrete block wall setback at least 30 feet from the street with landscaping, sidewalks and bike lanes. Trees of a small to medium size and a variety of shrubs create a generally consistent shared landscape theme by both cities.

In addition, a change in the visual character of a project site does not necessarily mean the visual character of the project site or the surrounding area will be degraded. The Project applicant has submitted a conceptual plan for the project detailing the Shepherd Avenue and open space landscaping for the proposed developed prepared by a licensed landscape architect. That conceptual landscape plan includes visual components that will enhance the appearance of the neighborhood once developed similar to those constructed by adjacent residential projects along Shepherd Avenue. These improvements include landscaping improvements like new street trees and other neighborhood greenery along Shepherd and Sunnyside Street frontages of the Project. The proposed Project would also result in the construction of park and open space areas which provides some visual relief within residential subdivisions. While implementation of the proposed Project would change the existing visual character of the area, the development components of the subdivisions are in alignment with the City's requirements for residential subdivisions in the region.

To reduce the visual impact of the development, development within the Project site is required to be consistent with the General Plan and the Clovis Zoning Ordinance, as described above, which includes design standards. The City of Clovis zoning ordinance and ministerial permits design, construction and maintenance standards will ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design, construction, and maintenance requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding urban uses.

The loss of the visual appearance of the agricultural land on the site will change the visual character of the Project site in perpetuity, which some people are expected to view as a loss of an isolated visually attractive amenity. Compliance with the requirements within the General Plan, as well as the Municipal Code (specifically Title 7 Public Works, Title 8 Building Regulations, Title 9 Development Code, and Title 10 Parks and Recreation), for the design, construction, and maintenance of the project will be required. Title 9 Development Code Division 3 includes a series of Development and Operational Standards that are aimed at creating uniform performance standards which are designed to minimize and mitigate the potential impacts of development within the City and promote compatibility with surrounding areas and land uses. These standards cover topics such as exterior light and glare (Section 9.22.050), fences, walls, and hedges (Section 9.24.060), height measure and height limit exceptions (9.24.080), screening and buffering (Section 9.24.090), setback regulations and exceptions (Section 9.24.100), landscaping standards (Chapter

9.28), tree protection standards (Chapter 9.30), and signs (Chapter 9.34). Some of these standards and requirements from pre-existing regulations are implemented after Project entitlement when more detailed site planning, engineering, and architecture is performed. The final approval of these items is ministerial. Some examples of requirements that the Project will follow are:

1. The Project will be required to submit and obtain approval form the City of Clovis of a comprehensive landscape and irrigation plan prepared by a licensed landscape architect that is in substantial conformity with the submitted project conceptual landscaping plan, entry treatment and park improvements. The City of Clovis ministerial permits for landscaping, irrigation and grading will assure said landscaping and irrigation complies with applicable state and local plant type and irrigation and grading standards.
2. The Project will be required to annex into a City of Clovis landscaping lighting and maintenance district (LLMD) that will assure that all landscaping and lighting within the public easements along Shepherd and Sunnyside Avenues are properly maintained in manner acceptable to the City of Clovis.
3. The Project will form a common interest association for the purpose of, among other things, common area maintenance. Said maintenance will be at the Project owner's expense. The common interest association will be subject to California Department of Real Estate operational and financial surety requirements.
4. Each Project lot will be subject to the City of Clovis requirement that a Site Plan Review be submitted and approved by the City of Clovis. The Site Plan Review process will require, among other things, that all lots meet applicable development standards; share a compatible architectural, landscaping and color scheme and conform to mandatory grading and drainage standards.

The Municipal Code implements the policies of the Clovis General Plan by classifying and regulating the uses of land and structures within the City of Clovis. The Municipal Code is adopted to protect and to promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses in the City. These existing requirements provide standards for the orderly growth and development of the City to establish and maintain the community's history and quality characteristics in appropriate locations. It requires high quality planning and design for development that enhances the visual character of the City, avoids conflicts between land uses, encourages the appropriate mix of uses, and preserves the scenic qualities of the City. It also creates a comprehensive and stable pattern of land uses upon which to plan sewerage, transportation, water supply, and other public facilities and utilities. Overall, these mandatory requirements are deemed effective in reducing potential visual impacts. This is particularly true here where the project site is an isolated and remnant agricultural use surrounded by residential and rural residential land uses. Therefore, the Project's potential to adversely impact aesthetics is considered **less than significant.**

Impact 3.1-2: Project implementation may substantially damage scenic resources within a State Scenic Highway. (Less than Significant)

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no “eligible” highway segments in the Project vicinity that may be included in the State Scenic Highway system. As such, this is a **less than significant** impact, and no mitigation is required.

Impact 3.1-3: Project implementation may result in light and glare impacts. (Less than Significant)

As noted in Impact 3.1-1, the proposed Project involves the development of up to 605 single-family residential units, open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements. New sources of glare would occur primarily from the windshields of vehicles travelling to and from the Development Area and from vehicles parked within the Project site. However, parking for the proposed residential uses in the Development Area would primarily occur within enclosed garages and driveways. Headlights and windshields would be shielded by the proposed residential structures within the site. Additionally, the Project includes plans for extensive landscaping and open space areas throughout the site, which would provide visual screening and block potential windshield glare for sensitive receptors within the Project site. Residential structures placed along the boundaries of the Development Area would provide visual screening and block potential windshield glare to areas surrounding the Project site.

Additionally, several roadways would be constructed within the Development Area to serve the proposed single-family residential uses. These roadways would result in the introduction of street lighting into a currently undeveloped site. However, the proposed single-family residential uses and local roadway would be typical of what is already experienced as a result of the existing single-family residential uses and local roadways that occur within the surrounding area. The proposed single-family residential uses would be an extension of single-family residential uses adjacent to the Project site.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. While implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare, the impacts would not be eliminated entirely, and the overall level of light and glare in the Project site would increase in general as urban development occurs.

Overall, the proposed Project would introduce new sources of daytime and nighttime lighting within the Project site that do not currently exist. However, it is noted there are no specific features within the proposed Project that would create unusual light and glare. Light sources from the proposed Project can have an adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, light sources can create light spillover impacts on surrounding land uses in the absence of a lighting plan that includes photometrics of the lighting. Any new lighting associated with implementation of the proposed Project would be pedestrian-scale lighting and the fixtures would be consistent with the style and technical specifications approved by the City, including compliance with the City's light and glare regulations under Section 9.22.050 of the Clovis Development Code, which requires that light be shielded so that light does not spill onto adjacent properties. The City's existing requirements require a lighting plan to be submitted to the City for review and approval for the improvement plans, as well as for the building plans. All proposed outdoor lighting is required to meet applicable City standards regulating outdoor lighting, including 9.22.050 Exterior light and glare of the City's Development code, in order to minimize any impacts resulting from outdoor lighting on adjacent properties. Implementation of the existing City standards would reduce potential impacts associated with nighttime lighting and light spillage onto adjacent properties to a **less than significant** level.

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This section provides an overview of agricultural resources in Fresno County and the City of Clovis, agricultural capability of the soils on the Project site, and existing site conditions. This section concludes with an evaluation of the impacts related to agricultural resources and recommendations for mitigating impacts as needed. Information in this section is derived primarily from:

- *City of Clovis General Plan* (City of Clovis, August 2014);
- Clovis *General Plan Draft Environmental Impact Report* (City of Clovis, June 2014);
- *California Important Farmlands Map* (California Department of Conservation, 2022);
- *California Land Conservation (Williamson) Act Status Report* (California Department of Conservation, 2021;
- *Fresno County Crop Report* (Fresno County Department of Agriculture, 2021);
- *Natural Resources Conservation Service* (NRCS) Web Soil Survey (NRCS, 2022);
- *A Landscape of Choice – Strategies for improving patterns of Community Growth (April 1998); and*
- *Geotechnical Engineering Investigation Proposed Tract 6205 (Spensley Property) Sunnyside and Shepherd Avenues Clovis, California (*Krazan & Associates, Inc., 2019) (Appendix F).

It is noted that there are no forest resources located on the Project site or in the City of Clovis, thus this CEQA topic is not relevant to the proposed Project and will not be addressed further in this EIR.

There was one comment received from the California Department of Conservation during the NOP scoping process related to this environmental topic. The comment is included as an appendix to this report and is addressed in part by the contents of this section.

3.2.1 ENVIRONMENTAL SETTING

FRESNO COUNTY AGRICULTURE

Fresno County occupies a central location in California’s vast agricultural heartland, the San Joaquin Valley. The County’s Agricultural Commissioner’s most recent published Agricultural Report (2021) contains the following information relating to agriculture in the County.

Agricultural Value

The gross value of agricultural production in Fresno County for 2021 was $8,085,567,000 which represents an increase of $117,167,000 or 1.47% above the previous year's revised total of $7,968,400,000. Table 3.2-1 lists the nine primary commodities in Fresno County in 2020 and 2021.

TABLE 3.2-1: SUMMARY COMPARISON OF CROP VALUES

PRODUCT TYPE	2020 VALUE IN DOLLARS	2021 VALUE IN DOLLARS
Field Crops	$299,961,000	$369,792,000
Vegetable Crops	$1,418,639,000	$1,219,120,000
Fruit and Nut Crops	$4,561,749,000	$4,793,849,000
Nursery Products	$39,201,000	$47,941,000
Livestock and Poultry	$1,022,018,000	$990,996,000
Livestock and Poultry Products	$473,272,000	$500,528,000

PRODUCT TYPE	2020 VALUE IN DOLLARS	2021 VALUE IN DOLLARS
Seed Crops	$8,812,000	$24,151,000
Apiary Products	$141,505,000	$133,585,000
Other Products (Industrial Crops)	$3,243,000	$5,605,000

SOURCE: FRESNO COUNTY AGRICULTURAL REPORT, 2021.

AGRICULTURAL CAPABILITY

The California Department of Conservation Farmland Mapping and Monitoring Program identifies lands that have agriculture value and maintains a statewide map of these lands called the Important Farmlands Inventory (IFI). IFI classifies land based upon the productive capabilities of the land, rather than the mere presence of ideal soil conditions.

The suitability of soils for agricultural use is just one factor for determining the productive capabilities of land. Suitability is determined based on many characteristics, including fertility, slope, texture, drainage, depth, and salt content. A variety of classification systems have been devised by the State to categorize soil capabilities. The two most widely used systems are the Capability Classification System and the Storie Index. The Capability Classification System classifies soils from Class I to Class VIII based on their ability to support agriculture with Class I being the highest quality soil. The Storie Index considers other factors such as slope and texture to arrive at a rating. The IFI is in part based upon both of these two classification systems.

Soil Capability Classification System

The Soil Capability Classification System takes into consideration soil limitations, the risk of damage when soils are used, and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils that are unsuitable for agriculture. Generally, as the rating of the capability classification increases, yields and profits are more difficult to obtain. A general description of soil classifications, as defined by the Natural Resources Conservation Service (NRCS) is provided in Table 3.2-2 below.

TABLE 3.2-2: SOIL CAPABILITY CLASSIFICATION

CLASS	DEFINITION
I	Soils have slight limitations that restrict their use.
II	Soils have moderate limitations that restrict choice plants or that require moderate conservation practices.
III	Soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.
IV	Soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.
V	Soils are not likely to erode, but have other limitations; impractical to remove that limits their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
VIII	Soils and landforms have limitations that preclude their use for commercial plans and restrict their use to recreation, wildlife habitat, water supply, or aesthetic purposes.

SOURCE: USDA SOIL CONSERVATION SERVICE.

Storie Index Rating System

The Storie Index Rating system ranks soil characteristics according to their suitability for agriculture from Grade 1 soils (80 to 100 rating) which have few or no limitations for agricultural production, to Grade 6 soils (less than 10) which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. The six grades, ranges in index rating, and definition of the grades, as defined by the NRCS, are provided below in Table 3.2-3.

TABLE 3.2-3: STORIE INDEX RATING SYSTEM

GRADE	*INDEX RATING*	*DEFINITION*
1	80 – 100	Few limitations that restrict their use for crops
2	60 – 80	Suitable for most crops, but have minor limitations that narrow the choice of crops and have a few special management needs
3	40 – 60	Suited to a few crops or to special crops and require special management
4	20 – 40	If used for crops, severely limited and require special management
5	10 – 20	Not suited for cultivated crops, but can be used for pasture and range
6	Less than 10	Soil and land types generally not suited to farming

SOURCE: NRCS WEB SOIL SURVEY, 2019.

In addition to soil suitability, other factors for determining the agricultural value of land include whether soils are irrigated, the depth of soil, water-holding capacity, and physical and chemical characteristics. Areas considered to have the greatest agricultural potential are designated as Prime Farmland or Farmland of Statewide Importance.

Important Farmlands

The Farmland Mapping and Monitoring Program (FMMP) is a farmland classification system administered by the California Department of Conservation. Important farmland maps are based on the Land Inventory and Monitoring criteria, which classify a land's suitability for agricultural production based on both the physical and chemical characteristics of soils, and the actual land use. The system maps five categories of agricultural land, which include important farmlands (prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance) and grazing land, as well as three categories of non-agricultural land, which include urban and built-up land, other land, and water area.

IMPORTANT FARMLANDS IN FRESNO COUNTY

Data from the Department of Conservation indicates that approximately 1,858 acres of Prime Farmland in the County were developed for other uses between 2016 and 2018, resulting in an existing total of 381,934 acres of Prime Farmland (42 percent of agricultural land). The remaining agricultural land is comprised of Farmland of Statewide Importance (9 percent), Unique Farmland (9 percent), Farmland of Local Importance (7 percent), and Grazing Land (14 percent). The types and acreages of farmland in 2016 and 2018 are shown in Table 3.2-4.

TABLE 3.2-4: FRESNO COUNTY FARMLANDS SUMMARY AND CHANGE BY LAND USE CATEGORY

LAND USE CATEGORY	*2016-2018 ACREAGE CHANGES*							
	TOTAL ACREAGE INVENTORIED				*ACRES LOST*	*ACRES GAINED*	*TOTAL ACREAGE CHANGED*	*NET ACREAGE CHANGED*
	2016		*2018*					
	Acres	*Percent*	*Acres*	*Percent*	*(-)*	*(+)*		
Prime Farmland	675,720	28%	672,208	28%	7,237	3,725	10,962	-3,512
Farmland of Statewide Importance	397,133	16%	395,148	16%	3,945	1,960	5,905	-1,985
Unique Farmland	94,902	4%	95,352	4%	809	1,259	2,068	450
Farmland of Local Importance	191,783	8%	192,434	8%	9,946	10,597	20,543	651
IMPORTANT FARMLAND SUBTOTAL	1,359,538	56%	1,355,142	56%	**21,937**	**17,541**	**39,478**	**-4,396**
Grazing Land	822,696	34%	822,455	34%	718	477	1,195	-241
AGRICULTURAL LAND SUBTOTAL	2,182,234	90%	2,177,597	89%	**22,655**	**18,018**	**40,673**	**-4,637**
Urban and Built-up Land	128,910	5%	132,868	5%	685	4,643	5,328	3,958
Other Land	121,445	5%	121,847	5%	1,745	2,211	3,956	466
Water Area	4,908	<1%	5,121	<1%	64	277	341	213
TOTAL AREA INVENTORIED	**2,437,497**	**100%**	**2,437,433**	**100%**	**25,149**	**25,149**	**50,298**	**0**

SOURCE: CA DEPARTMENT OF CONSERVATION, DIVISION OF LAND RESOURCE PROTECTION TABLE A-30, 2018.

EXISTING SITE CONDITIONS

The Development Area primarily contains farmland (orchard). Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

- Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin

Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.

- Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Surrounding Land Uses

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site are single family residential subdivisions under construction and a power sub-station.

Project Site Farmland Characteristics

The State of California Department of Conservation FMMP and Fresno County GIS data were used to illustrate the farmland designations for the Project site. The last mapping date in Fresno County is June 2020. Farmlands on the Project site are identified in Figure 3.2-1. The farmland classifications for the site and surrounding area are described below. It is important to note that the California Department of Conservation notes on the map that "*This map should be used within the limits of its purpose - as a current inventory of agricultural land resources. This map does not necessarily reflect general plan or zoning designations, city limit lines, changing economic or market conditions, or other factors which may be taken into consideration when land use policies are determined. This map is not designed for parcel-specific planning purposes due to its scale and the ten-acre minimum land use mapping unit. Classification of important farmland and urban areas on this map is based on best available data. The information has been delineated as accurately as possible at 1:24,000-scale, but no claim to meet 1:24,000 National Map Accuracy Standards is made due to variations in the quality of source data*."

PRIME FARMLAND

Prime Farmland is farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

According to the June 2020 Important Farmland Map, approximately 63.73 acres of Prime Farmland are in the Project Site with approximately 63.60 acres of the Prime Farmland in the Development Area. Prime Farmland is also shown immediately west of the Project Site. This designation, however, does not fully consider site specific characteristics such as the existence of a hardpan within the upper horizon of the soil profile, the project size, surrounding urban uses, lack of agricultural protection zones in the zone of influence, lack of water resources, and ongoing economic feasibility of agricultural operations due to other factors. The LESA model shows that the loss of this land does not exceed the threshold of significance, which suggests that the 2020 Important Farmland Map designating the Project site as Prime farmland is not justified for the site-specific conditions. The results of the LESA Model are included as Appendix B, and are discussed more in the Impact Analysis.

FARMLAND OF STATEWIDE IMPORTANCE

Farmland of Statewide Importance is farmland with characteristics similar to those of Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Approximately 11.47 acres of Farmland of Statewide Importance are in the Project Site with approximately 11.44 acres of the Farmland of Statewide Importance in the Development Area. Similar to what was discuss under the Prime Farmland discussion above, this designation does not fully consider site specific characteristics. As previously explained, the LESA model shows that the loss of this land does not exceed the threshold of significance, which suggests that the 2020 Important Farmland Map designating the Project site as Farmland of Statewide Importance is not justified for the site-specific conditions. The results of the LESA Model are included as Appendix B, and are discussed more in the Impact Analysis.

UNIQUE FARMLAND

Unique Farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

There is no Unique Farmland within the Project site, or in the immediately vicinity, that is designated Unique Farmland.

FARMLAND OF LOCAL IMPORTANCE

Farmland of Local Importance is land of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.

There is no Farmland of Local Importance located within the Project site. Farmland of Local Importance is located to the northwest of the Project site.

URBAN AND BUILT-UP LAND

Urban and Built-up Land is land occupied by structures with a building density of at least one (1) unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Approximately 41.02 acres of Urban and Built-up Land are located on the Project site with approximately 1.68 acres located within the Development Area of the Project Site. Urban and Built-up Land is located to the north and south of the Project site.

RURAL RESIDENTIAL LAND

Rural Residential Land has a building density of less than 1 structure per 1.5 acres, but with at least 1 structure per 10 acres.

Approximately 38.89 acres of Rural Residential land are located within the Project site with approximately 1.70 acres located within the Development Area of the Project Site.

OTHER LAND

Other Land is not included in any other mapping category. Common examples include brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty (40) acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Other Land is not located on the Project site or within the general vicinity of the Project as shown on Figure 3.2-1.

Soils and Farmland Characteristics

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. Table 3.2-5 identifies the soils found in the Project area. The NRCS Soils Map is provided on Figure 3.2-2. In addition, a Geotechnical Engineering Investigation was performed by Krazan and Associates, Inc. on January 24, 2019, that further refined the soil conditions through physical drilling and testing. This report essentially denotes that the majority of the property has a thin layer of productive soil, underlaid by a hardpan and perched water that is not conducive to sustained long term agricultural production.

TABLE 3.2-5: PROJECT SITE SOILS

MAP UNIT SYMBOL	*NAME*	*ACRES IN DEVELOPMENT AREA*	*PERCENT OF DEVELOPMENT AREA*	*ACRES IN NON-DEVELOPMENT AREA*	*PERCENT OF NON-DEVELOPMENT AREA*	*CAPABILITY CLASSIFICATION**	*STORIE INDEX*
An	Alamo clay	0.00	0.0%	0.27	0%	IIIw-IVw	6
ArA	Atwater sandy loam, 0 to 3 percent slopes	10.85	13.8%	16.21	21%	IIs-IVs	93
Gf	Grangeville fine sandy loam, 0 to 1 percent slopes	23.05	29.4%	8.49	11%	IIw-IVw	30

Gg	Grangeville fine sandy loam, saline alkali	3.36	4.3%	0.09	0%	IIs-IVs	56
Re	Ramona loam, hard substratum	20.39	26.0%	30.92	40%	IIs-IVs	48
Rh	Riverwash	0.81	1.0%	0.04	0%	VIII	25
SeA	San Joaquin loam, 0 to 3 percent slopes	11.54	14.7%	12.62	16%	IIIs-IVs	31
TzbA	Tujunga loamy sand, 0 to 3 percent slopes	0.00	0.0%	1.86	2%	IVs-IVs	65
VaA	Visalia sandy loam, 0 to 3 percent slopes	8.42	10.7%	6.19	8%	I-IVc	95

** DEPICTS IRRIGATED VS NON IRRIGATED CAPABILITY RATING*

SOURCE: FRESNO COUNTY GIS, NRCS SOILS DATABASE, JULY 19, 2022.

Alamo clay. The Alamo series consists of moderately deep to hardpan, poorly drained soils that formed in alluvium from mixed sources. Alamo soils are in basins and drainageways on floodplains and fan remnants. Slope ranges from 0 to 2 percent.

Atwater sandy loam. The Atwater series consists of very deep, well drained soils formed in granitic alluvium. Soils are well drained with moderately rapid permeability and slow runoff. Used mainly for production of truck crops, grapes, tree fruits, nuts, grain, and alfalfa. Vegetation consists of annual grasses, weeds, and low-growing shrubs.

Grangeville fine sandy loam. The Grangeville series consists of very deep, somewhat poorly drained soils that formed in moderate coarse textured alluvium dominantly from granitic rock sources. Grangeville soils are on alluvial fans and floodplains and have slopes ranging from 0 to 2 percent. Somewhat poorly drained; this soil has altered drainage because of the dams and reservoirs in the Sierra Nevada, pumping from the water table, tile and interceptor drains, and filling and leveling of sloughs in the vicinity. Negligible to very low runoff; moderately rapid permeability and moderate permeability in saline-sodic phases. Used intensively for growing alfalfa, grapes, cotton, truck crops and irrigated pasture. Some areas are being urbanized. Vegetation in uncultivated areas is annual grasses and forbs with native (sodic) alkali-tolerant plants and a few scattered oak and cottonwood trees.

Ramona loam. The Ramona series is a member of the fine-loamy, mixed, thermic family of Typic Haploxeralfs. Typically, Ramona soils have brown, slightly and medium acid, sandy loam and fine sandy loam A horizons, reddish brown and yellowish red, slightly acid, sandy clay loam B2t horizons, and strong brown, neutral, fine sandy loam C horizons. Well-drained; slow to rapid runoff; moderately slow permeability. Used mostly for production of grain, grain-hay, pasture, irrigated citrus, olives, truck crops, and deciduous fruits. Uncultivated areas have a cover of annual grasses, forbs, chamise or chaparral.

Riverwash. Riverwash consists of the unvegetated sand bars in the main channel of rivers that are frequently flooded.

San Joaquin loam. The San Joaquin series consists of moderately deep to a duripan, well and moderately well drained soils that formed in alluvium derived from mixed, but dominantly granitic rock sources. They are on undulating low terraces with slopes of 0 to 9 percent. Well and moderately well drained; medium to very high runoff; very slow permeability. Some areas are subject to rare or occasional flooding. Used for cropland and livestock grazing; crops are small grains, irrigated pasture and rice; vineyards, fruit and nut crops.

Tujunga loamy sand. The Tujunga series consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains, including urban areas. Slopes range from 0 to 12 percent. This soil is used for grazing, citrus, grapes, other fruits, and urban residential or commercial development. Uncultivated areas have a cover of shrubs, annual grasses and forbs. In urban areas, ornamentals and turf-grass are common.

Visalia sandy loam. This series consists of well drained soils. They formed in alluvium derived from granite. Slopes range from 5 to 9 percent. Common uses for this series include irrigated cropland and this soil is considered Prime farmland, if irrigated.

Availability of Water Resources and Feasibility

For several years, the current property owner has been responsible for managing the former Cal-Pecan orchard located on the Project site. In recent years, primarily due to drought conditions and expansion of new development surrounding the former Cal-Pecan orchard, the economically viable of irrigated agricultural production has diminished. The Project site is located entirely north and east of the Enterprise Canal and therefore outside of the nearby Fresno Irrigation District boundary. It is therefore not eligible to receive deliveries of surface water from any irrigation district. This is an entirely different situation from other properties located in the region, such as the nearby Heritage Grove growth area. A portion of Heritage Grove is located on the west side of the Enterprise Canal and continues to receive deliveries of surface water to support agricultural production. Recent SIGMA regulatory changes that now severely limit groundwater pumping has constrained the ability of any agricultural properties located outside of an irrigation district to support intensive agricultural uses that require regular and timely irrigation; further, groundwater pumping on this property has proven to be unpredictable and unreliable in recent years as available water from the aquifer under the Project site had been highly variable and provided an unreliable supply. The property owner has indicated that they made every effort to continue irrigating the trees throughout the drought conditions last summer, but the wells on the Project site went entirely dry and caused the pumps to burn out. The pecan trees suffered tremendous damage without available irrigation water and it resulted in large-scale tree mortality.

Additionally, as a result of the recent SIGMA regulatory changes, virtually all agricultural lending banks and institutions have recently changed their lending requirements to now demand availability of two sources of water (groundwater and surface water) as a condition for continued lending. The Project site cannot meet the new lending requirement because it is located outside of an irrigation district and is no longer eligible to obtain agricultural loans to support commercial agricultural operations.

The property owner also has noted that the soil substructure varies greatly on the Project site and is not accurately reflected in the more generic soil types documented in the Soil Survey for the region. The property owner has indicated that the soils are not conducive to produce high agricultural yields because there is a cemented silty sand, clayey sand, and silty sand with clay, locally referred to as "hardpan" that is encountered below 2 feet across much of the Project site. This cementation retards the free percolation of surface water into the soil stratum below the hardpan, frequently resulting in a temporary perched water table condition at or near the ground surface during winter periods of precipitation. The perched water table can result in anerobic conditions in the root zone, which can result in root mortality and damage or death to the crop. This hardpan layer limits the types of crops that can be successful and is generally a variable that makes the property less economically viable for agricultural production.

The property owner has also indicated that the proximity of the Project site to existing urban development diminishes the economic viability of agricultural production. The property owner has indicated that there is increased vandalism, theft and harassment costs in recent years. The property owner cited last summer as particularly troublesome when neighbors would routinely shut-off irrigation pumps during the night and the valves in the orchard rows that are necessary to regulate pressure to operate the system were stolen. The property owner noted that equipment vandalism and theft occurred regularly and continued agricultural operations are now virtually impossible.

3.2.2 REGULATORY SETTING

FEDERAL

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It ensures that, to the extent practicable, federal programs are compatible with State and local units of government as well as private programs and policies to protect farmland. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of the FPPA, farmland includes Prime Farmland, Unique Farmland, and Land of Statewide or Local Importance. Farmland subject to FPPA requirements does not have to be currently used for crop production. In fact, the land can be forest land, pastureland, cropland, or other land, but does not include water bodies or land developed for urban land uses (i.e., residential, commercial, or industrial uses).

The Natural Resource Conservation Service (NRCS) administers the Farmland Protection Program. NRCS uses a land evaluation and site assessment (LESA) system to establish a farmland conversion impact rating score on proposed sites of federally funded and assisted projects. This score is used as an indicator for the project sponsor to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level. The assessment is completed on form AD-1006, Farmland Conversion Impact Rating. The sponsoring agency completes the site assessment portion of the AD-1006, which assesses non-soil related criteria such as the potential for impact on the local agricultural economy if the land is converted to non-farm use and compatibility with existing agricultural use.

The Project site and adjacent parcels will not be completed by a federal agency, or with assistance from a federal agency. Therefore, the Project will not be subject to the FPPA.

STATE

Williamson Act

The California Land Conservation Act of 1965, commonly known as the Williamson Act, was established based on numerous State legislative findings regarding the importance of agricultural lands in an urbanizing society. Policies emanating from those findings include those that discourage premature and unnecessary conversion of agricultural land to urban uses and discourage discontinuous urban development patterns, which unnecessarily increase the costs of community services to community residents.

The Williamson Act authorizes each County to establish an agricultural preserve. Land that is within the agricultural preserve is eligible to be placed under a contract between the property owner and County that would restrict the use of the land to agriculture in exchange for a tax assessment that is based on the yearly production yield. The contracts have a 10-year term that is automatically renewed each year, unless the property owner requests a non-renewal or the contract is cancelled. If the contract is cancelled, the property owner is assessed a fee of up to 12.5 percent of the property value.

The Project site is not under a Williamson Act contract, however, a small parcel immediately south of the Project Site, on the opposite side of Shepherd Avenue, is designated Williamson Act Non-Renewal. Figure 3.2-3 Shows Williams Act contact land within the vicinity of the Project Site.

Farmland Security Zones

In 1998, the State legislature established the Farmland Security Zone (FSZ) program. FSZs are similar to Williamson Act contracts, in that the intention is to protect farmland from conversion. The main difference however, is that the FSZ must be designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. The term of the contract is a minimum of 20 years. The property owners are offered an incentive of greater property tax reductions when compared to the Williamson Act contract tax incentives; the incentives were developed to encourage conservation of prime farmland through FSZs. The non-renewal and cancellation procedures are similar to those for Williamson Act contracts.

The Project site and the adjacent parcels are not within the FSZ program.

California Government Code Section 56064

This section of the Government Codes defines "Prime agricultural land" as follows:

- Prime agricultural land means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:
    - Land that qualifies, if irrigated, for rating as Class I or Class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
    - Land that qualifies for rating 80 through 100 Storie Index Rating.
    - Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
    - Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will re-turn during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars ($400) per acre.
    - Land that has returned from the production of unprocessed agricultural plant products on an annual gross value of not less than four hundred dollars ($400) per acre for three of the previous five calendar years.

LOCAL

Local Agency Formation Commission Boundary Controls

The Fresno Local Agency Formation Commission (LAFCo) is responsible for coordinating orderly amendments to local jurisdictional boundaries, including annexations. Annexation of the Development Area into the City of Clovis would be subject to LAFCo approval, and LAFCo's decision is governed by state law (Gov't Code § 56001 et seq.) and the local LAFCo Policies and Procedures. State law requires LAFCo to consider agricultural land and open space preservation in all decisions related to expansion of urban development. LAFCO's definition of Prime Agriculture land refers to California Government Code Section 56064, which is described above.

City of Clovis General Plan

The General Plan includes several policies relevant to agricultural resources. Policies applicable to the Project are identified below:

Policies: Land Use Element

- LU-Policy 4.4. Participate in regional farmland conservation, including the establishment of comprehensive agricultural preserves or easements, through efforts such as the Fresno County Model Farmland Conservation Program or the San Joaquin Valley Greenprint.

- LU-Policy 6.2. Smart growth. The city is committed to the following smart growth goals.

    a. Create a range of housing opportunities and choices;
    b. Create walkable neighborhoods;
    c. Encourage community and stakeholder collaboration;
    d. Foster distinctive, attractive communities with a strong sense of place;
    e. Make development decisions predictable, fair, and cost-effective;
    f. Mix land uses;
    g. Preserve open space, farmland, natural beauty, and critical environmental areas;
    h. Provide a variety of transportation choices;
    i. Strengthen and direct development toward existing communities;
    j. Take advantage of compact building design;
    k. Enhance the economic vitality of the region;
    l. Support actions that encourage environmental resource management.

Policies: Open Space and Conservation Element

- OSC-Policy 2.2. New development. Encourage new development to incorporate on-site natural resources and low impact development techniques.

- OSC-Policy 2.4. Agricultural lands. Preserve the city's agricultural legacy through the Agricultural land use designation, memorialize agricultural history and culture, and facilitate thoughtful conversion of lands to development.

- OSC-Policy 2.5. Right to farm. Support, encourage, and protect agricultural operations within Clovis and recognize their right to farm.

City of Clovis Right to Farm Ordinance

Section 9.40.170 of the Municipal Code establishes the City's "Right to Farm" ordinance, which is intended to provide the City's policy regarding the "right to farm" and contains a subdivider's and owner's disclosure statement, which acknowledges the subdivider's and owner's understanding of the presence of the adjoining agricultural use and the City's policy regarding its right to continue. The ordinance establishes the City's policy to agricultural land consistent with the California Civil Code Section 3482.5 as follows:.

A. Policy of the City.

1. It is the declared policy of the City of Clovis to preserve, protect, and encourage development of its agricultural land consistent with the California Civil Code Section 3482.5, which provides that no agricultural activity, operation, or facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in operation for more than three (3) years if it was not a nuisance at the time it began.
2. This policy applies to normally acceptable agricultural operations, as defined in the California Civil Code Section 3482.5, and shall not apply if the agricultural activity, operation, facility, or appurtenances thereof obstruct the free passage or use, in the customary manner, of any public park, square, street, or highway.
3. This policy shall not invalidate any provision contained in the Fish and Game Code, Food and Agricultural Code, Health and Safety Code, or Water Code Division 7 (commencing with Section 13000), if the agricultural activity, operation, facility, or appurtenances thereof constitute a nuisance, public or private, as specifically defined or described in any of those provisions.

B. Covenant. If a subdivision is at any point within three hundred feet (300') of land zoned for agricultural uses, the approval of the tentative and final subdivision map or parcel map shall be conditional upon the recordation with the County Recorder of a right-to-farm covenant acknowledging, accepting and complying with this section, in substantially the following wording or similar form:

> The undersigned in consideration of recordation of said subdivision by the City of Clovis, do hereby covenant and agree with the declared policy of the City of Clovis (Right-to-Farm Ordinance) to preserve, protect, and encourage development of its agricultural land consistent with the California Civil Code Section 3482.5, which provides that no agricultural activity, operation, or facility, or appurtenances thereof, as defined in the code, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in operation for more than three years if it was not a nuisance at the time it began; that the described property is in or near agricultural districts and that the residents of the property should be prepared to accept the inconveniences and discomfort associated with normal farm activities. This covenant shall run with the land and be binding upon all future owners, heirs, successors, and assigns to the property.

(§ 2, Ord. 14-13, eff. October 8, 2014; § 1(2) (Atts. 1, 2), Ord. 20-18, eff. February 3, 2021. Formerly 9.40.180)

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on agricultural and forest resources if it will:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland zoned Timberland Production (as defined in Public Resources Code section 51104 (g));
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

There are no forest lands or timber lands located within the Clovis Planning Area. There are also no parcels that are currently zoned as forest land, timber, or timber production. Therefore, implementation of the proposed Project would have no impact on forest land, timber, or timber production and this impact will not be discussed further.

METHODOLOGY

Land Evaluation and Site Assessment

The California Land Evaluation and Site Assessment (LESA) Model was utilized in the impact analysis shown below. The formulation of the LESA Model is the result of Senate Bill 850 (Chapter 812 /1993), which charged the California Natural Resources Agency, in consultation with the Governor’s Office of Planning and Research, with developing an amendment to Appendix G of the California Environmental Quality Act (CEQA) Guidelines concerning agricultural lands. Such an amendment is intended “to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process” (Public Resources Code Section 21095).

The California Agricultural LESA Model is composed of six different factors. Two Land Evaluation factors are based upon measures of soil resource quality. Four Site Assessment factors provide measures of a given project’s size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, each of these factors is separately rated on a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points. It is this project score that becomes the basis for making a determination of a project's impact based on the scoring thresholds of significance.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: The proposed Project has the potential to result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses. (Less than Significant)

Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map and as shown on Figure 3.2-1, to nonagricultural use. However, it is important to consider that the California Department of Conservation includes the following note on their map: "*This map should be used within the limits of its purpose - as a current inventory of agricultural land resources. This map does not necessarily reflect general plan or zoning designations, city limit lines, changing economic or market conditions, or other factors which may be taken into consideration when land use policies are determined. This map is not designed for parcel-specific planning purposes due to its scale and the ten-acre minimum land use mapping unit. Classification of important farmland and urban areas on this map is based on best available data. The information has been delineated as accurately as possible at 1:24,000-scale, but no claim to meet 1:24,000 National Map Accuracy Standards is made due to variations in the quality of source data*." After looking at site-specific characteristics more closely for the Project site, it is noteworthy that the Department of Conservation's designations do not accurately and fully consider site specific characteristics such as the existence of a hardpan within the upper horizon of the soil profile, the project size, surrounding urban uses, lack of agricultural protection zones in the zone of influence, lack of water resources, and ongoing economic feasibility of agricultural operations due to other factors. To reconcile this inaccuracy and analyze the site-specific characteristics more fully, the Clovis General Plan calls for the use of the Land Evaluation and Site Assessment (LESA) to evaluate the significance of the agricultural conversion. It is noted that the LESA model was developed by the Department of Conservation, which is the same agency that published the 2020 Important Farmland's Map.

The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project is documented on the LESA scoring sheets in Appendix B. The proposed Project has a final LESA score of 50.50, which is considered to be a significant impact only if the Land Evaluation and Site Assessment sub scores are each greater than or equal to 20 points. The proposed Project has a sub score of 32.50 for the Land Evaluation and a sub score of 18.0 for the Site Assessment, which means the conversion of the land on the Project site is not considered significant according to the California Department of Conservation's established thresholds.

After evaluating the site-specific soil characteristics, project size, surrounding uses, agricultural protection zones, water resources availability, and ongoing economic feasibility of agricultural operations utilizing the LESA Model, it was determined that the conversion of the land on the Project site is not a significant impact. Therefore, implementation of the proposed Project would have a **less than significant** impact relative to this topic and no mitigation is required.

Impact 3.2-2: The proposed Project has the potential to conflict with existing zoning for agricultural use, or Williamson Act Contracts (Less than Significant)

The Project site is not under a Williamson Act Contract.

Under the Fresno County General Plan, the Development Area is designated for Low Density Residential, with AL-20 (Limited Agricultural) zoning. The Non-Development Area is designated for Rural Residential, with RR (Rural Residential) zoning. Any new development would be done after annexation from the County into the City limits, which would shift any land use and zoning decisions to the City of Clovis. The Fresno Local Agency Formation Commission (LAFCo) will require any land that is annexed into the City limits to be pre-zoned by the City of Clovis in conjunction with the proposed annexation. The proposed pre-zoning is for a Single-Family Planned Residential Development (R-1-PRD) zoning designation over the entire Development Area. The Non-Development Area would not receive a pre-zone since it is not proposed for annexation. Any pre-zoning approved by the City would go into effect upon annexation approval by LAFCo.

The proposed pre-zoning is consistent with the proposed residential uses. Additionally, conversion of the Project site from agricultural to urban uses has been anticipated by the City under the adopted General Plan. Therefore, development of the proposed Project would have a **less than significant** impact relative to this topic and no mitigation is required.

Impact 3.2-3: The proposed Project has the potential to result in conflicts with adjacent agricultural lands or indirectly cause conversion of agricultural lands (Less than Significant)

The designated prime farmland immediately west of the Project site has been approved for residential development and has not yet been updated in the FMMP. In the next version of the FMMP that land will be mapped as Urban and Built-Up Land. There is no immediately adjacent agricultural land that poses a potential for conflict. The City's General Plan anticipates that some agricultural lands within the City's Planning Area would ultimately develop with urban uses. Nevertheless, the City has a Right to Farm Ordinance that is intended to reduce the occurrence of any conflict between nonagricultural and agricultural land uses within the City through requiring the transferor of any property in the City to provide a disclosure statement describing that the City permits agricultural operations, including those that utilize chemical fertilizers and pesticides. Development of the proposed Project would have a **less than significant** impact relative to this topic and no mitigation is required.

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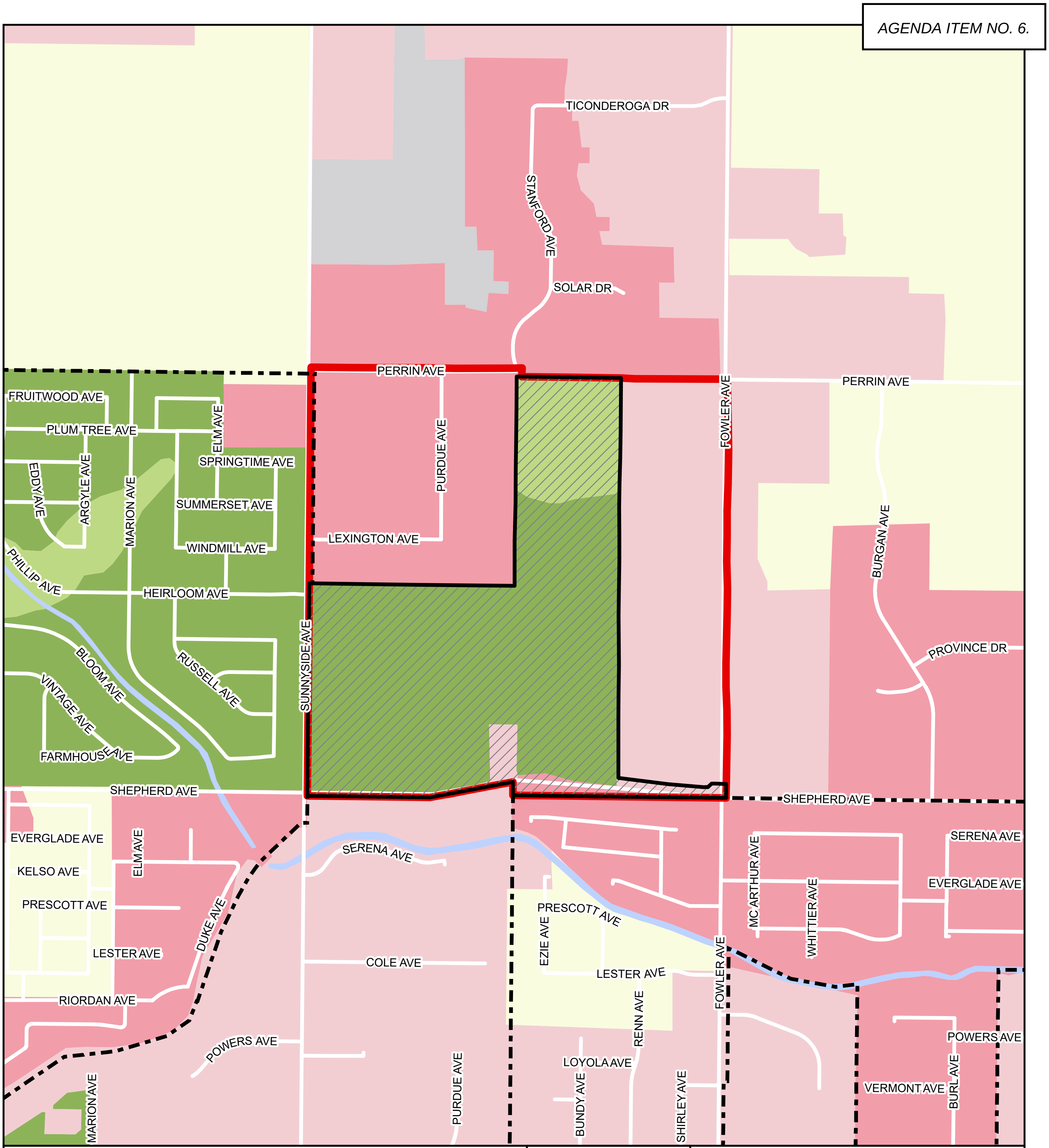

LEGEND

- 🟥 Project Boundary
- ▨ Developement Area
- ⬚ Clovis City Limits
- 🟩 Prime Farmland
- 🟩 Farmland of Statewide Importance
- ⬜ Farmland of Local Importance
- ⬜ Vacant or Disturbed Land
- 🟥 Rural Residential Land
- 🟥 Urban and Built-Up Land

N

0 200 400

Feet

SHEPHERD NORTH PROJECT

Figure 3.2-1. Important Farmlands

Sources: Fresno County GIS. Farmland Mapping & Monitoring Program. Map date: May 8, 2023.

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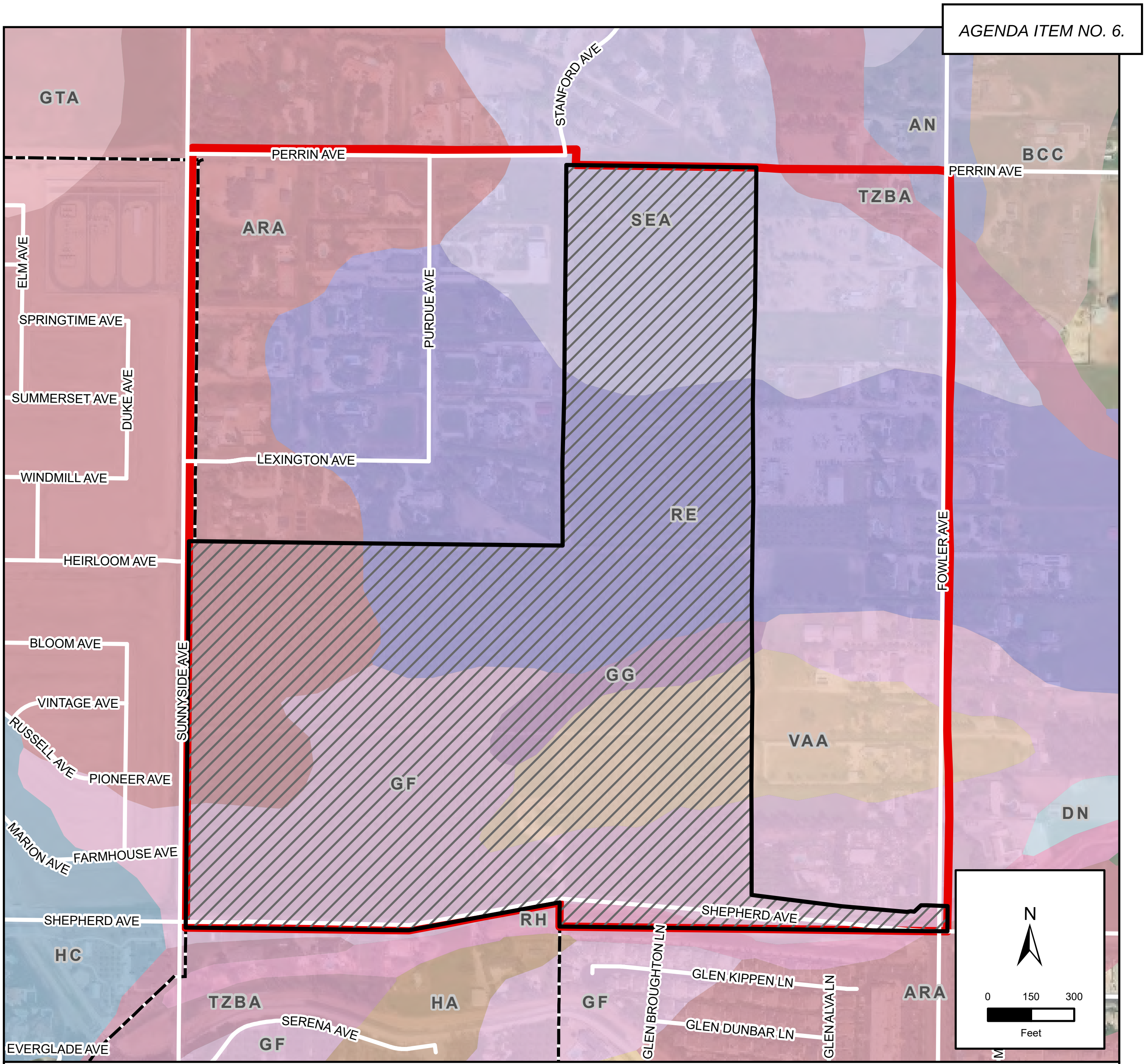

LEGEND

Project Boundary

▨ Developement Area

Clovis City Limits

NRCS Soil Description

An - Alamo clay

AoB - Atwater loamy sand, 3-9 %

ArA - Atwater sandy loam, 0-3 %

BcC - Blasingame loam, 3-15 %

Dn - Dello sandy loam

Gf - Grangeville fine sandy loam, 0-1 %, MLRA 17

Gg - Grangeville fine sandy loam, saline alkali

GtA - Greenfield sandy loam, 0 to 3 %

Ha - Hanford coarse sandy loam

Hc - Hanford sandy loam

Re - Ramona loam, hard substratum

Rh - Riverwash

SeA - San Joaquin loam, 0 to 3 %

TzbA - Tujunga loamy sand, 0 to 3 %

VaA - Visalia sandy loam, 0 to 3 %

SHEPHERD NORTH PROJECT

Figure 3.2-2: Soils Map

Sources: Fresno County GIS; NRCS Soil Survey. Map date: May 8, 2023.

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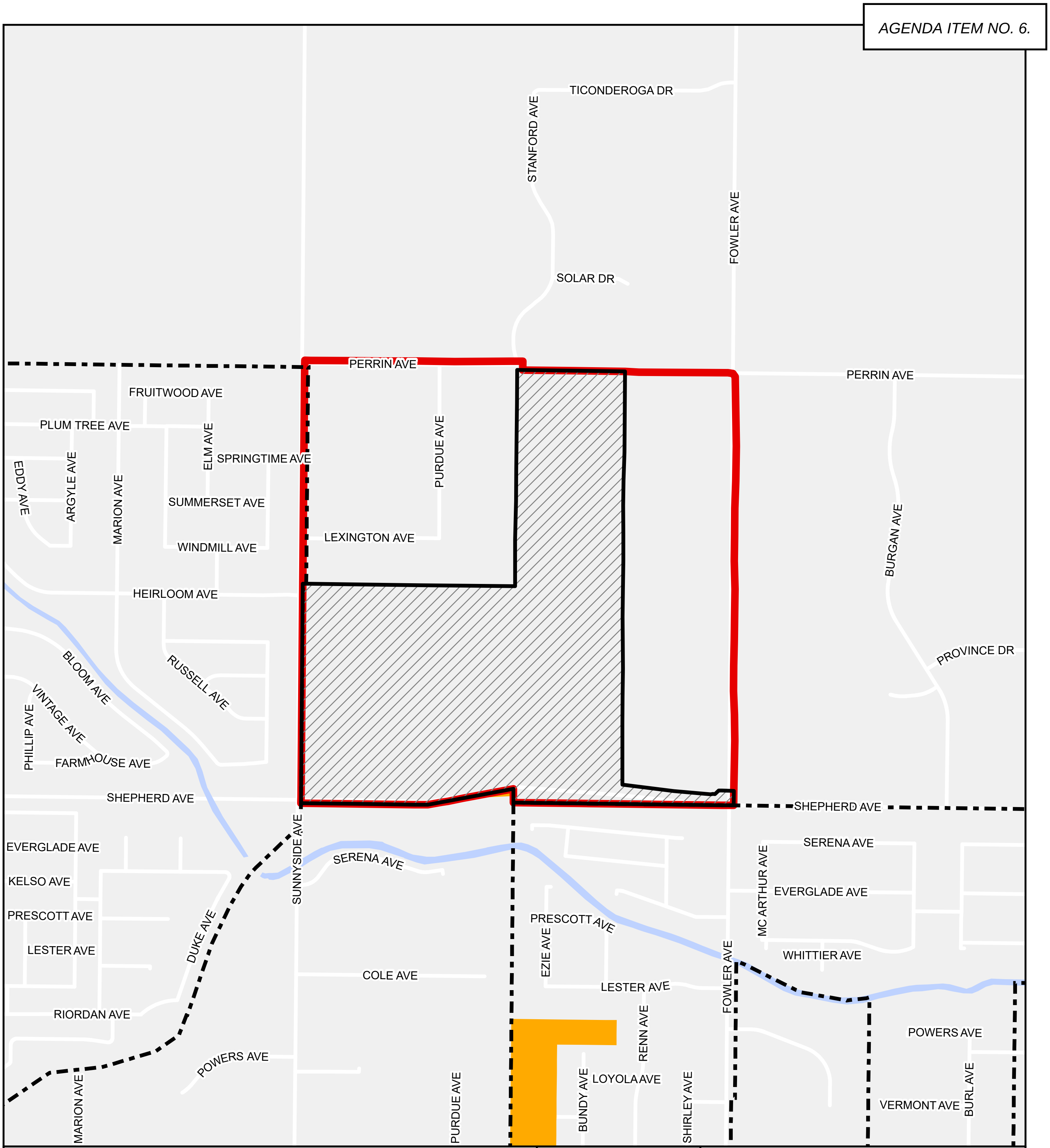

LEGEND

- 🟥 Project Boundary
- ▨ Developement Area
- ⬚ Clovis City Limits
- 🟧 Williamson Act Non-Renewal

N

0 200 400

Feet

SHEPHERD NORTH PROJECT

Figure 3..2-3. Williamson Act

Notes: Fresno County GIS employees provided a database of Williamson Act lands by parcel number (APN) on June 25th, 2015.
Sources: Fresno County GIS. Data Basin. Map date: May 8, 2023.

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AIR QUALITY 3.3

This section describes the regional air quality, current attainment status of the air basin, local sensitive receptors, emission sources, and impacts that are likely to result from Project implementation. The analysis contained in this section is intended to be at a project-level, and covers impacts associated with the conversion of the Development Area to urban uses. Following this discussion is an assessment of consistency of the proposed Project with applicable policies and local plans. The Greenhouse Gases and Climate Change analysis is located in a separate section of this document. This section is based in part on the following technical studies: *Air Quality and Land Use Handbook: A Community Health Perspective* (California Air Resources Board [CARB], 2007), *Guide for Assessing and Mitigation Air Quality Impacts* (San Joaquin Valley Air Pollution Control District [SJAVPCD], 2002), *Guidance for Assessing and Mitigating Air Quality Impacts - 2015* (SJAVPCD, 2015), and CalEEMod *(v.2020.4.0)* (CAPCOA, 2021).

There was one comment received during the Notice of Preparation (NOP) comment period regarding air quality. The comment was provided from the San Joaquin Air Pollution Control District (June 10, 2022). All comments are included in Appendix A.

3.3.1 ENVIRONMENTAL SETTING

SAN JOAQUIN VALLEY AIR BASIN

The City of Clovis (City) is in the central portion of the San Joaquin Air Basin (SJVAB). The SJVAB consists of eight counties: Fresno, Kern (western and central), Kings, Tulare, Madera, Merced, San Joaquin, and Stanislaus. Air pollution from significant activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

The SJVAB is approximately 250 miles long and an average of 35 miles wide. It is bordered by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Straits. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl-shaped topography inhibits movement of pollutants out of the valley (SJVAPCD, 2015).

Climate

The SJVAB is in a Mediterranean climate zone and is influenced by a subtropical high-pressure cell most of the year. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100°F in the valley.

The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions in the valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500 to 3,000 feet).

Winter-time high pressure events can often last many weeks, with surface temperatures often lowering into the 30°F. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet (SJVAPCD, 2015).

Wind Patterns

Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing and transporting it to other locations.

Especially in summer, winds in the San Joaquin Valley most frequently blow from the northwest. The region’s topographic features restrict air movement and channel the air mass towards the southeastern end of the valley. Marine air can flow into the basin from the San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow along the axis of the valley, over the Tehachapi Pass, into the Southeast Desert Air Basin. This wind pattern contributes to transporting pollutants from the Sacramento Valley and the Bay Area into the SJVAB. Approximately 27 percent of the total emissions in the northern portion, 11 percent of total emissions in the central region, and 7 percent of total emission in the south valley of the SJVAB are attributed to air pollution transported from these two areas.[1] The Coastal Range is a barrier to air movement to the west and the high Sierra Nevada Range is a significant barrier to the east (the highest peaks in the southern Sierra Nevada reach more than one third through the Earth’s atmosphere).[2] Many days in the winter are marked by stagnation events where winds are very weak. Transport of pollutants during winter can be very limited. A secondary, but significant summer wind pattern is from the southeast and can be associated with nighttime drainage winds, prefrontal conditions, and summer monsoons.

Two significant diurnal wind cycles that occur frequently in the valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down the valley. In the mountains during periods of weak synoptic scale winds, winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are especially pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can recirculate a polluted air mass for an extended period.

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[1] SJVAPCD. Frequently Asked Questions, http://www.valleyair.org/general_info/frequently_asked_questions.htm#What%20is%20being%20done%20to%20improve%20ai r%20quality%20in%20the%20San%20Joaquin%20Valley, accessed March 3, 2020.

[2] The Sierra Nevada rises to almost 14,000 feet with Mount Humphreys near Bishop, California, while the average height of the atmosphere is about 39,000 feet.

Temperature

Solar radiation and temperature are particularly important in the chemistry of ozone formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances (such as volatile organic compounds) and nitrogen dioxide under the influence of sunlight. Ozone concentrations are very dependent on the amount of solar radiation, especially during late spring, summer, and early fall. Ozone levels typically peak in the afternoon. After the sun goes down, the chemical reaction between nitrous oxide and ozone begins to dominate. This reaction tends to scavenge and remove the ozone in the metropolitan areas through the early morning hours, resulting in the lowest ozone levels, possibly reaching zero at sunrise in areas with high nitrogen oxides emissions. At sunrise, nitrogen oxides tend to peak, partly due to low levels of ozone at this time and also due to the morning commuter vehicle emissions of nitrogen oxides.

Generally, the higher the temperature, the more ozone formed, since reaction rates increase with temperature. However, extremely hot temperatures can “lift” or “break” the inversion layer. Typically, if the inversion layer does not lift to allow the buildup of contaminants to be dispersed, the ozone levels will peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB.

Ozone levels are low during winter periods when there is much less sunlight to drive the photochemical reaction (SJVAPCD, 2015).

Precipitation, Humidity, and Fog

Precipitation and fog may reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog can block the required solar radiation. Wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Atmospheric moisture can also increase pollution levels. In fogs with less water content, the moisture acts to form secondary ammonium nitrate particulate matter. This ammonium nitrate is part of the valley’s $PM_{2.5}$ and PM_{10} problem. The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJVAB floor. This creates strong low-level temperature inversions and very stable air conditions, which can lead to tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of $PM_{2.5}$ and PM_{10} (SJVAPCD, 2015).

Inversions

The vertical dispersion of air pollutants in the San Joaquin Valley can be limited by persistent temperature inversions. Air temperature in the lowest layer of the atmosphere typically decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. The height of the base of the inversion is known as the “mixing height.” This is the level to which pollutants can mix vertically. Mixing of air is minimized above and below the inversion base. The inversion base represents an abrupt density change where little air movement occurs.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor (SJVAPCD, 2015).

CRITERIA POLLUTANTS

All criteria pollutants can have human health and environmental effects at certain concentrations. The United States Environmental Protection Agency (U.S. EPA) uses six "criteria pollutants" as indicators of air quality and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). In addition, California establishes ambient air quality standards, called California Ambient Air Quality Standards (CAAQS). California law does not require that the CAAQS be met by a specified date as is the case with NAAQS.

The ambient air quality standards for the six criteria pollutants (as shown in Table 3.3-1) are set to public health and the environment within an adequate margin of safety (as provided under Section 109 of the Federal Clean Air Act). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants, and form the scientific basis for new and revised ambient air quality standards. Principal characteristics and possible health and environmental effects from exposure to the six primary criteria pollutants generated by the Project are discussed below.

Ozone (O_3) is a photochemical oxidant and the major component of smog. While O_3 in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O_3 at ground level are a major health and environmental concern. O_3 is not emitted directly into the air, but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O_3 levels occur typically during the warmer times of the year. Both ROGs and NO_x are emitted by transportation and industrial sources. ROGs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents. Relatedly, reactive organic compounds (ROG) are defined as the subset of ROGs that are reactive enough to contribute substantially to atmospheric photochemistry.

The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. EPA, 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. EPA, 2019b). The average background level of ozone in California and Nevada is approximately 48.3 parts per billion, which represents approximately 77 percent of the total ozone in the western region of the U.S. (NASA, 2015).

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O_3 can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects to ambient CO (CARB, 2019a).

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (U.S. EPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels increases the risk of such incidences.

Nitrogen oxides (NO_x) is a brownish, highly reactive gas that is present in all urban atmospheres. The main effect of increased NO_2 is the increased likelihood of respiratory problems. Under ambient conditions, NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O_3) and acid rain and may affect both terrestrial and aquatic ecosystems. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO_2.

The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO_x). NO_x plays a major role, together with ROGs, in the atmospheric reactions that produce O_3. NO_x forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur dioxide (SO_2) is one of the multiple gaseous oxidized sulfur species and is formed during the combustion of fuels containing sulfur, primarily coal and oil. The largest anthropogenic source of SO_2 emissions in the U.S. is fossil fuel combustion at electric utilities and other industrial facilities. SO_2 is also emitted from certain manufacturing processes and mobile sources, including locomotives, large ships, and construction equipment.

SO_2 affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO_2 is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Ambient SO_2 results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Short-term exposure to ambient SO_2 has been associated with various adverse health effects. Multiple human clinical studies, epidemiological studies, and toxicological studies support a causal relationship between short-term exposure to ambient SO_2 and respiratory morbidity. The observed health effects include decreased lung function, respiratory symptoms, and increased emergency department visits and hospitalizations for all respiratory causes. These studies further suggest that people with asthma are potentially susceptible or vulnerable to these health effects. In addition, SO_2 reacts with other air pollutants to form sulfate particles, which are constituents of fine particulate matter ($PM_{2.5}$). Inhalation exposure to $PM_{2.5}$ has been associated with various cardiovascular and respiratory health effects (U.S. EPA, 2017). Increased ambient SO_2 levels would lead to increased risk of such effects.

SO_2 emissions that lead to high concentrations of SO_2 in the air generally also lead to the formation of other sulfur oxides (SOx). SOx can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter (PM) pollution. Small particles may penetrate deeply into the lungs and in sufficient quantity can contribute to health problems.

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO_2 and ROGs are also considered particulate matter. PM is generally categorized based on the diameter of the particulate matter: PM_{10} is particulate matter 10 micrometers or less in diameter (known as respirable particulate matter), and $PM_{2.5}$ is particulate matter 2.5 micrometers or less in diameter (known as fine particulate matter).

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO_2) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution causes health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed.

Respirable particulate matter (PM_{10}) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural activities (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM_{10} causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

$PM_{2.5}$ consists of fine particles, which are less than 2.5 microns in size. Similar to PM_{10}, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM_{10}, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the U.S. EPA created new Federal air quality standards for $PM_{2.5}$.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also impacts soils and damages materials and is a major cause of visibility impairment.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in $PM_{2.5}$ results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. EPA, 2019c).

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Once taken into the body, lead distributes throughout the body in the blood and is accumulated in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

Lead is persistent in the environment and can be added to soils and sediments through deposition from sources of lead air pollution. Other sources of lead to ecosystems include direct discharge of waste streams to water bodies and mining. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals, and neurological effects in vertebrates.

Lead exposure is typically associated with industrial sources; major sources of lead in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters. As a result of the U.S. EPA's regulatory efforts, including the removal of lead from motor vehicle gasoline, levels of lead in the air decreased by 98 percent between 1980 and 2014 (U.S. EPA, 2019d). Based on this reduction of lead in the air over this period, and since most new developments do not generate an increase in lead exposure, the health impacts of ambient lead levels are not typically monitored by the California Air Resources Board (CARB).

AMBIENT AIR QUALITY STANDARDS

Both the U.S. EPA and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant.

The federal and State ambient air quality standards are summarized in Table 3.3-1 for important pollutants. The federal and State ambient standards were developed independently, although both processes attempted to avoid health-related effects. As a result, the federal and State standards differ in some cases. In general, the California standards are more stringent. This is particularly true for ozone, $PM_{2.5}$, and PM_{10}. The U.S. EPA signed a final rule for the federal ozone eight-hour standard of 0.070 ppm on October 1, 2015, and was effective as of December 28, 2015 (equivalent to the California state ambient air quality eight-hour standard for ozone).

TABLE 3.3-1: FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

POLLUTANT	*AVERAGING TIME*	*FEDERAL PRIMARY STANDARD*	*STATE STANDARD*
Ozone	1-Hour 8-Hour	-- 0.070 ppm	0.09 ppm 0.070 ppm
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 35.0 ppm	9.0 ppm 20.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.053 ppm 0.100 ppm	0.03 ppm 0.18 ppm
Sulfur Dioxide	Annual 24-Hour 1-Hour	0.03 ppm 0.14 ppm 0.075 ppm	-- 0.04 ppm 0.25 ppm
PM_{10}	Annual 24-Hour	-- 150 ug/m^3	20 ug/m^3 50 ug/m^3
$PM_{2.5}$	Annual 24-Hour	12 ug/m^3 35 ug/m^3	12 ug/m^3 --
Lead	30-Day Avg. 3-Month Avg.	-- 0.15 ug/m^3	1.5 ug/m^3 --

NOTES: PPM = PARTS PER MILLION, UG/M3 = MICROGRAMS PER CUBIC METER

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2019A.

In 1997, new national standards for fine particulate matter diameter 2.5 microns or less ($PM_{2.5}$) were adopted for 24-hour and annual averaging periods. The existing PM_{10} standards were retained, but the method and form for determining compliance with the standards were revised.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Existing air quality concerns within Fresno County and the entire air basin are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles which account for 70 percent of the ozone in the region. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the State as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, carbon monoxide, and nitrogen dioxide as "does not meet the primary standards," "cannot be classified," or "better than national standards." For sulfur dioxide, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

Fresno County has a State designation Attainment or Unclassified for all criteria pollutants except for ozone, PM_{10} and $PM_{2.5}$. Fresno County has a national designation of either Unclassified or Attainment for all criteria pollutants except for Ozone and $PM_{2.5}$. Table 3.3-2 presents the state and national attainment status for Fresno County.

TABLE 3.3-2: STATE AND NATIONAL ATTAINMENT STATUS IN FRESNO COUNTY

CRITERIA POLLUTANTS	*STATE DESIGNATIONS*	*NATIONAL DESIGNATIONS*
Ozone (O_3)	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment
Sulfates	Attainment	
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	
Visibility Reducing Particles	Unclassified	

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2023.

Fresno County Air Quality Monitoring

The SJVAPCD and the CARB maintain air quality monitoring sites throughout Fresno County that collect data for ozone, $PM_{2.5}$, and PM_{10}. The nearest active air quality monitoring site to the Project site is Clovis-N Villa Avenue. It is important to note that while the State retains the one-hour standard, the federal ozone 1-hour standard was revoked by the U.S. EPA and is no longer applicable for federal standards. Data obtained from the monitoring sites between 2015 and 2018 (latest year of data available) is shown in Table 3.2-3, Table 3.2-4, and Table 3.2-5.

Table 3.3-3 Ambient Air Quality Monitoring Data Summary (Clovis-N Villa Avenue) - Ozone

Year	*Days > Standard*				*1-Hour Observations*			*8-Hour Averages*				*Year Coverage*	
	State		*National*			*State*	*Nat'l*	*State*		*National*			
	1-Hr	*8-Hr*	*1-Hr*	*8-Hr*	*Max.*	*D.V.*[1]	*D.V.*[2]	*Max.*	*D.V.*[1]	*Max.*	*D.V.*[2]	*Min*	*Max*
2021	9	37	0	34	0.123	0.11	0.120	0.1	0.095	0.100	0.083	97	98
2020	12	41	2.1	36	0.142	0.11	0.114	0.108	0.095	0.108	0.084	98	99
2019	6	30	0	27	0.103	0.11	0.109	0.080	0.090	0.079	0.084	98	98

Notes: All concentrations expressed in parts per million. The national 1-hour ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked standard are shown in italics. D.V. [1]= State Designation Value. D.V. [2]= National Design Value.

Source: California Air Resources Board (Aerometric Data Analysis and Management System or iADAM) Air Pollution Summaries.

Table 3.3-4: Quality Monitoring Data Summary (Clovis-N Villa Avenue) – PM$_{10}$

Year	*Est. Days > Std.*		*Annual Average*		*High 24-Hr Average*		*Year Coverage*
	Nat'l	*State*	*Nat'l*	*State*	*Nat'l*	*State*	
2021	No Data	112.4	37.6	43.2	125.0	208.8	95
2020	5.8	117.5	45.8	50.8	180.9	296.0	100
2019	0	65.9	32.5	32.6	150.9	155.7	100

Notes: The national annual average PM$_{10}$ standard was revoked in December 2006 and is no longer in effect. An exceedance is not necessarily a violation. Statistics may include data that are related to an exceptional event. State and national statistics may differ for the following reasons: State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers. National statistics are based on standard conditions. State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria. ND=There was insufficient (or no) data available to determine the value.

Source: California Air Resources Board (Aerometric Data Analysis and Management System or ADAM) Air Pollution Summaries.

Table 3.3-5 Ambient Air Quality Monitoring Data Summary (Clovis-N Villa Avenue) - PM$_{2.5}$

Year	*Est. Days > Nat'l '06 Std.*	*Annual Average*		*Nat'l Ann. Std. D.V.*[1]	*State Annual D.V.*[2]	*Nat'l '06 Std. 98th Percentile*	*Nat'l '06 24-Hr Std. D.V.*[1]	*High 24-Hour Average*		*Year Coverage*
		Nat'l	*State*					*Nat'l*	*State*	
2021	22.0	15.1	No Data	No Data	18	49.6	59	104.6	104.6	100
2020	40.0	18.4	18.4	No Data	18	99.5	62	188.0	257.5	99
2019	No Data	No Data	10.2	No Data	18	28.0	45	53.7	53.7	93

Notes: All concentrations expressed in parts per million. State and national statistics may differ for the following reasons: State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers. State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria. D.V. [1]= State Designation Value. D.V. [2]= National Design Value

Source: California Air Resources Board (Aerometric Data Analysis and Management System or ADAM) Air Pollution Summaries.

ODORS

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity, but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word “strong” to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. A sensitive receptor is a location where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals, and schools. The closest sensitive receptors to the Project site include existing residences located within the Project site itself (within the Non-Development Area, to the east and north of the Development Area).

3.3.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The U.S. EPA is responsible for administering the FCAA. The FCAA requires the U.S. EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health (with an adequate margin of safety, including for sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases), and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

NAAQS standards define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. Existing violations of the ozone and $PM_{2.5}$ ambient air quality standards indicate that certain individuals exposed to these pollutants may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

NAAQS standards have been designed to accurately reflect the latest scientific knowledge and are reviewed every five years by a Clean Air Scientific Advisory Committee (CASAC), consisting of seven members appointed by the U.S. EPA Administrator. Reviewing NAAQS is a lengthy undertaking and includes the following major phases: Planning, Integrated Science Assessment (ISA), Risk/Exposure Assessment (REA), Policy Assessment (PA), and Rulemaking. The process starts with a comprehensive review of the relevant scientific literature. The literature is summarized and conclusions are presented in the ISA. Based on the ISA, U.S. EPA staff perform a risk and exposure assessment, which is summarized in the REA document. The third document, the PA, integrates the findings and conclusions of the ISA and REA into a policy context, and provides lines of reasoning that could be used to support retention or revision of the existing NAAQS, as well as several alternative standards that could be supported by the review findings. Each of these three documents are released for public comment and public peer review by the CASAC. Members of CASAC are appointed by the U.S. EPA Administrator for their expertise in one or more of the subject areas covered in the ISA. The CASAC's role is to peer review the NAAQS documents, ensure that they reflect the thinking of the scientific community, and advise the Administrator on the technical and scientific aspects of standard setting. Each document goes through two to three drafts before CASAC deems it to be final.

Although there is some variability among the health effects of the NAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. NAAQS standards were last revised for each of the six criteria pollutant as listed below, with detail on what aspects of NAAQS changed during the most recent update:

- Ozone: On October 1, 2015, the U.S. EPA lowered the national eight-hour standard from 0.075 ppm to 0.070 ppm, providing for a more stringent standards consistent with the current California state standard.
- CO: In 2011, the primary standards were retained from the original 1971 level, without revision. The secondary standards were revoked in 1985.

- NO_2: The national NO_2 standard was most recently revised in 2010 following an exhaustive review of new literature pointed to evidence for adverse effects in asthmatics at lower NO_2 concentrations than the existing national standard.
- SO_2: On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb.
- PM: the national annual average $PM_{2.5}$ standard was most recently revised in 2012 following an exhaustive review of new literature pointed to evidence for increased risk of premature mortality at lower $PM_{2.5}$ concentrations than the existing standard.
- Lead: The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. In 2016, the primary and secondary standards were retained.

The law recognizes the importance for each state to locally carry out the requirements of the FCAA, as special consideration of local industries, geography, housing patterns, etc. are needed to have full comprehension of the local pollution control problems. As a result, the U.S. EPA requires each state to develop a State Implementation Plan (SIP) that explains how each state will implement the FCAA within their jurisdiction. A SIP is a collection of rules and regulations that a particular state will implement to control air quality within their jurisdiction. The CARB is the state agency that is responsible for preparing the California SIP.

Transportation Conformity

Transportation conformity requirements were added to the FCAA in the 1990 amendments, and the U.S. EPA adopted implementing regulations in 1997. See §176 of the FCAA (42 U.S.C. §7506) and 40 CFR Part 93, Subpart A. Transportation conformity serves much the same purpose as general conformity: it ensures that transportation plans, transportation improvement programs, and projects that are developed, funded, or approved by the United States Department of Transportation or that are recipients of funds under the Federal Transit Act or from the Federal Highway Administration (FHWA), conform to the SIP as approved or promulgated by U.S. EPA.

Currently, transportation conformity applies in nonattainment areas and maintenance areas. Under transportation conformity, a determination of conformity with the applicable SIP must be made by the agency responsible for the proposed Project, such as the Metropolitan Planning Organization, the Council of Governments, or a federal agency. The agency making the determination is also responsible for all the requirements relating to public participation. Generally, a project will be considered in conformance if it is in the transportation improvement plan and the transportation improvement plan is incorporated in the SIP. If an action is covered under transportation conformity, it does not need to be separately evaluated under general conformity.

Transportation Control Measures

One particular aspect of the SIP development process is the consideration of potential control measures as a part of making progress towards clean air goals. While most SIP control measures are aimed at reducing emissions from stationary sources, some are typically created to address mobile or transportation sources. These are known as transportation control measures (TCMs). TCM strategies are designed to reduce vehicle miles traveled and trips, or vehicle idling and associated air pollution. These goals are achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

STATE

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the State. Rather than mandating the use of specific technology or the reliance on a specific fuel, the CARB motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the CARB has adopted regulations which require auto manufacturers to phase in less polluting vehicles.

California Clean Air Act

The California Clean Air Act (CCAA) was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CARB is the agency responsible for administering the CCAA. The CARB established ambient air quality standards pursuant to the California Health and Safety Code (CH&SC) [§39606(b)], which are similar to the federal standards.

California Air Quality Standards

Although NAAQS are determined by the U.S. EPA, states have the ability to set standards that are more stringent than the federal standards. As such, California established more stringent ambient air quality standards. Federal and state ambient air quality standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates and lead. In addition, California has created standards for pollutants that are not covered by federal standards. Although there is some variability among the health effects of the CAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. The existing state and federal primary standards for major pollutants are shown in Table 3.3-1.

Air quality standard setting in California commences with a critical review of all relevant peer reviewed scientific literature. The Office of Environmental Health Hazard Assessment (OEHHA) uses the review of health literature to develop a recommendation for the standard. The recommendation can be for no change, or can recommend a new standard. The review, including the OEHHA recommendation, is summarized in a document called the draft Initial Statement of Reasons (ISOR), which is released for comment by the public, and also for public peer review by the

Air Quality Advisory Committee (AQAC). AQAC members are appointed by the President of the University of California for their expertise in the range of subjects covered in the ISOR, including health, exposure, air quality monitoring, atmospheric chemistry and physics, and effects on plants, trees, materials, and ecosystems. The Committee provides written comments on the draft ISOR. The ARB staff next revises the ISOR based on comments from AQAC and the public. The revised ISOR is then released for a 45-day public comment period prior to consideration by the Board at a regularly scheduled Board hearing.

In June of 2002, the CARB adopted revisions to the PM_{10} standard and established a new $PM_{2.5}$ annual standard. The new standards became effective in June 2003. Subsequently, staff reviewed the published scientific literature on ground-level ozone and nitrogen dioxide and the CARB adopted revisions to the standards for these two pollutants. Revised standards for ozone and nitrogen dioxide went into effect on May 17, 2006 and March 20, 2008, respectively. These revisions reflect the most recent changes to the CAAQS.

Tanner Air Toxics Act (TACs)

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted U.S. EPA’s list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technologies (BACT) to minimize emissions.

AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, CARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

Omnibus Low-NOx Rule

The CARB approved the Omnibus Low-NOx Rule on August 28, 2020, which will require engine NOx emissions to be cut to approximately 75% below current standards beginning in 2024, and 90% below current standards in 2027. The rule also places nine additional regulatory requirements on new heavy-duty truck and engines. Those additional requirements include a 50% reduction in particulate matter emissions, stringent new low-load and idle standards, a new in-use testing protocol, extended deterioration requirements, a new California-only credit program, and extended mandatory warranty requirements. The regulatory requirements in the Omnibus Low-NOX Rule will first become effective in 2024, at the same time as the Advanced Clean Trucks regulations that CARB approved that mandates manufacturers convert increasing percentages of their heavy-duty trucks sold in California to zero-emission vehicles.

Assembly Bill 170

Assembly Bill 170, Reyes (AB 170), was adopted by state lawmakers in 2003, creating Government Code Section 65302.1, which requires cities and counties in the San Joaquin Valley to amend their general plans to include data and analysis, comprehensive goals, policies, and feasible implementation strategies designed to improve air quality. The elements to be amended include, but are not limited to, those elements dealing with land use, circulation, housing, conservation, and open space. Section 65302.1.c identifies four areas of air quality discussion required in these amendments:

- A report describing local air quality conditions, attainment status, and state and federal air quality and transportation plans;
- A summary of local, district, state, and federal policies, programs, and regulations to improve air quality;
- A comprehensive set of goals, policies, and objectives to improve air quality; and
- Feasible implementation measures designed to achieve these goals.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to air quality. General Plan goals and policies applicable to the Project are identified below:

Policies: Circulation Element

- Goal 1: A context-sensitive and “complete streets” transportation network that prioritizes effective connectivity and accommodates a comprehensive range of mobility needs.
- Policy 1.1: Multimodal network. The city shall plan, design, operate, and maintain the transportation network to promote safe and convenient travel for all users: pedestrians, bicyclists, transit riders, freight, and motorists.
- Policy 1.2: Transportation decisions. Decisions should balance the comfort, convenience, and safety of pedestrians, bicyclists, and motorists.
- Policy 1.3: Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.
- Policy 1.4: Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles travelled and effectively utilize the existing transportation infrastructure.
- Policy 1.5: Neighborhood connectivity. The transportation network shall provide

multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).

- Policy 1.6: Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.
- Policy 1.7: Narrow streets. The City may permit curb-to-curb dimensions that are narrower than current standards on local streets to promote pedestrian and bicycle connectivity and enhance safety.
- Policy 1.8: Network completion. New development shall complete the extension of stub streets planned to connect to adjacent streets, where appropriate.
- Goal 4: A bicycle and transit system that serves as a functional alternative to commuting by car.
- Policy 4.1: Bike and transit backbone. The bicycle and transit system should connect Shaw Avenue, Old Town, the Medical Center/R&T Park, and the three Urban Centers.
- Policy 4.2: Priority for new bicycle facilities. Prioritize investments in the backbone system over other bicycle improvements.
- Policy 4.3: Freeway crossings. Require separate bicycle and pedestrian crossings for new freeway extensions and encourage separate crossings where Class I facilities are planned to cross existing freeways.
- Policy 4.4: Bicycles and transit. Coordinate with transit agencies to integrate bicycle access and storage into transit vehicles, bus stops, and activity centers.
- Policy 4.5: Transit stops. Improve and maintain safe, clean, comfortable, well-lit, and rider-friendly transit stops that are well marked and visible to motorists.
- Policy 4.6: Transit priority corridors. Prioritize investments for, and transit services and facilities along the transit priority corridors.
- Policy 4.7: Bus rapid transit. Plan for bus rapid transit and transit-only lanes on transit priority corridors as future ridership levels increase.
- Goal 5: A complete system of trails and pathways accessible to all residents.
- Policy 5.1: Complete street amenities. Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety, consistent with the Bicycle Transportation Master Plan and other master plans.
- Policy 5.2: Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
- Policy 5.3: Pathways. Encourage pathways and other pedestrian amenities in Urban Centers and new development 10 acres or larger.
- Policy 5.4: Homeowner associations. The city may require homeowner associations to maintain pathways and other bicycle and pedestrian facilities within the homeowner association area.
- Policy 5.5: Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers and to provide general pedestrian connectivity throughout the city.

- Goal 6: Safe and efficient goods movement with minimal impacts on local roads and neighborhoods.
- Policy 6.1: Truck routes. Plan and designate truck routes that minimize truck traffic through or near residential areas.
- Policy 6.2: Land use. Place industrial and warehousing businesses near freeways and truck routes to minimize truck traffic through or near residential areas.

Policies: Air Quality Element

- Goal 1: A local environment that is protected from air pollution and emissions.
- Policy 1.1: Land use and transportation. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.
- Policy 1.2: Sensitive Land Uses. Prohibit, without sufficient mitigation, the future siting of sensitive land uses within the distances of emission sources as defined by the California Air Resources Board.
- Policy 1.3: Construction activities. Encourage the use of best management practices during construction activities to reduce emissions of criteria pollutants as outlined by the San Joaquin Valley Air Pollution Control District (SJVAPCD).
- Policy 1.4: City buildings. Require that municipal buildings be designed to exceed energy and water conservation and greenhouse gas reduction standards set in the California Building Code.
- Policy 1.5: Fleet operations. Purchase low- or zero-emission vehicles for the city's fleet where feasible. Use clean fuel sources for city-owned mass transit vehicles, automobiles, trucks, and heavy equipment where feasible.
- Policy 1.6: Alternative fuel infrastructure. Encourage public and private activity and employment centers to incorporate electric charging and alternative fuel stations.
- Policy 1.7: Employment measures. Encourage employers to provide programs, scheduling options, incentives, and information to reduce vehicle miles traveled by employees.
- Policy 1.8: Trees. Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
- Goal 2: A region with healthy air quality and lower greenhouse gas emissions.
- Policy 2.1: Regional coordination. Support regional efforts to reduce air pollution (criteria air pollutants and greenhouse gas emissions) and collaborate with other agencies to improve air quality at the emission source and reduce vehicle miles traveled.
- Policy 2.2: Cross-jurisdictional issues. Collaborate with regional agencies and surrounding jurisdictions to address cross-jurisdictional transportation and air quality issues.
- Policy 2.3: Valleywide programs. Establish parallel air quality programs and implementation measures with other communities across the San Joaquin Valley.
- Policy 2.4: Public participation. Encourage participation of local citizens, the business community, and interested groups and individuals in air quality planning and implementation.
- Policy 2.5: Public education. Promote programs that educate the public about regional air quality issues and solutions.

- Policy 2.6: Innovative mitigation. Encourage innovative mitigation measures to reduce air quality impacts by coordinating with the SJVAPCD, project applicants, and other interested parties.

City of Clovis Municipal Code

Chapter 9.22 of the Clovis Municipal Code describes performance standards for air quality (consistent with rules and regulations of the U.S. EPA, CARB, and the SJVAPCD). Chapter 8.18 of the Municipal Code describes expedited permitting procedures for electric vehicle charging stations. Furthermore, Chapter 8.14 of the Municipal Code describes the permitting requirements for small residential rooftop solar energy systems within the City. Additionally, Chapter 8.1. provides the City's Building Code, which provides standards for energy efficiency for buildings within the City.

San Joaquin Valley Air Pollution Control District

The primary role of SJVAPCD is to develop plans and implement control measures in the SJVAB to control air pollution. These controls primarily affect stationary sources such as industry and power plants. Rules and regulations have been developed by SJVAPCD to control air pollution from a wide range of air pollution sources. SJVAPCD also provides uniform procedures for assessing potential air quality impacts of proposed projects and for preparing the air quality section of environmental documents.

AIR QUALITY PLANNING

The U.S. EPA requires states that have areas that do not meet the National AAQS to prepare and submit air quality plans showing how the National AAQS will be met. If the states cannot show how the National AAQS will be met, then the states must show progress toward meeting the National AAQS. These plans are referred to as the State Implementation Plans (SIP). California's adopted 2007 State Strategy was submitted to the U.S. EPA as a revision to its SIP in November 2007.[3] More recently, in October 2018, the CARB adopted the 2018 Updates to the California State Implementation Plan.

In addition, the CARB requires regions that do not meet California AAQS for ozone to submit clean air plans (CAPs) that describe measures to attain the standard or show progress toward attainment. To ensure federal CAA compliance, SJVAPCD is currently developing plans for meeting new National AAQS for ozone and $PM_{2.5}$ and the California AAQS for PM_{10} in the SJVAB (for California CAA compliance)[4]. The following describes the air plans prepared by the SJVAPCD, which are incorporated by reference per CEQA Guidelines Section 15150.

1-HOUR OZONE PLAN

Although U.S. EPA revoked its 1979 1-hour ozone standard in June 2005, many planning

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[3] Note that the plan was adopted by CARB on September 27, 2007; California Air Resources Board. 2007. California Air Resources Board's Proposed State Strategy for California's 2007 State Implementation Plan.

[4] SJVAPCD, 2012. 2012 $PM_{2.5}$ Plan, December 20.

requirements remain in place, and SJVAPCD must still attain this standard before it can rescind CAA Section 185 fees. The SJVAPCD's most recent 1-hour ozone plan, the 2013 Plan for the Revoked 1-hour Ozone Standard, demonstrated attainment of the 1-hour ozone standard by 2017. However, on July 18, 2016, the U.S. EPA published in the Federal Register a final action determining that SJVAB has attained the 1-hour ozone NAAQS based on the 2012 to 2014 three-year period allowing nonattainment penalties to be lifted under federal Clean Air Act section 179b (SJVAPCD, 2015).

8-HOUR OZONE PLAN

The SJVAPCD's Governing Board adopted the 2007 Ozone Plan on April 30, 2007. This far-reaching plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard as set by U.S. EPA in 1997. The plan projects that the valley will achieve the 8-hour ozone standard for all areas of the SJVAB no later than 2023. The CARB approved the plan on June 14, 2007. The U.S. EPA approved the 2007 Ozone Plan effective April 30, 2012. SJVAPCD adopted the 2016 Ozone Plan to address the federal 2008 8-hour ozone standard, which must be attained by end of 2031.[5,6]

PM_{10} PLAN

Based on PM_{10} measurements from 2003 to 2006, the U.S. EPA found that the SJVAB has reached federal PM_{10} standards. On September 21, 2007, the SJVAPCD's Governing Board adopted the 2007 PM_{10} Maintenance Plan and Request for Redesignation. This plan demonstrates that the valley will continue to meet the PM_{10} standard. U.S. EPA approved the document and on September 25, 2008, the SJVAB was redesignated to attainment/maintenance (SJVAPCD, 2015).

PM2.5 PLAN

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards on November 15, 2018.[7] This plan addresses the U.S. EPA federal 1997 annual $PM_{2.5}$ standard of 15 µg/m³ and 24-hour $PM_{2.5}$ standard of 65 µg/m³; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m³. This plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable (SJVAPCD, 2020).

All of the above-referenced plans include measures (i.e., federal, state, and local) that would be implemented through rule making or program funding to reduce air pollutant emissions in the SJVAB. Transportation control measures are part of these plans.

SJVAPCD RULES AND REGULATIONS

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[5] SJVAPCD. Ozone Plans. http://www.valleyair.org/ Air_Quality_Plans/Ozone_Plans.htm, accessed March 3, 2020.

[6] SJVAPCD. 2016 Plan for the 2008 8-Hour Ozone Standard, http://www.valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm, accessed March 3, 2020.

[7] SJVAPCD. Particulate Matter Plans. http://valleyair.org/Air_Quality_Plans/PM_Plans.htm, accessed March 9, 2020.

SJVAPCD Indirect Source Review

On December 15, 2005, SJVAPCD adopted the Indirect Source Review Rule (ISR or Rule 9510) to reduce ozone precursors (i.e., ROG and NOx) and PM_{10} emissions from new land use development projects. Specifically, Rule 9510 targets the indirect emissions from vehicles and construction equipment associated with these projects and applies to both construction and operational-related impacts. The rule applies to any applicant that seeks to gain a final discretionary approval for a development project, or any portion thereof, which upon full buildout would include any one of the following:

- 50 residential units.
- 2,000 square feet of commercial space.
- 25,000 square feet of light industrial space.
- 100,000 square feet of heavy industrial space.
- 20,000 square feet of medical office space.
- 39,000 square feet of general office space.
- 9,000 square feet of educational space.
- 10,000 square feet of government space.
- 20,000 square feet of recreational space.
- 9,000 square feet of space not identified above.
- Transportation/transit projects with construction exhaust emissions of two or more tons of NOx or two or more tons of PM_{10}.
- Residential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, regardless of the number of tract maps, and has the capability of accommodating more than 50 residential units.
- Nonresidential projects on contiguous or adjacent property under common ownership of a single entity in whole or in part, that is designated and zoned for the same development density and land use, and has the capability of accommodating development projects that emit two or more tons per year of NOx or PM_{10} during project operations.

The rule requires all subject, nonexempt projects to mitigate both construction and operational period emissions by (1) applying feasible SJVAPCD-approved mitigation measures, or (2) paying any applicable fees to support programs that reduce emissions. Off-site emissions reduction fees (off-site fee) are required for projects that do not achieve the required emissions reductions through on-site emission reduction measures. Phased projects can defer payment of fees in accordance with an Off-site Emissions Reduction Fee Deferral Schedule (FDS) approved by the SJVAPCD.

To determine how an individual project would satisfy Rule 9510, each project would submit an air quality impact assessment (AIA) to the SJVAPCD as early as possible, but no later than prior to the project's final discretionary approval, to identify the project's baseline unmitigated emissions inventory for indirect sources: on-site exhaust emissions from construction activities and operational activities from mobile and area sources of emissions (excludes fugitive dust and permitted sources). Rule 9510 requires the following reductions, which are levels that the SJVAPCD has identified as necessary, based on their air quality management plans, to reach attainment for ozone and particulate matter:

Construction Equipment Emissions

The exhaust emissions for construction equipment greater than 50 horsepower (hp) used or associated with the development project shall be reduced by the following amounts from the statewide average as estimated by CARB:

- 20 percent of the total NOx emissions
- 45 percent of the total PM_{10} exhaust emissions

Mitigation measures may include those that reduce construction emissions on-site by using less polluting construction equipment, which can be achieved by utilizing add-on controls, cleaner fuels, or newer, lower emitting equipment.

Operational Emissions

- NOx Emissions. Applicants shall reduce 33.3 percent of the project's operational baseline NOx emissions over a period of 10 years as quantified in the approved AIA.
- PM_{10} Emissions. Applicants shall reduce of 50 percent of the project's operational baseline PM_{10} emissions over a period of 10 years as quantified in the approved AIA.

These requirements listed above can be met through any combination of on-site emission reduction measures. In the event that a project cannot achieve the above standards through imposition of mitigation measures, then the project would be required to pay the applicable off-site fees. These fees are used to fund various incentive programs that cover the purchase of new equipment, engine retrofit, and education and outreach.

Fugitive PM_{10} Prohibitions

SJVAPCD controls fugitive PM_{10} through Regulation VIII, Fugitive PM_{10} Prohibitions. The purpose of this regulation is to reduce ambient concentrations of PM_{10} and $PM_{2.5}$ by requiring actions to prevent, reduce, or mitigate anthropogenic (human caused) fugitive dust emissions.

- Regulation VIII, Rule 8021 applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on-site, and travel on access roads to and from the site.
- Regulation VIII, Rule 8031 applies to the outdoor handling, storage, and transport of any bulk material.
- Regulation VIII, Rule 8041 applies to sites where carryout or trackout has occurred or may occur on paved roads or the paved shoulders of public roads.
- Regulation VIII, Rule 8051 applies to any open area having 0.5 acre or more within urban areas or 3.0 acres or more within rural areas, and contains at least 1,000 square feet of disturbed surface area.
- Regulation VIII, Rule 8061 applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.
- Regulation VIII, Rule 8071 applies to any unpaved vehicle/equipment traffic area.
- Regulation VIII, Rule 8081 applies to off-field agricultural sources.

Sources regulated are required to provide Dust Control Plans that meet the regulation requirements. Under Rule 8021, a Dust Control Plan is required for any residential project that will include 10 or more acres of disturbed surface area, a nonresidential project with 5 or more acres of disturbed surface area, or a project that relocates 2,500 cubic yards per day of bulk materials for at least three days. The Dust Control Plan is required to be submitted to SJVAPCD prior to the start of any construction activity. The Dust Control Plan must also describe fugitive dust control measure to be implemented before, during, and after any dust-generating activity. For sites smaller than those listed above, the project is still required to notify SJVAPCD a minimum of 48 hours prior to commencing earthmoving activities.

National Emission Standards for Hazardous Air Pollutants

Rule 4002 applies in the event an existing building will be renovated, partially demolished or removed (National Emission Standards for Hazardous Air Pollutants); this rule applies to all sources of Hazardous Air Pollutants.

Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

If asphalt paving will be used, then paving operations of the proposed Project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Nuisance Odors

SJVAPCD controls nuisance odors through implementation of Rule 4102, Nuisance. Pursuant to this rule, “a person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.”

Employer Based Trip Reduction Program

SJVAPCD has implemented Rule 9410, Employer Based Trip Reduction. The purpose of this rule is to reduce VMT from private vehicles used by employees to commute to and from their worksites to reduce emissions of NOx, ROG, and particulate matter (PM_{10} and $PM_{2.5}$). The rule applies to employers with at least 100 employees. Employers are required to implement an Employer Trip Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate the participation of the development of ETRIPs by providing information to its employees explaining the requirements and applicability of this rule. Employers are required to prepare and submit an ETRIP for each worksite to the District. The ETRIP must be updated annually. Under this rule, employers shall collect information on the modes of transportation used for each eligible employee’s commutes both to and from work for every day of the commute verification period, as defined in using either the mandatory commute verification method or a representative survey method. Annual reporting includes the results of the commute verification for the previous calendar year along with the measures implemented as outlined in the ETRIP and, if necessary, any updates to the ETRIP.

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with air quality if it will:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

CRITERIA POLLUTANT EMISSIONS MODELING

California Emission Estimator Model (CalEEMod)^{TM} (v.2020.4.0), developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with California air districts, was used to estimate emissions for the proposed Project. Project buildout was assumed to be completed in 2028, consistent with the Transportation Impact Analysis, prepared by LSA (LSA, 2023). This may prove to be a conservative estimate because criteria pollutant emission rates are reduced over time (due to state and federal mandates) and would be expected to be even lower than reported in this analysis, should the Project buildout be completed after 2028.

The assumptions for the modeling were selected on a best-fit basis and are consistent with the information provided in Chapter 2.0: Project Description. The land uses modeled include: Single Family Housing – (605 dwelling units); and Open Space – (approximately 5.54 acres). Vehicle trip rates and trip lengths estimated in the modeling are consistent with the vehicle trips rates included in the modeling developed by LSA. The construction phase includes site preparation, grading, building construction, paving, and architectural coating phases. See Appendix C for further detail.

IMPACTS RELATED TO PROJECT-GENERATED POLLUTANTS OF HUMAN HEALTH CONCERN

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (226 Cal.App.4th 704) (hereafter referred to as the Friant Ranch Decision). The case reviewed the long-term, regional air quality analysis contained in the EIR for the proposed Friant Ranch development. The Friant Ranch Project is a 942-acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin. The Court found that the air quality analysis was inadequate because it failed to provide enough detail “for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time.” The Court’s decision clarifies that the agencies authoring environmental documents must make reasonable efforts to connect a project’s air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

All criteria pollutants that would be generated by the Project are associated with some form of health risk (e.g., asthma). Criteria pollutants can be classified as either regional or localized pollutants. Regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source. Localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO_2, SO_2, and lead (Pb) are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. As discussed above, the primary criteria pollutants of concern generated by the Project are ozone precursors (ROG and NO_x) and PM (including Diesel PM). The lead agency has determined that, given the nature and size of the Project, a qualitative approach to correlating the expected air quality emissions of Projects to the likely health consequences of the increased emissions is appropriate.

Regional Project-Generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the Project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NO_x) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NO_x generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutants may be transported over long-distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by the Project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and particulate pollution, the effects are a result of cumulative and regional emissions. As such, a project's incremental contribution to specific health outcomes on a regional scale would be very minimal, given the size of the Project. Therefore, a quantitative correlation of Project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

Other Pollutants of Human Health Concern

The impact analysis does not directly evaluate airborne lead. Neither construction nor future operations would generate quantifiable lead emissions because of regulations that require unleaded fuel and that prohibit lead in new building materials.

TAC emissions associated with Project construction that could affect surrounding areas are evaluated qualitatively. The potential for the Project operations to expose residents to TAC emissions that would exceed applicable health standards is analyzed qualitatively.

Lastly, the SJVPACD recommends that odor impacts be addressed in a qualitative manner. Such an analysis must determine if the Project would result in excessive nuisance odors, as defined under the SJVAPCD's Rule 4102 and California Code of Regulations, Health and Safety Code Section 41700, Air Quality Public Nuisance.

IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Project operation has the potential to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan. (Less than Significant)

The SJVAPCD is tasked with implementing programs and regulations required by the Federal Clean Air Act and the California Clean Air Act. In that capacity, the SJVAPCD has prepared plans to attain Federal and State ambient air quality standards. To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions in their *SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts* (2015). Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

The proposed Project would be both a direct and indirect source of air pollution. Direct sources of pollution include area, energy, and water and waste sources, due to development of the on-site buildings and associated infrastructure. Indirect sources of pollution would be due to the generation of trips of from vehicles traveling to and from the Project site.

CalEEMod^{TM} (v.2020.4.0) was used to model operational emissions of the proposed Project. Table 3.3-6 shows proposed Project emissions as provided by CalEEMod. The SJVAPCD provides a list of applicable air quality emissions thresholds.

TABLE 3.3-6: OPERATIONAL PROJECT GENERATED EMISSIONS (TONS PER YEAR)

POLLUTANT	*CO*	*NO_X*	*ROG*	*SO_X*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD	100	10	10	27	15	15
EMISSIONS	20.8	3.6	7.4	<0.1	4.1	1.2
EXCEEDS THRESHOLD?	**N**	**N**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2020.4.0)

The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. The SJVAPCD has established operations related emissions thresholds of significance as follows: 100 tons per year of carbon monoxide (CO, 10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), 27 tons per year of sulfur oxides (SO_x), 15 tons per year particulate matter of 10 microns or less in size (PM_{10}), and 15 tons per year particulate matter of 2.5 microns or less in size ($PM_{2.5}$). If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. As shown in Table 3.3-6 above, operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

PROJECT EFFECTS ON PUBLIC HEALTH

Fresno County has a state designation of Nonattainment for ozone, PM_{10} and $PM_{2.5}$. The SJVAPCD developed these Project-level thresholds based on the emissions that would exceed a CAAQS or contribute substantially to an existing or projected violation of a CAAQS. Ambient levels of these criteria pollutants are likely to decrease in the future, based on current and future implementation of federal and/or state regulatory requirements, such as improvements to the statewide vehicle fleet over time (including the long-term replacement of internal combustion engine vehicles with electric vehicles in coming decades).

Ozone

O_3 is not emitted directly into the air, but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) (also known as ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. Environmental Protection Agency, 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. Environmental Protection Agency, 2019b).

The Project would generate emissions of ROG and NO_x during Project operational activities, as shown in Table 3.3-6. Although the exact effects of Project-level emissions on local health are not precisely known, it is likely that the increases in ROG and NO_x generated by the proposed Project would especially affect people with impaired respiratory systems, but also healthy adults and children located in the immediate vicinity of the Project site. However, the increases of these pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the proposed Project in comparison to Fresno County as a whole. Instead, the increases in ROG and NO_x generated by the proposed Project when combined with the existing ROG and NO_x emitted regionally, would affect people, especially those with impaired respiratory systems located in the immediate vicinity of the Project site.

Particulate Matter

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO_2) and laboratory studies of animals and humans, PM can cause major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution has health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed. The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in $PM_{2.5}$ results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. Environmental Protection Agency, 2019c).

The Project would generate emissions of PM during Project operational activities, as shown in Table 3.3-6. Although the exact effects of such emissions on local health are not known, it is likely that the increases in PM generated by the proposed Project would especially affect people with impaired respiratory systems, but also healthy adults and children located in the immediate vicinity of the Project site. However, the increases of these pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the Project in comparison the Fresno County as a whole. Instead, the increases in PM generated by the proposed Project when combined with the existing PM emitted regionally, would affect people, especially those with impaired respiratory systems located in the immediate vicinity of the Project site.

CONCLUSION

As shown in Table 3.3-6, the proposed Project's operational criteria pollutant would not exceed the applicable SJVAPCD thresholds of significance. Therefore, the Project's criteria pollutant emissions would be considered to have a **less than significant** impact.

Impact 3.3-2: Proposed Project construction activities would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan. (Less than Significant)

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Air quality impacts can nevertheless be acute during construction periods, resulting in significant localized impacts to air quality. Construction-related activities would result in Project-generated emissions from demolition, site preparation, grading, paving, building construction, and architectural coatings. CalEEMod™ (v.2020.4.0) was used to estimate construction emissions for the proposed Project. Table 3.3-7, below, provides the construction criteria pollutant emissions associated with implementation of the proposed Project.

TABLE 3.3-7: MAXIMUM CONSTRUCTION PROJECT GENERATED EMISSIONS (TONS PER YEAR)

POLLUTANT	*CO*	*NO_X*	*ROG*	*SO_X*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD	100	10	10	27	15	15
EMISSIONS	3.3	3.0	3.5	<0.1	1.2	0.5
EXCEEDS THRESHOLD?	**N**	**N**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2020.4.0)

If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for construction-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions. As shown in Table 3.3-7, Project maximum construction emissions would not exceed the SJVAPCD thresholds of significance. Nevertheless, regardless of emission quantities, the SJVAPCD requires construction related control measures in accordance with their rules and regulations. Implementation of these control measures (provided in further detail below) would further reduce proposed Project construction related emissions to the extent possible.

The first step is to prepare a Dust Control Plan that meets all of the applicable requirements of APCD Rule 8021. All construction activities are required to implement dust control measures, as required by APCD Rules 8011-8081, to limit Visible Dust Emissions to 20% opacity or less. Dust control measures include application of water or chemical dust suppressants to unpaved roads and graded areas, covering or stabilization of transported bulk materials, prevention of carryout or trackout of soil materials to public roads, limiting the area subject to soil disturbance, construction of wind barriers, access restrictions to inactive sites as required by the applicable rules. The following dust control practices are identified in Tables 6-2 and 6-3 of the GAMAQI (2002):

a. *All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.*
b. *All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.*
c. *All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall control fugitive dust emissions by application of water or by presoaking.*
d. *When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least six inches of freeboard space from the top of the container shall be maintained.*
e. *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.*
f. *Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.*
g. *Limit traffic speeds on unpaved roads to 15 mph.*
h. *Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.*

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions.

CONCLUSION

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a **less than significant** impact.

Impact 3.3-3: The proposed Project would not generate carbon monoxide hotspot impacts. (Less than Significant)

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (U.S. EPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels could increase the risk of such incidences.

The Project site is located in a State attainment area and a federal attainment-unclassified area for carbon monoxide. In addition, CO emissions under Project operation are below the applicable significance threshold promulgated by the SJVAPCD. Therefore, no project-level conformity analysis is necessary for CO. Increases in proposed Project VMT would increase concentrations of carbon monoxide (CO) along streets and intersections that provide access to the Project site. Carbon monoxide is a local pollutant (i.e., high concentrations are normally only found very near sources), and can form local elevated concentrations under specific conditions. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations (i.e., hotspots), therefore, are usually only found near areas of very high traffic volume and congestion.

Several factors combine to make substantial concentrations of carbon monoxide unlikely. Existing physical constraints such as high-density, high-profile buildings or other obstructions that could prevent dispersion of carbon monoxide are largely absent. Predominant weather conditions in the area include air movement that would help facilitate carbon monoxide dispersion. Congested traffic conditions that otherwise could result in concentration of carbon monoxide would be of short duration. Further, under existing regulatory and legislative mandates, emissions volumes from all vehicles classes will continue to decline. Given these factors, substantial concentrations of carbon monoxide are not expected at or along any affected roadways or intersections.

CONCLUSION

This Project is located in an area that is designated attainment and attainment-unclassified for carbon monoxide. No Project-level conformity analysis is necessary for CO. Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Impacts associated with carbon monoxide hotspots would be **less than significant,** and no additional mitigation is required.

Impact 3.3-4: The proposed Project has the potential for public exposure to toxic air contaminants. (Less than Significant)

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. EPA regulate 188 air toxics, also known as hazardous air pollutants. The U.S. EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources. In addition, the U.S. EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999

National Air Toxics Assessment. These are acrolein, benzene, 1,3-butidiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter.

The 2007 U.S. EPA rule requires controls that will dramatically decrease Mobile Source Air Toxics (MSAT) emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (VMT) increases by 145 percent, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050. California maintains stricter standards for clean fuels and emissions compared to the national standards, therefore, it is expected that MSAT trends in California will decrease consistent with or more than the U.S. EPA's national projections.

The California Air Resources Board (CARB) published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB, 2005) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. The most serious pollutants on a statewide basis include diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads. Non-mobile source air toxics are largely associated with industrial and commercial uses. Table 3.3-8 provides the California Air Resources Board minimum separation recommendations on siting sensitive land uses.

TABLE 3.3-8: CARB MINIMUM SEPARATION RECOMMENDATIONS ON SITING SENSITIVE LAND USES

SOURCE CATEGORY	*ADVISORY RECOMMENDATIONS*
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro-ethylene	• Avoid siting new sensitive land uses within 300 feet of any dry-cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

SOURCES: AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE" (CARB 2005)

Residences are proposed as part of the Project, which are considered traditional sensitive receptors. However, the residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, since the proposed Project would not have land uses that would generate a significant risk of public exposure to TACs, the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.3-5: The proposed Project would not cause exposure to other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Less than Significant)

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. The general nuisance rule (Health and Safety Code §41700) is the basis for the threshold.

Examples of facilities that are known producers of odors include: Wastewater Treatment Facilities, Chemical Manufacturing, Sanitary Landfill, Fiberglass Manufacturing, Transfer Station, Painting/Coating Operations (e.g. auto body shops), Composting Facility, Food Processing Facility, Petroleum Refinery, Feed Lot/Dairy, Asphalt Batch Plant, and Rendering Plant.

If a project proposes to locate receptors and known odor sources in proximity to each other, further analysis may be warranted. However, if a project would not locate receptors and known odor sources in proximity to each other, then further analysis is not warranted. The proposed Project does not include new industrial uses that are not already present in the vicinity of the Project site. Air district Rule 402 prohibits any mobile or stationary source generating an objectionable odor, with the exception of odors emanating from certain agricultural operations. The California Health and Safety Code §41700 and Air District Rule 402 prohibit emissions of air contaminants from any source that cause nuisance or annoyance to a considerable number of people or that present a threat to public health or cause property damage. Compliance with these rules would preclude land uses proposed under the proposed Project from emitting objectionable odors.

CONCLUSION

The proposed Project does not propose sensitive receptors that would be exposed to odors in the vicinity; nor does it propose uses that would create new odors that would expose substantial numbers of people. Therefore, operation of the proposed Project would not result in significant objectionable odors. Impacts associated with exposure to odors would be **less than significant.**

BIOLOGICAL RESOURCES 3.4

This section describes the regulatory setting, regional biological resources, and impacts that are likely to result from Project implementation. The analysis contained in this section is intended to be at a Project-level, and covers impacts associated with the conversion of the Development Area to an urban use. This section is based in part on the following: *2014 Clovis General Plan* (Placeworks, 2014), *2014 Clovis General Plan Draft Program Environmental Impact Report* (Placeworks, 2014), *Natural Resources Conservation Service (NRCS) Web Soil Survey* (NRCS, 2022), *Biological Habitat Assessment of the Tract 6205, Spensley Property, N. Sunnyside and Shepherd Avenue, Clovis, Fresno County, California* (Argonaut Ecological Consulting, Inc., 2018) (see Appendix D), as well as site specific surveys and analysis.

There was one comment received during the Notice of Preparation (NOP) comment period regarding biological resources from Robert Shuman (May 25, 2022). The commenter states that the on-site orchards are suitable for foraging by Swainson's hawk and other raptors. The commenter also notes that there are active, well-documented Swainson's hawk nests within ¼ mile radius of the proposed Project site.

KEY TERMS

The following key terms are used throughout this section to describe biological resources and the framework that regulates them:

Hydric Soils. One of the three wetland identification parameters, according to the Federal definition of a wetland, hydric soils have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season. There are approximately 2,000 named soils in the United States that may occur in wetlands.

Hydrophytic Vegetation. Plant types that typically occur in wetland areas. Nearly 5,000 plant types in the United States may occur in wetlands. Plants are listed in regional publications of the U.S. Fish and Wildlife Service (USFWS) and include such species as cattails, bulrushes, cordgrass, sphagnum moss, bald cypress, willows, mangroves, sedges, rushes, arrowheads, and water plantains.

Sensitive Natural Community. A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, State, or Federal agencies. The California Environmental Quality Act (CEQA) identifies the elimination or substantial degradation of such communities as a significant impact. The California Department of Fish and Wildlife (CDFW) tracks sensitive natural communities in the California Natural Diversity Database (CNDDB).

Special-Status Species. Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by Federal, State, or other agencies. Some of these species receive specific protection that is defined by Federal or State endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as "special status species" in this report, following a convention that has developed in practice, but has no official sanction. For the purposes of this assessment, the term “special status” includes those species that are:

- Federally listed or proposed for listing under the Federal Endangered Species Act (50 CFR 17.11-17.12);
- Candidates for listing under the Federal Endangered Species Act (61 FR 7596-7613);
- State listed or proposed for listing under the California Endangered Species Act (14 CCR 670.5);
- Species listed by the USFWS or the CDFW as a species of concern (USFWS), rare (CDFW), or of special concern (CDFW);
- Fully protected animals, as defined by the State of California (California Fish and Game Code Section 3511, 4700, and 5050);
- Species that meet the definition of threatened, endangered, or rare under CEQA (CEQA Guidelines Section 15380);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.); and
- Plants listed by the California Native Plant Society (CNPS) as rare, threatened, or endangered (List 1A and List 2 status plants in Skinner and Pavlik 1994).

Waters of the U.S. The Federal government defines waters of the U.S. as "lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows" [33 C.F.R. §328.3(a)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the U.S. Army Corps of Engineers (USACE) as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

Wetlands. Wetlands are ecologically complex habitats that support a variety of both plant and animal life. The Federal government defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Wetlands require wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to waters of the U.S.

METHODS

Pre-Field Investigation

Prior to the field investigation, numerous maps, databases, and reports were reviewed including:

- U.S. Geological Survey (USGS) 7.5-minute Quadrangle
- USGS National Hydrography Data Set
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps
- National Resource Conservation Service (NRCS) Soil Survey

- California Wildlife Habitat Relationships (CWHR) maps
- California Natural Diversity Database (CNDDB)
- California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants
- U.S. Fish and Wildlife Service's (USFWS) IPac
- U.S. Fish and Wildlife Service's (USFWS) Official List

Field Surveys

The Development Area was subject to a field survey by Principal Biologist Steve McMurtry (De Novo Planning Group) on May 11, 2021. The site reconnaissance survey served several purposes. First, it served as reconnaissance of the site to establish the existing conditions of the site and to verify information gathered in the pre-field investigation. This included identification of the habitat types, hydrologic features, topography, soil characteristics, and vegetation. The field investigations followed the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009). Habitat was recorded. Visibility during the survey was excellent.

Additionally, as part of the *Biological Habitat Assessment of the Tract 6205, Spensley Property, N. Sunnyside and Shepherd Avenue, Clovis, Fresno County, California* (Argonaut Ecological Consulting, Inc., 2018), a site review was conducted on October 23, 2017. The entire Development Area was reviewed. There were no access issues. The primary objective of the field work was to identify any areas on the site, or immediately adjacent to the site, that potentially supports habitat for sensitive species or aquatic habitat. The orchard manager provided historical and current information on the farming operations.

3.4.1 ENVIRONMENTAL SETTING

GEOMORPHIC PROVINCES/BIOREGION

The City of Clovis is located in the western portion of the Great Valley Geomorphic Province of California. The Great Valley Province is a broad structural trough bounded by the tilted block of the Sierra Nevada Range on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River is located just north and west of the City. This major river drains the Great Valley Province into the San Joaquin Delta to the north, ultimately discharging into the San Francisco Bay to the northwest.

The City of Clovis is located within the San Joaquin Valley Bioregion, which is comprised of Kings County, most of Fresno, Kern, Merced, and Stanislaus counties, and portions of Madera, San Luis Obispo, and Tulare counties. The San Joaquin Valley Bioregion is the third most populous out of ten bioregions in the State, with an estimated two million people. The largest cities are Fresno, Bakersfield, Modesto, and Stockton. Interstate 5 and State Route 99 are the major north-south roads that run the entire length of the bioregion.

The bioregion is bordered on the west by the coastal mountain ranges. Its eastern boundary joins the southern two-thirds of the Sierra bioregion, which features Yosemite, Kings Canyon, and Sequoia National Parks. At its northern end, the San Joaquin Valley bioregion borders the southern end of the Sacramento Valley bioregion. To the west, south, and east, the bioregion extends to the edges of the valley floor.

Habitat in the bioregion includes vernal pools, valley sink scrub and saltbush, freshwater marsh, grasslands, arid plains, orchards, and oak savannah. Historically, millions of acres of wetlands flourished in the bioregion, but stream diversions for irrigation dried all but about five percent. Remnants of the wetland habitats are protected in this bioregion in publicly owned parks, reserves, and wildlife areas. The bioregion is considered the State's top agricultural producing region with the abundance of fertile soil.

LOCAL SETTING

Location

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 show the Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 2.0-4 illustrates the Project location on the USGS Clovis, California, 7.5-minute series quadrangle map.

Topography

The Project site is relatively flat and is approximately 385 feet above mean sea level.

Climate

Climate in the Development Area is typical of the central San Joaquin Valley with summers that are long, hot, and dry and winters that are cool and mild. Rainfall in the winter averages approximately 10.9 inches per year, falling mainly between November and April.

Vegetation

Vegetation on the Project site consists of agricultural, ruderal, and orchard. The majority of the Development Area is in active agricultural use (pecan orchards). Because of the active agricultural use over the majority of the Project site, there is very limited natural vegetation on the Project site. Common plant species observed in the perimeter of the agricultural fields include: wild oat (*Avena barbata*), rip-gut brome (*Bromus diandrus*), softchess (*Bromus hordeaceus*) alfalfa (*Medicago sativa*), Russian thistle (*Salsola tragus*), Italian thistle (*Carduus pycnocephalus*), rough pigweed (*Amaranthus retroflexus*), sunflower (*Helianthus annuus*), tarragon (*Artemisia dracunculus*), coyote brush (*Baccharis pilularis*), prickly lettuce (*Lactuca serriola*), milk thistle (*Silybum marianum*), sow thistle (*Sonchus asper*), telegraph weed (*Heterotheca grandiflora*), barley (*Hordeum* sp.), mustard (*Brassica niger*), and heliotrope (*Heliotropium curassavicum*).

Wildlife

Agricultural and ruderal vegetation found on the Project site provides habitat for both common and a few special-status wildlife populations. For example, some commonly observed wildlife species in the region include: California ground squirrel (*Spermophilus beecheyi*), California vole (*Microtus californicus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus),* American kestrel (*Falco sparverius*), white-tailed kite (*Elanus leucurus*), American killdeer (*Charadrius vociferus*), gopher snake (*Pituophis melanoleucus*), garter snake (*Thamnophis species*), and western fence lizard (*Sceloporus occidentalis*), as well as many native insect species. There are also several bat species in the region. Bats often feed on insects as they fly over agricultural and natural areas.

Locally common and abundant wildlife species are important components of the ecosystem. Due to habitat loss, many of these species must continually adapt to using agricultural, ruderal, and ornamental vegetation for cover, foraging, dispersal, and nesting.

Plant Communities

Agricultural and natural plant communities provide habitat for a variety of biological resources in the region. Sensitive habitats include those that are of special concern to resource agencies or those that are protected under a Habitat Conservation Plan, Natural Community Conservation Plan, the California Environmental Quality Act (CEQA), the Fish and Game Code, or the Clean Water Act (CWA). Additionally, sensitive habitats are usually protected under specific policies from local agencies. Figure 3.4-1 illustrates the plant communities (land cover types) in the vicinity of the Project site.

Table 3.4-1 summarizes the plant communities (land cover types) by acreage.

TABLE 3.4-1: LAND COVER TYPES

LAND COVER TYPE	*ACREAGE*
Deciduous Orchard	77.01
Evergreen Orchard	8.83
Irrigated Row and Field Crops	0.62
Riverine	1.07
Urban	56.16
Vineyard	11.43
TOTAL	*155.11*

SOURCE: FRESNO COUNTY GIS; NRCS SOIL SURVEY MAP DATE: SEPTEMBER 12, 2022.

The majority of the Project site is labeled as Deciduous Orchard (77.01 acres) on the land cover types maps. The remainder of the site includes Evergreen Orchard (8.83 acres), Irrigated Row and Field Crops (0.62 acres), Riverine (1.07 acres), Urban (56.16 acres), and Vineyard (11.43 acres).

The Development Area primarily contains farmland (orchard). Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use (pecan orchards).

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

Drainage and Hydrogeomorphic Features

The Development Area has historically drained to the southwest. The site is fairly flat with little change in elevation. Historically, there was a small lake that was located north of the Development Area and has since been filled. A topographic map from 1919 shows the general vicinity of the Development Area.

A query of the National Wetland Inventory Map does not show any stream, creeks, or wetland on the Study Area. The National Wetland Inventory Map code is “PUBHx,” which correlates to “palustrine, unconsolidated bottom, permanently flooded, excavated. Based on a review of historical records, readily available wetland mapping databases, and a site review, the field investigation completed as part of the *Biological Habitat Assessment* (Argonaut Ecological Consulting, Inc., 2018) confirmed the accuracy of the U.S. Fish and Wildlife Service’s Wetland Inventory Map. No wetlands, waters, or any aquatic habitat is present within the Development Area. There is a man-made conveyance channel (trapezoidal with no vegetation) located along the northern boundary, but outside the project limits.

SPECIAL-STATUS SPECIES

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDB), the California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Plants, and the U.S. Fish and Wildlife Service’s (USFWS) records of listed endangered and threatened species from the Information for Planning and Consultation (IPaC) database. The background search was regional in scope and focused on the documented occurrences within the nine-quadrangle region (approximately 10 miles) of the Project site. The background search included the following USGS quadrangles: Lanes Bridge, Friant, Academy, Round Mountain, Clovis, Fresno North, Fresno South, Malaga, and Sanger. The Table 3.4-2 provides a list of special-status plants and Table 3.4-3 provides a list of special-status animals. Figure 3.4-2 presents the documented occurrences within the nine-quadrangle region for the Project site.

TABLE 3.4-2: SPECIAL-STATUS PLANT SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	STATUS (FED./CA/ CNPS)	HABITAT AND BLOOMING PERIOD	PRESENCE DETERMINATION
bristly sedge *Carex comosa*	--/--/2B.1	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -5-1010 m. May-September.	Not Present
California jewelflower *Caulanthus californicus*	E/E/1B.1	Chenopod scrub, valley and foothill grassland, pinyon and juniper woodland. Sandy soils. 65-1860 m. February-May.	Not Present
California satintail *Imperata brevifolia*	--/--/2B.1	Coastal scrub, chaparral, riparian scrub, mojavean desert scrub, meadows and seeps (alkali), riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-1495 m. September-May.	Not Present
dwarf downingia *Downingia pusilla*	--/--/2B.2	Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 1-490 m. March-May.	Not Present
forked hare-leaf *Lagophylla dichotoma*	--/--/1B.1	Cismontane woodland, valley and foothill grassland. Sometimes clay. 190-335 m. April-June.	Not Present
Greene's tuctoria *Tuctoria greenei*	E/R/1B.1	Vernal pool. Vernal pools in open grasslands. 25-1325 m. May-July.	Not Present
hairy Orcutt grass *Orcuttia pilosa*	E/E/1B.1	Vernal pools. 25-125 m. May-September.	Not Present
Hartweg's golden sunburst *Pseudobahia bahiifolia*	E/E/1B.1	Valley and foothill grassland, cismontane woodland. Clay soils, often acidic. Predominantly on the northern slopes of knolls, but also along shady creeks or near vernal pools. 60-170 m. March-April.	Not Present
Hoover's calycadenia *Calycadenia hooveri*	--/--/1B.3	Cismontane woodland, valley and foothill grassland. On exposed, rocky, barren soil. 60-260 m. July-September.	Not Present
Madera leptosiphon *Leptosiphon serrulatus*	--/--/1B.2	Cismontane woodland, lower montane coniferous forest. Dry slopes; often on decomposed granite in woodland. 80-1645 m. April-May.	Not Present
pincushion navarretia *Navarretia myersii ssp. myersii*	--/--/1B.1	Vernal pools. Clay soils within non-native grassland. 45-100 m. Grassy valley floors and rolling foothills in heavy clay soil. 115-795 m. April-May.	Not Present
San Joaquin adobe sunburst *Pseudobahia peirsonii*	T/E/1B.1	Valley and foothill grassland, cismontane woodland. March-April.	Not Present
San Joaquin Valley Orcutt grass *Orcuttia inaequalis*	T/E/1B.1	Vernal pool. 10-755 m. April-September.	Not Present
Sanford's arrowhead *Sagittaria sanfordii*	--/--/1B.2	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m. May-October (November).	Not Present
spiny-sepaled button-celery *Eryngium spinosepalum*	--/--/1B.2	Vernal pools, valley and foothill grassland. Some sites on clay soil of granitic origin; vernal pools, within grassland. 15-1270 m. April-June.	Not Present
succulent owl's-clover *Castilleja campestris var. succulenta*	T/E/1B.2	Vernal pools. Moist places, often in acidic soils. 20-705 m. (March) April-May.	Not Present

NOTES: *CNPS = CALIFORNIA NATIVE PLANT SOCIETY*

STATUS EXPLANATIONS:

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL CALIFORNIA ENDANGERED SPECIES ACT.

R = RARE UNDER THE CALIFORNIA ENDANGERED SPECIES ACT

CALIFORNIA NATIVE PLANT SOCIETY

1B = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA AND ELSEWHERE.

2 = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA, BUT MORE COMMON ELSEWHERE.

3 = A REVIEW LIST – PLANTS ABOUT WHICH MORE INFORMATION IS NEEDED.

4 = PLANTS OF LIMITED DISTRIBUTION – A WATCH LIST

.1 = SERIOUSLY ENDANGERED IN CALIFORNIA (OVER 80% OF OCCURRENCES THREATENED-HIGH DEGREE AND IMMEDIACY OF THREAT).

.2 = FAIRLY ENDANGERED IN CALIFORNIA (20-80% OCCURRENCES THREATENED).

.3 = NOT VERY ENDANGERED IN CALIFORNIA (<20% OF OCCURRENCES THREATENED).

TABLE 3.4-3: SPECIAL-STATUS WILDLIFE AND FISH SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	STATUS (FED/CA)	GEOGRAPHIC DISTRIBUTION	HABITAT REQUIREMENTS
INVERTEBRATES			
California linderiella *Linderiella occidentalis*	--/--	Ranges from near Redding in the north to as far south as Fresno County, mainly to the east of the Sacramento and San Joaquin Rivers	Natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities
midvalley fairy shrimp *Branchinecta mesovallensis*	--/--	Extending from Stillwater Plain in Shasta County through most of the length of the Central Valley to Pixley in Tulare County and along the central Coast Range from northern Solano County to Pinnacles National Monument in San Benito County.	Vernal pools with tea-colored water, most commonly in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands.
Vernal pool fairy shrimp *Branchinecta lynchi*	T/--	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County	Common in vernal pools; they are also found in sandstone rock outcrop pools.
Antioch efferian robberfly *Efferia antiochi*	--/--	Known only from Antioch, Fresno, and Scout Island in the San Joaquin River	No specific habitat information is available.
Crotch bumble bee *Bombus crotchii*	--/--	Central California south to Baja California del Norte, Mexico, and includes coastal areas east to the edges of the deserts and the Central Valley	Open grassland and scrub
Hurd's metapogon robberfly *Metapogon hurdi*	--/--	Known only from the sand dunes at Antioch and San Joaquin Valley.	No specific habitat information is available.
Molestan blister beetle *Lytta molesta*	--/--	Distribution of this species is poorly known	Annual grasslands, foothill woodlands or saltbush scrub.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/--	Stream side habitats below 3,000 feet throughout the Central Valley	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.
western ridged mussel *Gonidea angulata*	--/--	Known to occur in California, Oregon, Washington, Idaho, Nevada, and British Columbia	Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from Central and Southern California.
AMPHIBIANS			
California tiger salamander - central California DPS *Ambystoma californiense pop. 1*	T/T(WL)	Central California	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.
western spadefoot *Spea hammondii*	--/SSC	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.
BIRDS			
black-crowned night heron *Nycticorax nycticorax*	--/--	Throughout California	Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.

SPECIES	STATUS (FED/CA)	GEOGRAPHIC DISTRIBUTION	HABITAT REQUIREMENTS
burrowing owl *Athene cunicularia*	BCC/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows
California horned lark *Eremophila alpestris actia*	--/WL	Central Valley and coastal valleys and foothills.	Forage in large groups in open grasslands, nesting in hollows on the ground, and are also regularly found breeding on the Valley floor in suitable habitat.
double-crested cormorant *Nannopterum auritum*	--/WL	Nonbreeding California habitat located along coastal California and the Central Valley. Migrates throughout California.	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.
great egret *Ardea alba*	--/--	Throughout California	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.
least Bell's vireo *Vireo bellii pusillus*	E/E	Central Valley of California and other low-elevation river valleys.	Dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak.
prairie falcon *Falco mexicanus*	--/WL	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms.	Found below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.
snowy egret *Egretta thula*	--/--	Found mostly throughout North, Central, and South America. Breeds in coastal and inland wetlands. Their range has been limited over time due to habitat destruction and hunting. A migratory species that relocates from the United States and Canada to Mexico, Central America, South America, and the West Indies.	Prefer shallow water inlets for feeding such as salt-marsh pools, tidal channels, and bays. Mostly along coastal areas and islands. During winter time they migrate and roost in the mangroves of the Caribbean.
Swainson’s hawk *Buteo swainsoni*	--/T	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields
tricolored blackbird *Agelaius tricolor*	--/T(SSC)	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	T/E	Nests along the upper Sacramento, lower Feather, south fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley oak riparian habitats where scrub jays are abundant
FISH			
hardhead *Mylopharodon conocephalus*	--/SSC	Tributary streams in the San Joaquin drainage; large tributary streams in the Sacramento River and the main stem	Resides in low to mid-elevation streams and prefer clear, deep pools and runs with slow velocities. They also occur in reservoirs.

SPECIES	STATUS (FED/CA)	GEOGRAPHIC DISTRIBUTION	HABITAT REQUIREMENTS
MAMMALS			
American badger *Taxidea taxus*	--/SSC	In California, badgers occur throughout the State except in humid coastal forests of northwestern California in Del Norte and Humboldt Counties	Badgers occur in a wide variety of open, arid habitats but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; the principal habitat requirements for the species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground
Fresno kangaroo rat *Dipodomys nitratoides exilis*	E/E	Western Fresno County.	Alkali sink-open grassland habitats. Bare alkaline clay-based soils subject to seasonal inundation, with more friable soil mounds around shrubs and grasses.
hoary bat *Lasiurus cinereus*	--/--	Occur in all 50 states. Rare in the eastern United States and northern Rockies. Found mainly in the Pacific Northwest and California, Arizona, and New Mexico.	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
pallid bat *Antrozous pallidus*	--/SSC	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts
San Joaquin kit fox *Vulpes macrotis mutica*	E/T	Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; recent records from 17 counties extending from Kern County north to Contra Costa County	Saltbush scrub, grassland, oak, savanna, and freshwater scrub
San Joaquin pocket mouse *Perognathus inornatus*	--/--	Occurs throughout the San Joaquin Valley and in the Salinas Valley	Favors grasslands and scrub habitats with fine textured soils
spotted bat *Euderma maculatum*	--/SSC	Distributed across large areas of western North America from southern British Columbia to the central Mexican state of Queretaro.	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting.
western mastiff bat *Eumops perotis californicus*	--/SSC	Ranges from central Mexico across the southwestern United States (parts of California, southern Nevada, southwestern Arizona, southern New Mexico and western Texas). Significant populations of E. perotis occur in many of the Sierra Nevada river drainages, particularly in the central and southern Sierra, i.e., the Stanislaus, Tuolumne, Merced (North and South Forks), San Joaquin, Kaweah, Tule, and Kern rivers.	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.
REPTILES			
California glossy snake *Arizona elegans occidentalis*	--/SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California.	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils
coast horned lizard *Phrynosoma blainvillii*	--/SSC	Historically found in California along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir, and south into Baja California.	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.

SPECIES	*STATUS (FED/CA)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*
Northern California legless lizard *Anniella pulchra*	--/SSC	California legless lizards are found in California and Mexico. They are found from western central California (San Joaquin and the coastal regions), through northwestern Baja California, and as far south as Colonia Guerrero, Mexico.	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.

STATUS EXPLANATIONS:

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
PE = PROPOSED FOR ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
PT = PROPOSED FOR THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
C = CANDIDATE SPECIES FOR LISTING UNDER THE FEDERAL ENDANGERED SPECIES ACT.
D = DELISTED FROM FEDERAL LISTING STATUS.
BCC = BIRD OF CONSERVATION CONCERN

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
C = CANDIDATE SPECIES FOR LISTING UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
FP = FULLY PROTECTED UNDER THE CALIFORNIA FISH AND GAME CODE.
SSC = SPECIES OF SPECIAL CONCERN IN CALIFORNIA.

3.4.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the State and nation, including the California Department of Fish and Wildlife (CDFW), USFWS, U.S. Army Corps of Engineers (USACE), and the Central Valley Regional Water Quality Control Board (CVRWQCB). These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the Federal, State and local regulations that are applicable to the proposed Project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed, it is fully protected from a “take” unless a take permit is issued by the USFWS. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, possess, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., §703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Federal Bald and Golden Eagle Protection Act

The Federal Bald and Golden Eagle Protection Act provide regulations to protect bald and golden eagles, as well as their nests and eggs from willful damage or injury.

Clean Water Act – Section 404

Section 404 of the CWA regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)].

Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

The USACE is the agency responsible for administering the permit process for activities that affect waters of the U.S. Executive Order 11990 is a federal implementation policy, which is intended to result in no net loss of wetlands.

Clean Water Act – Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the CVRWQCB. To obtain the water quality certification, the CVRWQCB must indicate that the proposed fill would be consistent with the standards set forth by the State.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. The Act requires authorization from the USACE for any excavation or deposition of materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

STATE

Fish and Game Code §2050-2097 – California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code §1900-1913 – California Native Plant Protection Act

In 1977, the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the State. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code §3503, 3503.5, 3800 – Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called “raptors,” are protected. The law indicates that it is unlawful to take, possess, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code §1601-1603 – Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a “Streambed Alteration Agreement” from CDFW prior to any alteration of a lakebed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Public Resources Code §21000 - California Environmental Quality Act

CEQA identifies that a species that is not listed on the Federal or State endangered species list may be considered rare or endangered if the species meets certain criteria. (CEQA Guidelines § 15380) Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e., candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFW. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California that have low populations, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere.

California Wetlands Conservation Policy

In August 1993, the Governor announced the "California Wetlands Conservation Policy.” The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and Federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act provides long-term protection of species and habitats through regional, multi-species planning before the special measures of the CESA become necessary.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to regulate State water quality and protect beneficial uses.

Water Quality Control Plan for the Sacramento-San Joaquin River Basins

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), adopted by the CVRWQCB in 1998, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and SJR basins, including the Delta.

State and Federal laws mandate the protection of designated “beneficial uses” of water bodies. State law defines beneficial uses as “domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves” (Water Code Section 13050[f]). Additional protected beneficial uses of the SJR include groundwater recharge and freshwater replenishment. Major issues and the general conditions of existing beneficial uses in the SJR are as follows:

- Water Supply: The SJR is not currently a source of municipal water supply for the City of Clovis and is not identified as a source for the proposed Project, although some farms in the region use the river as a source of water for irrigation. The City currently uses groundwater only and surface water from the SSJID South County Surface Water Supply Project (SCSWSP), which does not rely on the SJR.
- Agricultural Supply: Extensive use is made of SJR and Delta waters for agricultural purposes. Annual water diversions from the Delta by the State Water Project (SWP) and the Central Valley Project (CVP) for agriculture are estimated to reach 4.3 million acre-feet (MAF) per year by 2030. In addition, about 2,000 privately owned agricultural water supply diversions are scattered throughout the Delta, generally consisting of riverside pumping stations.

- Recreation: Water-dependent recreation uses of the SJR and the Delta include swimming, wading, waterskiing, sport fishing, and a variety of other activities that involve contact with the water. Noncontact (water-enhanced) recreation uses include picnicking, camping, pleasure boating, hunting, bird watching, education, and aesthetic enjoyment.
- Groundwater Recharge: Water from the SJR and the Delta recharges the San Joaquin Valley groundwater basin. Recharge serves to maintain salt balance in the soil column, prevent saltwater intrusion into freshwater aquifers, and provide for water supplies. Groundwater is replenished through deep percolation of streamflow, precipitation, and applied irrigation water. Groundwater quality is generally adequate throughout the San Joaquin Valley and the Delta, although at shallow depths within the Delta, the water is often saline and contains high levels of total dissolved solids (TDS) and dissolved minerals. Enforceable TDS standards do not exist for drinking water. The need for treatment generally depends on consumer acceptance.
- Fish and Wildlife: The SJR and the waterways of the Delta provide important habitat for a diverse variety of aquatic life and terrestrial wildlife. This includes temporary habitat and migration routes for anadromous and other migratory species, as well as permanent habitat for resident species. Fish dependent on the Delta as a migration corridor, nursery, or permanent residence include Chinook salmon, steelhead, delta smelt, Sacramento splittail, striped bass, American shad, sturgeon, catfish, largemouth bass, and numerous other estuary and freshwater species. The amount and quality of water flowing through the Delta greatly influences the overall productivity of the area on an annual basis. A large assemblage of wildlife uses the Delta either seasonally or year-round, including waterfowl; migratory and resident songbirds; mice, rabbits, and other small mammals; water dependent mammals, such as beaver and muskrat; and predators such as skunk, raccoon, northern harrier, and coyote.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes the following policy that is relevant to biological resources:

POLICIES: OPEN SPACE AND CONSERVATION ELEMENT

- Policy 2.6 Biological resources. Support the protection of biological resources through the conservation of high-quality habitat area.

City of Clovis Municipal Code

Chapter 9.30, Tree Protection Standards, of the Clovis Municipal Code outlines protected trees, heritage trees, and tree removal permit/application requirements.

Section 9.30.040 of the Code states that, except as otherwise provided in Section 9.30.050 (Exemptions), the following trees shall not be removed from private property without first obtaining a tree removal permit:

A. Heritage trees. Heritage trees in all zoning districts;
B. Condition of approval. Any tree required to be planted or retained as a condition of approval of a development application or a building permit in all zoning districts;
C. Multi-trunk trees. For multi-trunk trees, any tree which has at least one trunk twelve inches (12") or greater in diameter or thirty-eight inches (38") or greater in circumference, measured four feet (4') above the adjacent grade, except for developed single-family residential properties.
D. Twelve inches (12") or greater in diameter. Any tree which measures twelve inches (12") or greater in diameter or thirty-eight inches (38") or greater in circumference, measured four feet (4') above the adjacent grade in all zoning districts, except for developed single-family residential properties.
E. Parkway trees. Parkway trees and any tree located on public property.
F. Trees required by site plan review. Trees required or memorialized under site plan review. (See Chapter 56 of this title) (§ 2, Ord. 14-13, eff. October 8, 2014)

Chapter 9.120, Definitions, of the Municipal Code includes the following definition for heritage trees:

> Heritage tree. Any tree so designated by the Protected Tree Advisory Committee based on the finding that the tree has character, significant age and girth, interest or value as part of the development of and/or exemplification of the agricultural, cultural, economic, educational, social, indigenous or historical heritage of the City and identified on the historic resources inventory.

Section 9.30.050, Exemptions, states that the following tree types and conditions are exempt from Chapter 9.30 and may be removed without approval of a tree removal permit:

A. Emergencies. Trees that pose an immediate threat to persons or property during an emergency or are determined to constitute an emergency, upon order of the Director, the Public Utilities Director, or any member of the Police or Fire Departments.
B. Public nuisance. Any tree in a condition to constitute a public nuisance, as defined in Chapter 1 of Title 10, when the declaration of a public nuisance has been made by the Building Official, the Director, the Fire Chief, or the Public Utilities Director.
C. Public utilities. Trees that undermine or impact the safe operation of public utilities.
D. Fruit trees. Fruit tree(s) in any zoning district.
E. Eucalyptus trees. All trees of the genus Myrtaceae.
F. Developed single-family residential. Any tree located on developed single-family residential property, except as specified in Section 9.30.040 (Protected trees). (§ 2, Ord. 14-13, eff. October 8, 2014)

Further, Section 9.30.090, Replacement trees, outlines requirements for replacement trees.

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on biological resources if it will:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

IMPACTS AND MITIGATION

Impact 3.4-1: The proposed Project has the potential to have a direct or indirect effect on special-status invertebrate species. (Less than Significant)

According to the CNDDB, there are nine special-status invertebrate species that are documented within the nine-quadrangle region for the Project site, including: California linderiella (*Linderiella occidentalis*), midvalley fairy shrimp (*Branchinecta mesovallensis*), Vernal pool fairy shrimp (*Branchinecta lynchi*), Antioch efferian robberfly (*Efferia antiochi*), Crotch bumble bee (*Bombus crotchii*), Hurd's metapogon robberfly (*Metapogon hurdi*), Molestan blister beetle (*Lytta molesta*), Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and western ridged mussel (*Gonidea angulata*).

Field surveys/habitat evaluations for the entire Project site were performed on May 11, 2021 (De Novo Planning Group) and October 23, 2017 (Argonaut Ecological Consulting, Inc.).

California linderiella requires natural and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities. California linderiella is not anticipated to be directly affected by any individual phase or component of the proposed Project because there are no seasonally ponded habitat types in the Project site.

Midvalley fairy shrimp requires vernal pools with tea-colored water, most commonly in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands. Midvalley fairy shrimp is not anticipated to be directly affected by any individual phase or component of the proposed Project because there are no vernal pool habitat types in the Project site.

Vernal pool fairy shrimp is a Federal threatened invertebrate found in the Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. They are commonly found in vernal pools and in sandstone rock outcrop pools. Vernal pool fairy shrimp is not anticipated to be directly affected by any individual phase or component of the proposed Project because there in not appropriate vernal pool habitat on the Project site.

Valley elderberry longhorn beetle is a Federal threatened insect, proposed for delisting. Elderberry (*Sambucus* sp.), which is a primary host species for valley elderberry longhorn beetle, is not present within the Project site. Valley elderberry longhorn beetle is not anticipated to be directly affected by any individual phase or component of the proposed Project because there are no blue elderberry shrubs in the Project site.

Western ridged mussel occurs primarily within creeks and rivers, and less often lakes. Originally in most of state, this species is now extirpated from Central and Southern California. Aquatic habitat for this species is not found on-site.

Essential habitat for Antioch efferian robberfly, Molestan blister beetle, and Hurd's metapogon robberfly is not present on the Project site.

No special-status invertebrates, or their habitat, were observed within the Project site during field surveys and none are expected to be affected by the proposed Project. Therefore, the proposed Project would have a **less than significant** impact on special-status invertebrate species.

Impact 3.4-2: The proposed Project has the potential to have direct or indirect effects on special-status reptile and amphibian species. (Less than Significant)

According to the CNDDB, there are four special-status reptile species that are documented within the nine-quadrangle region for the Project site, including: California glossy snake (*Arizona elegans occidentalis*), coast horned lizard (*Phrynosoma blainvillii*), and Northern California legless lizard (*Anniella pulchra*). Additionally, there are two special-status amphibian species that are documented within the nine-quadrangle region for the Project site, including: California tiger salamander - central California DPS (*Ambystoma californiense [A. tigrinum c.] pop. 1*) and western spadefoot (*Spea hammondii*).

California Tiger Salamander: California tiger salamander (*Ambystoma californiense*) is both federally and state listed as endangered. CTS is endemic to California and the historical presence of it likely includes grassland habitats that are found throughout the state. The primary cause for decline in populations has been habitat loss and fragmentation due to urban and agricultural development, land conversion, and other human-caused factors. California tiger salamander occupy different habitats depending on the state of their life cycle and breeding cycle. CTS require seasonal ponds that retain water until at least May or June in order to successfully breed and the young to mature. Once the aquatic larvae have matured, they relocate to the dry upland habitat to aestivate (oversummer) during the hot dry summers, seeking shelter in underground burrows. Once the winter rains return and suitable ponding has occurred, the adults return to the seasonal ponds to breed. During years of low rainfall, the males may migrate into the seasonal ponds, but the females may remain in their upland habitat. There appears to be a strong association between grazed communities, burrowing mammals, and the presence of CTS (USDOI 2009). Adults will find burrows dug by California ground squirrels (*Otospermophilus beecheyi*) and pocket gophers (*Thomomys bottaeto*) to aestivate (Barry and Shaffer 1994, Trenham 2001).

Typically, CTS breed in seasonal wetlands, ponds (including some farm ponds) or in slow moving portions of creeks. The upland habitat they use is typically grassland or ruderal habitat that has friable soils and supports a burrowing rodent. CTS have been reported to travel up to 1.3 miles between breeding habitat and upland habitat.

The nearest California tiger salamander (CTS) record (occurrence record # 613) is located south of the Study Area, just southwest of the intersection of Nees Avenue and N. Fowler Avenue.

This record is from 1974 and the species was found in a vernal pool. Jennings considered this record extirpated (species no longer present), since the land has since been converted to dense residential.

A second CTS record was found in the CNDDB. This record (occurrence record # 888) is located to the northeast along Dry Creek (1.5 miles from the center of the Study Area, and 1.3 miles from the eastern edge of the Study Area). This record is from 2006 and CTS larva was found in a swale adjacent to the man-made Dry Creek channel just below the Big Dry Reservoir. The surrounding land has vernal pool and other seasonal wetlands.

The Project site does not support any aquatic habitat that could support CTS. The channel/ditch located immediately north of the Study Area remains dry except in response to groundwater pumping or some return flows from the orchard during the non-breeding season (personal conversation with the orchard manager, 2017). The ditch does not pond water, but instead has a flashy hydrologic regime (days). The channel/ditch is not suitable habitat for CTS because it lacks sufficient ponding during the breeding season.

The Project site also does not support ground burrowing mammals given that it is an active orchard with a rodent control program being implemented onsite. Additionally, there is no physical evidence of burrows that could be used for estivation by CTS. The existing residential areas in the vicinity have limited habitat quality for this species. Overall, it is highly unlikely that the orchard or residential areas would support a CTS population.

Western Pond Turtle: The western pond turtle is a California species of special concern. This species' favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates, such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Western pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks.

A western pond turtle record is located to the southeast, south of Shepherd Avenue. The Project site does not support any aquatic habitat that could support this species. The channel/ditch located immediately north of the Study Area remains dry except in response to groundwater pumping or some return flows from the orchard during the non-breeding season (personal conversation with the orchard manager, 2017). The ditch does not pond water, but instead has a flashy hydrologic regime (days). The channel/ditch is not suitable habitat for CTS because it lacks sufficient ponding during the breeding season. Western pond turtle requires persistent ponded water, which does not occur within the Study Area.

Western Spadefoot: The western spadefoot is a California species of special concern. This species is found in the Sierra Nevada foothills, Central Valley, Coast Ranges, and coastal counties in southern California. Its favored habitats include shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.

The CNDDB search shows the species occurs within a 9-quad search; however, there are no records proximate to the Project site and field surveys revealed that the necessary aquatic habitat and upland habitat is not present.

Conclusion*:* The Project site does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. No special-status reptiles or amphibians, or their habitat, were observed within the Project site during the field surveys and none are expected to be affected by the proposed Project. Therefore, the proposed Project would have a **less than significant** impact on special-status reptile or amphibian species.

Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species. (Less than Significant with Mitigation)

According to the CNDDB, there are thirteen (13) special-status bird species that are documented within the nine-quadrangle region for the Project site, including: black-crowned night heron (*Nycticorax nycticorax*), burrowing owl (*Athene cunicularia*), California horned lark (*Eremophila alpestris actia*), double-crested cormorant (*Nannopterum auritum*), great egret (*Ardea alba*), least Bell's vireo (*Vireo bellii pusillus*), snowy egret (*Egretta thula*), Swainson's hawk (*Buteo swainsoni*), tricolored blackbird (*Agelaius tricolor*), and Western yellow-billed cuckoo (*Coccyzus americanus Occidentalis*). The Project site may provide suitable foraging habitat for a variety of potentially occurring special-status birds, including some of those listed above. Potential nesting habitat is present in a variety of trees located within the Project site and in the vicinity. There is also the potential for other special-status birds that do not nest in this region and represent migrants or winter visitants to forage on the Project site.

NESTING RAPTORS (BIRDS OF PREY)

All raptors (owls, hawks, eagles, falcons), including common species, and their nests, are protected from take pursuant to the Fish and Game Code of California Section 3503.5, and the federal MBTA, among other federal and state regulations. Powerlines on the Project site and trees located in the region represent potentially suitable nesting habitat for a variety of special-status raptors. The Project site is generally not suitable for nesting raptors other than ground nesters. In general, raptor nesting occurs from late February and early March through late July and early August, depending on various environmental conditions.

CNDDB Documented Raptor Species

Swainson's hawk (Buteo swainsoni) is state threatened and is a migrant species that spends much of the spring, summer, and early fall in California's Central Valley. Their preferred nesting habitat consists of valley oaks, cottonwoods, and other tall trees adjacent to both agricultural fields and grasslands. They have been observed more frequently in recent years within the Central Valley. Due to the recent expansion of their population, it is possible that agricultural, grassland, and rural residential areas may support foraging and possibly nesting hawks. However, the orchard is not considered quality habitat for foraging or nesting. This species generally prefers open fields for foraging, and tall trees for nesting. The Project site is within the range of documented Swainson's hawk, and given the high mobility of the species, it is possible that an individual could be present on the site at some future time even though none have been observed or recorded in the past.

Burrowing Owl (Athene cunicularia) is a species of concern in California. It is a small owl that typically lives in grassland habitats of the Central Valley region that also support California ground squirrels. The species will also sometimes overwinter or even nest within agricultural areas, using whatever is available (pipes, ground holes/burrows). The owl seeks shelter and breeds from February to July. Although the numbers of owls have declined in some parts of California over the past 20 years, their numbers have increased greatly in some agricultural areas. In Fresno County, the species mostly occurs on the valley floor.

The orchard is not considered quality habitat for foraging or nesting for this species. The Project site is within the range of this species and given the high mobility of the species, it is possible that an individual could be present on the site at some future time even though none have been observed or recorded in the past.

Other Raptor Species

Bald Eagle: Bald eagle is listed by CDFW as an Endangered species. The breeding range includes the Sierra Nevada, Cascade Range and portions of the Coast Ranges; winter range expands to include most of the state. This species forages primarily in large inland fish-bearing waters with adjacent large trees or snags and occasionally in uplands with abundant rabbits, other small mammals, or carrion. The Project site does not contain suitable habitat for this species.

Cooper's Hawk: Cooper's hawk is protected by the MBTA and the Fish and Game Code. They prefer open woodland habitat. Nest sites for this species are mainly found in riparian growths of deciduous trees, in canyon bottoms on river floodplains, and also in live oaks. The Project site does not contain suitable nesting habitat for this species.

Ferruginous Hawk: Ferruginous hawk is listed by CDFW as a Watch List species. They prefer open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon and juniper habitats. This species eats mostly lagomorphs, ground squirrels, and mice. The Project site does not contain suitable nesting habitat for this species.

Golden Eagle: Golden eagle is listed by CDFW as a Fully Protected species. The winter range for this species spans most of California; the breeding range excludes the Central Valley floor. This species nests in cliffs, rocky outcrops, and large trees. Golden eagles typically forage in a variety of open habitats, including grassland, shrubland, and cropland. The Project site does not contain suitable nesting habitat for this species.

Merlin: The Merlin is a CDFW species of special concern that has never been observed nesting in California. Though it is a transient throughout most of the state, wintering populations are known to occur in the Central Valley and along the coast. The Project site does not contain suitable nesting habitat for this species.

Northern Harrier: Northern harrier is listed by CDFW as a Watch List species. They prefer a variety of open grassland, wetland, and agricultural habitats. Open wetland habitats used for breeding include marshy meadows, wet and lightly grazed pastures, and freshwater and brackish marshes. Northern Harrier breeding habitat also includes dry upland habitats, including grasslands, croplands, drained marshlands, and shrub-steppe in cold deserts. This species is a ground nester. The Project site does not contain suitable nesting habitat for this species.

Prairie Falcon: Prairie falcon is listed by CDFW as a Watch List species. They are a summer resident of southern California in low riparian in the vicinity of water or in dry river bottoms. They are found below 2000 ft and nests are placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. The Project site does not contain suitable nesting habitat for this species.

White-Tailed Kite: White-tailed kite is a CDFW Fully Protected species. This non-migrating bird typically attains a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which it forages from open grasslands. It builds a platform-like nest of sticks in trees or shrubs and lays 3 to 5 eggs, but may brood a second clutch if prey is abundant. The kite's distinct style of hunting includes hovering before diving onto its target. The Project site does not contain suitable nesting habitat for this species.

NESTING PASSERINE BIRDS (SONGBIRDS)

Bank Swallow: Bank swallow is listed by CDFW as a Threatened species. They typically prefer to nest along banks or bluffs along rivers or coastal areas. This species also prefers low gradient and meandering rivers or bodies of water. The Project site does not contain suitable habitat for this species.

California Horned Lark: This species is listed by CDFW as a Watch List species. They prefer to forage in large groups in open grasslands, nesting in hollows on the ground, and are also regularly found breeding on the Valley floor in suitable habitat. The Project site does not contain suitable nesting habitat for this species.

Least Bell's Vireo: This species is listed by CDFW as a federal and CDFW Endangered species. They are found in the Central Valley of California and other low-elevation river valleys. They prefer dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak. The Project site does not contain suitable nesting habitat for this species.

Loggerhead Shrike: loggerhead shrike is listed by CDFW as a species of special concern. Loggerhead shrikes occur in dry, open habitats including grasslands, pastures with fence rows, agricultural fields, open woodlands (savannas), scrub, and riparian areas. They inhabit open areas with clear visibility for hunting, perches for scanning, and scattered small trees and large shrubs for nesting. Loggerhead shrikes typically avoid completely treeless and shrubless areas (Cade and Woods 1997), as well as urbanized and densely wooded areas (Grinnell and Miller 1944). Winter foraging habitat is similar to summer breeding and foraging habitat; however, shrikes also use idle pastures and hayfields during the winter (Bartgis 1992). The Project site does not contain suitable nesting habitat for this species.

Song Sparrow: Song sparrows are listed by CDFW as a species of special concern due to declining populations in the Great Central Valley of California. They prefer open grasslands with barren ground for foraging and tend to be found in areas with vegetation and scrub cover especially in grasslands and prairies. The Project site does not contain suitable habitat for this species.

Purple martin: Purple martin are listed by CDFW as a species of special concern. They inhabit woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. They nest in old woodpecker cavities mostly, but also in human-made structures. Nests are often located in tall, isolated tree/snag. The Project site does not contain suitable habitat for this species.

Tricolored Blackbird: Tricolored blackbirds are listed by CDFW as a Threatened species. During the breeding season, tricolored blackbirds typically nest in dense colonies (some estimated as having 200,000+ nests), with males defending small territories and mating with one to four females. Studies have shown that nesting colonies are often located in seasonal wetlands with tules and cattails present. More recent studies indicate that nesting colonies are also regularly found in Himalayan blackberries (Rubus discolor) and grain fields. Other substrates where they have been observed nesting include giant European reed (Arundo donax), safflower (Carthamus tinctorius), tamarisk (Tamarix spp.), elderberry (Sambucus spp.), poison-oak (Toxicodendron diversilobum), and riparian scrublands and forests (e.g., Salix, Populus, and Fraxinus spp.).

Tricolored blackbird foraging habitats in all seasons include annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules, and recently tilled fields), cattle feedlots, and dairies. They also forage occasionally in Mixed Riparian Scrub habitats along marsh borders. Weed-free row crops, intensively managed vineyards, and orchards do not serve as regular foraging sites (Beedy and Hamilton 1997, 1999; DeHaven 2000). The Project site does not contain suitable nesting habitat for this species.

Western yellow-billed cuckoo: Western yellow-billed cuckoo are CDFW listed as Endangered. They are found in riparian forest nester, along the broad, lower flood-bottoms of larger river systems. They nest in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. The Project site does not contain suitable habitat for this species.

Yellow-headed blackbird. Yellow-headed blackbird are CDFW listed as a species of special concern. They nest in freshwater emergent wetlands with dense vegetation and deep water. They are often found along borders of lakes or ponds and only nest where large insects, such as *Odonata* are abundant. Nesting is timed with maximum emergence of aquatic insects. The Project site does not contain suitable habitat for this species.

SHORE/WATER BIRDS

Colonial nesting water birds, such as double-crested cormorant, great blue heron, and great egret, among others, are considered sensitive species. These species are not formally listed and protected pursuant to either the state or federal Endangered Species Acts. However, these species are of stated interest to CDFW and are protected by the MBTA. The colonial nesting water birds documented within the region are discussed individually below.

Black-crowned night heron: Black-crowned heron are protected by the MBTA. These colonial nesters usually nest in trees, occasionally in tule patches. Rookery sites are located adjacent to foraging areas and include lake margins, mud-bordered bays, and marshy spots. The Project site does not contain suitable habitat for this species.

Double-Crested Cormorant: Double-crested cormorant are protected by the MBTA. They are colonial nesters, which prefer to nest on coastal cliffs, offshore islands, and along lake margins in the interior of the state. This species nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins. The Project site does not contain suitable habitat for this species.

Great Egret: Great egret are protected by the MBTA. These colonial nesters prefer to nest in large trees. Rookery sites are typically located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes. The Project site does not contain suitable habitat for this species.

Great Blue Heron: Great blue heron are protected by the MBTA. These colonial nesters prefer to nest in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites are typically located in close proximity to foraging areas, which include marshes, lake margins, tide-flats, rivers and streams, and wet meadows. The Project site does not contain suitable habitat for this species.

Snowy Egret: Snowy egret are protected by the MBTA. These colonial nesters that prefer shallow water inlets for feeding, such as salt-marsh pools, tidal channels, and bays. They are found commonly along coastal areas and islands and during wintertime, they migrate and roost in the mangroves of the Caribbean. The Project site does not contain suitable habitat for this species.

OTHER SENSITIVE BIRDS (GRUIFORMES)

The term “Gruiformes” means “crane-like” and there are a considerable number of Gruiformes bird families with a widespread geographical diversity.

Greater Sandhill Crane: Greater sandhill crane is listed as a CDFW threatened species, and is a SSHCP Covered Species. Greater sandhill cranes winter and use open agricultural habitats, natural vegetation communities, and seasonally managed wetlands. After the onset of winter rains, sandhill cranes begin foraging for invertebrates by probing soils in grassland habitats and overturning cattle dung. They also hunt for mice in taller grassland vegetation. They appear to avoid grassland habitats when vegetation exceeds 10 inches. Invertebrates are also consumed in natural and managed seasonal wetlands. The Project site does not contain suitable habitat for this species.

California Black Rail: California black rail are listed by CDFW as a Threatened species. They inhabit freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. This species requires water depths of about one inch that do not fluctuate during the year and dense vegetation for nesting habitat. The Project site does not provide the appropriate aquatic habitat for this species.

Conclusion

Several bird species discussed above are protected under federal, state, or local regulations. The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site, or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-1*: The Project applicant shall implement the following measure to avoid or minimize impacts on other protected bird species that may occur on the site:*

- *Preconstruction surveys for active nests of special-status birds shall be conducted by a qualified biologist in all areas of suitable habitat within 500 feet of project disturbance. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 15 to August 31) in a given area.*
- *If any active nests, or behaviors indicating that active nests are present, are observed, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. The size of the buffer shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines, based on these same considerations, that a change in buffer size would not be likely to adversely affect the nest. If buffers are adjusted, monitoring will be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist has determined that the young have fledged or the nest site is otherwise no longer in use.*

Impact 3.4-4: The proposed Project has the potential to result in direct or indirect effects on special-status mammal species. (Less than Significant with Mitigation)

According to the CNDDB, there are eight special-status mammal species that are documented within the nine-quadrangle region for the Project site, including: American badger (*Taxidea taxus*), Fresno kangaroo rat (*Dipodomys nitratoides exilis*), hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), San Joaquin kit fox (*Vulpes macrotis mutica*), San Joaquin pocket mouse (*Perognathus inornatus*), spotted bat (*Euderma maculatum*), and western mastiff bat (*Eumops perotis californicus*).

American badger, Fresno kangaroo rat, San Joaquin kit fox, or San Joaquin pocket mouse: The Project site is frequently disturbed from active agricultural activities. As a result, the Project site does not contain high quality habitat for the American badger or Fresno kangaroo rat. American badger, Fresno kangaroo rat, San Joaquin kit fox, or San Joaquin pocket mouse have not been documented within nine miles of the Project site. It is unlikely that the Project site is used by American badger, Fresno kangaroo rat, San Joaquin kit fox, or San Joaquin pocket mouse and these species have not been observed during recent or previous field surveys. Therefore, the proposed Project would have a **less than significant** impact on these species.

Special-status bats: The Project site provides potential habitat for four special-status bats, including: hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum*), and western mastiff bat (*Eumops perotis californicus*). Pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum*), and western mastiff bat (*Eumops perotis californicus*) are Species of Special Concern; hoary bat (*Lasiurus cinereus*) does not have a state or federal protection status.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a **less than significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-2*: Prior to grading of each Project development phase, the Project applicant shall conduct a survey of the area to be graded for bat roosts, and if present, the Project applicant shall implement the following measures to avoid or minimize impacts on special-status bats:*

- *If removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31), surveys for active maternity roosts shall be conducted by a qualified biologist. The surveys shall be conducted from dusk until dark.*
- *If a special-status bat maternity roost is located, appropriate buffers around the roost sites shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from habitat removal or other project activities. The size of the buffer shall depend on the species, roost location, and specific construction activities to be performed in the vicinity. No project activity shall commence within the buffer areas until the end of the pupping season (August 1) or until a qualified biologist conforms the maternity roost is no longer active.*
- *If a non-maternal roost is located, eviction and exclusion techniques shall be conducted as recommended by the qualified biologist. Methods may include opening the roosting area to change the air flow and lighting, installing one-way doors, or other appropriate methods that allow the bats to exit and find a new roost. After eviction is believed to be completed, acoustic monitoring, and an evening emergence survey shall be performed by the qualified biologist to ensure eviction is complete. For tree removal, a two-step tree removal process involving removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree.*

Impact 3.4-5: The proposed Project has the potential for direct or indirect effects on candidate, sensitive, or special-status plant species. (Less than Significant)

According to the CNDDB, there are 16 special-status plant species that are documented within the nine-quadrangle region for the Project site, including: bristly sedge (*Carex comosa*), California jewelflower (*Caulanthus californicus*), California satintail (*Imperata brevifolia*), dwarf downingia (*Downingia pusilla*), forked hare-leaf (*Lagophylla dichotoma*), Greene's tuctoria (*Tuctoria greenei*), hairy Orcutt grass (*Orcuttia Pilosa*), Hartweg's golden sunburst (*Pseudobahia bahiifolia*), Hoover's calycadenia (*Calycadenia hooveri*), Madera leptosiphon (*Leptosiphon serrulatus*), pincushion navarretia (*Navarretia myersii ssp. Myersii*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), Sanford's arrowhead (*Sagittaria sanfordii*), spiny-sepaled button-celery (*Eryngium spinosepalum*), and succulent owl's-clover (*Castilleja campestris var. succulenta*).

Of the 16 documented plant species, seven are federally listed species (California jewelflower, Greene’s tuctoria, hairy Orcutt grass, and Hartweg's golden sunburst, all endangered, and San Joaquin adobe sunburst, San Joaquin Valley Orcutt grass, and succulent owl's-clover are all threatened) and seven are State listed species (California jewelflower, hairy Orcutt grass, Hartweg's golden sunburst, San Joaquin adobe sunburst, San Joaquin Valley Orcutt grass, and succulent owl's-clover all endangered, while Greene’s tuctoria is rare). Additionally, 13 are CNPS 1B listed species and three are CNPS 2 listed species.

Field surveys/habitat evaluations for the entire Project site were performed on May 11, 2021 (De Novo Planning Group) and October 23, 2017 (Argonaut Ecological Consulting, Inc.). The field survey performed by De Novo Planning Group coincided with the blooming period for special-status plants known to occur within the region. It was determined during the field survey the that the agricultural disturbance on the project site precludes the existence of special-status plants unless agricultural operations were to cease. The conditions of the Project site are highly disturbed due to the active agricultural operations. The site perimeter has a higher potential for plant growth that is not associated with the agricultural operations. This area was inspected during the field survey and special status plants were not observed. Therefore, development of the individual phases, and the proposed Project as a whole, will have a **less than significant** impact on special-status plants.

Impact 3.4-6: The proposed Project has the potential to effect protected wetlands and jurisdictional waters. (No Impact)

As noted previously, a query of the National Wetland Inventory Map does not show any stream, creeks, or wetland on the Study Area. The National Wetland Inventory Map code is “PUBHx,” which correlates to “palustrine, unconsolidated bottom, permanently flooded, excavated. Based on a review of historical records, readily available wetland mapping databases, and a site review, the field investigation completed as part of the *Biological Habitat Assessment* (Argonaut Ecological Consulting, Inc., 2018) confirmed the accuracy of the U.S. Fish and Wildlife Service’s Wetland Inventory Map. No wetlands, waters, or any aquatic habitat is present within the Development Area. There is a man-made conveyance channel (trapezoidal with no vegetation) located along the northern boundary, but outside the project limits.

The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. Absent any wetlands or jurisdictional waters, development of the proposed Project would have **no impact** relative to this topic.

Impact 3.4-7: The proposed Project has the potential to result in adverse effects on riparian habitat or a sensitive natural community. (Less than Significant)

The CNDDB record search revealed documented occurrences of five sensitive habitats within the nine-quadrangle region for the Project site, including: Great Valley Mixed Riparian Forest, Northern Claypan Vernal Pool, and Sycamore Alluvial Woodland. None of these sensitive natural communities occur within the portion of the Project site. Additionally, there is no riparian habitat on the Project site. Development of the proposed Project would have a **less than significant** impact on riparian habitats or natural communities.

Impact 3.4-8: The proposed Project has the potential to result in interference with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant)

The CNDDB record search did not reveal any documented wildlife corridors or wildlife nursery sites on or adjacent to the Project site. Hardhead (*Mylopharodon conocephalus*) is the only special-status fish species documented within the region. The closest major natural movement corridor for native fish that are documented in the region is the San Joaquin River (which is dammed upstream at Millerton Lake), located approximately 5.4 miles to the west of the Project site.

The land uses within the Project site would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. Therefore, Development of the proposed Project would have a **less than significant** level impact to any direct disturbance to the movement corridor or habitat.

Impact 3.4-9: The proposed Project has the potential to conflict with an adopted Habitat Conservation Plan. (No Impact)

The proposed Project is not subject to a Habitat Conservation Plan. Therefore, the proposed Project would have **no impact** relative to this topic.

Impact 3.4-10: The proposed Project has the potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant)

The Open Space and Conservation Element of the General Plan establishes the following policy related to biological resources as listed below:

Open Space and Conservation Element Policies

Policy 2.6 Biological resources. Support the protection of biological resources through the conservation of high-quality habitat area.

- ***Consistent**: This EIR includes an in-depth analysis of impacts for sensitive plants and wildlife, as well as habitat. Where impacts are identified, mitigation measures are presented to minimize and avoid to the extent practicable.*

Municipal Code

Chapter 9.30, Tree Protection Standards, of the Clovis Municipal Code outlines protected trees, heritage trees, and tree removal permit/application requirements.

> Section 9.30.040 of the Code states that, except as otherwise provided in Section 9.30.050 (Exemptions), the following trees shall not be removed from private property without first obtaining a tree removal permit:
>
> A. Heritage trees. Heritage trees in all zoning districts;
> B. Condition of approval. Any tree required to be planted or retained as a condition of approval of a development application or a building permit in all zoning districts;
> C. Multi-trunk trees. For multi-trunk trees, any tree which has at least one trunk twelve inches (12") or greater in diameter or thirty-eight inches (38") or greater in circumference, measured four feet (4') above the adjacent grade, except for developed single-family residential properties.
> D. Twelve inches (12") or greater in diameter. Any tree which measures twelve inches (12") or greater in diameter or thirty-eight inches (38") or greater in circumference, measured four feet (4') above the adjacent grade in all zoning districts, except for developed single-family residential properties.
> E. Parkway trees. Parkway trees and any tree located on public property.
> F. Trees required by site plan review. Trees required or memorialized under site plan review. (See Chapter 56 of this title) (§ 2, Ord. 14-13, eff. October 8, 2014)

Chapter 9.120, Definitions, of the Municipal Code includes the following definition for heritage trees:

> Heritage tree. Any tree so designated by the Protected Tree Advisory Committee based on the finding that the tree has character, significant age and girth, interest or value as part of the development of and/or exemplification of the agricultural, cultural, economic, educational, social, indigenous or historical heritage of the City and identified on the historic resources inventory.

Section 9.30.050, Exemptions, states that the following tree types and conditions are exempt from Chapter 9.30 and may be removed without approval of a tree removal permit:

> A. Emergencies. Trees that pose an immediate threat to persons or property during an emergency or are determined to constitute an emergency, upon order of the Director, the Public Utilities Director, or any member of the Police or Fire Departments.
> B. Public nuisance. Any tree in a condition to constitute a public nuisance, as defined in Chapter 1 of Title 10, when the declaration of a public nuisance has been made by the Building Official, the Director, the Fire Chief, or the Public Utilities Director.
> C. Public utilities. Trees that undermine or impact the safe operation of public utilities.
> D. Fruit trees. Fruit tree(s) in any zoning district.

E. Eucalyptus trees. All trees of the genus Myrtaceae.
F. Developed single-family residential. Any tree located on developed single-family residential property, except as specified in Section 9.30.040 (Protected trees). (§ 2, Ord. 14-13, eff. October 8, 2014)

Further, Section 9.30.090, Replacement trees, outlines requirements for replacement trees.

The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements. Therefore, the proposed Project would have a **less than significant** impact relative to this topic.

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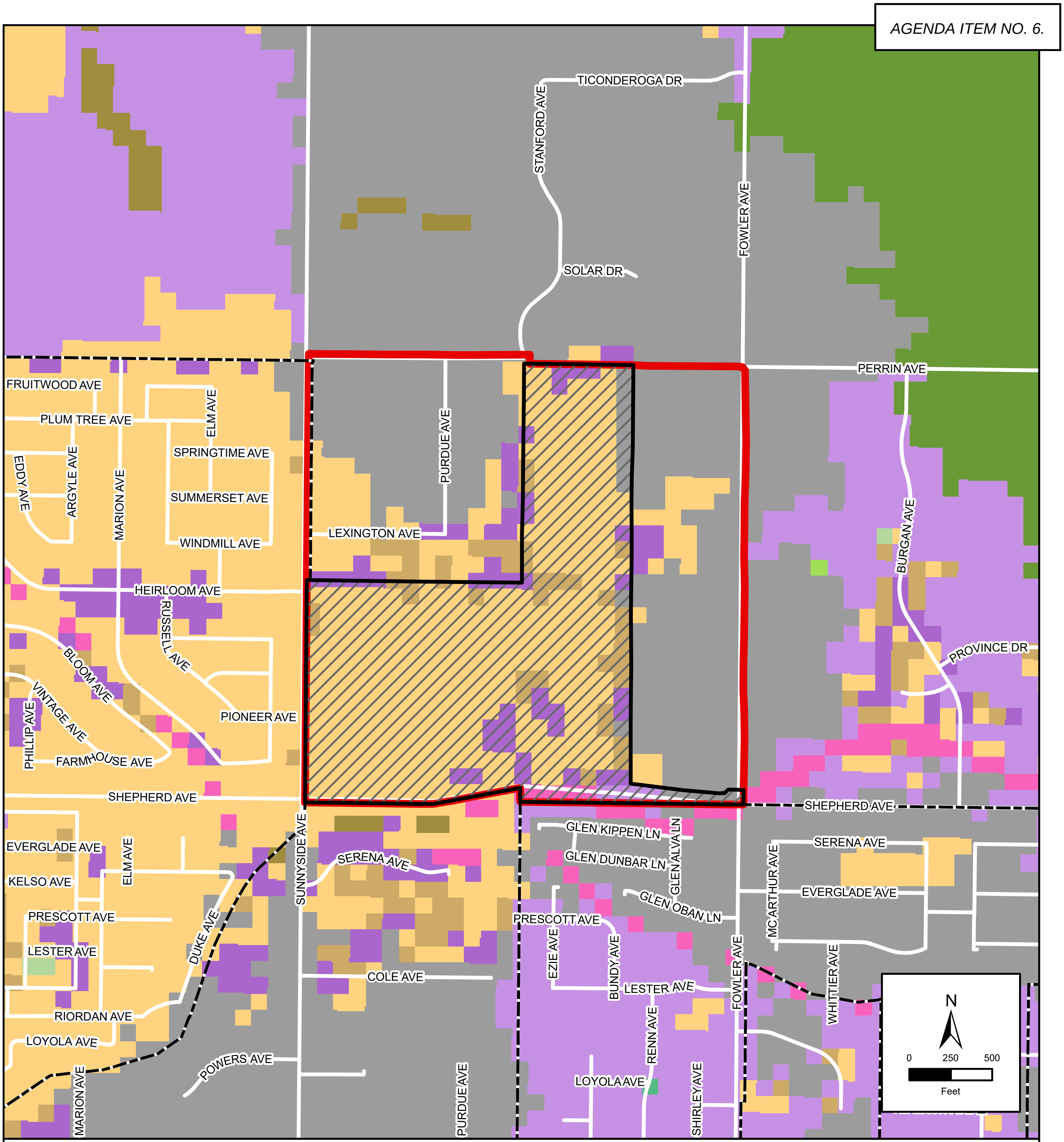

SHEPHERD NORTH PROJECT

Figure 3.4-1 Land Cover Types

LEGEND

- ▭ Project Boundary
- ▨ Developement Area
- ⬚ Clovis City Limits

Land Cover Types

- 🟩 Annual Grassland
- 🟨 Deciduous Orchard
- 🟩 Dryland Grain Crops
- 🟫 Evergreen Orchard
- 🟩 Irrigated Grain Crops
- 🟩 Irrigated Hayfield
- 🟪 Irrigated Row and Field Crops
- 🟫 Lacustrine
- 🟥 Riverine
- ⬜ Urban
- 🟪 Vineyard

Sources: Fresno County GIS; NRCS Soil Survey. Map date: May 8, 2023.

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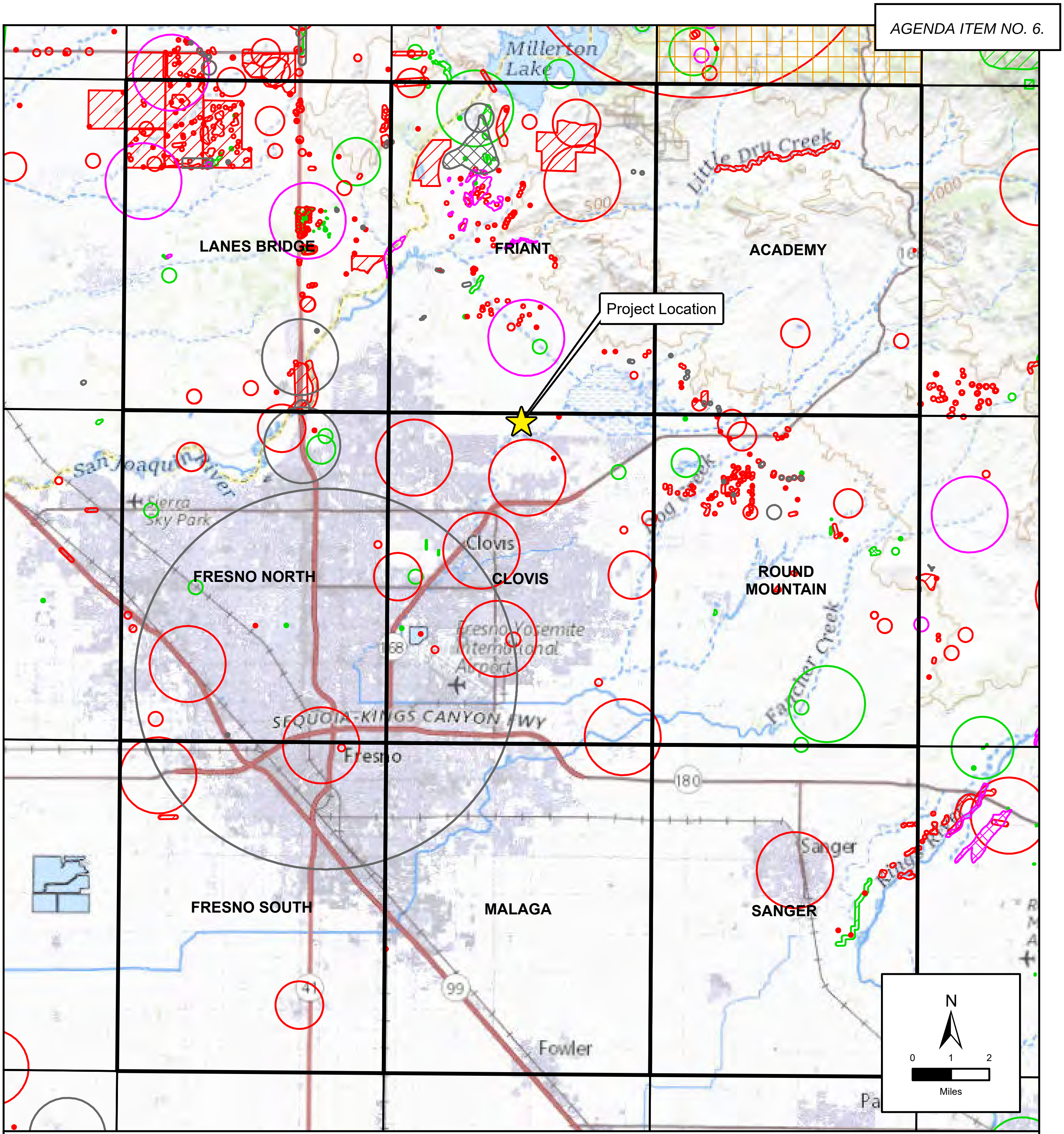

LEGEND

- 🟩 Plant (80m)
- ▨ Plant (specific)
- ▨ Plant (non-specific)
- ☐ Plant (circular)
- 🟥 Animal (80m)
- ▨ Animal (specific)
- ▨ Animal (non-specific)
- ☐ Animal (circular)
- ▨ Terrestrial Comm. (specific)
- ▨ Terrestrial Comm. (non-specific)
- ☐ Terrestrial Comm. (circular)
- ■ Multiple (80m)
- ▨ Multiple (specific)
- ▨ Multiple (non-specific)
- ☐ Multiple (circular)
- ▦ Sensitive EO's (Commercial only)

SHEPHERD NORTH PROJECT

Figure 3.4-2. California Natural Diversity Database
9-quad Search

Sources: Fresno County GIS. Map date: May 8, 2023.

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CULTURAL AND TRIBAL RESOURCES 3.5

This section provides a discussion of the prehistoric period background, ethnographic background, and historic period background, known cultural and tribal resources in the region, the regulatory setting, an impact analysis, and mitigation measures. Information in this section is derived primarily from the *Cultural Resource Assessment for the Cultural Resource Overview for the North Shepherd Project, City of Clovis, California* (Peak & Associates, Inc., January 12, 2023).

The Notice of Preparation (NOP) for the proposed Project was sent to the Native American Heritage Commission (NAHC) for review and comment on July 6, 2022. The NAHC provided comments on the proposed Project and a list of Native American contacts for consultation by the City of Clovis. There were no comments received during the public review period for the NOP related to cultural resources.

KEY TERMS

The following key terms are used throughout this section to describe cultural and tribal resources and the framework that regulates them:

Archaeology. The study of historic or prehistoric peoples and their cultures by analysis of their artifacts and monuments.

Complex. A patterned grouping of similar artifact assemblages from two or more sites, presumed to represent an archaeological culture.

Ethnography. The study of contemporary human cultures.

Midden. A deposit marking a former habitation site and containing such materials as discarded artifacts, bone and shell fragments, food refuse, charcoal, ash, rock, human remains, structural remnants, and other cultural leavings.

3.5.1 ENVIRONMENTAL SETTING

CULTURAL AND HISTORICAL SETTING

Prehistory

The Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data, but the emphasis has been in the northern portion of the valley. In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and excavation were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmiller site (CA-SAC107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

In the southern San Joaquin Valley, with the exception of Hewes's excavation at CA-FRE-48 (the Tranquility Site), the foci of early investigations have been the old shorelines of the interior lakes; Tulare, Kern, and Buena Vista. In 1899, Dr. P. M. Jones directed fieldwork in the Buena Vista-Tulare Lake area of Kern County. Jones investigated 150 mounds and conducted trenching of several sites including CA-KER-53. In 1909, N. C. Nelson investigated prehistoric Site CA-KER-49, which is located to the west of Buena Vista Lake. Later, four surveys and excavations were conducted in the same locale under the auspices of the University of California. A compilation of these investigation results was published in 1926 by Gifford and Schenck.

As a result of this early work, an elaborate culture complex was defined for the late prehistoric period. This complex can be ascribed probably to the Yokuts and their direct ancestors. The material culture of this late temporal period complex included steatite vessels and beads, finelymade projectile points, pottery, shaped stone mortars, Tivela disc beads, use of asphaltum, and the presence of metates and manos. Flexed burials were the predominant interment mode. Earlier complexes underlying the late cultural expressions were represented by chipped stone crescents, large projectile points, atlatl spurs, and weights. Mortuary practices, generally thought to be related, include extended rather than flexed burial position, a situation analogous to that of the northern valley (Gifford and Schenck 1926; Lillard, Heizer, and Fenenga 1939; Moratto 1972). 20 Presence of "Early Man," although not found in direct association with extinct animals, is demonstrated by the frequency of chipped stone crescents and fluted points similar to those of the Clovis-Folsom Complex in the American Southwest. Although fluted points have been found near the shores of Tulare Lake, an area that has also produced surface finds of extinct mammal bone of Pleistocene age, the association is not substantiated by controlled excavations and remains speculative (Riddell and Olsen 1969). Most of the point collection had been acquired by D. Witt over a period of 30 years.

Under the direction of Wedel (1941), the Civil Works Administration, in conjunction with the Smithsonian Institution, initiated the first major excavations using stratigraphic controls. Investigations of CA-KER-39 and CA-KER-60 as well as several smaller sites near Buena Vista Lake produced evidence of two distinct cultural entities or occupation periods. Wedel lacked methods for dating these two entities by cross-comparison of the assemblages, he tentatively stated that the early occupation at Buena Vista Lake appeared to be temporally older and less developed than the Early Horizon (Windmiller Pattern) of the Delta region. He compared this early component to the Oak Grove or Milling Stone culture of the Santa Barbara area (Rogers 1939). He divided the later cultural entity into two distinct phases, both clearly distinguished from the earlier cultural phase by artifact types. Wedel (1941:144-145) estimated that neither of these cultural periods exceeded 1500 B.P. (years Before the Present). Later, other investigators proposed far earlier ages for these early occupations, with dates ranging from 2000 to 7000 B.P. (Baumhoff and Olmstead 1963, 1964; Heizer 1964; Meighan 1959).

Later investigations in 1963 and 1964 at CA-KER-116 near Buena Vista Lake produced materials similar to Wedel's early occupation. These materials occurred in the lower levels of the "upper deposit," while an even deeper cultural deposit yielded materials similar to those of the San Dieguito Complex. Artifacts included a chipped stone crescent, crude point fragments, and an atlatl spur. Radiocarbon age determinations on shell from the lowest cultural levels returned a date of circa 8200 B.P. (Fredrickson and Grossman 1966, 1977; Fredrickson 1967).

Despite the previously mentioned investigations, the prehistory of the southern San Joaquin remains as yet poorly understood, without a tightly defined chronological sequence of cultural development.

Ethnography

Ethnographic literature is often uncertain in definition of cultural boundaries for Indian groups. Early displacement by white intrusion resulted in population shifts to avoid conflict with the Spanish, and later with the miners and settlers. The ravages of disease and warfare decimated the native people, further weakening cultural identity. Informants were often uncertain of original territories of the various tribal groupings.

The Foothill Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

The Foothill Yokuts were a group of about 15 named tribes who occupied the western Sierra Nevada foothills from the Fresno River to the Kern River. A further subdivision separated the groups into northern, central and southern groups. The area controlled by individual groups varied over time. There is no information to indicate that there was a village in the project vicinity, but this does not preclude the possibility. Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs which formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925). The housepit depressions ranged in diameter from between 3 to 18 meters.

Latta (1949:99) reported that a village of 200 to 300 Yokuts might have four or five large houses that were used for ten or twelve years or until a family member died, at which time the Indians burned the house in which the death had occurred. If a sick or aged person died outside the dwelling, the family did not burn the house. When a Northern Yokuts died, the body was cremated or buried in a flexed position. Southern tribes normally buried their dead, although they did cremate shamans, persons who died away from their village and, among the Tachi, persons of great importance.

The Yokuts experienced severe depopulation after contact with the Spanish and subsequent explorers. The most devastating impacts of the Spanish colonization effort were not the result of military conflicts, but came from Old World diseases newly introduced to the native people.

Historical Background

EARLY EXPLORATIONS

The early recorded inhabitants of the region were members of the Yokuts tribe. Although the Spanish missions were established closer to the Pacific coast between 1769 and 1817, the general Project area was first visited in the early 1800s by Spanish explorers, who visited the San Joaquin Valley with three goals: to search for runaway neophytes from the missions in the coastal regions, to punish the Indian raiders, and to select sites for new missions. In 1806, a group led by Gabriel Moraga and Father Pedro Muñoz, left Mission San Juan Bautista heading north to about the Mokelumne River. They then turned south, and travelled along the edge of the mountains crossing the San Joaquin River and passing through Tejon Pass, arriving at Mission San Fernando. In 1815, José Dolores Pico marched an expedition group from Monterey into the region. Following the San Joaquin River, he passed through the area in search of runaways, traveling as far south as the Kern River. The expedition returned to the starting point in Monterey with nine prisoners and a number of horses.

After control of California passed from Spain to Mexico in 1822, Mexican explorations into the interior continued, with José Dolores Pico conducting a major expedition along the San Joaquin River in 1825-1826. This expedition was considered successful in that some neophytes were captured, hostile Indians killed, some of the tribal groups intimidated, and some stolen horses recovered. In 1828, Sebastián Rodríguez led a similar expedition into the same region. His expedition captured a number of neophytes as well as some of the stolen horses, an item that had become an important dietary staple for the Indian tribes in the San Joaquin Valley region (Beck and Haase 1974).

The expeditions did not leave physical evidence, but there were definitely effects to the Native American populations. Causing even more of an effect on the native population were the diseases brought in to the Native populations of the Central Valley in the early 1830s.

RANCHOS

In Fresno County, there was only one early land grant, a rancho along the current southern border of the county: Laguna de Tache. The era of the Spanish and Mexican land grants did not directly affect the Project area.

CLOVIS

The extension of the railroad system throughout the San Joaquin Valley allowed the increased expansion of a market for the agricultural production of the region. A branch line of the Southern Pacific Railroad (first known as the Pollasky Railroad or the San Joaquin Railroad) was built through this region circa 1891. Marcus Pollasky served as the promoter, and monies were raised locally for the construction costs. Clovis Cole, the owner of the large wheat ranch, donated land for the route, and a station was established here on the line and named Clovis (Gudde 1969; City of Clovis 1962).

After the completion of the railroad, the construction of the flume from Shaver Lake to the east was soon completed by the Fresno Flume and Irrigation Company. The 45-mile-long flume could deliver 200,000 board feet of lumber through the vee-shaped watercourse in a 24-hour period. At the end of the flume, there was a finishing and distributing plant. Other, better grade lumber was delivered to Clovis down Tollhouse Grade, hauled by ox and horse teams. In the early years, 140 men were employed by the lumber company, with an annual payroll of $450,000. The Clovis lumber plant occupied a 40 acre site. The factory, warehouse, (lumber) planing mill and engine house all burned to the ground in 1898, but were soon rebuilt. As many as 400 men were employed by the company. The mill was located on the south side of Fifth Street (City of Clovis 1962; Clovis Centennial Book Committee 2011).

The mill in Clovis produced “ordinary lines of lumber,” shakes, trays, sweat boxes, raisin boxes, orange boxes, cedar posts, ties, poles, and also pine and oak cordwood (Fresno Republican 1897: 96). The ever increasing agricultural use of the San Joaquin Valley, due to improvements and expansion of irrigation systems, led to a large market for the fruit packing boxes, allowing shipment of the produce to a wider marketplace.

Clovis was laid out by a licensed surveyor, working for the co-owners of the land: Clovis Cole, Clarence Pallos and George Owen. Early homes were utilitarian, and the streets were ungraded (City of Clovis 1962).

The town’s population expanded rapidly from about 500 residents in 1905 to about 1,000 in 1910. Nearby, the population was increasing within the local rural agricultural colonies, with large acreages broken up into 20 acre tracts advertised for sale to Midwesterners. By 1919, local population had grown to 1,500. At this point, the lumber business is still the main support of the economy, but the area produced huge crops of Malaga grapes and figs (Clovis Centennial Book Committee 2011; Vandor 1919:269).

For the first 21 years, there was no organized government in Clovis. Late in 1911, an election was held, and the City incorporated in 1912. Most of the early businesses in town were located on Front Street, now known as Clovis Avenue, on the west side of the tracks (City of Clovis 1962).

HISTORICAL BACKGROUND FOR THE DEVELOPMENT AREA

The early use of land in the Big Dry Creek region was for cultivation of wheat. Improvements such as the development of the railroad, allowing marketing of more perishable crops, and irrigation canals, providing a steady source of water year round, also encouraged the growth of crops such as grapes. The establishment of orchards and vineyards allowed more profitability with smaller tracts of land, and many pieces of land were subdivided as portions of agricultural colonies.

Much of the Project site is a portion a 160-acre tract first acquired by Rebecca Wilson Norman Strother in 1873 as a land patent. Strother had been born in Mississippi in 1818, and had eight daughters and one son, who died as a child, with her husband. He died in Mississippi in 1868, and she travelled west to Fresno County. Mrs. Strother apparently did not reside on the land, but likely transferred ownership to one of her daughters who did choose to live in the region.

In 1880, Mrs. Strother lived in Santa Rosa with two of her unmarried daughters (Federal census 1880). Her will was prepared at this time, leaving her estate to the two unmarried daughters, and specifically excluding the married daughters. She died in 1883.

One of the daughters, Laura Strother, also acquired land in the area, the land immediately north of the Project site consisting of the northwest quarter of section 21.

William Shipp was married to a Strother daughter, Mary. He brought his family to California in 1868. The Shipps acquired large tracts of land in the Big Dry Creek area, and ran large herds of sheep. It appears that this land may have been part of the Shipp place.

Early maps show the Enterprise Canal near the Project Area. The Enterprise Canal had been constructed by 1891, south of the Project site (Thompson 1891).

In 1891, R. T. Owen owned the south half of section 21, including the land of the Project site. In 1892, he lived in the Temperance Township according to voter records, so it cannot be certain where precisely he lived without further research.

Owen, his father and brother had been farmers and ranchers in the area. He continued to raise grain in the region until 1902. The 1891 map shows a building to the east of the current building on Owen's holding. A 1919 biography describes the R.T. Owen residence as "the first fine house in Clovis," suggesting he lived closer to the early townsite after he sold the Project area.

By 1907, the south half of section 21 and the northeast quarter of the section had been acquired by Hugh Bissell (Official County Map 1907).

Hugh Bissell, a native of Iowa, had farmed for a number of years in Missouri, and came to California in 1885. He first settled in Modesto, then a year later, moved to Fresno County. He had a ranch near Fresno, that he sold in 1898. He leased a tract of about 3,000 acres for dry grain farming. He quit grain farming in 1906, and purchased 320 acres of what was known as the Shipp place for $20 an acre. Bissell also purchased the northeast quarter of the section, so his ranch totaled 480 acres. Bissell wanted to improve the land for intensive farming, so he sank wells and found that the water readily came to the ground surface. Even though others thought it impossible, he installed a pumping plant for irrigation. With a six-inch centrifugal pump, run by a twenty-horsepower engine, he was able to irrigate the land, and set up the first vineyard above the ditch. He made a success of the vineyard and the orchard on the property, later irrigated by a total of three pumping plants (Vandor 1919; Official Map of Fresno County 1907).

In 1910, the residents of the Project Area included High Bissell, a widower since 1908, his daughter-in-law (widowed in 1909), his grandson William, son Ralph, six hired men, and a house servant (Federal Census 1910). It is not certain where the residents were housed on the property. The large residence appears to date to about 1915.

At various points, Bissell sold off portions of the ranch, and in 1919, had 160 acres, including the much of the Project site. The land had increased in value from $20 an acre to $750 an acre.

In a 1919 biography, Bissell was credited with having developed "a wonderfully productive and valuable place, and erecting a large comfortable residence, constructed of cement blocks, making it one of the show places of the district."

As well as his involvement in viticulture and horticulture, Bissell served as a director for the National Bank of Clovis. Bissell also served with various groups related to the production of raisins (Vandor 1919).

The family remained on the property until an unknown date. By 1920, Hugh Bissell had moved to Fresno. By 1930, his son Raymond had moved with his family to Madera. The later history of ownership and use of the residence is not known.

PROJECT SETTING

Project Site

The Project site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM).

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.

- Non-Development Area - Includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The Project site is approximately 155 acres and includes 39 Assessor parcels (APNs). The Project site is relatively flat and is approximately 385 feet above mean sea level.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis’ Planning Area but is outside of the City’s existing Sphere of Influence and contains existing single-family residences . Each SubArea is uniquely different and is described below:

- Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
- Expansion SubArea East: Includes single-family residences and agricultural fields located between the Project Site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Surrounding Uses

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

KNOWN CULTURAL RESOURCES

A summary of the record search, field survey, and Native American consultation that was performed for the Project site is included below.

Records Search

A record search has been conducted for the North Shepherd Project site and a 0.25-mile radius through the South San Joaquin Valley Information Center of the California Historical Resources Information System (CHRIS) (RS#22-461, Appendix 2). The Project area includes one recorded resource, P-10-07197. Formerly, the site was a 1909 residence, recorded in 2017 by Peak & Associates. The residence has been removed from the property, and the former location appears to lie in a non-development area, not proposed for housing. Within the search area radius, there are three recorded resources, all historic period resources. They include: P-10-005511, two branches of the Helm Colonial Ditch; P10-005934, a section of the Enterprise Canal; and P-10-007198, a residence at 4707 N. Preuss Avenue.

Field Survey

Peak & Associates conducted a complete, intensive survey of the Project Site in 2017 (FR-3009), recording the historic residence at the southern boundary. One other negative survey for a cell tower was conducted by Lossee in 2006 (FR-02285) in the eastern portion of the Project site. Four other surveys have also been reported within the Project site. Bissonette’s 1993 survey is shown to have included hundreds of acres of land in the region including the Project site. However, as noted in the Cultural Assessment, the survey was not plotted correctly by the SSJVC, in part due to the lack of a survey coverage map in the report (FR-01219). Bissonette has noted the survey only spent two days doing fieldwork and walked along the pipelines and channel routes with transects and within a five meter radius of proposed culverts. Varner reportedly surveyed the major portion of the Development Area in 2001 with negative findings. He did note the presence of the historic building (FR-02203), but did not record it during his survey.

NATIVE AMERICAN CONSULTATION

The Project includes an amendment to the General Plan, triggering the need for tribal consultation pursuant to Senate Bill (SB) 18. Pursuant to SB 18, consultation letters were sent via certified mail by the City of Clovis, requesting information related to cultural resources or heritage sites within the Project Site. The letters were sent to the twelve tribal representatives listed in the NAHC response, including: Elizabeth Kipp, Chairperson of the Big Sandy Rancheria of Western Mono Indians; Timothy Perez of the North Valley Yokuts Tribe; Carol Bill, Chairperson of the Cold Springs Rancheria of Mono Indians; Claudia Gonzales, Chairwoman of the Picayune Rancheria of Chukchansi Indians; Robert Ledger, Chairperson of the Dumna Wo-Wah Tribal Government; Brenda Lavell, Chairpersonof the Table Mountain Rancheria; Stan Alec of the Kings River Choinumni Farm Tribe; David Alvarez, Chairperson of the Traditional Choinumni Tribe; Elaine Fink, Chairperson of the North Fork Rancheria of Mono Indians; Neil Peyron, Chairperson of the Tule River Indian Tribe; Katherine Perez, Chairperson of the North Valley Yokuts Tribe; and Kenneth

Woodrow, Chairperson of the Wuksache Indian Tribe/Eshom Valley Band. The City received a response from the Table Mountain Rancheria declining participation, but requesting notification in the event that cultural resources are discovered on the Project site. All consultation correspondence and a contact log are provided in Appendix E.

3.5.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act was enacted in 1966 as a means to protect cultural resources that are eligible to be listed on the National Register of Historic Places (NRHP). The law sets forth criterion that is used to evaluate the eligibility of cultural resources. The NRHP is composed of districts, sites, buildings, structures, objects, architecture, archaeology, engineering, and culture that are significant to American History.

Virtually any physical evidence of past human activity can be considered a cultural resource. Although not all such resources are considered to be significant and eligible for listing, they often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values.

National Register of Historic Places

The eligibility criteria for the NRHP are as follows (36 CFR 60.4):

> *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess aspects of integrity of location, design, setting, materials, workmanship, feeling, association, and*
>
> *(A) that are associated with events that have made a significant contribution to the broad patterns of our history and cultural heritage; or*
> *(B) that are associated with the lives of persons significant in our past; or*
> *(C) that embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master, or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
> *(D) that have yielded, or may be likely to yield, information important in prehistory or history.*

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

Other Federal Legislation

Historic preservation legislation was initiated by the Antiquities Act of 1966, which aimed to protect important historic and archaeological sites. It established a system of permits for conducting archaeological studies on federal land, as well as setting penalties for noncompliance. This permit process controls the disturbance of archaeological sites on federal land. New permits are currently issued under the Archaeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands. The Historic Sites Act of 1935 declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance."

STATE

California Register of Historic Resources

The California Register of Historical Resources (CRHR) was established in 1992 and codified in the Public Resource Code §5020, 5024 and 21085. The law creates several categories of properties that may be eligible for the CRHR. Certain properties are included in the program automatically, including: properties listed in the NRHP; properties eligible for listing in the NRHP; and certain classes of State Historical Landmarks. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and Public Resources Code (PRC) §§21083.2 and 21084.1.

Cultural resources, under CRHR guidelines, are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. A cultural resource may be eligible for listing on the CRHR if it:

- is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- is associated with the lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
- has yielded, or may be likely to yield, information important in prehistory or history.

California Environmental Quality Act

CEQA Guidelines §15064.5 provides guidance for determining the significance of impacts to archaeological and historical resources. Demolition or material alteration of a historical resource, including archaeological sites, is generally considered a significant impact. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and Public Resources Code (PRC) §§21083.2 and 21084.1.

CEQA also provides for the protection of Native American human remains (CCR §15064.5[d]). Native American human remains are also protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items within their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government.

If a prehistoric or historic period cultural resource does not meet any of the four CRHR criteria, but does meet the definition of a "unique" site as outlined in PRC §21083.2, it may still be treated as a significant resource if it is: an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
- it has a special and particular quality such as being the oldest of its type or the best available example of its type, or
- it is directly associated with a scientifically recognized important prehistoric or historic event.

California Health and Safety Code

§§7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. The CEQA Guidelines (§§15064.5) specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Senate Bill 18 (Burton, Chapter 905, Statutes 2004)

SB 18, authored by Senator John Burton and signed into law by Governor Arnold Schwarzenegger in September 2004, requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. This legislation, which amended §§65040.2, §§65092, §§65351, §§65352, and §§65560, and added §§65352.3, §§653524, and §§65562.5 to the Government Code; also requires the Governor's Office of Planning and Research to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code §§65300 et seq.) and specific plans (defined in Government Code §§65450 et seq.).

Assembly Bill 978

In 2001, Assembly Bill (AB) 978 expanded the reach of Native American Graves Protection and Repatriation Act of 1990 and established a state commission with statutory powers to assure that federal and state laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-federally recognized tribes for repatriation.

Assembly Bill 52

AB 52, approved in September 2014, creates a formal role for California Native American tribes by creating a formal consultation process and establishing that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. Tribal cultural resources are defined as:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    A) Included or determined to be eligible for inclusion in the CRHR;
    B) Included in a local register of historical resources as defined in PRC §§5020.1(k).
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC §§5024.1 (c). In applying the criteria set forth in PRC §§5024.1 (c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above is also a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in PRC §§21084.1, a unique archaeological resource as defined in PRC §§21083.2(g), or a “non-unique archaeological resource” as defined in PRC §§21083.2(h) may also be a tribal cultural resource if it conforms with above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project is considered to have a significant impact on cultural or tribal cultural resources if it will:

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries;
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k);
    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.

IMPACTS AND MITIGATION MEASURES

Impact 3.5-1 Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5 (Less than Significant with Mitigation)

The Project site encompasses approximately 155 acres, encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area. The Development Area Includes the parcels being annexed into the City of Clovis that will be entitled for subdivision and development. This will include a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review. The Non-Development Area Includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use. The Non-Development Area is located within the City of Clovis' Planning Area but is outside of the City's existing Sphere of Influence and contains existing single-family residences.

The Project site is not located in an area known to have historical and archaeological resources. However, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation of the following Mitigation Measure would ensure that this potential impact is **less than significant**.

MITIGATION MEASURE(S)

Mitigation Measure 3.5-1: *If subsurface deposits believed to be cultural, historical, archaeological, tribal, and/or human in origin are discovered during construction and/or ground disturbance, all work must halt within a 100-foot radius of the discovery. A Native American Representative from traditionally and culturally affiliated Native American Tribes that requested consultation shall be immediately contacted and invited to assess the significance of the find and make recommendations for further evaluation and treatment, as necessary. If deemed necessary by the City, a qualified cultural resources specialist meeting the Secretary of Interior's Professional Qualifications Standards for Archaeology, may also assess the significance of the find in joint consultation with Native American Representatives to ensure that Tribal values are considered. Work at the discovery location cannot resume until it is determined by the City, in consultation with culturally affiliated tribes, that the find is not a tribal cultural resource, or that the find is a tribal cultural resource and all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied. The qualified cultural resources specialist shall have the authority to modify the no-work radius as appropriate, using professional judgement.*

The following notifications and measures shall apply to potential unique archaeological resources and potential historical resources of an archaeological nature (as opposed to tribal cultural resources), depending on the nature of the find:

- *If the professional archaeologist determines that the find does not represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature, work may resume immediately and no agency notifications are required.*

- *If the professional archaeologist determines that the find does represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature from any time period or cultural affiliation, he or she shall immediately notify the City and applicable landowner. The professional archaeologist and a representative from the City shall consult to determine whether any unique archaeological resources or historical resources of an archaeological nature are present, in part based on a finding of eligibility for inclusion in the NRHP or CRHR. If it is determined that unique archaeological resources or historical resources of an archaeological nature are present, the qualified archaeologist shall develop mitigation or treatment measures for consideration and approval by the City. Mitigation shall be developed and implemented in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section*

15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If approved by the City, such measures shall be implemented and completed prior to commencing further work for which grading or building permits were issued, unless otherwise directed by the City. Avoidance or preservation of unique archaeological resources or historical resources of an archaeological nature shall not be required where such avoidance or preservation in place would preclude the construction of important structures or infrastructure or require exorbitant expenditures, as determined by the City. Where avoidance or preservation are not appropriate for these reasons, the professional archaeologist, in consultation with the City, shall prepare a detailed recommended a treatment plan for consideration and approval by the City, which may include data recovery. If employed, data recovery strategies for unique archaeological resources that do not also qualify as historical resources of an archaeological nature shall follow the applicable requirements and limitations set forth in Public Resources Code Section 21083.2. Data recovery will normally consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of recovering important scientific data contained within the unique archaeological resource or historical resource of an archaeological nature. The data recovery plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. If data recovery is determined by the City to not be appropriate, then an equally effective treatment shall be proposed and implemented. Work may not resume within the no-work radius until the City, in consultation with the professional archaeologist, determines that the site either: 1) does not contain unique archaeological resources or historical resources of an archaeological nature; or 2) that the preservation and/or treatment measures have been completed to the satisfaction of the City.

- *If the find includes human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (§5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information*

Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.

Impact 3.5-2: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

Indications suggest that humans have occupied Fresno County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials.

Under CEQA, human remains are protected under the definition of archaeological materials as being “any evidence of human activity.” Additionally, Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during Project implementation.

While no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Mitigation Measure 3.5-1 provides the appropriate procedures if subsurface deposits believed to be human in origin are discovered during construction and/or ground disturbance. This would include all work being halted within a 100-foot radius of the discovery in order for the appropriately qualified professionals to evaluate the find and provide recommendations on how to proceed. If the appropriately qualified professional determines that the find is not human remains, work may resume immediately and no agency notifications are required. However, if the appropriately qualified professional determines that the find is human remains, procedures are outlined in Mitigation Measure 3.5-1 on how to proceed to ensure that the County Coroner is contacted for an evaluation, and appropriate mitigation or treatment measures are developed based on the findings of the coroner. Implementation of Mitigation Measure 3.5-1 as previously stated, would ensure that the potential to disturb human remains, including those interred outside of formal cemeteries, would be reduced to a **less than significant** level.

Impact 3.5-3: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or a resource determined by the lead agency (Less than Significant with Mitigation)

As described under the Consultation heading above, the City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response, including: Elizabeth Kipp, Chairperson of the Big Sandy Rancheria of Western Mono Indians; Timothy Perez of the North Valley Yokuts Tribe; Carol Bill, Chairperson of the Cold Springs Rancheria of Mono Indians; Claudia Gonzales, Chairwoman of the Picayune Rancheria of Chukchansi Indians; Robert Ledger, Chairperson of the Dumna Wo-Wah Tribal Government; Brenda Lavell, Chairpersonof the Table Mountain Rancheria; Stan Alec of the Kings River Choinumni Farm Tribe; David Alvarez, Chairperson of the Traditional Choinumni Tribe; Elaine Fink, Chairperson of the North Fork Rancheria of Mono Indians; Neil Peyron, Chairperson of the Tule River Indian Tribe; Katherine Perez, Chairperson of the North Valley Yokuts Tribe; and Kenneth Woodrow, Chairperson of the Wuksache Indian Tribe/Eshom Valley Band. All consultation correspondence and a contact log are provided in Appendix E.

While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Mitigation Measure 3.5-1 has been incorporated to provide the appropriate procedures if subsurface deposits believed to be tribal resources, and/or human in origin are discovered during construction and/or ground disturbance. This would include all work being halted within a 100-foot radius of the discovery in order for the appropriately qualified professionals to evaluate the find and provide recommendations on how to proceed. If the appropriately qualified professional determines that the find does not represent a resource that might qualify as a tribal resource, work may resume immediately and no agency notifications are required. However, if the appropriately qualified professional determines that the find does represent a resource that might qualify as a tribal resource, procedures are outlined in Mitigation Measure 3.5-1 on how to proceed to ensure that the resource is evaluated, and appropriate mitigation or treatment measures are developed.

As discussed under Impacts 3.5-1 through 3.5-2, development of the proposed project could impact unknown archaeological resources including Native American Tribal artifacts and human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources, including human remains, would be reduced to a **less than significant** level.

GEOLOGY, SOILS, AND MINERAL 3.6

The purpose of this section is to disclose and analyze the potential impacts associated with the geology of the Project site and regional vicinity, and to analyze issues such as the potential exposure of people and property to geologic hazards, landform alteration, and erosion. This section is based in part on the following:

- *2014 Clovis General Plan* (Placeworks, 2014);
- *2014 Clovis General Plan Draft Program Environmental Impact Report* (Placeworks, 2014);
- *Natural Resources Conservation Service (NRCS) Web Soil Survey* (NRCS, 2022);
- *Geotechnical Engineering Investigation Proposed Tract 6205 (Spensley Property) Sunnyside and Shepherd Avenues Clovis, California (*Krazan & Associates, Inc., 2019) (Appendix F); and
- *Fresno County Multi-Jurisdictional Hazard Mitigation Plan* (Amec Foster Wheeler, 2018).

3.6.1 ENVIRONMENTAL SETTING

GEOLOGIC SETTING

Geomorphic Province

The City of Clovis, including the Project site, is located in the southern portion of the Great Valley Geomorphic Province of California. The Great Valley Province is a broad structural trough bounded by the tilted block of the Sierra Nevada on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River is the principal river in the area and is located just north and west of the City. Alluvial fans formed by this river are the largest geomorphic features in the Clovis area. The formation of the fans has resulted in rather flat regional topography.

Regional Geology

The Project site lies in the San Joaquin Valley in central California. The San Joaquin Valley is a topographically flat, northwest-trending, structural trough (or basin). It is bordered by the Tehachapi Mountains on the south, the Sierra Nevada on the east, the Coast Ranges on the west, and the beginning of the Sacramento Valley to the north.

The San Joaquin Valley is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. Large alluvial fans have developed on each side of the Valley. The larger and more gently sloping fans are on the east side of the San Joaquin Valley and overlie metamorphic and igneous basement rocks. These basement rocks are exposed in the Sierra Nevada foothills and consist of meta-sedimentary, volcanic, and granitic rocks.

Local Setting

The Project site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). The Project site is relatively flat and is approximately 385 feet above mean sea level.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use. Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

> Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
>
> Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

FAULTS AND SEISMICITY

Faults

A fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. A fault trace is the line on the earth's surface defining the fault. Displacement of the earth's crust along faults releases energy in the form of earthquakes and in some cases results in fault creep. Most faults are the result of repeated displacements over a long period of time.

The State of California designates faults as active, potentially active, and inactive depending on how recent the movement that can be substantiated for a fault. Table 3.6-1 presents the California fault activity rating system.

TABLE 3.6-1: FAULT ACTIVITY RATING

FAULT ACTIVITY RATING	*GEOLOGIC PERIOD OF LAST RUPTURE*	*TIME INTERVAL (YEARS)*
Active (A)	Holocene	Within last 11,000 years
Potentially Active (PA)	Quaternary	11,000-1.6 Million Years
Inactive (I)	Pre-Quaternary	Greater than 1.6 Million

SOURCE: CALIFORNIA GEOLOGICAL SURVEY

Figure 3.6-1 provides a map of known nearby faults in relation to the Project site. The closest known fault to the Project site is the Clovis Fault, which extends northwest-southeast from just north of the Project site. The Clovis Fault is not mapped as active and is mapped as showing no recognized displacement in the Quaternary Period (California Geological Survey, 2010). No other faults within 50 miles of the Project site are mapped on the 2010 Fault Activity Map of California.

Seismicity

The amount of energy available to a fault is determined by considering the slip-rate of the fault, its area (fault length multiplied by down-dip width), maximum magnitude, and the rigidity of the displaced rocks. These factors are combined to calculate the moment (energy) release on a fault. The total seismic energy release for a fault source is sometimes partitioned between two different recurrence models, the characteristic and truncated Gutenberg-Richter (G-R) magnitude-frequency distributions. These models incorporate our knowledge of the range of magnitudes and relative frequency of different magnitudes for a particular fault.

Earthquakes are generally expressed in terms of intensity and magnitude. Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. By comparison, magnitude is based on the amplitude of the earthquake waves recorded on instruments, which have a common calibration. The Richter scale, a logarithmic scale ranging from 0.1 to 9.0, with higher numbers being stronger, measures the magnitude of an earthquake relative to ground shaking. Table 3.6-2 provides a description and a comparison of intensity and magnitude.

TABLE 3.6-2: MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

RICHTER MAGNITUDE	*MODIFIED MERCALLI*	*EFFECTS OF INTENSITY*
Less than 2.0	I	Microearthquakes, not felt or rarely felt; recorded by seismographs.
2.0-2.9	I to II	Felt slightly by some people; damages to buildings.
3.0-3.9	II to IV	Often felt by people; rarely causes damage; shaking of indoor objects noticeable.
4.0-4.9	IV to VI	Noticeable shaking of indoor objects and rattling noises; felt by most people in the affected area; slightly felt outside; generally, no to minimal damage.
5.0-5.9	VI to VII	Can cause damage of varying severity to poorly constructed buildings; at most, none to slight damage to all other buildings. Felt by everyone.
6.0-6.9	VII to X	Damage to a moderate number of well-built structures in populated areas; earthquake-resistant structures survive with slight to moderate damage; poorly designed structures receive moderate to severe damage; felt in wider areas; up to hundreds of miles/kilometers from the epicenter; strong to violent shaking in epicentral area.
7.0-7.9	VIII<	Causes damage to most buildings, some to partially or completely collapse or receive severe damage; well-designed structures are likely to receive damage; felt across great distances with major damage mostly limited to 250 km from epicenter.
8.0-8.9	VIII<	Major damage to buildings, structures likely to be destroyed; will cause moderate to heavy damage to sturdy or earthquake-resistant buildings; damaging in large areas; felt in extremely large regions.
9.0 and Greater	VIII<	At or near total destruction - severe damage or collapse to all buildings; heavy damage and shaking extends to distant locations; permanent changes in ground topography.

SOURCE: AMEC FOSTER WHEELER, 2018, FRESNO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

Although most of Fresno County is situated within an area of relatively low seismic activity, the faults and fault systems that lie along the eastern and western boundaries of Fresno County, as well as other regional faults, have the potential to produce high-magnitude earthquakes throughout the County (Amec Foster Wheeler, 2018). A high-magnitude earthquake on one of these faults could cause moderate intensity ground shaking in Fresno County. The most probable sources of earthquakes that might cause damage in Clovis are the Owens Valley Fault Group about 68 miles to the northeast, the Foothills Suture Fault Zone approximately 75 miles to the north, the San Andreas fault approximately 80 miles to the southwest, and the White Wolf fault located about 120 miles to the south (Amec Foster Wheeler, 2018). A maximum probable earthquake on any of the major faults would produce a maximum ground acceleration in the area of about 0.1g as ground deceleration generally decreases with increasing distance from the earthquake source. This level of ground shaking correlates to a Modified Mercalli intensity of I to V, light to moderate.

Alquist-Priolo Special Study Zone

An active earthquake fault, per California's Alquist-Priolo Act, is one that has ruptured within the Holocene Epoch (≈11,000 years). Based on this criterion, the California Geological Survey identifies Earthquake Fault Zones. These Earthquake Fault Zones are identified in Special Publication 42 (SP42), which is updated as new fault data become available. The SP42 lists all counties and cities within California that are affected by designated Earthquake Fault Zones. The Fault Zones are delineated on maps within SP42 (Earthquake Fault Zone Maps).

The California legislature passed the Alquist-Priolo Special Studies Zone Act in 1972 to address seismic hazards associated with faults and to establish criteria for developments for areas with identified seismic hazard zones. The California Geologic Survey (CGS) evaluates faults with available geologic and seismologic data and determines if a fault should be zoned as active, potentially active, or inactive. If CGS determines a fault to be active, then it is typically incorporated into a Special Studies Zone in accordance with the Alquist-Priolo Earthquake Hazard Act. Alquist-Priolo Special Study Zones are usually one-quarter mile or less in width and require site-specific evaluation of fault location and require a structure setback if the fault is found traversing a project site.

As shown in Figure 3.6-1, the Project site is not within an Alquist-Priolo Special Study Zone. The nearest Alquist-Priolo fault zone, the Nunez Fault Zone, is located approximately 60 miles southwest of the Project site.

SEISMIC HAZARDS

Seismic Ground Shaking

The potential for seismic ground shaking in California is expected. As a result of the foreseeable seismicity in California, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. These seismic design provisions require enhanced structural integrity based on several risk parameters. Seismic ground shaking in the Project site is expected during the life of the proposed Project. All structures will be built in accordance with the California Building Code's seismic design standards.

Fault Rupture

A fault rupture occurs when the surface of the earth breaks as a result of an earthquake, although this does not happen with all earthquakes. Surface ruptures have been known to extend up to 50 miles with displacements of an inch to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness. These ruptures generally occur in a weak area of an existing fault. Ruptures can be sudden (i.e., earthquake) or slow (i.e., fault creep). Sudden displacements are more damaging to structures because they are accompanied by shaking. The Alquist-Priolo Fault Zoning Act requires active earthquake fault zones to be mapped and it provides special development considerations within these zones. The Project site does not have surface expression of active faults and fault rupture is not anticipated. Figure 3.6-1 shows the regional faults in relation to Clovis.

Liquefaction

Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged ground shaking (Amec Foster Wheeler, 2018). Under certain circumstances, the ground shaking can temporarily transform an otherwise solid material to a fluid state. Liquefaction is a serious hazard because buildings in areas that experience liquefaction may subside and suffer major structural damage. Liquefaction is most often triggered by seismic shaking, but it can also be caused by improper grading, landslides, or other factors. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet.

According to the Fresno County MJHMP, no specific countywide assessments to identify liquefaction hazards have been performed; however, areas of the San Joaquin Valley in Fresno County are not considered conducive to liquefaction due to soil types, because they are either too coarse or too high in clay content (2018). To date, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced liquefaction zones in the City of Clovis or in the Project site (California Department of Conservation, 2022a). The *Geotechnical Engineering Investigation Proposed Tract 6205 (Spensley Property) Sunnyside and Shepherd Avenues Clovis, California (*Krazan & Associates, Inc., 2019) (hereinafter "Geotechnical Report") further indicates that the potential for liquefaction is low since groundwater occurs below 60 feet.

Lateral Spreading

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Since the potential for liquefaction is low, the potential for lateral spreading is low; additionally, because the City of Clovis is essentially flat, lateral spreading of soils has not been observed.

Landslides

The California Geological Survey classifies landslides with a two-part designation based on Varnes (1978) and Cruden and Varnes (1996). The designation captures both the type of material that failed and the type of movement that the failed material exhibited. Material types are broadly categorized as either rock or soil, or a combination of the two for complex movements. Landslide movements are categorized as falls, topples, spreads, slides, or flows.

Landslide potential is influenced by physical factors, such as slope, soil, vegetation, and precipitation. Landslides require a slope, and can occur naturally from seismic activity, excessive saturation, and wildfires, or from human-made conditions such as construction disturbance, vegetation removal, wildfires, etc.

The Project site is essentially flat; therefore, the potential for a landslide in the Project site is low to non-existent.

SOILS

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. The NRCS Soils Map is provided in Figure 3.2-2 in Section 3.2, Agricultural Resources. Table 3.6-3 identifies the type and range of soils found in the Project site.

TABLE 3.6-3: PROJECT SITE SOILS

SOIL TYPES	*DEVELOPMENT AREA (ACRES)*	*% OF DEVELOPMENT AREA*	*NON-DEVELOPMENT AREA (ACRES)*	*% OF NON-DEVELOPMENT AREA*	*GRAND TOTAL (ACRES)*
An - Alamo clay	0.00	0.00%	0.27	0.35%	0.27
ArA - Atwater sandy loam, 0 to 3 percent slopes	10.85	13.83%	16.21	21.14%	27.07
Gf - Grangeville fine sandy loam, 0 to 1 percent slopes, MLRA 17	23.05	29.39%	8.49	11.07%	31.55
Gg - Grangeville fine sandy loam, saline alkali	3.36	4.28%	0.09	0.12%	3.44
Re - Ramona loam, hard substratum	20.39	26.00%	30.92	40.32%	51.31
Rh - Riverwash	0.81	1.03%	0.04	0.05%	0.86
SeA - San Joaquin loam, 0 to 3 percent slopes	11.54	14.71%	12.62	16.46%	24.15
TzbA - Tujunga loamy sand, 0 to 3 percent slopes	0.00	0.00%	1.86	2.43%	1.86
VaA - Visalia sandy loam, 0 to 3 percent slopes	8.42	10.74%	6.19	8.07%	14.61
Grand Total	**78.43**	**100.00%**	**76.69**	**100.00%**	**155.12**

SOURCE: NRCS CUSTOM SOIL SURVEY 2022.

Alamo clay. The Alamo series consists of moderately deep to hardpan, poorly drained soils that formed in alluvium from mixed sources. Alamo soils are in basins and drainageways on floodplains and fan remnants. Slope ranges from 0 to 2 percent. Erosion potential is moderate (K factor 0.24). Linear extensibility is high. As shown in Table 3.6-3, this soil type is not found in the development area and 0.35 percent of the non-development area are Alamo clay soils.

Atwater sandy loam. The Atwater series consists of very deep, well drained soils formed in granitic alluvium. This series is characterized as well draining, with moderately rapid permeability and slow runoff. The soils are formed in dunes of uniformly sorted material containing a minimum of coarse and very coarse particles. They have mixed mineralogy. They are used mainly for production of truck crops, grapes, tree fruits, nuts, grain, and alfalfa. Vegetation consists of annual grasses, weeds, and low-growing shrubs. Erosion potential is moderate (K factor 0.24 to 0.28). Linear extensibility is low. As shown in Table 3.6-3, 13.83 percent of the development area and 21.14 percent of the non-development area are Atwater sandy loam.

Grangeville fine sandy loam. This series consists of very deep, somewhat poorly drained soils that formed in moderate coarse textured alluvium dominantly from granitic rock sources. Grangeville soils are on alluvial fans and floodplains and have slopes ranging from 0 to 2 percent. This series is characterized by negligible to very low runoff, moderately rapid permeability and moderate permeability in saline-sodic phases. Erosion potential is low to moderate (K factor 0.10 to 0.28). Linear extensibility is low. As shown in Table 3.6-3, 33.67 percent of the development area and 11.19 percent of the non-development area are Grangeville fine sandy loam.

Ramona loam. The Ramona series is a member of the fine-loamy, mixed, thermic family of Typic Haploxeralfs. The series is well-drained, with slow to rapid runoff and moderately slow permeability. They are used mostly for production of grain, grain-hay, pasture, irrigated citrus, olives, truck crops, and deciduous fruits. Uncultivated areas have a cover of annual grasses, forbs, chamise or chaparral. Erosion potential is moderate to moderately-high (K factor 0.37 to 0.49). Linear extensibility is low-to-moderate. As shown in Table 3.6-3, 26 percent of the development area and 40.32 percent of the non-development area are Ramona loam.

Riverwash. Riverwash consists of very deep alluvial materials in stream channels that are frequently flooded (University of California, Davis, 2022). Little or no vegetation grows on Riverwash because of the flooding. No attempt is made to classify these materials because of the instability of the unit. The unit is subject to erosion and deposition during flooding events. Erosion potential is low to moderate (K factor 0.05 to 0.37). Linear extensibility is low. As shown in Table 3.6-3, 1.03 percent of the development area and 0.05 percent of the non-development area are Riverwash.

San Joaquin loam. The San Joaquin series consists of moderately deep to a duripan, well and moderately well drained soils that formed in alluvium derived from mixed but dominantly granitic rock sources. They are on undulating low terraces with slopes of 0 to 9 percent. The series is characterized by well and moderately well drained, with medium to very high runoff and very slow permeability. They are used for cropland and livestock grazing; crops are small grains, irrigated pasture and rice; vineyards, fruit and nut crops. Erosion potential is moderate (K factor 0.28 to 0.32). Linear extensibility is low-to-high. As shown in Table 3.6-3, 14.71 percent of the development area and 16.46 percent of the non-development area are San Joaquin loam.

Tujunga loamy sand. This series consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains, including urban areas. Slopes range from 0 to 12 percent. They are somewhat excessively drained, with negligible to low runoff and high saturated hydraulic conductivity. This soil is used for grazing, citrus, grapes, other fruits, and urban residential or commercial development. Uncultivated areas have a cover of shrubs, annual grasses and forbs. In urban areas, ornamentals and turf-grass are common. Erosion potential is low to moderate (K factor 0.17 to 0.24). Linear extensibility is low. As shown in Table 3.6-3, 0 percent of the development area and 2.43 percent of the non-development area are Tujunga loamy sand.

Visalia sandy loam. The Visalia series is coarse-loamy, mixed, alluvium derived from granite. This series is well drained with very low runoff. Erosion potential is low to moderate (K factor 0.15 to 0.24). Linear extensibility is low. As shown in Table 3.6-3, 10.74 percent of the development area and 8.07 percent of the non-development area are Visalia sandy loam.

NON-SEISMIC HAZARDS

Expansive Soils

The NRCS delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of linear extensibility (also known as shrink-swell potential or expansive potential) is provided by the NRCS Physical Properties Descriptions:

> "Linear extensibility" refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet. If structures are underlain by expansive soils, it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscape watering.

The *Geotechnical Report* (Krazan & Associates 2019) indicates that the Project site has a low swell potential. According to the NRCS Custom Soils Report, the soils in the Project site generally have a low shrink-swell potential, with the highest potential occurring in the northeastern corner of the Non-Development Area. Additionally, the *Geotechnical Report* (Krazan & Associates 2019) encountered upper soils consisting of silty sand, silty sand with trace clay, clayey sand, silty sand/sand and sand. The report notes that the clayey soils appeared to have a low swell potential.

Erosion

Erosion naturally occurs on the surface of the earth as surface materials (i.e., rock, soil, debris, etc.) is loosened, dissolved, or worn away, and transported from one place to another by gravity. Two common types of soil erosion include wind erosion and water erosion. The steepness of a slope is an important factor that affects soil erosion. Erosion potential in soils is influenced primarily by loose soil texture and steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover.

The NRCS Custom Soils Report identified the erosion potential for the soils in the Project site. This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. Soil property data for each map unit component includes the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Within the Project site, the erosion factor Kf exhibits a wide range, varying from 0.10 to 0.49, which is considered a low to moderately-high potential for erosion; however, the majority of the Project site, particularly the development area, exhibits an erosion factor Kf of low to moderate. Furthermore, because the Project site is essentially flat, the erosion potential is slight.

Collapsible Soils

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Soils prone to collapse are commonly associated with manmade fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. During an earthquake, even slight settlement of fill materials can lead to a differentially settled structure and significant repair costs. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Collapsible soils have not been identified in the Clovis General Plan or the Fresno County MJHMP as an issue in the Clovis area.

Subsidence

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Subsidence has not been identified in the Clovis General Plan or Fresno County MJHMP as an issue in the Clovis area.

PALEONTOLOGICAL RESOURCES

Among the natural resources deserving conservation and preservation, and existing within the City, are the often-unseen records of past life buried in the sediments and rocks below the pavement, buildings, soils, and vegetation which now cover most of the area. These records – fossils and their geologic context – undoubtedly exist in large quantities below the surface in many areas in and near the City of Clovis, and span millions of years in age of origin. Fossils constitute a non-renewable resource; once lost or destroyed, the exact information they contained can never be reproduced.

Paleontologists consider all vertebrate fossils to be of significance. Fossils of other types are considered significant if they represent a new record, new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations. However, even a previously designated low potential site may yield significant fossils. Paleontological resources consist of the fossilized remains of plants and animals, including vertebrates (animals with backbones) and invertebrates (e.g., starfish, clams, ammonites, and coral). Fossils of microscopic plants and animals, or microfossils, are also considered in this analysis. The age and abundance of fossils depend on the location, topographic setting, and particular geologic formation in which they are found.

Paleontological Setting - City of Clovis

The following summary of the geological evolution of Clovis and the potential for paleontological resources is based on the Clovis General Plan Draft EIR. Clovis is on recent alluvium, Pleistocene river and possibly lake sediments, and pre-Cretaceous meta-sedimentary rocks, and has either low or undetermined paleontological sensitivity.

Recent alluvium is a coarse-grained unconsolidated river wash, typically too young to contain any fossil resources. Thus, it is considered a formation of low paleontological sensitivity. Pre-Cretacious meta-sedimentary rocks have the potential to contain fossils, but they would have been destroyed by present day. Therefore, it is also considered a formation of low sensitivity.

Lastly, Pleistocene river and lake sediments could potentially contain significant nonrenewable paleontological resources. Three sedimentary formations are exposed in Clovis: Modesto Formation (Upper Unit); Riverbank Formation (Middle Unit); and Turlock Lake Formation (Upper Unit). Modesto Formation (Upper Unit) is primarily composed of Sierran arkosic sand and gravel, preceding fine sand and silt near the lower San Joaquin River. Carbon dating determines the Modesto Formation to be 9,000 to 27,000 years old. Riverbank Formation (Middle Unit) is composed of yellowish-brown sandy loam. According to uranium dating, this unit is about 45,000 to 260,000 years old. A vertebrate fauna assigned to the Rancholabrean Land Mammal Age has been found in this unit. The Turlock Lake Formation (Upper Unit) contains stratified silt and fine sand, approximately 600,000 years old. Irvingtonian Land Mammal Age vertebrate fossils have been recovered in several locations in this unit. Thus, the 1993 General Plan EIR concludes that the Pleistocene river and lake sediments are considered an area of undetermined paleontological sensitivity and may contain undiscovered resources.

In addition to the fossils found in the units described above, large mammal bones were discovered in the Clovis river terraces dated to the Pleistocene epoch.

MINERAL RESOURCES

Mineral Resource Classification

Pursuant to the Surface Mining and Reclamation Act of 1975 (SMARA), the California State Mining and Geology Board oversees the Mineral Resource Zone (MRZ) classification system. The MRZ system characterizes both the location and known/presumed economic value of underlying mineral resources. The mineral resource classification system uses four main MRZs based on the degree of available geologic information, the likelihood of significant mineral resource occurrence, and the known or inferred quantity of significant mineral resources. The four classifications are described as follows:

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- **MRZ-3:** Areas containing mineral deposits, the significance of which cannot be evaluated.
- **MRZ-4:** Areas where available information is inadequate for assignment to any other MRZ classification.

Mineral Resources

Mineral resources include commercially viable oil and gas deposits, and nonfuel mineral resources deposits. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate, including sand, gravel, and crushed stone. The entire City of Clovis, including the Project site, is designated as MRZ-3 (California Division of Mines and Geology, 1988). MRZ-3 is a classification for areas containing known or inferred mineral occurrences of undetermined mineral resource significance.

Location of Permitted Aggregate Mines

The California Office of Mine Reclamation periodically publishes a list of qualified permitted aggregate mines regulated under SMARA that is generally referred to as the AB 3098 List. The Public Contract Code precludes mining operations that are not on the AB 3098 List from selling sand, gravel, aggregates or other mined materials to State or local agencies. As of March 2022, there are 10 aggregate mines on the AB 3098 list in Fresno County; none of the 10 listed mines are within the Project site (California Department of Conservation, 2022b).

3.6.2 REGULATORY SETTING

FEDERAL

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 (42 USC, 7701 et seq.) requires the establishment and maintenance of an earthquake hazards reduction program by the Federal government.

Executive Order 12699

Signed in January 1990, this executive order of the President implements provisions of the Earthquake Hazards Reduction Act for “federal, federally assisted or federally regulated new building construction” and requires the development and implementation of seismic safety programs by Federal agencies.

International Building Code (IBC)

The purpose of the International Building Code (IBC) is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. IBC standards address foundation design, shear wall strength, and other structurally related conditions.

STATE

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or simply "Title 24," contains the regulations that govern the construction of buildings in California. The CBSC includes 12 parts: California Building Standards Administrative Code, California Building Code, California Residential Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code, California Green Building Standards Code (CAL Green Code), and the California Reference Standards Code. Through the CBSC, the State provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

California Health and Safety Code

Section 19100 et seq. of the California Health and Safety Code establishes the State’s regulations for earthquake protection. This section of the code requires structural designs to be capable of resisting likely stresses produced by phenomena such as strong winds and earthquakes.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and
- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

"Sufficiently Active" and "Well Defined" are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various "seismic hazard zones."

- Cities and counties, or other local permitting authority, must regulate certain development "projects" within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.
- The State Mining and Geology Board provides additional regulations, policies, and criteria to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.
- Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

National Pollution Discharge Elimination System (NPDES) Construction General Permit

The California State Water Resource Control Board (SWRCB) Order No. 2009-0009-DWQ known as the “Construction General Permit” was adopted on September 2, 2009 and was amended by Order No 2012-0006-DWQ which became effective on July 17, 2012. This NPDES permit establishes a risk-based approach to stormwater control requirements for construction projects by identifying three project risk levels. The main objectives of the General Permit are to:

- Reduce erosion
- Minimize or eliminate sediment in stormwater discharges
- Prevent materials used at a construction site from contacting stormwater
- Implement a sampling and analysis program
- Eliminate unauthorized non-stormwater discharges from construction sites
- Implement appropriate measures to reduce potential impacts on waterways both during and after construction of projects
- Establish maintenance commitments on post-construction pollution control measures

California mandates requirements for all construction activities disturbing more than one acre of land to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP documents the selection and implementation of Best Management Practices (BMPs) for a specific construction project, charging owners with stormwater quality management responsibilities. A construction site subject to the General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit.

Division of Mines and Geology

The California Division of Mines and Geology (DMG) operates within the Department of Conservation. The DMG is responsible for assisting in the utilization of mineral deposits and the identification of geological hazards.

Surface Mining and Reclamation Act of 1975

The California Department of Conservation Surface Mining and Reclamation Act of 1975 (Section 2710), also known as SMARA, provides a comprehensive surface mining and reclamation policy that permits the continued mining of minerals, as well as the protection and subsequent beneficial use of the mined and reclaimed land. The purpose of SMARA is to ensure that adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition and are readily adaptable for alternative land uses. The production and conservation of minerals are encouraged, while also giving consideration to values relating to recreation, wildlife, range and forage, as well as aesthetic enjoyment. Residual hazards to public health and safety are eliminated. These goals are achieved through land use planning by allowing a jurisdiction to balance the economic benefits of resource reclamation with the need to provide other land uses.

If a use is proposed that might threaten the potential recovery of minerals from an area that has been classified MRZ-2, SMARA would require the jurisdiction to prepare a statement specifying its reasons for permitting the proposed use, provide public notice of these reasons, and forward a copy of the statement to the State Geologist and the State Mining and Geology Board (Cal. Pub. Res. Code Section 2762). Lands classified MRZ-2 are areas that contain identified mineral resources.

State Geological Survey

Similar to the DMG, the California Geological Survey is responsible for assisting in the identification and proper utilization of mineral deposits, as well as the identification of fault locations and other geological hazards.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to geological hazards and soils. General Plan goals and policies applicable to the Project are identified below:

Environmental Safety Element

- Goal 1: Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural hazards.
- Policy 1.3. Geologic and seismic risk. Prohibit development on unstable terrain, excessively steep slopes, and other areas deemed hazardous due to geologic and seismic hazards unless acceptable mitigation measures are implemented. Require that underground utilities be designed to withstand seismic forces and accommodate ground settlement.
- Policy 1.5. Critical and public facilities. Locate and design critical and public facilities to minimize their exposure and susceptibility to flooding, seismic and geological effects, fire, and explosions. Ensure critical use facilities (e.g., hospital, police, and fire facilities) can remain operational during an emergency.

City of Clovis Municipal Code

Chapter 8.1 of the Clovis Municipal Code adopts the 2019 CBSC, with amendments to address administrative provisions and additional requirements related to moved buildings, as the building code of the City.

Chapter 9.110 provides subdivision design and improvement requirements. Per Section 9.110.040, a grading plan is required to be submitted to and approved by the City Engineer prior to issuance of a subdivision-level building permit. Subdivisions are required to incorporate appropriate erosion and sediment control measures. Section 9.110.050 requires subdivisions in the City to install an approved sewer connection to the property line of each lot as part of the subdivision improvements.

Chapter 9.114 provides standards for the preparation and review of soils reports. A preliminary soils report based upon adequate test borings and prepared by a registered civil engineer is required for every subdivision for which a final map is required or when required as a condition of development when soils conditions warrant the investigation and report. A final soils report is required where a preliminary soils report was required, unless the final report is waived by the City Engineer.

Section 9.22.070 requires development to comply with the Alquist-Priolo Earthquake Fault Zoning Act and the Safety Element of the City's General Plan.

Chapter 9.28 contains landscaping standards and requires a landscape design plan, irrigation design plan, and soil analysis in order to reduce runoff and control soil erosion as part of the landscape documentation package.

3.6.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on geology and soils and/or mineral resources if it will:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42;
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction; or
    - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and/or
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

There are no significant deposits of mineral resources located on the Project site, as delineated by the Mineral Resources and Mineral Hazards Mapping Program. Additionally, the Project site is not designated as a Mineral Resource Zone and there are no existing mines located on the Project site. Therefore, the proposed Project would have no impact on mineral resources or mineral resource recovery sites and these impacts will not be discussed further.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: The proposed Project may expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides (Less than Significant)

Development of the proposed Project could result in the exposure of people and structures to conditions that have the potential for adverse effects associated with rupture of a known earthquake fault, strong seismic ground shaking, and seismic-related ground failure, including liquefaction, or landslides. Each are discussed below:

GROUND RUPTURE

The California Geologic Survey (CGS) evaluates faults and determines if a fault should be zoned as active, potentially active, or inactive. All active faults are incorporated into a Special Studies Zone, also referred to as an Alquist-Priolo Special Study Zone. The Project site is not within an Alquist-Priolo Special Study Zone.

The closest known fault to the Project site is the Clovis Fault, which extends northwest-southeast from just north of the Project site. The Clovis Fault is not mapped as active and is mapped as showing no recognized displacement in the Quaternary Period (California Geological Survey, 2010). No other faults within 50 miles of the Project site are mapped on the 2010 Fault Activity Map of California. Therefore, because no faults are located on the Project sites, the potential for ground rupture (cracking or breaking of the ground during an earthquake) would be less than significant.

GROUND SHAKING

Although most of Fresno County is situated within an area of relatively low seismic activity, the faults and fault systems that lie along the eastern and western boundaries of Fresno County, as well as other regional faults, have the potential to produce high-magnitude earthquakes throughout the County. A high-magnitude earthquake on one of these faults could cause moderate intensity ground shaking in Fresno County. The most probable sources of earthquakes that might cause damage in Clovis are the Owens Valley Fault Group about 68 miles to the northeast, the Foothills Suture Fault Zone approximately 75 miles to the north, the San Andreas fault approximately 80 miles to the southwest, and the White Wolf fault located about 120 miles to the south. A maximum probable earthquake on any of the major faults would produce a maximum ground acceleration in the area of about 0.1g as ground deceleration generally decreases with increasing distance from the earthquake source. This level of ground shaking correlates to a Modified Mercalli intensity of I to V, light to moderate.

To reduce the impact of seismic ground shaking on the development, the Project would be required to be constructed using standard engineering and seismic safety design techniques of the California Building Code, as required by Chapter 8.1 of the City's Municipal Code. Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures would be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level.

LIQUEFICATION

Substantial hazards from liquefaction are not expected in areas of the San Joaquin Valley in Fresno County because they are either too coarse or too high in clay content. To date, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced liquefaction zones in the City of Clovis or in the Project site. In addition, the Geotechnical Report (Krazan & Associates 2019) indicates that the potential for liquefaction on the Project site is low since groundwater occurs below 60 feet. Therefore, this is a less than significant impact.

LANDSLIDES

The Project site is essentially flat; therefore, the potential for a landslide in the Project site is low to non-existent. Some limited potential for slope instability risk could arise during grading and construction activities, where slopes could be over-steepened. However, this risk is mitigated by adhering to relevant California Building Code requirements. Additionally, according to the California Earthquake Hazards Zone Application, the site is not located within a Landslide and Liquefication Zone. As a result, the probability of landslides causing substantial adverse effects on people or structures is less than significant.

CONCLUSION

The Project site is subject to potential ground shaking caused by seismic activity. Seismic activity could come from a known active fault such as the Clovis fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. As discussed under Section 3.6.2 Regulatory Setting, the California Building Code, Title 24, Part 2, Chapter 16 addresses structural design and Chapter 18 addresses soils and foundations. Collectively, these requirements, which have been adopted by the City of Clovis (Chapter 8.1), including design standards and requirements that are intended to minimize impacts to structures in seismically active areas of California. Section 1613 of the California Building Code specifically provides structural design standards for earthquake loads.

The Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. Therefore, the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.6-2: Implementation and construction of the proposed Project would not result in substantial soil erosion or the loss of topsoil. (Less than Significant)

According to the United States Environmental Protection Agency, polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. Soil erosion and the loss of topsoil is one of the most common sources of polluted stormwater runoff during construction activities. When left uncontrolled, stormwater runoff can erode soil and cause sedimentation in waterways, which collectively result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges which adversely affect the quality of our nation's waters. The program uses the National Pollutant Discharge Elimination System (NPDES) permitting mechanism to require the implementation of controls designed to prevent harmful pollutants, including soil erosion, from being washed by stormwater runoff into local water bodies. The construction activities for the proposed Project would be governed by the General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), which states:

> *"…Particular attention must be paid to large, mass graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing stormwater contamination, and sediment control techniques should be used to capture any soil that becomes eroded…"*

General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ) further states that:

> *“Sediment control BMPs should be the secondary means of preventing stormwater contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed…Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions…All measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended…”*

To ensure that construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), projects in California must prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the Regional Water Quality Control Board as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency.

The Custom Soils Report identified the erosion potential for the majority of soils in the Project site as low to moderate. Furthermore, because the Project site is essentially flat, the erosion potential is considered slight. Regardless of the potential for erosion, there is always the potential for human caused erosion associated with construction activities or through the operational phase of a project. Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities temporarily expose soils and increase the potential for soil erosion and sedimentation during rail events. Construction activities can also result in soil compaction and wind erosion effects that can adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City’s Municipal Code, and adhere to the City’s landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a ***less than significant*** impact relative to this topic.

Impact 3.6-3: The proposed Project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse (Less than Significant)

Development of the proposed Project could result in the exposure of people and structures to conditions that have the potential for adverse effects associated with ground instability or failure. Soils and geologic conditions in the Project site have the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. Each are discussed below:

LIQUEFACTION

As discussed in Impact 3.6-1, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced liquefaction zones in the City of Clovis, including the Project site. In addition, the Geotechnical Report (Krazan & Associates 2019) indicates that the potential for liquefaction on the Project site is low since groundwater occurs below 60 feet.

LATERAL SPREADING

Lateral spreading generally is a phenomenon where blocks of intact, non-liquefied soil move down slope on a liquefied substrate of large areal extent. The potential for liquefaction at the Project site is low; therefore, the potential for lateral spreading of soils is also low.

LANDSLIDES

As discussed in Impact 3.6-1, the Project site is essentially flat and, to date, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced landslide zones in the City of Clovis or in the Project site. Therefore, the potential for a landslide in the Project site is low to non-existent.

COLLAPSIBLE SOILS

Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Collapsible soils have not been identified in the Clovis General Plan or the Fresno County MJHMP as an issue in the Clovis area.

SUBSIDENCE

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Subsidence has not been identified in the Clovis General Plan or Fresno County MJHMP as an issue in the Clovis area.

CONCLUSION

The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. Through compliance with applicable laws, standards, and guidelines, (including the CBSC and City's Municipal Code), the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.6-4: The proposed Project has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property. (Less than Significant)

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. According to the NRCS Web Soil Survey, the soils in the Project site have a low shrink-swell potential. Additionally, the Geotechnical Report (Krazan & Associates 2019) encountered upper soils consisting of silty sand, silty sand with trace clay, clayey sand, silty sand/sand and sand. The report notes that the clayey soils appeared to have a low swell potential.

The California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 requires specific geotechnical evaluation when a preliminary geotechnical evaluation determines that expansive or other special soil conditions are present, which, if not corrected, would lead to structural defects. The City of Clovis also requires a final soils report to be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations. Compliance with this requirement would occur in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final soils report would include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. Through compliance with applicable laws, standards, and guidelines, (including the CBSC and City's Municipal Code), the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.6-5: The proposed Project does not have the potential to have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water (Less than Significant)

The proposed Project involves the sphere of influence expansion (SOI) of approximately 155 acres into the City of Clovis' SOI, including the annexation of the proposed 77-acre Development Area, to develop single-family detached units, open space, parks and recreational uses, and new public and private roadways and utility improvements (water, storm drainage, sanitary sewer). Septic tanks or septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The Development Area would be served by a new wastewater distribution system installed within the roadway right-of-way and connecting to each new house that is constructed. The proposed wastewater conveyance facilities would connect to the existing sewer main(s) along nearby roadway(s) as part of the City of Clovis collection and treatment system.

The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

Development of the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.6-6: The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Less than Significant with Mitigation)

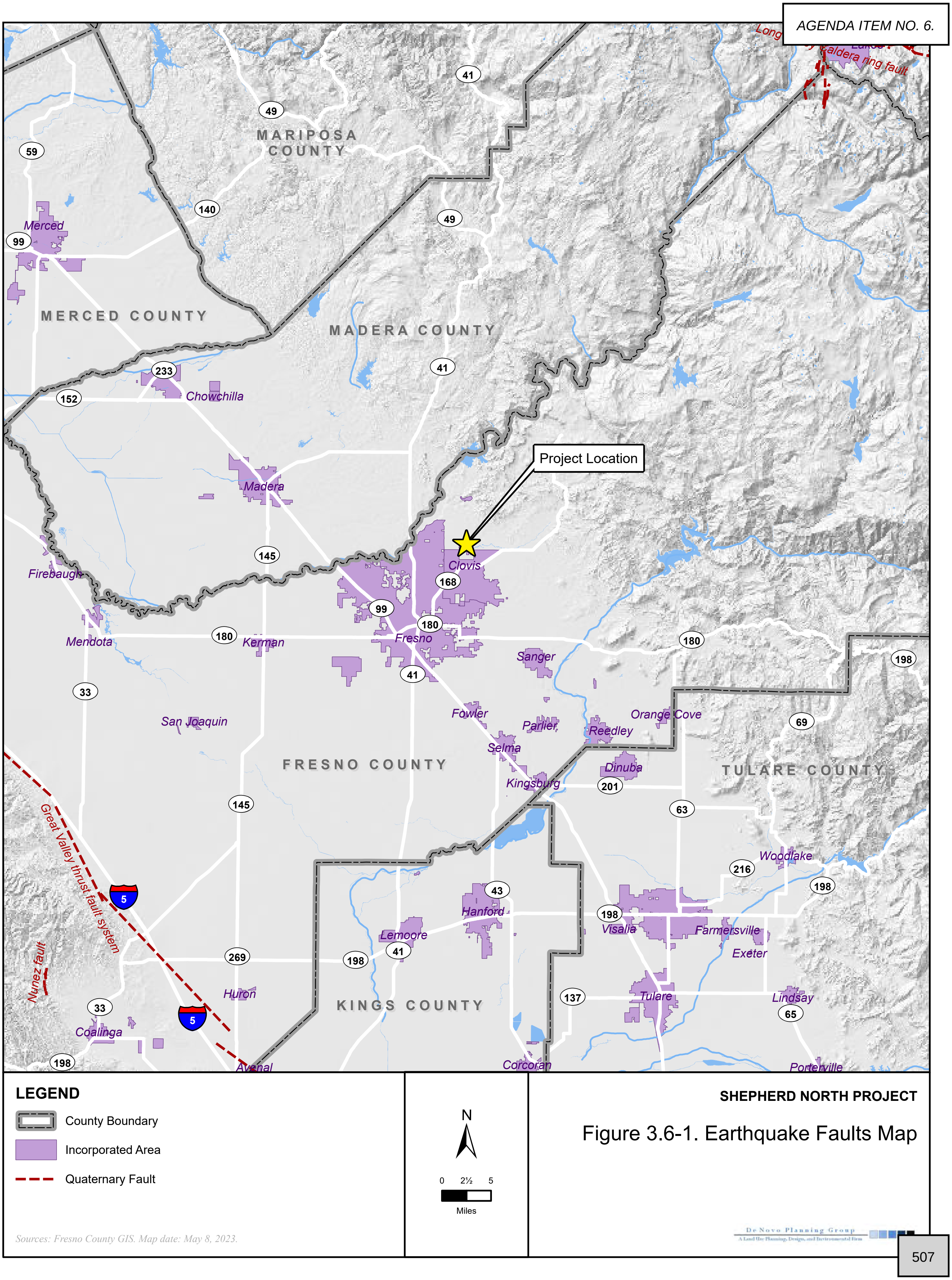
Although the Project site is not expected to contain subsurface paleontological resources, the Project site is in an area known to have these resources and it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.6-1: *Prior to approval of a grading permit, the Project proponent shall ensure that grading and improvement plans include the following note: "If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology."*

Impact 3.6-7: The proposed Project has the potential to result in the loss of availability of a locally-important mineral resource recovery site or known mineral resource of value to the region and the residents of the state. (Less than Significant)

The entire City of Clovis, including the Project site, is designated as MRZ-3 (California Division of Mines and Geology, 1988). MRZ-3 is a classification for areas containing known or inferred mineral occurrences of undetermined mineral resource significance. As of March 2022, there are 10 aggregate mines on the AB 3098 list in Fresno County; none of the 10 listed mines are within the Project site (California Department of Conservation, 2022b). There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a **less than significant** impact relative to this topic.



SHEPHERD NORTH PROJECT

Figure 3.6-1. Earthquake Faults Map

Sources: Fresno County GIS. Map date: May 8, 2023.

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GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY 3.7

This section discusses regional greenhouse gas (GHG) emissions, climate change, and energy conservation impacts that could result from Project implementation. The analysis contained in this section is intended to be at a Project-level, and covers impacts associated with the conversion of the Development Area to urban uses. This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis. The analysis and discussion of the GHG, climate change, and energy conservation impacts in this section focuses on the proposed Project's consistency with local, regional, and statewide climate change planning efforts and discusses the context of these planning efforts as they relate to the proposed Project. Disclosure and discussion of the Project's estimated energy usage and greenhouse gas emissions are provided.

There were two comments received during the Notice of Preparation (NOP) comment period regarding greenhouse gases. One comment was provided from the San Joaquin Air Pollution Control District (June 10, 2022), while another comment was provided by George Gonzalez (June 10, 2022). All comments are included in Appendix A.

3.7.1 ENVIRONMENTAL SETTING

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring GHGs include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Although the direct GHGs CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three GHGs have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial and electricity generation sectors (California Energy Commission, 2020).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 440 million gross metric tons of carbon dioxide equivalents (MMTCO$_2$e) in 2016 (California Air Resources Board, 2018a).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO$_2$ were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for 41% of total GHG emissions in the State. This category was followed by the industrial sector (24%), the electricity generation sector (including both in-state and out of-state sources) (15%), the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Air Resources Board, 2020c).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21st century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the State; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (California Environmental Protection Agency, 2010). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate

Scenarios report (California Environmental Protection Agency, 2010), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Public Health

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25% to 35% under the lower warming range and to 75% to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major State fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25% of the water supply they need; decrease the potential for hydropower production within the State (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70% to 90%. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry, reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to alter the distribution and character of natural vegetation thereby resulting in a possible increased risk of large of wildfires. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the State. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30% toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90%.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the State. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60% to 80% by the end of the century as a result of increasing temperatures. The productivity of the State's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the State's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

ENERGY CONSUMPTION

Energy in California is consumed from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are most widely used form of energy in the State. However, renewable sources of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which requires the State to derive at least 33% of electricity generated from renewable resources by 2020, 60 percent by 2030, and to achieve zero-carbon emissions by 2045 (as passed in September 2018, under AB 100).

Overall, in 2018, California's per capita energy usage was ranked fourth-lowest in the nation (U.S. EIA, 2020b). California's per capita rate of energy usage has remained relatively constant since the 1970's. Many State regulations since the 1970's, including new building energy efficiency standards, vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the State in check.

The consumption of non-renewable energy (i.e. fossil fuels) associated with the operation of passenger, public transit, and commercial vehicles, results in GHG emissions that contribute to global climate change. Alternative fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. In 2016, more than one-fourth of the electricity supply comes from facilities outside of the State. Much of the power delivered to California from states in the Pacific Northwest was generated by wind. States in the Southwest delivered power generated at coal-fired power plants, at natural gas-fired power plants, and from nuclear generating stations (U.S. EIA, 2020a). In 2016, approximately 50 percent of California's utility-scale net electricity generation was fueled by natural gas. In addition, about 25 percent of the State's utility-scale net electricity generation came from non-hydroelectric renewable technologies, such as solar, wind, geothermal, and biomass. Another 14 percent of the State's utility-scale net electricity generation came from hydroelectric generation, and nuclear energy powered an additional 11 percent. The amount of electricity generated from coal negligible (approximately 0.2 percent) (U.S. EIA, 2020a). The percentage of renewable resources as a proportion of California's overall energy portfolio is increasing over time, as directed by the State's Renewable Portfolio Standard (RPS).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (U.S. EIA, 2020b). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010. In 2021, electricity consumption in Fresno County was 8,378 GWh (California Energy Commission, 2023).

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2016, world consumption of oil had reached 96 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (U.S. EIA, 2020c). The transportation sector relies heavily on oil. In California, petroleum-based fuels currently provide approximately 96 percent of the State's transportation energy needs.

Natural Gas/Propane

The State produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (California Energy Commission, 2012). In 2006, California produced 325.6 billion cubic feet of natural gas (California Energy Commission, 2012). PG&E is the largest publicly-owned utility in California and provides natural gas for residential, industrial, and agency consumers within the Fresno County area. In 2021, natural gas consumption in Fresno County was 318 million therms (California Energy Commission, 2023).

3.7.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, State attainment plans, motor National Ambient Air Quality Standards (NAAQS) vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

On April 2, 2007, in the court case of *Massachusetts et al. vs. the USEPA et al*. (549 U.S. 497), the U.S. Supreme Court found that GHGs are air pollutants covered by the Federal Clean Air Act (42 USC Sections 7401-7671q). The Supreme Court held that the Administrator of the United States Environmental Protection Agency must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emission standards for vehicles. In collaboration with the National Highway Traffic Safety Administration (NHTSA) and CARB, the USEPA developed emission standards for light-duty vehicles (2012-2025 model years), and heavy-duty vehicles (2014-2027 model years).

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers’ compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, State, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Federal Climate Change Policy

According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR," "Climate Leaders," and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

Mandatory Greenhouse Gas Reporting Rule

In 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO_2 per year. This publicly available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial GHGs along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

STATE

The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions all across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives. The discussion below will address each of these key sets of statutes, as well as CARB “Scoping Plans” intended to achieve GHG reductions under the first set of statutes and recent building code requirements intended to reduce energy consumption.

Statutes Setting Statewide GHG Reduction Targets

ASSEMBLY BILL 32 (GLOBAL WARMING SOLUTIONS ACT)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006 (Health & Safety Code Section 38500 et seq.), also known as Assembly Bill (AB) 32 (Stats. 2006, ch. 488). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

SENATE BILL 32

SB 32 (Stats. 2016, ch. 249) added Section 38566 to the Health and Safety Code. It provides that “[i]n adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030.” In other words, SB 32 requires California, by 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

Between AB 32 (2006) and SB 32 (2016), the Legislature has codified some of the ambitious GHG reduction targets included within certain high-profile Executive Orders issued by the last two Governors. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger’s 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code Section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Brown issued Executive Order, B-30-15, which created and established a “new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below

1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050." SB 32 codified this target.

In 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter." The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

Notably, the Legislature has not yet set a 2045 or 2050 target in the manner done for 2020 and 2030 through AB 32 and SB 32, though references to a 2050 target can be found in statutes outside the Health and Safety Code. Senate Bill 350 (SB 350) (Stats. 2015, ch. 547) added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that "[t]he Legislature finds and declares [that] … [r]educing emissions of [GHGs] to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification." Furthermore, Section 740.12(b) now states that the California Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must "direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, … and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050."

ASSEMBLY BILL 1279

Assembly Bill 1279, passed in 2022, declares the State's objective to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative greenhouse gas emissions thereafter. This is in addition to, and does not replace or supersede, Statewide greenhouse gas emissions reduction targets.

Statute Setting Target for the Use of Renewable Energy for the Generation of Electricity

CALIFORNIA RENEWABLES PORTFOLIO STANDARD

In 2002, the Legislature enacted Senate Bill 1078 (Stats. 2002, ch. 516), which established the Renewables Portfolio Standard program, requiring retail sellers of electricity, including electrical corporations, community choice aggregators, and electric service providers, to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources such as wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. (See Pub. Utilities Code, Section 399.11 et seq. [subsequently amended].) The legislation set a target by which 20 percent of the State's electricity would be generated by renewable sources. (Pub. Utility Code, Section 399.11, subd. (a) [subsequently amended].) As described in the Legislative Counsel's Digest, Senate Bill 1078 required "[e]ach electrical corporation … to increase its total procurement of eligible renewable energy resources by at least one percent per year so that 20 percent of its retail sales are procured from eligible renewable energy resources. If an electrical corporation fails to procure sufficient eligible renewable energy resources in a given year to meet an annual target, the electrical corporation would be required to procure additional eligible renewable resources in subsequent years to compensate for the shortfall, if funds are made available as described. An electrical corporation with at least 20 percent of retail sales procured from eligible renewable energy resources in any year would not be required to increase its procurement in the following year."

In 2006, the Legislature enacted Senate Bill 107 (Stats. 2006, ch. 464), which modified the Renewables Portfolio Standard to require that at least 20 percent of electricity retail sales be served by renewable energy resources by year 2010. (Pub. Utility Code, Section 399.11, subd (a) [subsequently amended].)

Senate Bill X1-2 (Stats. 2011, 1st Ex. Sess., ch. 1) set even more aggressive statutory targets for renewable electricity, culminating in the requirement that 33 percent of the State's electricity come from renewables by 2020. This legislation applies to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet renewable energy goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020. (See Pub. Utility Code, Section 399.11 et seq. [subsequently amended].)

SB 350, discussed above, increases the Renewable Portfolio Standard to require 50 percent of electricity generated to be from renewables by 2030. (Pub. Utility Code, Section 399.11, subd (a); see also Section 399.30, subd. (c)(2).) Of equal significance, Senate Bill 350 also embodies a policy encouraging a substantial increase in the use of electric vehicles. As noted earlier, Section 740.12(b) of the Public Utilities Code now states that the PUC, in consultation with CARB and the CEC, must "direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, … and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050."

Executive Order, B-16-12, issued in 2012, embodied a similar vision of a future in which zero-emission vehicles (ZEV) will play a big part in helping the State meet its GHG reduction targets. Executive Order B-16-12 directed State government to accelerate the market for in California through fleet replacement and electric vehicle infrastructure. The Executive Order set the following targets:

- By 2015, all major cities in California will have adequate infrastructure and be "ZEV ready";
- By 2020, the State will have established adequate infrastructure to support 1 million ZEVs in California;
- By 2025, there will be 1.5 million ZEVs on the road in California; and
- By 2050, virtually all personal transportation in the State will be based on ZEVs, and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

In 2018, Senate Bill 100 (Stats. 2018, ch. 312) revised the above-described deadlines and targets so that the State will have to achieve a 50% renewable resources target by December 31, 2026 (instead of by 2030) and achieve a 60% target by December 31, 2030. The legislation also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% of electricity procured to serve all State agencies by December 31, 2045.

In summary, California has set a statutory goal of requiring that, by the 2030, 60 percent of the electricity generated in California should be from renewable sources, with increased generation capacity intended to sufficiently allow the mass conversion of the statewide vehicle fleet from petroleum-fueled vehicles to electrical vehicles and/or other ZEVs. By 2045, all electricity must come from renewable resources and other carbon-free resources. Former Governor Brown had an even more ambitious goal for the State of achieving carbon neutrality as soon as possible and by no later than 2045. The Legislature is thus looking to California drivers to buy electric cars, powered by green energy, to help the State meet its aggressive statutory goal, created by SB 32, of reducing statewide GHG emissions by 2030 to 40 percent below 1990 levels. Another key prong to this strategy is to make petroleum-based fuels less carbon-intensive. A number of statutes in recent years have addressed that strategy. These are discussed immediately below.

Statutes and CARB Regulations Addressing the Carbon Intensity of Petroleum-based Transportation Fuels

ASSEMBLY BILL 1493, PAVLEY CLEAN CARS STANDARDS

In 2002, the Legislature enacted Assembly Bill 1493 (“Pavley Bill”) (Stats. 2002, ch. 200), which directed the CARB to develop and adopt regulations that achieve the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks beginning with model year 2009. (See Health and Safety Code Section 43018.5.) In September 2004, pursuant to this directive, CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created what are commonly known as the “Pavley standards.” In September 2009, CARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created are what are commonly known as the “Pavley II standards.” (See California Code of Regulations, Title 13, Sections 1900, 1961, and 1961.1 et seq.)

In 2012, CARB adopted an Advanced Clean Cars (ACC) program aimed at reducing both smog-causing pollutants and GHG emissions for vehicles model years 2017-2025. This historic program, developed in coordination with the USEPA and NHTSA, combined the control of smog-causing (criteria) pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. The regulations focus on substantially increasing the number of plug-in hybrid cars and zero-emission vehicles in the vehicle fleet and on making fuels such as electricity and hydrogen readily available for these vehicle technologies. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. (See California Code of Regulations, Title 13, Sections 1900, 1961, 1961.1, 1961.2, 1961.3, 1965, 1968.2, 1968.5, 1976, 1978, 2037, 2038, 2062, 2112, 2139, 2140, 2145, 2147, 2235, and 2317 et seq.)

It is expected that the Pavley standards will reduce GHG emissions from California passenger vehicles by about 34 percent below 2016 levels by 2025, all while improving fuel efficiency and reducing motorists' costs.

Cap and Trade Program

In 2011, CARB adopted the final Cap-and-Trade Program for California (See California Code of Regulations, Title 17, Sections 95801-96022.) The California cap-and-trade program creates a market-based system with an overall emissions limit for affected sectors. The program is intended to regulate more than 85 percent of California's emissions and staggers compliance requirements according to the following schedule: (1) electricity generation and large industrial sources (2012); (2) fuel combustion and transportation (2015).

According to 2012 CARB guidance, "[t]he Cap-and-Trade Program will reduce GHG emissions from major sources (covered entities) by setting a firm cap on statewide GHG emissions while employing market mechanisms to cost-effectively achieve the emission-reduction goals. The statewide cap for GHG emissions from major sources, which is measured in metric tons of carbon dioxide equivalent (MTCO2e), will commence in 2013 and decline over time, achieving GHG emission reductions throughout the program's duration. Each covered entity will be required to surrender one permit to emit (the majority of which will be allowances, entities are also allowed to use a limited number of CARB offset credits) for each ton of GHG emissions they emit. Some covered entities will be allocated some allowances and will be able to buy additional allowances at auction, purchase allowances from others, or purchase offset credits."

The guidance goes on to say that "[s]tarting in 2012, major GHG-emitting sources, such as electricity generation (including imports), and large stationary sources (e.g., refineries, cement production facilities, oil and gas production facilities, glass manufacturing facilities, and food processing plants) that emit more than 25,000 $MTCO_2e$ per year will have to comply with the Cap-and-Trade Program. The program expands in 2015 to include fuel distributors (natural gas and propane fuel providers and transportation fuel providers) to address emissions from transportation fuels, and from combustion of other fossil fuels not directly covered at large sources in the program's initial phase." In early April 2017, the Third District Court of Appeal upheld the lawfulness of the Cap-and-Trade program as a "fee" rather than a "tax." (See *California Chamber of Commerce et al. v. State Air Resources Board et al.* (2017) 10 Cal.App.5th 604.)

AB 398 (Stats. 2017, ch. 135) extended the life of the existing Cap and Trade Program through December 2030.

Statute Intended to Facilitate Land Use Planning Consistent with Statewide Climate Objectives

CALIFORNIA SENATE BILL 375 (SUSTAINABLE COMMUNITIES STRATEGY)

This 2008 legislation built on AB 32 by setting forth a mechanism for coordinating land use and transportation on a regional level for the purpose of reducing GHGs. The focus is to reduce miles traveled by passenger vehicles and light trucks. CARB is required to set GHG reduction targets for each metropolitan region for 2020 and 2035. Each of California's metropolitan planning organizations then prepares a sustainable communities strategy that demonstrates how the region will meet its GHG reduction target through integrated land use, housing, and transportation planning. Once adopted by the metropolitan planning organizations, the sustainable communities strategy is to be incorporated into that region's federally enforceable regional transportation plan. If a metropolitan planning organization is unable to meet the targets through the sustainable communities strategy, then an alternative planning strategy must be developed, which demonstrates how targets could be achieved, even if meeting the targets is deemed to be infeasible.

Climate Change Scoping Plans

AB 32 SCOPING PLAN

In 2008, CARB adopted the Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) CO_2e, or approximately 22 percent from the State's projected 2020 emission level of 545 MMT of CO_2e under a business-as-usual scenario. This is a reduction of 47 MMT CO_2e, or almost 10 percent, from 2008 emissions. CARB's original 2020 projection was 596 MMT CO_2e, but this revised 2020 projection takes into account the economic downturn that occurred in 2008. The Scoping Plan also includes CARB recommended GHG reductions for each emissions sector of the State GHG inventory. CARB estimates the largest reductions in GHG emissions would be by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (26.1 MMT CO_2e);
- the Low Carbon Fuel Standard (15.0 MMT CO_2e);
- energy efficiency measures in buildings and appliances (11.9 MMT CO_2e); and
- renewable portfolio and electricity standards for electricity production (23.4 MMT CO_2e).

In 2011, CARB adopted a Cap-and-Trade regulation. The Cap-and-Trade program covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The Cap-and-Trade program includes an enforceable emissions cap that will decline over time. The State distributes allowances, which are tradable permits, equal to the emissions allowed under the cap. Sources under the cap are required to surrender allowances and offsets equal to their emissions at the end of each compliance period. Enforceable compliance obligations started in 2013. The program applies to facilities that comprise 85 percent of the State's GHG emissions.

With regard to land use planning, the Scoping Plan expects that reductions of approximately 3.0 MMT CO_2e will be achieved through implementation of Senate Bill (SB) 375, which is discussed further below.

2014 SCOPING PLAN UPDATE

CARB revised and reapproved the Scoping Plan and prepared the First Update to the 2008 Scoping Plan in 2014 (2014 Scoping Plan). The 2014 Scoping Plan contains the main strategies California will implement to achieve a reduction of 80 MMT of CO_2e emissions, or approximately 16 percent, from the State's projected 2020 emission level of 507 MMT of CO_2e under the business-as-usual scenario defined in the 2014 Scoping Plan. The 2014 Scoping Plan also includes a breakdown of the amount of GHG reductions CARB recommends for each emissions sector of the State's GHG inventory. Several strategies to reduce GHG emissions are included: the Low Carbon Fuel Standard, the Pavley Rule, the ACC program, the Renewable Portfolio Standard, and the Sustainable Communities Strategy.

2017 SB 32 SCOPING PLAN

With the passage of SB 32, the Legislature also passed companion legislation AB 197, which provides additional direction for developing the scoping plan. In response, CARB adopted an updated Scoping Plan in December 2017. The document reflects the 2030 target of reducing statewide GHG emissions by 40 percent below 1990 levels codified by SB 32. The GHG reduction strategies in the plan that CARB will implement to meet the target include:

- SB 350 - achieve 50 percent Renewables Portfolio Standard (RPS) by 2030 and doubling of energy efficiency savings by 2030;
- Low Carbon Fuel Standard - increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020);
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario) - maintaining existing GHG standards for light- and heavy-duty vehicles, put 4.2 million zero-emission vehicles on the roads, and increase zero-emission buses, delivery and other trucks;
- Sustainable Freight Action Plan - improve freight system efficiency, maximize use of near-zero emission vehicles and equipment powered by renewable energy, and deploy over 100,000 zero-emission trucks and equipment by 2030;
- Short-Lived Climate Pollutant Reduction Strategy - reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and reduce emissions of black carbon 50 percent below 2013 levels by 2030;
- SB 375 Sustainable Communities Strategies - increased stringency of 2035 targets;
- Post-2020 Cap-and-Trade Program - declining caps, continued linkage with Québec, and linkage to Ontario, Canada;
- 20 percent reduction in GHG emissions from the refinery sector; and
- By 2018, develop an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

2022 SCOPING PLAN FOR ACHIEVING CARBON NEUTRALITY

For the first time, the 2022 Scoping Plan includes modeling and quantification of GHG emissions and carbon sequestration in natural and working lands (NWL). To date, the focus has been only on reducing the emissions of GHGs from our transportation, energy, and industrial sectors. The state's 2020 and 2030 GHG reductions targets only include these sources, as they are the primary drivers of climate change and disproportionate harmful air pollution in our vulnerable communities. The 2022 Scoping Plan, through the lens of carbon neutrality, expands the scope to more meaningfully consider how our NWL contribute to our long-term climate goals.

Four scenarios were extensively modeled to develop this Scoping Plan, with the objective of informing the most viable path to remain on track to achieve our 2030 GHG reduction target: a reduction in anthropogenic emissions by 85% below 1990 levels and carbon neutrality by 2045. All four have their merits and are informed by stakeholder input. The scenario ultimately chosen as the basis of the 2022 Scoping Plan is the alternative that most closely aligns with existing statute and Executive Orders. It was selected because it best achieves the balance of cost-effectiveness, health benefits, and technological feasibility.

Building Code Requirements Intended to Reduce GHG Emissions

CALIFORNIA ENERGY CODE

The California Energy Code (California Code of Regulations, Title 24, Part 6), which is incorporated into the Building Energy Efficiency Standards, was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Although these standards were not originally intended to reduce GHG emissions, increased energy efficiency results in decreased GHG emissions because energy efficient buildings require less electricity and thus less consumption of fossil fuels, which emit GHGs. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The current 2019 Building Energy Efficiency Standards, commonly referred to as the "Title 24" standards, include changes from the previous standards that were adopted, to do the following:

- Provide California with an adequate, reasonably priced, and environmentally sound supply of energy.
- Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its GHG emissions to 1990 levels by 2020.
- Pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.
- Act on the California Energy Commission's Integrated Energy Policy Report, which finds that standards are the most cost-effective means to achieve energy efficiency, states an expectation that the Building Energy Efficiency Standards will continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Building Energy Efficiency Standards in reducing energy related to meeting California's water needs and in reducing GHG emissions.

- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of State building codes.
- Meet Executive Order S-20-04, the Green Building Initiative, to improve the energy efficiency of non-residential buildings through aggressive standards.

The most recent Title 24 standards are the 2022 Title 24 standards. The 2022 Building Energy Efficiency Standards improve upon the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Buildings permitted on or after January 1, 2023, must comply with the 2022 Standards. The California Energy Commission updates the standards every three years.

CALIFORNIA GREEN BUILDING STANDARDS CODE

The purpose of the California Green Building Standards Code (California Code of Regulations Title 24, Part 11) is to improve public health and safety and to promote the general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: 1) planning and design; 2) energy efficiency; 3) water efficiency and conservation; 4) material conservation and resource efficiency; and 5) environmental quality. The California Green Building Standards, which became effective on January 1, 2011, instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial, low-rise residential uses, and State-owned buildings, as well as schools and hospitals. The mandatory standards require the following:

- 20 percent mandatory reduction in indoor water use relative to baseline levels;
- 50 percent construction/demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency; and
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particle boards.

The voluntary standards require the following:

- **Tier I:** 15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, and cool/solar reflective roof.
- **Tier II:** 30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, and cool/solar reflective roof.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to greenhouse gases. General Plan goals and policies applicable to the Project are identified below:

Policies: Circulation Element

- Goal 1: A context-sensitive and “complete streets” transportation network that prioritizes effective connectivity and accommodates a comprehensive range of mobility needs.
- Policy 1.1: Multimodal network. The city shall plan, design, operate, and maintain the transportation network to promote safe and convenient travel for all users: pedestrians, bicyclists, transit riders, freight, and motorists.
- Policy 1.2: Transportation decisions. Decisions should balance the comfort, convenience, and safety of pedestrians, bicyclists, and motorists.
- Policy 1.3: Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.
- Policy 1.4: Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles travelled and effectively utilize the existing transportation infrastructure.
- Policy 1.5: Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).
- Policy 1.6: Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.
- Policy 1.7: Narrow streets. The City may permit curb-to-curb dimensions that are narrower than current standards on local streets to promote pedestrian and bicycle connectivity and enhance safety.
- Policy 1.8: Network completion. New development shall complete the extension of stub streets planned to connect to adjacent streets, where appropriate.
- Goal 4: A bicycle and transit system that serves as a functional alternative to commuting by car.
- Policy 4.1: Bike and transit backbone. The bicycle and transit system should connect Shaw Avenue, Old Town, the Medical Center/R&T Park, and the three Urban Centers.
- Policy 4.2: Priority for new bicycle facilities. Prioritize investments in the backbone system over other bicycle improvements.
- Policy 4.3: Freeway crossings. Require separate bicycle and pedestrian crossings for new freeway extensions and encourage separate crossings where Class I facilities are planned to cross existing freeways.
- Policy 4.4: Bicycles and transit. Coordinate with transit agencies to integrate bicycle access and storage into transit vehicles, bus stops, and activity centers.
- Policy 4.5: Transit stops. Improve and maintain safe, clean, comfortable, well-lit, and rider-

friendly transit stops that are well marked and visible to motorists.

- Policy 4.6: Transit priority corridors. Prioritize investments for, and transit services and facilities along the transit priority corridors.
- Policy 4.7: Bus rapid transit. Plan for bus rapid transit and transit-only lanes on transit priority corridors as future ridership levels increase.
- Goal 5: A complete system of trails and pathways accessible to all residents.
- Policy 5.1: Complete street amenities. Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety, consistent with the Bicycle Transportation Master Plan and other master plans.
- Policy 5.2: Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
- Policy 5.3: Pathways. Encourage pathways and other pedestrian amenities in Urban Centers and new development 10 acres or larger.
- Policy 5.4: Homeowner associations. The city may require homeowner associations to maintain pathways and other bicycle and pedestrian facilities within the homeowner association area.
- Policy 5.5: Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers and to provide general pedestrian connectivity throughout the city.
- Goal 6: Safe and efficient goods movement with minimal impacts on local roads and neighborhoods.
- Policy 6.1: Truck routes. Plan and designate truck routes that minimize truck traffic through or near residential areas.
- Policy 6.2: Land use. Place industrial and warehousing businesses near freeways and truck routes to minimize truck traffic through or near residential areas.

Policies: Air Quality Element

- Goal 1: A local environment that is protected from air pollution and emissions.
- Policy 1.1: Land use and transportation. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.
- Policy 1.2: Sensitive Land Uses. Prohibit, without sufficient mitigation, the future siting of sensitive land uses within the distances of emission sources as defined by the California Air Resources Board.
- Policy 1.3: Construction activities. Encourage the use of best management practices during construction activities to reduce emissions of criteria pollutants as outlined by the San Joaquin Valley Air Pollution Control District (SJVAPCD).
- Policy 1.4: City buildings. Require that municipal buildings be designed to exceed energy and water conservation and greenhouse gas reduction standards set in the California Building Code.
- Policy 1.5: Fleet operations. Purchase low- or zero-emission vehicles for the city's fleet

where feasible. Use clean fuel sources for city-owned mass transit vehicles, automobiles, trucks, and heavy equipment where feasible.

- Policy 1.6: Alternative fuel infrastructure. Encourage public and private activity and employment centers to incorporate electric charging and alternative fuel stations.
- Policy 1.7: Employment measures. Encourage employers to provide programs, scheduling options, incentives, and information to reduce vehicle miles traveled by employees.
- Policy 1.8: Trees. Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
- Goal 2: A region with healthy air quality and lower greenhouse gas emissions.
- Policy 2.1: Regional coordination. Support regional efforts to reduce air pollution (criteria air pollutants and greenhouse gas emissions) and collaborate with other agencies to improve air quality at the emission source and reduce vehicle miles traveled.
- Policy 2.2: Cross-jurisdictional issues. Collaborate with regional agencies and surrounding jurisdictions to address cross-jurisdictional transportation and air quality issues.
- Policy 2.3: Valleywide programs. Establish parallel air quality programs and implementation measures with other communities across the San Joaquin Valley.
- Policy 2.4: Public participation. Encourage participation of local citizens, the business community, and interested groups and individuals in air quality planning and implementation.
- Policy 2.5: Public education. Promote programs that educate the public about regional air quality issues and solutions.
- Policy 2.6: Innovative mitigation. Encourage innovative mitigation measures to reduce air quality impacts by coordinating with the SJVAPCD, project applicants, and other interested parties.

3.7.3 IMPACTS AND MITIGATION MEASURES

GREENHOUSE GAS EMISSIONS THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the proposed Project would do any of the following:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Based on these standards and significance thresholds and criteria, the Project’s effects have been categorized as either “no impact,” a “less than significant impact,” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant impact through the application of mitigation, it is categorized as a “significant unavoidable impact.”

ANALYSIS APPROACH AND METHODOLOGY

Cumulative impacts are the collective impacts of one or more past, present, and future projects that, when combined, result in adverse changes to the environment. In determining the significance of a project's contribution to anticipated adverse future conditions, a lead agency should generally undertake a two-step analysis. The first question is whether the *combined* effects from *both* the proposed Project *and* other projects would be cumulatively significant. If the agency answers this inquiry in the affirmative, the second question is whether "the project's *incremental* effects are cumulatively considerable" and thus significant in and of themselves. The cumulative global project list for this issue (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe. No project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate, but rather effects are shown to be caused by the cumulative emissions from across the globe. However, legislation and executive orders on the subject of climate change in California have established a Statewide context and process for developing an enforceable Statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant.

The baseline against which to compare potential impacts of the Project includes the natural and anthropogenic drivers of global climate change, including worldwide GHG emissions from human activities that have increased by about 90 percent since 1970.[1] As a result, the study area for climate change and the analysis of GHG emissions is broad. However, the study area is also limited by CEQA Guidelines Section 15064.4(b), which directs lead agencies to consider an "indirect physical change" only if that change is a reasonably foreseeable impact, which may be caused by the Project.

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project, including the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Section 15064.4 does not establish a threshold of significance. CEQA Guidelines Section 15064.7 provides lead agencies the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies or suggested by other experts, as long as any threshold chosen is supported by substantial evidence. The City of Clovis has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reducing GHG emissions. Similarly, the SJVACPD, the Governor's Office of Planning and Research, CARB, California Air Pollution Control Officers Association

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[1] U.S. EPA, Global Greenhouse Gas Emissions Data, https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed July 14, 2022.

(CAPCOA), or any other State or applicable regional agency has yet to adopt a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Therefore, the significance of the Project's potential impacts with regard to GHG emissions and climate change will be assessed solely on its consistency with plans and policies adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change and the Project's ability to incorporate sustainable features and strategies in its design to reduce GHG emissions. The analysis has also quantified the Project's GHG emissions for informational purposes. The methodology for quantifying GHG emissions is the same as the methodology for quantifying criteria pollutants and is discussed in detail in Section 5.3, Air Quality, and in Appendix C, of this Draft EIR.

THRESHOLDS OF SIGNIFICANCE (ENERGY CONSERVATION)

Consistent with Appendices F and G of the CEQA Guidelines, energy-related impacts are considered significant if implementation of the proposed Project would do the following:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation;
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In order to determine whether or not the proposed Project would result in a significant impact on energy use, this EIR includes an analysis of proposed Project energy use, as provided under *Impacts and Mitigation Measures* below.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Project implementation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (Less than Significant)

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the proposed Project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO_2 and other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O), from mobile sources and utility usage.

The proposed Project's short-term construction-related and long-term operational GHG emissions were estimated using the California Emission Estimator Model (CalEEMod)^{TM}. CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., MT CO_2e), based on the global warming potential of the individual pollutants.

SHORT-TERM CONSTRUCTION GHG EMISSIONS

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are summarized in Table 3.7-1. These emissions include all worker vehicle, vendor vehicle, hauler vehicle, and off-road construction vehicle GHG emissions. For the purposes of this analysis, based on input from the Project Proponents, the proposed Project is assumed to commence construction in 2023 and finish in 2028. It should be noted that this schedule is an approximation and may change over time. A regularized construction schedule was utilized for modelling purposes for the sake of simplicity.

TABLE 3.7-1: MAXIMUM CONSTRUCTION GHG EMISSIONS (MITIGATED AVERAGE MT CO_2E/YEAR)

YEAR	*BIO- CO_2*	*NON-BIO- CO_2*	*TOTAL CO_2*	*CH_4*	*N_2O*	*CO_2E*
2028	0	762.7	762.7	0.1	<0.1	776.8

SOURCE: CALEEMOD (SEE APPENDIX C FOR DETAIL)

As presented in the table above, short-term construction emissions of GHGs are estimated at a maximum of approximately 776.8 MT CO_2e per year.

OPERATIONAL GHG EMISSIONS

The operational GHG emissions estimate for the proposed Project includes on-site area, energy, mobile, waste, and water emissions generated by the Project during its operation. Estimated GHG emissions associated with the proposed Project are summarized in Table 3.7-2, below. It should be noted that CalEEMod does not account for the Governor Newsom's Zero-Emission by 2035 Executive Order (N-79-20), which requires that all new cars and passenger trucks sold in California be zero-emission vehicles by 2035. Additionally, the CalEEMod modeling conducted does not account for the incorporation of additional Renewables Portfolio Standard attainment beyond CalEEMod defaults, incorporation of AB 341, and incorporation of Title 24 requirements for the EV charging stations. This is anticipated to substantially reduce the operational emissions associated with passenger vehicles (i.e. mobile emissions), energy emissions, and waste emissions, over time, including prior the 2035 final implementation year. Therefore, the operational emissions results are likely an overestimate for mobile, energy, and waste emissions. As shown in the following table, as conservatively modeled, the annual GHG emissions associated with the proposed Project would be approximately 5,071 MT CO_2e.

TABLE 3.7-2: OPERATIONAL GHG EMISSIONS AT BUILDOUT (METRIC TONS/YEAR)

	BIO- CO_2	*NON-BIO- CO_2*	*TOTAL CO_2*	*CH_4*	*N_2O*	*CO_2E*
Area	0	7.3	7.3	<0.1	0	7.5
Energy	0	1,222.4	1,222.4	0.1	<0.1	1,231.4
Mobile	0	3,371.2	3,371.2	0.2	0.2	3,435.4
Waste	126.5	0	126.5	7.5	0	313.4
Water	12.5	29.4	42.0	1.3	<0.1	83.4
Total	**139.0**	**4,630.4**	**4,769.4**	**9.1**	**0.3**	**5,071.1**

SOURCE: CALEEMOD (SEE APPENDIX C FOR DETAIL)

Pacific Gas & Electric (PG&E), the electrical service provider for the Project site, will need to continue to annually increase renewable electricity through 2045 in order to meet the carbon-free electricity target set by SB 100. The Project would need to comply with AB 341, which set a target of reducing landfill waste by 75 percent by 2020, and the Title 24 standards, which require incorporation of rooftop PV systems and solar panels, as well as electric vehicle charging capabilities. The potential reductions in GHG emission associated with this requirement were not incorporated in the reductions, as the amount would be confirmed at a later stage; therefore, the operational emissions shown in Table 3.7-2 are conservative.

PROJECT CONSISTENCY WITH APPLICABLE PLANS

Several plans and policies have been adopted to reduce GHG emissions in the San Joaquin Valley region. The Project's consistency with the State's 2022 Scoping Plan, as well as the Fresno Council of Governments' (Fresno COG's) 2022 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), and the City of Clovis General Plan are discussed below.

The CARB's 2022 Scoping Plan

The 2022 Scoping Plan strategies that are applicable to the Project include reducing fossil fuel use, energy demand, and vehicle miles traveled (VMT); maximizing recycling and diversion from landfills; and increasing water conservation. The Project would be consistent with these goals through Project design, which includes complying with the latest requirements of the CALGreen Code and Building Energy Efficiency Standards, providing EV parking spaces and charging equipment, and complying with the AB 341 waste diversion goal of 75 percent. In addition, the Project would receive electricity from PG&E, which is required to reduce GHG emissions by increasing procurement from eligible renewable energy by set target years. Moreover, the Project would reduce VMT and energy demand, thereby reducing GHG emissions, by constructing residences in a time of housing shortage in California, which would provide housing opportunities to those who already live near the Project Site or in the San Joaquin Valley, providing new housing opportunities near multiple public transit options; providing extensive pedestrian connectivity to encourage alternative modes of transportation; and incorporating a number of sustainable design features, including, but not limited, to installation of energy-efficient light fixtures, high-efficiency plumbing fixtures, EV parking spaces, and rooftop PV systems and solar panels, consistent with the requirements of the latest (2022) version of the Title 24 Energy Code, or better. Therefore, the Project would be consistent with the 2022 Scoping Plan.

Fresno COG 2022 RTP/SCS

The Fresno COG's 2022 RTP/SCS includes five goals with corresponding policies and actions for improved mobility, communities accessible by sustainable transportation options, a multi-faceted multimodal transportation network, a transportation network that supports a sustainable and vibrant economy, and a region that embraces clean transportation, technology, and innovation. These strategies include similar measures to the 2022 Scoping Plan, such as supporting lower-carbon and sustainable transportation options. The Project's consistency with the applicable 2022 RTP/SCS strategies is discussed in Table 3.7-3, below. As shown therein, the Project would be consistent with the GHG emissions reduction strategies contained in the Fresno COG's 2022 RTP/SCS.

TABLE 3.7-3: PROJECT CONSISTENCY WITH THE FRESNO COG'S 2022 RTP/SCS

GOAL	*PROJECT CONSISTENCY*
Goal 1: Improved mobility and accessibility for all	No Conflict. The Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. The Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas. Specifically, the proposed Project includes open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south. These park and trail connections would provide pedestrian and bicycle connections to neighboring communities.
Goal 2: Vibrant communities that are accessible by sustainable transportation options	No Conflict. As stated above, the Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. In addition, as previously stated, The Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas, promoting sustainable forms of transportation such as walking and cycling, as well as enhancing the vibrancy of the Project and neighboring communities.
Goal 3: A safe, well-maintained, efficient, and climate-resilient multimodal transportation network	No Conflict. As stated above, the Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. In addition, as previously stated, the Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas, promoting sustainable forms of transportation such as walking and cycling. Furthermore, the Project would be developed using the latest State and local requirements relating to safety and security. Development of the Project site would include other uses to support and compliment the proposed residential development include public utility infrastructure, public and private roadways, curb/gutters/sidewalks, other pedestrian facilities, private parking, street lighting, and street signage, which would enhance the safety and security of the site and it surroundings, by connecting to existing development, thus ensuring a safe, well-maintained, efficient, and climate-resilient multimodal transportation network.
Goal 4: A transportation	No Conflict. The State of California is currently in a housing crisis. The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing

network that supports a sustainable and vibrant economy	objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Project would bring new housing to the City of Clovis and the broader region, by establishing a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA), and by providing infrastructure that meets City standards and is integrated with existing and planned facilities and connections. Such infrastructure includes the improvements to the transportation network described herein. For example, as stated above, the Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. In addition, as previously stated, the Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas, promoting sustainable forms of transportation such as walking and cycling, supporting the sustainability and vibrancy of the local economy.
Goal 5: A region embracing clean transportation, technology, and innovation	No Conflict. As stated above, the Project would support the use of zero-emission and low-emission vehicles, by implementing EV-ready charging spaces, consistent with the requirements of the 2022 Title 24 Building Energy Efficiency Standards. In addition, although this Project is not a transportation improvement project, the Project is located near existing transit routes. In addition, as previously stated, the Project would also include extensive park and trail connections, both within the Project site as well as to neighboring areas, promoting sustainable forms of transportation such as walking and cycling. Therefore, the Project would promote clean transportation, technology, and innovation.

SOURCE: FRESNO COG 2022 RTP/SCS

CITY OF CLOVIS GENERAL PLAN

The City's General Plan includes the overarching goal of a comprehensive and well-maintained multimodal circulation system that provides for the safe and efficient movement of people and goods. For example, Goal 1 of the Circulation Element is to develop a context-sensitive and "complete streets" transportation network that prioritizes effective connectivity and accommodates a comprehensive range of mobility needs. The Project would create a multimodal circulation system, including via road, bicycle, and pedestrian pathways, that would provide for a safe and efficient connection to the surrounding transportation network, consistent with a "complete streets" approach to development. In addition, the proposed Project includes open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south. These park and trail connections would improve the quality of life for nearby residents.

Separately, the Air Quality Element of the City's General Plan calls for improved air quality through effective land use and transportation planning, regional cooperation, and a reduction in emissions. For example, Goal 1 of the Air Quality Element directs the City to develop a local environment that is protected for air pollution and emissions; Policy 1.1 (Land Use and transportation) calls for the City to reduce GHG emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems. Furthermore, Policy 3.5 (Energy and water conservation) of the Open Space and Conservation Element encourages new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code. In line with this overarching goal and these policies, the Project would be required to comply with the applicable requirements of the CALGreen Code and California Energy Code, the City's Green Building Standards Code, and the City's Energy Code. The Project would be constructed in compliance with the 2022 Title 24 (CALGreen and Energy Code) standards and would be located within walking and biking distance to nearby transit options. In addition, the Project would include a variety of park and open space, which would connect to adjacent trails located in the planned residential community to the west, as well as the trail at Dog Creek and Old Town Clovis to the south, which would contribute to vehicle trip reductions. Therefore, the Project would be consistent with the applicable goals, objectives, and policies in the City's General Plan.

CONCLUSION

In summary, the Project, including the off-site improvements, would be consistent with the plans, policies, regulations, and GHG emissions reduction actions/strategies outlined in the 2022 Scoping Plan Update, the Fresno COG's 2022 RTP/SCS, and the Clovis General Plan. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions as described above would not result in a significant impact on the environment. Therefore, Project-related impacts related to GHG emissions would be **less than significant** relative to this topic.

Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources. (Less than Significant)

The CEQA Guidelines requires consideration of the potentially significant energy implications of a Project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100, subdivision [b][3]). According to the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed Project would be considered "wasteful, inefficient, and unnecessary" if it were to violate State and federal energy standards and/or result in significant adverse impacts related to Project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The amount of energy used by the proposed Project during operation would directly correlate primarily with the amount of energy used by Project buildings and outdoor lighting, and the generation of vehicle trips associated with the proposed Project. Other Project energy uses include fuel used by vehicle trips generated during Project construction and operation, fuel used by off-road construction vehicles during construction activities, and fuel used by Project maintenance activities during Project operation. The following discussion provides a detailed calculation of energy usage expected for the proposed Project, as provided by applicable modelling software (i.e. CalEEMod and the CARB EMFAC2021). Additional assumptions and calculations are provided within Appendix C of this EIR.

ELECTRICITY

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, “Energy” is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the “Energy” category during Project operation is 1,231 CO_2e.

ON-ROAD VEHICLES (OPERATION)

The proposed Project would generate vehicle trips during its operational phase. A description of Project operational on-road mobile energy usage is provided below.

According to the Transportation Impact Assessment prepared for the proposed Project (LSA, 2023), and as described in more detail in Section 3.13: Transportation and Circulation of this EIR, the Project would increase automobile VMT by approximately 5,705 new daily trips. In order to calculate operational on-road vehicle energy usage and emissions, De Novo Planning Group used fleet mix data from the CalEEMod output for the proposed Project, Year 2028 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2021, weighted average MPG factors for gasoline and diesel were derived. Therefore, upon full buildout, the proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

ON-ROAD VEHICLES (CONSTRUCTION)

The proposed Project would also generate on-road vehicle trips during Project construction (from construction workers and vendors travelling to and from the Project site). De Novo Planning Group estimated the vehicle fuel consumed during these trips based the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and Year 2023 gasoline and diesel MPG factors provided by EMFAC2021 (year 2023 factors were used to represent a conservative analysis, as the energy efficiency of construction activities is anticipated to improve over time). For the sake of simplicity, it was assumed that all construction worker light duty passenger cars and truck trips use gasoline as a fuel source, and all medium and heavy-duty vendor trucks use diesel fuel. Table 3.7-4, below, describes gasoline and diesel fuel consumed during each construction phase (in aggregate). As shown, the vast majority of on-road mobile vehicle fuel used during the construction of the proposed Project would occur during the building construction phase. There is no feasible mitigation available that would reduce on-road mobile vehicle GHG emissions generated by the Project construction activities (requiring the use of electric construction vehicles was deemed infeasible, given price and availability concerns). See Appendix C of this EIR for a detailed accounting of construction on-road vehicle fuel usage estimates.

TABLE 3.7-4: ON-ROAD MOBILE FUEL GENERATED BY PROJECT CONSTRUCTION ACTIVITIES – BY PHASE

CONSTRUCTION PHASE	*# OF DAYS*	*TOTAL DAILY WORKER TRIPS(A)*	*TOTAL DAILY VENDOR TRIPS(A)*	*TOTAL HAULER WORKER TRIPS(A)*	*TOTAL GALLONS OF GASOLINE FUEL(B)*	*TOTAL GALLONS OF DIESEL FUEL(B)*
Site Preparation	60	18	0	0	**443**	**0**
Grading	155	20	0	0	**1,272**	**0**
Building Construction	960	297	96	0	**5,852**	**6,185**
Paving	110	15	0	0	**677**	**0**
Architectural Coatings	110	59	0	0	**133**	**0**
Total	**N/A**	**N/A**	**N/A**	**N/A**	**8,940**	**6,648**

NOTE: (A) PROVIDED BY CALEEMOD OUTPUT. (B)SEE APPENDIX C OF THIS EIR FOR FURTHER DETAIL

SOURCE: CALEEMOD; EMFAC2021.

OFF-ROAD VEHICLES (CONSTRUCTION)

Off-road construction vehicles would use diesel fuel during the construction phase of the proposed Project. A non-exhaustive list of off-road constructive vehicles expected to be used during the construction phase of the proposed Project includes: forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO_2 emissions expected to be generated by the proposed Project (as provided by the CalEEMod output), and standard conversion factors (as provided by the U.S. Energy Information Administration), the proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles. Detailed calculations are provided in Appendix C of this EIR.

CONCLUSION

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a **less than significant** impact.

HAZARDS AND HAZARDOUS MATERIALS 3.8

The purpose of this section is to disclose and analyze the potential impacts associated with hazards and hazardous materials related to the Project site and general vicinity, and to analyze the potential for exposure of people to hazards and hazardous materials as the Project is built and operated in the future. Information in this section is derived primarily from:

- *Phase I Environmental Site Assessment, Tract No. 6205 Property, Northeast corner of N. Sunnyside and E. Shepherd Avenues, Clovis, California 93619* (Krazan & Associates, Inc., 2019) (see Appendix G);
- *2014 Clovis General Plan* (City of Clovis, 2014);
- *2014 Clovis General Plan Draft Program Environmental Impact Report* (City of Clovis, 2014);
- *2000 Fresno County General Plan* (City of Clovis, 2000);
- *2018 Fresno County Zoning Ordinance* (City of Clovis, 2018);
- *City of Clovis Municipal Code, Title 9 – Development Code* (City of Clovis, 2022).

There were two comments received during the Notice of Preparation (NOP) comment period regarding hazards and hazardous materials from the California Department of Toxic Substances Control (DTSC) (May 18, 2022) and the County of Fresno Department of Public Works and Planning (June 2, 2022). All comments are included in Appendix A.

3.8.1 ENVIRONMENTAL SETTING

PHYSICAL SETTING

Project Location

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM).

Existing Site Uses

The Project site is approximately 155 acres and includes 39 Assessor parcels (APNs). The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

> Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
>
> Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Existing Surrounding Uses

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

Site Topography

The Project site is relatively flat and is approximately 385 feet above mean sea level.

HAZARDS ASSESSMENT

For the purposes of this EIR, "hazardous material" is defined as provided in California Health & Safety Code, Section 25501:

- Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

"Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment, if released into the workplace or the environment.

"Hazardous waste" is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in the California Health & Safety Code, Section 25517, and in the California Code of Regulations (CCR), Title 22, Section 66261.2:

- Hazardous wastes are wastes that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

CCR Title 22 categorizes hazardous waste into hazard classes according to specific characteristics of ignitibility, corrosivity, reactivity, or toxicity. Hazardous waste with any of these characteristics is also known as a Resource Conservation and Recovery Act (RCRA) waste.

Hazardous materials can be categorized as hazardous non-radioactive chemical materials, radioactive materials, toxic materials, and biohazardous materials. The previous definitions are adequate for non-radioactive hazardous chemicals. Radioactive and biohazardous materials are further defined as follows:

- Radioactive materials contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.
- Radioactive wastes are radioactive materials that are discarded (including wastes in storage) or abandoned.
- Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing mercury, lead). When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute groundwater.
- Biohazardous materials include materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, and viruses) that cause or significantly contribute to increased human mortality or organisms capable of being communicated by invading and multiplying in body tissues.
- Medical wastes include both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities.

There are a number of hazardous materials and hazardous wastes that could be found on any given property based on past uses. Some common examples include agrichemicals (chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as Mecoprop [MCPP], Dinoseb, chlordane, dichloro-diphenyltrichloroethane [DDT], and dichloro-diphenyl-dichloroethylene [DDE]), petroleum based products (oil, gasoline, diesel fuel), a variety of chemicals including paints, cleaners, and solvents, and asbestos-containing or lead-containing materials (e.g., paint, sealants, pipe solder).

Site Reconnaissance

As part of the Phase I Environmental Site Assessment (ESA) that was completed for the Project site (Krazan & Associates, Inc., 2019), a site reconnaissance, which included a visual observation of the Development Area and surrounding properties, was conducted by Ms. Michelle Phillips, Krazan's Environmental Assessor, on January 10, 2019. The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions, including hazardous substances and petroleum products, in connection with the property (including soils, surface waters, and groundwater). A discussion of visual observations is provided below. Refer to the Site Observations Map (Figure 3.8-1) for the locations of items discussed below.

- A rural residential dwelling[1] with the associated Development Area address of 5230 East Shepherd Avenue was observed within the southern portion of the Development Area. A domestic water well was observed adjacent to the west of the rural residential dwelling (See Photographs No. 11 – 17 in Appendix F).
- Adjacent to the north of the rural residential dwelling was a large warehouse[2] where pecans are dried, packed and shipped. The warehouse was observed to be a steel structure set upon a slab on grade foundation. Large cracks were observed in the concrete foundation. De minimis staining was also observed on the foundation. Inside the warehouse were observed multiple pallets of stacked and bagged product, a forklift, several empty pallets, at least three refrigerators, and a ladder. A small storage room and two restrooms were also observed in the warehouse. The storage room was observed to contain a generator, at least three boxes of Roundup® herbicide, and multiple bags of zinc sulfate fertilizer. A small shop area was observed in the northeastern portion of the warehouse and contained multiple various tools and two compressed gas cylinders. The type of gas contained was no longer legible on the cylinders (See Photographs No. 18 – 21, 29 in Appendix G).
- The warehouse had a bay attached to the eastern side and observed within the bay were a large electric heater for drying pecans, a concrete-lined subsurface pit that is used to dry the pecans, and at least eight metal access panels for the pit. No evidence of petroleum products was observed within or near the pit. De minimis staining was observed on the motor of the electric heater (See Photographs No. 26 – 28 in Appendix G).
- Adjacent to the north of the warehouse and lined against its back wall were observed three approximately 250-gallon aboveground storage (AST) tanks. Two ASTs contained diesel fuel and the third contained gasoline. The site reconnaissance was completed a day following a heavy rain event and it was not clear if the ground surface below the ASTs exhibited any petroleum product staining because the ground remained saturated with rainwater precluding visual observations (See Photographs No. 22 – 25 in Appendix G). A propane tank and stack of firewood were observed adjacent to the north of the ASTs (See Photograph No. 31 in Appendix G).
- Four 55-gallon drums containing motor oil were observed to be located to the west of the ASTs. The drums exhibited de minimis staining. Also observed adjacent to the drums were two trash bins, a shopping cart and a tire (See Photograph No. 30 in Appendix G).
- At least seven utility vaults were observed to be located on the southern boundary along E. Shepherd Avenue (See Photograph No. 11, 52 in Appendix G).
- Four pole-mounted transformers were observed on the Development Area. Two of the pole-mounted transformers were observed to be located in the central-eastern portion of the

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[1] Note – this dwelling was removed in 2020.

[2] Note – this warehouse was removed in 2020.

Development Area, and two were observed to be located along the eastern boundary on the southern portion of the Development Area. The transformer casings displayed no visual evidence of leakage and the ground surface below the transformers displayed no evidence of discoloration. Based on Krazan's observations, the Pacific Gas & Electric (PG&E) Company is the owner of the transformers. The transformers were not labeled as to their polychlorinated biphenyl (PCB) status. Based on the visual absence of apparent unauthorized releases of insulating fluids from the transformers at the time of Krazan's site reconnaissance, the transformers are not currently anticipated to pose an adverse impact to the Development Area (See Photographs No. 9, 38, 40, 58 in Appendix G).

- A small residential structure[3] was observed to be located in the central-eastern portion of the Development Area. Access was not granted to the structure at the time of the site reconnaissance because a trailer was parked up against the building, blocking the only entrance to the structure. Additionally, the three windows observed were all too frosted to allow observation of the interior. Multiple items were stored around the structure (See Photographs No. 34 – 37 in Appendix G):
  - On the western side was stored an old satellite dish, a pile of concrete debris, a flatbed trailer, and farming equipment;
  - On the southern side was stored a pile of railroad ties, old chain-link fencing, a ladder and farming equipment; and,
  - On the eastern side was stored two trailers, multiple bales of chain link fencing, several stacks of tires and a portable water tank on a trailer.
- Five agricultural water wells were observed to be located on the Development Area, two located along the east-west centerline of the Development Area to the east of the small residential structure previously mentioned, one located in the southwestern corner of the Development Area, one located in the northwestern corner of the Development Area, and one located along the eastern boundary of the Development Area (See Photographs No. 6, 33 – 34, 37 – 39, 41, and 53 in Appendix G).
- A rural residential dwelling[4] was observed within the northwestern portion of the Development Area. A domestic water well and associated water tank was observed adjacent to the west of the rural residential dwelling (See Photographs No. 6 – 7, 42 – 49 in Appendix G).
- Two large berms containing wood branches and debris from pruning the orchard were observed along the eastern boundary of the Development Area. The berms were at least 10 to 12 feet tall. The larger of the two berms was approximately 550 feet in length, and the smaller was approximately 80 feet in length. The smaller of the two berms appears to be mainly chopped wood. It is unknown how long the berms have been there and what the condition of the ground is below the berms. Additionally, three flatbed trailers were observed to be located adjacent to the smaller berm (See Photographs No. 50 – 51, 54 – 57 in Appendix G).

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[3] Note – this residential structure was removed in 2020.

[4] Note – this residential structure was removed in 2020.

- During the visual observations of the Development Area, no hazardous materials were observed. Exposed surface soils did not exhibit obvious signs of discoloration in accessible areas. No obvious evidence (vent pipes, fill pipes, dispensers, etc.) of USTs was noted within the areas observed. No standing water or major depressions were observed on the Development Area. No indications of former structures, such as foundations, were observed on the Development Area.
- No high-voltage, tower-mounted electrical transmission lines were observed on or in the vicinity of the Development Area.

Site Usage Survey

A review of a previous environmental assessment, historical aerial photographs, a USGS topographic quadrangle map, City of Clovis Planning and Development Department (CCPDD) and Fresno County Public Works and Development Department (FCPWDD) records, reasonably ascertainable City directories, a search for historical fire insurance maps (HFIMs), and a Phase I ESA interview were utilized to assess the history of the Development Area.

AERIAL PHOTOGRAPH INTERPRETATION

Historical aerial photographs dated 1937, 1946, 1950, 1957, 1962, 1967, 1973, 1979, 1984, 1987, 1998, 2005, 2009, 2012, and 2016 were reviewed to assess the history of the Development Area. These photographs were obtained from Environmental Data Resources, Inc. (EDR). As shown in the historical aerial photographs, the Development Area has been used for agricultural and residential uses since at least 1979. A discussion of the aerial photograph interpretation is provided below.

- 1979: The Development Area appears to be utilized for agricultural purposes. A small residential structure has been developed in the southwestern corner of the northeastern portion of the Development Area. One out-structure on the Development Area has been removed and replaced with a barn approximately twice as large as the previous structure. At least 15 rural residential dwellings have been developed on the eastern adjacent property to the Development Area. At least eight rural residential dwellings have been developed in the vicinity to the south, seven rural residential dwellings have been developed in the vicinity to the north and seven rural residential dwellings have been developed in the vicinity to the northeast of the Development Area.
- 1984: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 1979 aerial photograph, except that five rural residential dwellings have been developed and at least 10 plots have been cleared for residential development on the adjacent properties to the north and west of the Development Area. Additionally, a new paved road has been developed to access the newly developed residences.
- 1987: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 1984 aerial photograph, except that a rural residential dwelling has been developed in the northwestern corner of the northeastern portion of the Development Area. The adjacent property to the west and vicinity properties to the west

and northwest appear to be fallow land. Several additional structures have been developed on the rural residential properties adjacent to the east of the Development Area.

- 1998: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 1987 aerial photograph, except that 10 rural residential dwellings have been developed on the adjacent properties to the north and west of the Development Area. One rural residential dwelling has been developed on a vicinity property to the north of the Development Area. The adjacent property to the west and vicinity properties to the west and northwest appear to have been recently cultivated.
- 2005: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 1998 aerial photograph, except that the adjacent property to the west and vicinity properties to the west and northwest appear to be utilized for agricultural purposes. Residential tract housing has been developed in the vicinity to the southwest of the Development Area.
- 2009: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 2005 aerial photograph, except that additional residential tract housing has been developed on the southeastern adjacent property and in the vicinity to the southwest of the Development Area. A large commercial structure has been developed in the vicinity to the southeast of the Development Area.
- 2012: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 2009 aerial photograph.
- 2016: Conditions on the Development Area and the adjacent properties appear relatively similar to those noted in the 2012 aerial photograph, except that Dry Creek Trailhead has been developed on a southwestern vicinity property, on the southwest corner of N. Sunnyside and E. Shepherd Avenues. A PG&E Substation has been developed in the vicinity to the west of the Development Area.

USGS TOPOGRAPHIC QUADRANGLE MAP

Krazan's review of the USGS, 7.5 minute, Clovis California topographic quadrangle map dated 1964, photo revised 1981, indicates that two residential structures and a water well are depicted on the Development Area.

CCPDD AND FCPWDD

On January 9, 2019, the CCPDD and FCPWDD were visited to review building permit records for the Development Area APNs of 557-021-19, -20 and -21, and the historical address of 5230 E. Shepherd Avenue. No building permit records are on file with the CCPDD or FCPWDD for the current APNs or historical Development Area addresses. Therefore, no permits for items such as underground storage tanks, demolition, or previous structures/features were revealed for the Development Area.

CITY DIRECTORIES

Krazan contracted with EDR to provide a review of available City directories for the Development Area historic address of 5230 East Shepherd Avenue utilizing approximately five-year intervals. According to the City directory, the owner of the site from 1996 to 2002 was CAL PECAN.

SANBORN FIRE INSURANCE MAPS

Krazan reviews Sanborn Fire Insurance Maps (SFIMs) to evaluate prior land use of the Development Area and the adjacent properties. SFIMs typically exist for cities with populations of 2,000 or more, the coverage dependent on the location of the Development Area within the City limits. Krazan contracted with EDR to provide copies of available SFIMs for the Development Area and the adjacent properties as far back as 1867. EDR's search of SFIMs revealed no coverage for the Development Area and the adjacent properties.

INTERVIEWS

Krazan attempted to conduct an interview with the current and past owners of the Development Area. The interviews are designed to provide pertinent information regarding potential environmental impacts associated with the Development Area.

Development Area Owner: A completed owner questionnaire was not received from nor was an interview conducted with the property owner. The absence of a completed owner interview/questionnaire represents a data gap.

Previous Development Area Owners/Occupants: An interview with a previous owner/occupant of the Development Area was not reasonably ascertainable. Consequently, the absence of information regarding the history and historical uses of the Development Area obtained from an interview of the previous owner and/or occupant constitutes a data gap.

Regulatory Agency Records

A review of regulatory agency records was conducted to help determine if hazardous materials have been handled, stored, or generated on the Development Area and/or the adjacent properties and businesses. Regulatory records are reviewed based on the following criteria:

1) properties with known soils and/or groundwater releases considered to represent the potential for impact to the Development Area that are located within 1,760 feet of the Development Area for constituents of concern impacts or 528 feet of the Development Area for petroleum hydrocarbon impacts;
2) properties that are adjacent or in proximity to the Development Area included within the EDR regulatory database report or noted during the site reconnaissance to possibly handle, store, or generate hazardous materials.

FRESNO COUNTY DEPARTMENT OF COMMUNITY HEALTH, ENVIRONMENTAL HEALTH SYSTEM

The Fresno County Department of Community Health, Environmental Health System (FCEHS) is the lead regulatory agency, or Certified Unified Program Agency (CUPA), for hazardous materials handling facilities in Fresno County. The review of the FCEHS CUPA and Solid Waste Programs Resource List (CUPA List) dated January 7, 2019, indicated that no records are on file with the FCEHS for the Development Area. However, records are on file with the FCEHS for adjacent and vicinity properties which do not represent material evidence of the potential to represent environmental concern to the Development Area.

CITY OF CLOVIS FIRE DEPARTMENT

The City of Clovis Fire Department (CCFD) has jurisdiction for the fire protection for the Development Area and the immediate vicinity. According to representatives of the CCFD, records of hazardous materials incidents are kept by the FCEHS. Additionally, hazardous/flammable incidents are filed according to the date of occurrence and by the location of occurrence with the FCEHS.

STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – GEOTRACKER

The review of the State of California Regional Water Quality Control Board (RWQCB) Geotracker database available via the RWQCB Internet Website indicated that no sites including leaking underground storage tank (LUST) sites, cleanup program sites, land disposal sites, or military sites are listed for the Development Area, the adjacent properties, or properties located within the Development Area vicinity. Additionally, no permitted underground storage tank (UST) sites were determined to be located on or adjacent to the Development Area.

STATE OF CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL – ENVIROSTOR

The review of the State of California Department of Toxic Substances Control (DTSC) Envirostor database available via the DTSC's Internet Website indicated that no sites including State response sites, voluntary cleanup sites, school cleanup sites, or military or school evaluation sites are listed for the Development Area, the adjacent properties, or properties located within 1,000 feet of the Development Area. Additionally, no Federal Superfund – National Priorities List (NPL) sites were determined to be located within a one-mile radius of the Development Area.

CALIFORNIA DEPARTMENT OF CONSERVATION, DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES - DOMS

The review of the State of California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) Online Mapping System indicated that no plugged and abandoned or producing oil wells are located on or adjacent to the Development Area.

LOCAL AREA TRIBAL RECORDS

No Indian reservations, USTs on Indian land, or LUSTs on Indian land were reported on the Development Area, adjacent properties, or vicinity properties in the EDR-provided government database report.

REGULATORY AGENCY LISTS REVIEW

Several agencies have published documents that list businesses or properties, which have handled hazardous materials or waste or may have experienced site contamination. The lists consulted in the course of our assessment were compiled by EDR and represent reasonably ascertainable current listings. The locations and distances of every property listed by EDR were not verified as part of the Phase I ESA. As part of the Phase I ESA, the location and distances of the properties Krazan deemed as having the potential to adversely impact the Development Area were verified. The actual location of the listed properties may differ from the EDR listing. The actual distances of the listed properties are based on observations during the site reconnaissance completed as part of the Phase I ESA. No EDR-listed unmapped (non-geocoded) sites were determined to be located on or adjacent to the Development Area. Please refer to Appendix D of Appendix G in the Table of Contents for a copy of the EDR Radius Map Report.

There were no listings for the Development Area or adjacent properties.

The following property was listed in the vicinity of the Development Area:

- **P-R Farms, Inc.** (located approximately 158 to 173 feet to the southwest 4648-4650 East Shepherd Avenue): According to EDR, this facility is listed a CUPA Listings, Statewide Environmental Evaluation and Planning System (SWEEPS) UST, California Facility Inventory Database (FID) UST, and HIST UST site including a 500-gallon gasoline tank and a 2,000-gallon diesel tank on a farm property installed in at least 1985. No records for releases or removal were found on file with the FCEHS, RWQCB or DTSC. Based on the review of available regulatory records and its hydraulically cross-gradient location from the Development Area, there is no evidence to suggest that this facility represents an environmental concern in connection with the Development Area.

The remaining properties within the specified search radius of the Development Area, which appeared on local, state, or federally published lists of sites that use or have had releases of hazardous materials or petroleum products are of sufficient distance and/or situated hydraulically cross- or downgradient from the Development Area, such that impact to the Development Area via groundwater migration is unlikely. In general, potentially hazardous materials released from facilities located approximately hydraulically upgradient within the Development Area vicinity, or in a hydraulically cross-gradient direction in proximity to the site, may have a reasonable potential of migrating to the Development Area via groundwater flow. This opinion is based on the assumption that non-vaporous hazardous materials generally do not migrate large distances laterally within the soil, but rather tend to migrate with groundwater in the general direction of groundwater flow. However, the potential for migration of volatile hazardous materials may include movement within soils, groundwater flow or potentially omni-directionally if present in a vaporous state.

HAZARDOUS MATERIALS MIGRATION IN VAPOR

Hazardous materials or petroleum product vapors which may have the potential to migrate into the subsurface of the Development Area may be caused by the release of vapors from contaminated soil or groundwater either on or in the vicinity of the Development Area from current or historical uses of the Development Area and/or adjacent or vicinity properties. Current or past land uses such as gasoline stations (using petroleum hydrocarbons), dry cleaning establishments (using chlorinated volatile organic compounds), former manufactured gas plant sites (using volatile and semi-volatile organic compounds), and former industrial sites, such as those that had vapor degreasing or other parts-cleaning operations (using chlorinated volatile organic compounds) are of particular concern. Constituent of concern vapors are capable of migrating great distances omni-directionally along subsurface conduits such as pipelines, utility lines, sewer and stormwater lines, and building foundations.

Based on the observations and review of the EDR regulatory database report included in the Phase I ESA, no listings of concern were determined to be associated with the Development Area, adjacent properties, or properties located within the Development Area vicinity. The screening process for vapor migration in connection with the Development Area is described in the ASTM E 2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions, an industry consensus methodology to assess vapor migration, which is not included in the scope of work of the Phase I ESA.

No engineering control sites, sites with institutional controls, or sites with deed restrictions were listed for the Development Area, adjacent sites or vicinity properties in the EDR Report.

Transportation of Hazardous Materials

The transportation of hazardous materials within the City of Clovis Planning Area is subject to various federal, State, and local regulations. The following provisions are included in the California Vehicle Code (CVC) and pertain to the transportation of hazardous related materials.

- The Highway Patrol designates the routes in California which are to be used for the transportation of explosives. (Section 31616)
- The CVC applies when the explosives are transported as a delivery service for hire or in quantities in excess of 1,000 pounds. The transportation of explosives in quantities of 1,000 pounds or less, or other than on a public highway, is subject to the California Health and Safety Code. (Section 31601(a))
- It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery of, or the loading of, such materials. (Section 31602(b) and Section 32104(a))
- When transporting explosives through or into a city for which a route has not been designated by the Highway Patrol, drivers must follow routes as may be prescribed or established by local authorities. (Section 31614(a))

Inhalation hazards and poison gases are subject to additional safeguards. These materials are highly toxic, spread rapidly, and require rapid and widespread evacuation if there is loss of containment or a fire. The Highway Patrol designates through routes to be used for the transportation of inhalation hazards. It may also designate separate through routes for the transportation of inhalation hazards composed of any chemical rocket propellant. (Section 32100 and Section 32102(b))

FIRE HAZARDS

Wild fires are a major hazard in the State of California. Wild fires burn natural vegetation on developed and undeveloped lands and include timber, brush, woodland, and grass fires. While low intensity wild fires have a role in the County's ecosystem, wild fires put human health and safety, structures (e.g., homes, schools, businesses, etc.), air quality, recreation areas, water quality, wildlife habitat and ecosystem health, and forest resources at risk.

Wildland fire hazards exist in varying degrees in the foothill portion of the County located to the east and southwest of the Project site. In addition, the existing dead pecan orchard poses a potential fire hazard and as a precaution tree removal is in process, as well as the number of existing structures without sprinkler systems, are potential fire hazards. Nevertheless, the Project site is located in the valley floor, which is predominantly under agricultural or urban use, which is typically considered an area with a low fire hazard risk.

Fire Hazard Severity Zones

The State has charged the California Department of Forestry and Fire Protection (CalFire) with the identification of Fire Hazard Severity Zones (FHSZ) within State Responsibility Areas. In addition, CalFire must recommend Very High Fire Hazard Severity Zones (VHFHSZ) identified within any Local Responsibility Areas. The FHSZ maps are used by the State Fire Marshall as a basis for the adoption of applicable building code standards.

LOCAL RESPONSIBILITY AREAS

The Project site is located within a Local Responsibility Area (LRA). The Project site is not categorized as a "Very High" FHSZ by CalFire.

STATE RESPONSIBILITY AREAS

There are no State Responsibility Areas (SRAs) within the vicinity of the Project site.

FEDERAL RESPONSIBILITY AREAS

There are no Federal Responsibility Areas (FRAs) within the vicinity of the Project site.

3.8.2 REGULATORY SETTING

FEDERAL

Aviation Act of 1958

The Federal Aviation Act resulted in the creation of the Federal Aviation Administration (FAA). The FAA is charged with the creation and maintenance of a National Airspace System.

Federal Aviation Regulations (CFR, Title 14)

The Federal Aviation Regulation (FAR) establishes regulations related to aircraft, aeronautics, and inspection and permitting.

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, State attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

Clean Water Act

The Clean Water Act (CWA), which amended the Water Pollution Control Act (WPCA) of 1972, sets forth the §404 program to regulate the discharge of dredged and fill material into Waters of the U.S. and the §402 National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants into Waters of the U.S. The §401 Water Quality Certification program establishes a framework of water quality protection for activities requiring a variety of Federal permits and approvals (including CWA §404, CWA §402, FERC Hydropower and §10 Rivers and Harbors).

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) introduced active Federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The Act was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous material releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Environmental Protection Agency

The primary regulator of hazards and hazardous materials is the EPA, whose mission is to protect human health and the environment. The City of Clovis is located within EPA Region 9, which includes Arizona, California, Hawaii, and New Mexico.

FY 2001 Appropriations Act

Title IV of the Appropriations Act required the identification of “Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire” by the U.S. Departments of the Interior and Agriculture.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act, as amended, is the basic statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation (USDOT) and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases, as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the federal government is primarily responsible for developing, issuing, and enforcing pipeline safety regulations, the pipeline safety statutes provide for State assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program established tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. The RCRA was further amended in 1988 to set additional standards for USTs.

In July 2015, the EPA revised the federal UST regulation, which strengthened the 1988 federal UST regulations by increasing emphasis on properly operating and maintaining UST equipment. The revision added new operation and maintenance requirements and addressed UST systems deferred in the 1988 UST regulation. The purpose of the revision was to help prevent and detect UST releases, which are a leading source of groundwater contamination. To ensure compliance performance measures reflect the 2015 UST regulation, the Environmental Protection Agency (EPA) and the Association of State and Territorial Solid Waste Management Officials coordinated to update existing compliance performance measures and add new measures. The measures required states to switch from tracking compliance against significant operational compliance measures to the more stringent technical compliance rate (TCR) measures. As of June 2020, only 45.6 percent of USTs were in compliance with all TCR categories[5].

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[5] EPA. *Semiannual Report of UST Performance Measures Mid Fiscal Year 2020*. June 2020. Access: https://www.epa.gov/sites/production/files/2020-06/documents/ca-20-12.pdf

STATE

Aeronautics Act (Public Utilities Code §21001)

The Caltrans Division of Aeronautics bases the majority of its aviation policies on the Aeronautics Act. Policies include permits and annual inspections for public airports and hospital heliports and recommendations for schools proposed within two miles of airport runways.

Airport Land Use Commission Law (Public Utilities Code §21670 et seq.)

The law, passed in 1967, authorized the creation of Airport Land Use Commissions (ALUC) in California. Per the Public Utilities Code, the purpose of an ALUC is to protect *public health, safety, and welfare by encouraging orderly expansion of airports and the adoption of land use measures that minimizes exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses* (Pub. Util. Code §21670). Furthermore, each ALUC must prepare an ALUCP. Each ALUCP, which must be based on a twenty-year planning horizon, should focus on broadly defined noise and safety impacts.

Assembly Bill 337

Per AB 337, local fire prevention authorities and CalFire are required to identify Very High Fire Hazard Severity Zones (VHFHSZ) in LRAs. Standards related to brush clearance and the use of fire-resistant materials in fire hazard severity zones are also established.

California Code of Regulations

Title 3 of the California Code of Regulations (CCR) pertains to the application of pesticides and related chemicals. Parties applying regulated substances must continuously evaluate application equipment, the weather, the treated lands and all surrounding properties. Title 3 prohibits any application that would:

- Contaminate persons not involved in the application;
- Damage non-target crops or animals or any other public or private property; and
- Contaminate public or private property or create health hazards on said property.

Title 8 of the CCR establishes California Occupational Safety and Health Administration (Cal OSHA) requirements related to public and worker protection. Topics addressed in Title 8 include materials exposure limits, equipment requirements, protective clothing, hazardous materials, and accident prevention. Construction safety and exposure standards for lead and asbestos are set forth in Title 8.

Title 14 of the CCR establishes minimum standards for solid waste handling and disposal.

Title 17 of the CCR establishes regulations relating to the use and disturbance of materials containing naturally occurring asbestos.

Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

Title 22 of the CCR sets forth definitions of hazardous waste and special waste. The section also identifies hazardous waste criteria and establishes regulations pertaining to the storage, transport, and disposal of hazardous waste.

Title 26 of the CCR is a medley of State regulations pertaining to hazardous materials and waste that are presented in other regulatory sections. Title 26 mandates specific management criteria related to hazardous materials identification, packaging, and disposal. In addition, Title 26 establishes requirements for hazardous materials transport, containment, treatment, and disposal. Finally, staff training standards are set forth in Title 26.

Title 27 of the CCR sets forth a variety of regulations relating to the construction, operation, and maintenance of the state's landfills. The title establishes a landfill classification system and categories of waste. Each class of landfill is constructed to contain specific types of waste (household, inert, special, and hazardous).

California Government Code Section 65302

This section, which establishes standards for developing and updating General Plans, includes fire hazard assessment and Safety Element content requirements.

California Health and Safety Code

Division 11 of the Health and Safety Code establishes regulations related to a variety of explosive substances and devices, including high explosives and fireworks. Section 12000 et seq. establishes regulations related to explosives and explosive devices, including permitting, handling, storage, and transport (in quantities greater than 1,000 pounds).

Division 12 establishes requirements for buildings used by the public, including essential services buildings, earthquake hazard mitigation technologies, school buildings, and postsecondary buildings.

Division 20 establishes DTSC authority and sets forth hazardous waste and underground storage tank regulations. In addition, the division creates a State superfund framework that mirrors the Federal program.

Division 26 establishes California Air Resources Board (CARB) authority. The division designates CARB as the air pollution control agency per Federal regulations and charges the Board with meeting Clean Air Act requirements.

California Health and Safety Code and Uniform Building Code Section 13000 et seq.

State fire regulations are set forth in §13000 *et seq*. of the California Health and Safety Code, which is divided into "Fires and Fire Protection" and "Buildings Used by the Public." The regulations provide for the enforcement of the Uniform Building Code and mandate the abatement of fire hazards.

The code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

California Vehicle Code §31600 (Transportation of Explosives)

This code establishes requirements related to the transportation of explosives in quantities greater than 1,000 pounds, including licensing and route identification.

California Public Resources Code

The State's Fire Safety Regulations are set forth in Public Resources Code §4290, which include the establishment of SRAs.

Public Resources Code §4291 sets forth defensible space requirements, which are applicable to anyone who "*…owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material"* (§4291(a)).

Food and Agriculture Code

Division 6 of the California Food and Agriculture Code (FAC) establishes pesticide application regulations. The division establishes training standards for pilots conducting aerial applications, as well as permitting and certification requirements.

State Oversight of Hazards and Hazardous Materials

The DTSC is chiefly responsible for regulating the handling, use, and disposal of toxic materials. The State Water Resources Control Board (SWRCB) regulates discharge of potentially hazardous materials to waterways and aquifers and administers the basin plans for groundwater resources in the various regions of the state. The RWQCB oversees surface and groundwater. Programs intended to protect workers from exposure to hazardous materials and from accidental upset are covered under OSHA at the Federal and California Division of Occupational Safety and Health (Cal/OSHA) and the California Department of Health Services (DHS) at the state level. Air quality is regulated through the CARB and San Joaquin Valley Air Pollution Control District. The State Fire Marshal is responsible for the protection of life and property through the development and application of fire prevention engineering, education, and enforcement; CalFire provides fire protection services for State and privately-owned wildlands.

Water Code

Division 7 of the California Water Code, commonly referred to as the Porter-Cologne Water Quality Control Act, created the SWRCB and the RWQCB. In addition, water quality responsibilities are established for the SWRCB and RWQCBs.

LOCAL

City of Clovis General Plan

POLICIES: ENVIRONMENTAL SAFETY ELEMENT

- Policy 1.4 Facilities that use hazardous materials. Prohibit facilities using, storing, or otherwise involved with hazardous or toxic materials to be located in the 100-year flood zone, unless all standards of elevation, flood proofing and storage have been implemented.
- Policy 2.1 Safe storage and maintenance. The use and storage of hazardous materials shall comply with applicable federal, state, and local laws to prevent and mitigate hazardous materials releases.
- Policy 2.2 Mitigation and remediation of groundwater contamination. Actively participate in local and regional efforts directed at mitigating environmental exposure to and cleaning up contaminated groundwater.
- Policy 2.3 Truck routes for hazardous materials. Maintain designated truck routes for the transportation of hazardous materials through the City. Discourage routes that pass through residential neighborhoods to the maximum extent feasible.
- Policy 2.4 Hazardous materials response team. Maintain a Type 1 hazardous materials response team serving the City of Clovis.
- Policy 2.5 Safer Alternatives. Minimize the use of hazardous materials by encouraging the selection of non-toxic alternatives that do not pose a threat to the environment.
- Policy 2.6 Community education. Provide educational resources to residents and businesses to promote safe practices related to the use, storage, transportation, and disposal of hazardous materials.
- Policy 3.11 Airport land use compatibility. Approve land uses in a manner that is consistent with the Fresno Yosemite International Airport Land Use Compatibility Plan.

POLICIES: PUBLIC FACILITIES ELEMENT

- Policy 6.8 Emergency preparedness planning. Maintain an emergency operations plan, an emergency operations center, and a hazard mitigation plan to prepare for actual or threatened conditions of disaster or extreme peril.

Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPA), typically at the county level. The FCEHS is the CUPA designated for Fresno County. The FCEHS is responsible for the implementation of statewide programs within its jurisdiction, including Underground storage of hazardous substances (USTs), Hazardous Materials Business Plan (HMP) requirements, California Accidental Release Prevention (Cal-ARP) program, etc. Implementation of these programs involves permitting, inspecting, providing education/guidance, investigations, and enforcement.

San Joaquin Valley Air Pollution Control District

San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over the City of Clovis and deals with pollutants that get into the air from stationary (including fumes, dust and smoke, some asbestos) and mobile sources. SJVAPCD's mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality management strategies. SJVAPCD responds to complaints about smells, answers questions about air quality management permits, and reviews development projects for compliance with air quality and greenhouse gas significance thresholds. The SJVAPCD and air quality are addressed in detail in Section 3.3, Air Quality, of this EIR.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact from hazards and hazardous materials if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

(Less than Significant with Mitigation)

CONSTRUCTION PHASE IMPACTS

Based on the review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) are presented:

- Adjacent to the north of the on-site warehouse[6] and lined against its back wall, three approximately 250-gallon aboveground storage (AST) tanks were observed. Two ASTs contained diesel fuel and the third contained gasoline. Additionally, four 55-gallon drums containing motor oil were observed to be located to the west of the ASTs, which exhibited minimis staining. The site reconnaissance was completed a day following a heavy rain event and it was not clear if the ground surface below the ASTs and/or drums exhibited any significant petroleum product staining because the ground remained saturated with rainwater precluding visual observations. Consequently, the specific condition of the ground surface underlying the ASTs and drums is unknown. The ASTs and drums are shown in Figure 3.8-1.
- The review of aerial photographs indicates that the Development Area was utilized for agricultural purposes from at least 1937 to the present and that residential structures and associated outbuildings occupied the property from at least 1937, 1979 and 1987 to the present. No records of USTs for the Development Area are on file with the local regulatory agencies; however, USTs on rural or agricultural properties historically have been exempt from requirements for registration with regulatory agencies. Furthermore, Kazan's (the Phase I ESA author) experience with such properties has shown that it was not uncommon for property owners/operators to install USTs for their convenience, especially in the vicinity of structures, which are undocumented and whose presence would remain unknown in spite of the standard data research conducted in the course of this Phase I ESA. It is therefore possible that subsurface features such as unregistered fuel USTs may exist within the structure-related portions of the Development Area, which remain unknown based on the absence of any regulatory, municipality, and/or interview data, or other evidence indicating their presence or location. Consequently, despite an absence of data suggesting their

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[6] Note – this warehouse was removed in 2020.

presence, the presence or absence of USTs associated with on-site structures in a historical agricultural setting on the Development Area is unknown.

The following non-scope issues and site development issues are presented:

- A review of historical aerial photographs indicates the Development Area was utilized for agricultural purposes from at least 1937 to present. It is not known if environmentally persistent pesticides and/or herbicides were historically applied to the crops grown on the Development Area. Although the potential exists that environmentally persistent pesticides/herbicides were historically applied to the crops grown on the Development Area, 1) no material evidence of the use of environmentally persistent pesticides/herbicides was obtained during the course of this assessment, 2) Krazan's sampling analysis of surface soils from properties with similar agricultural histories in the Development Area has typically yielded nondetectable results or very low concentrations for analysis of environmentally persistent pesticides/herbicides, and 3) based upon the soil disturbance in conjunction with the grading and trenching activities during the proposed redevelopment of the Development Area, it is likely that potential agricultural chemicals would be significantly mixed and diluted. Consequently, given the above referenced factors and Krazan's experience in the Development Area vicinity, which generally indicates that the potential is low for elevated concentrations of environmentally persistent pesticides/herbicides related to agricultural cultivation to exist in the near-surface soils of common agricultural ground at concentrations which would require regulatory action, despite the absence of specific data, the potential for elevated concentrations of environmentally persistent pesticides/herbicides to currently exist in the near-surface soils of the Development Area at concentrations, which would require regulatory action appears to be low.
- Four pole-mounted transformers were observed on the Development Area. Two of the pole-mounted transformers were observed to be located in the central-eastern portion of the Development Area, and two were observed to be located along the eastern boundary on the southern portion of the Development Area. The transformer casings displayed no visual evidence of leakage and the ground surface below the transformers displayed no evidence of discoloration. Based on site observations made, the Pacific Gas & Electric (PG&E) Company is the owner of the transformers. The transformers were not labeled as to their polychlorinated biphenyl (PCB) status. Based on the visual absence of apparent unauthorized releases of insulating fluids from the transformers at the time of the site reconnaissance, the transformers are not currently anticipated to pose an adverse impact to the Development Area. However, in the event of a future release/leak of insulating fluids from the transformers, PG&E should be contacted regarding the testing of the transformers for PCB fluids or for their removal/replacement (See Photographs No. 9, 38, 40, 58 in Appendix G). The pole-mounted transformers are shown in Figure 3.8-1.
- Based on historical research and interviews, two domestic water wells and five agricultural water wells were observed to be associated with the Development Area. If the on-site water wells are not to be used in the future, they should be properly abandoned/destroyed in accordance with state and local guidelines. The wells are shown in Figure 3.8-1.

Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat, and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Hazardous materials regulations, which are codified in CCR Titles 8 and 22, and their enabling legislation set forth in Chapter 6.5 (Section 25100 et seq.) of the California Health and Safety Code, were established at the State level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Mitigation Measure 3.8-1 was developed to ensure that a well abandonment permit is obtained from Fresno County Department of Public Health Environmental Health Division, and that all on-site wells are properly abandoned. Mitigation Measure 3.8-2 was developed to ensure that additional testing is performed prior to the issuance of grading permits for construction activities in several areas that have been deemed to have potentially hazardous conditions present. The additional testing will investigate whether any of these areas contain hazardous materials that need special treatments. Mitigation Measure 3.8-2 also specifies that all construction or demolition activities comply with Cal/OSHA asbestos and lead worker construction standards, and offsite disposal requirements. This measure also provides specifications for additional soil sampling in stained areas prior to soil disturbance activities. Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that potential impacts are reduced to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.8-1*: Prior to the acceptance of improvements, the Project proponent shall hire a licensed well contractor to obtain a well abandonment permit from Fresno County Department of Public Health Environmental Health Division, and properly abandon the on-site wells, pursuant to review and approval of the City Engineer and the Fresno County Department of Public Health Environmental Health Division.*

Mitigation Measure 3.8-2: *The Project proponent shall hire a qualified consultant to perform additional testing prior to the issuance of grading permits for construction activities in the following areas that have been deemed to have potentially hazardous conditions present:*

- *The area near the three ASTs and four 55-gallon drums (see Figure 3.8-1 of the Draft EIR).*
- *The areas where USTs may exist, including near the former warehouse and former residences.*
- *The soils in the area where farming equipment and above ground tanks have been used, and near the former warehouse and former residences (see Figure 3.8-1 of the Draft EIR).*
- *The area near the four pole-mounted transformers (see Figure 3.8-1 of the Draft EIR).*

The intent of the additional testing is to investigate whether any of the areas, facilities, or soils contain hazardous materials. All activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The ACBM and lead shall be disposed of properly at an appropriate offsite disposal facility. If surface staining is found on the Project site, a hazardous waste specialist shall be engaged to further assess the stained area.

Should further soil sampling be required in any stained areas, evenly distributed soil samples shall be conducted for analysis of pesticides and heavy metals. The samples shall be submitted for laboratory analysis of pesticides and heavy metals per DTSC and EPA protocols. The results of the soil sampling shall be submitted to the Fresno County Department of Public Health Environmental Health Division. If elevated levels of pesticides or heavy metals are detected during the laboratory analysis of the soils, a soil cleanup and remediation plan shall be prepared and implemented prior to the commencement of grading activities.

Further, in the event of a future release/leak of insulating fluids from any of the four pole-mounted transformers, PG&E shall be contacted regarding the testing of the transformers for PCB fluids or for their removal/replacement.

OPERATIONAL PHASE IMPACTS

The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis.

The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas including: paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department. Overall, the proposed Project would have a **less than significant** impact relative to this issue.

Impact 3.8-2: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant)

The nearest school to the Project site is the Woods Elementary School, located approximately 0.66 miles southwest of the Project site. Other schools near the Project site include: Dry creek Elementary School (1.25 miles southeast), Century Elementary School (1.28 miles south), and Buchanan High School (1.29 miles southwest). There are a variety of other schools located beyond three miles from the Project site.

The proposed Project includes the development of up to 605 residential units. Household wastes generated from residential uses include pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals that typically do not pose a significant threat of emitting hazardous emissions or materials with proper disposal. Household Hazardous Waste (HHW) Collection Facilities receive hazardous waste that comes from homes and, in some cases, from small business hazardous waste generators. These HHW facilities are intended to provide a local facility for residents to easily dispose of household wastes, including those described above, so that they do not end up be illegally disposed of in places that could result in more serious pollution Therefore, there is not a higher risk of household hazardous materials being released within the Project site. Development of the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.8-3: Potential to result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. (Less than Significant)

The hazards assessment included a site reconnaissance, interviews, historical land use research, and database research. The assessment revealed no evidence of historical or existing Recognized Environmental Conditions in connection with the Project site. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, Development of the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.8-4: The Project is not located within an airport land use plan, two miles of a public airport or public use airport, and would not result in a safety hazard for people residing or working in the project area (Less than Significant)

There are no documented public airports or public use airports within close proximity to the Project site. The nearest airport facility within the vicinity of the Project site is the Fresno Yosemite International Airport, located approximately six miles south. The Project site is not located within the airport influence area or within the Airport's noise exposure contours for the Fresno Yosemite International Airport as identified in the Airport Land Use Compatibility Plan (ALUCP). Therefore, Development of the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.8-5: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

The Fresno County Master Emergency Services Plan serves as the Emergency Plan for Fresno County. This plan serves as a guide for response to an emergency/disaster in the unincorporated areas of the Fresno County Operational Area, and to coordinate and assist with the disaster response in jurisdictions both within and outside of the Fresno County Operational Area. In addition to the Fresno County Operational Area Master Emergency Services Plan, hazard specific response plans and standard operating procedures (SOP) have been developed or are in the process of development to supplement this master plan with disaster/emergency specific response procedures and information.

The County also prepared a Fresno County Multi-Jurisdictional Hazard Mitigation Plan. This plan underwent a comprehensive update in 2017-2018 building upon the plan that was originally developed in 2009. This plan demonstrates the community's commitment to reducing risks from hazards and serves as a tool to help decision makers direct mitigation activities and resources. This plan was also developed to make Fresno County and participating jurisdictions eligible for certain federal disaster assistance, specifically, the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program, and Flood Mitigation Assistance (FMA). This plan also meets the planning requirements of the National Flood Insurance Program's Community Rating System (CRS), in order to earn points under CRS Activity 510, which could lower flood insurance premiums in CRS communities.

In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Future uses on the Project site will have access to the County resources that establish protocols for safe use, handling and transport of hazardous materials. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency. Therefore, Development of the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.8-6: Potential to expose people or structures to a risk of loss, injury or death from wildland fires. (Less than Significant)

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The County has areas with an abundance of flashy fuels (i.e. grassland) in the foothill areas of the County.

Wildfires are a potential hazard to development, including land uses located in the foothill and forested areas of the City. The severity of wildfire problems depends on a combination of vegetation, climate, slope, and people. The vegetation and topography found in the eastern portions of the City, coupled with hot, dry summers, present fire hazards during critical fire periods for much of the county. In addition to natural factors such as lightning, human activity is a primary factor contributing to the incidence of wildfires. Campfires, smoking, debris burning, arson, public utility infrastructure, and equipment use are common human-related causes of wildfires.

The Project site is not categorized as a “Very High” FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban.

The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire. The proposed Project would have a **less than significant** impact with regards to this environmental issue.

LEGEND

━━ = SUBJECT SITE BOUNDARY
🔵 = AGRICULTURAL WATER WELL
🟡 = DOMESTIC WATER WELL
🟥 = POLE-MOUNTED TRANSFORMERS
🟢 = ASTS
🟠 = 55-GALLON DRUMS
🟨 = RESIDENTIAL DWELLING*
☐ = WAREHOUSE*
🟩 = UTILITY VAULT

*Note: The two residences and warehouse were removed in 2020.

Sources: Krazan & Associates, Inc. Map date: November 9, 2022.

SHEPHERD NORTH PROJECT

Figure 3.8-1. Site Observations

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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HYDROLOGY AND WATER QUALITY 3.9

This section describes the regulatory setting, regional hydrology and water quality, impacts that are likely to result from project implementation, and measures to reduce potential impacts to water quality. This section is based in part on the following documents, reports and studies:

- *2014 Clovis General Plan* (Placeworks, 2014);
- *2014 Clovis General Plan Draft Program Environmental Impact Report* (Placeworks, 2014);
- *Fresno-Clovis Storm Water Quality* Management *Program* (Fresno Metropolitan Flood Control District, 2013);
- *California's Groundwater: Bulletin 118 - San Joaquin Valley Groundwater Basin/Kings Subbasin* (DWR 2006);
- *City of Clovis Urban* Water *Management Plan 2020 Update (Provost & Pritchard, 2021B)*

3.9.1 ENVIRONMENTAL SETTING

REGIONAL HYDROLOGY

The San Joaquin Valley is surrounded on the west by the Coast Ranges, on the south by the San Emigdio and Tehachapi Mountains, on the east by the Sierra Nevada and on the north by the Sacramento-San Joaquin Delta and Sacramento Valley. The northern portion of the San Joaquin Valley drains toward the Delta by the San Joaquin River and its tributaries, the Fresno, Merced, Tuolumne, and Stanislaus Rivers. The southern portion of the valley is internally drained by the Kings, Kaweah, Tule, and Kern Rivers that flow into the Tulare drainage basin, including the beds of the former Tulare, Buena Vista, and Kern Lakes.

The San Joaquin and Kings Rivers are the two principal rivers within or bordering the Kings subbasin, where the City of Clovis is located. The Fresno Slough and James Bypass are along the western edge of the subbasin and connect the Kings River with the San Joaquin River. Average annual precipitation values range from seven to 10 inches, increasing eastward.

Watersheds

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife including special-status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State of California uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.9-1 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.9-1. STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

WATERSHED LEVEL	APPROXIMATE SQUARE MILES (ACRES)	DESCRIPTION
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2012.

Hydrologic Region

The City of Clovis is located in the Tulare Lake Hydrological Region, which covers about 16,800 square miles and includes all of Kings and Tulare counties and most of Fresno and Kern counties (Department of Water Resources, 2015). The hydrologic region is bordered to the east by the Sierra Nevada, to the west by the Coast Ranges, and to the south by the Tehachapi Mountains. To the north, the Tulare Lake region is separated from the San Joaquin River Hydrologic Region (San Joaquin region) by a rise in the San Joaquin Valley floor caused by an accumulation of San Joaquin River and the Kings River alluvial fan deposits. Although this drainage divide is the boundary between the San Joaquin and Tulare Lake regions, geographically the valley floor portion of the Tulare Lake region is considered part of the southern San Joaquin Valley. Major rivers draining into the Tulare Lake region include the Kings, Kaweah, Tule, and Kern, which extend from the Sierra Nevada headwaters in eastern Fresno and Tulare counties, to their termination at the former Tulare Lake and Buena Vista Lake beds.

As shown in Figure 3.9-1, the Project site is located in the James Bypass watershed.

Groundwater

Clovis is underlain by the Kings Groundwater Subbasin. The Kings Subbasin is bounded on the north by the San Joaquin River, on the west by the Delta-Mendota and Westside Subbasins, the south by the Kings River South Fork and the Empire West Side Irrigation District, and on the east by the Sierra Nevada foothills.

LOCAL SETTING

The Project site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). The Project site is relatively flat and is approximately 385 feet above mean sea level.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use. Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

> Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
>
> Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Drainage

Stormwater runoff in the City of Clovis is conveyed through a system of street gutters, underground storm drains, retention/detention basins, pumping stations, and open channels that are maintained by the Fresno Metropolitan Flood Control District (FMFCD). The FMFCD provides flood control and urban storm water services in a 399-square mile watershed located between the Kings and San Joaquin Rivers (FMFCD, 2022a). The Fresno/Clovis urban area is served by a system of roughly 700 miles of pipeline and more than 150 stormwater retention basins. FMFCD's stormwater drainage system discharges to irrigation canals, creeks, and the San Joaquin River (FMFCD, 2013). The system is designed to retain and infiltrate as much runoff as possible into the underlying groundwater aquifer. On average, FMFCD's regional stormwater basin system captures 92 percent of annual rainfall, of which, 70-85 percent of the captured stormwater runoff is recharged into the local groundwater aquifer (FMFCD, 2020). The stormwater basins also remove 50-80 percent of the typical stormwater pollutants.

The District Master Plan storm drainage pipeline system is designed to accept the peak flow rate of runoff from a two-year intensity storm event (a storm that has a 50 percent probability of occurring in any given year) (FMFCD, 2022b). When storm events occur that exceed the two-year intensity, ponding begins to occur in the streets until the pipeline system can remove the water. If the storm is of sufficient intensity to generate more water than the street can store, the water will continue to rise until it reaches a topographic outlet where it can escape down gradient. This escape route is a feature of the major storm routing system, implemented in 1998, that protects properties from damage in rainfall or runoff events that exceed system design capacities. The Project site is located within Drainage Area BY1.

Water Supplies

SURFACE WATER SUPPLY

The City has access to surface water through several different contracts, all of which are delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project. The average delivery the City has received of its total allocation is just over 17,000 AF per year, with the smallest delivery being 9,452 AF in 2015 and the largest of 24,958 in 2017. The City executed a new, firm water supply, agreement with FID in 2019 that provides a surface water supply that does not fluctuate with the FID entitlement or allocation and will be available to the City on a consistent basis. This agreement provides for up to 7,000 AF per year by 2045, beginning at 1,000 AF in 2020. As the City grows and annexes portions of the Garfield and International Water Districts, those CVP, Class I water rights will be transferred to the City and added to the overall water supply portfolio. (Provost & Pritchard, 2021B).

FID's average gross annual entitlement is 452,541 AF. Within the last fifty years, the smallest entitlement received was 158,109 AF, which occurred in 2015. The City's allocation from the Kings River is proportional to the total acreage of the City's included area to the total FID area receiving water. Over time, the City has received on average 17,011 AFY, though this has varied from 9,452 AF in the severe drought of 2015 to over 24,958 AF in 2017. (Provost & Pritchard, 2021B).

Two additional water districts are located within the City's General Plan Boundaries: Garfield Water District (GWD) and International Water District (IWD). Both have access to Class I CVP surface water supplies. The GWD holds a Class 1 CVP contract for 3,500 AFY. With half of GWD within the City's SOI, an estimated 1,750 AFY is expected to be added to the City's supply upon development. The IWD holds a Class 1 CVP contract for 1,200 AFY. The City's General Plan designates a portion of the District's area as industrial and residential use. At build-out, it is estimated that the entire 1,200 AFY supply will be added to the City's Supply. As the districts urbanize, supplies associated with these areas are expected to be added to the City's supply. The City uses their surface water supplies in two primary ways: (1) as potable water supply after being treated at the City's Surface Water Treatment Plant (SWTP) or (2) as groundwater recharge in various basins located in and around the City's service area. (Provost & Pritchard, 2021B).

GROUNDWATER SUPPLY

The City's groundwater supplies stem from the basin underlying the area, the Kings Subbasin; the Subbasin holds a status of being critically over drafted. The Kings Subbasin, a non-adjudicated basin, is a high-priority basin, which lies within the Tulare Lake Hydrologic Basin. This Basin contains multiple interconnected subbasins that transmit, filter and store water. These subbasins are Kaweah and Tulare Lake to the south, Westside and Delta Mendota to the west, and Madera to the North. (Provost & Pritchard, 2021B).

The Kings Subbasin (Subbasin 5-22.08) covers a surface area of approximately 976,000 acres (1,530 square miles). The Department of Water Resources estimated that the total basin storage was about 93,000,000 AF to a depth of more than 1,000 feet. The two major rivers overlying the subbasin are the San Joaquin River and Kings River. The Fresno Slough and James Bypass are along the western edge of the southern basin and connect the Kings River to the San Joaquin River. (Provost & Pritchard, 2021B).

The subbasin does have localized water quality impairments, including Dibromochloropropane (DBCP); Nitrate; Ethylene-Dibromide; 1,2,3-Trichloropropane (TCP); Methyl Tert-butyl Ether (MTBE); uranium; arsenic; hexavalent chromium; perfluoroalkyl substances (PFAS) and petroleum hydrocarbons. High concentrations of fluoride, boron, and sodium can be found in localized areas of the subbasin. (Provost & Pritchard, 2021B).

In 2014, the Sustainable Groundwater Management Act (SGMA) was signed into law to provide a framework for management of groundwater supplies by local agencies and restricts state intervention, if required. SGMA provides an opportunity for local agencies overlying the basin to form a Groundwater Sustainability Agency (GSA), which is the primary agency responsible for achieving sustainability. As part of the region’s compliance with SGMA, the North Kings Groundwater Sustainability Agency (NKGSA) was formed and includes representatives from Bakman Water Company, Biola Community Services District, City of Fresno, City of Clovis, City of Kerman, County of Fresno, Fresno Irrigation District, Fresno Metropolitan Flood Control District, Garfield Water District, and International Water District. The North Kings Groundwater Sustainability Agency adopted a Groundwater Sustainability Plan (GSP) in late 2019.

North Kings Groundwater Sustainability Agency

The City is a member of the North Kings Groundwater Sustainability Agency (NKGSA). The NKGSA is working collaboratively, under a coordination agreement with the other six (6) Groundwater Sustainability Agencies in the Kings Subbasin to achieve sustainable groundwater conditions by 2040, in accordance with the Sustainable Groundwater Management Act of 2014 (SGMA) for critically over drafted groundwater basins such as the Kings Subbasin. (Provost & Pritchard, 2021B).

SGMA identifies six (6) sustainability indicators to be monitored and reported in order to document sustainability: lowering groundwater levels, reduced [groundwater] storage, seawater intrusion, degraded [groundwater] quality, land subsidence, and surface water depletion. The NKGSA documents five (5) of those with seawater intrusion not being applicable to this region. (Provost & Pritchard, 2021B).

The City will continue increasing its surface water and recycled water supply usage to a point where the groundwater extraction is not greater than the sustainable yield in a normal year. The sustainable yield is currently estimated at 9,400 AF per year (AFY) for the SOI). (Provost & Pritchard, 2021B).

Potable water production consists of municipal groundwater wells and a surface water treatment plant (SWTP). The total groundwater pumping that occurs within the City boundaries include City-owned municipal wells and City-owned park irrigation wells. The following section provides a summary of the estimated groundwater pumping that occurs within the current City limits and planning area.

City-Produced Groundwater

The City's system contains more than 30 wells with a total capacity of approximately 37,690 gallons per minute with another 4,750 gpm of additional capacity planned in the next few years. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B).

Wells are spaced at intervals across the City and are connected to a distribution system. The pipes are sized for local distribution and have, in certain instances, presented some restrictions to cross-town water supply distribution. The transmission network consists primarily of 12-inch mains on a one-half mile grid with extensive looping. The wells are controlled by a telemetry system that controls pump operation as well as independent controls in case of remote computer failure. (Provost & Pritchard, 2017).

As of 2016, there are 34 wells operating in the City of Clovis system. Of these 34 wells, there are two functioning for standby purposes only. There are also three additional wells operating within the Tarpey system. Typically, wells are put on standby status as a result of water quality problems and are maintained for emergency use. The production rate of the existing wells varies from approximately 300 gallons per minute (gpm) to approximately 2,200 gpm. The total production for the City of Clovis in the year 2014 was approximately 15,500 acre-feet. The Tarpey Village wells accounted for approximately 540 acre-feet of this total. (Provost & Pritchard, 2017).

Existing wells are not evenly distributed across the service area, but rather generally located in the western one-half of the City of Clovis. In general, older wells are in the southwest quarter of the City and the newest wells are located to the northwest quarter of the City. The northern portion of the City of Clovis (north of Herndon Avenue), has experienced the highest growth in recent years, and has dramatically shifted the production and demand characteristics of the City's water system. (Provost & Pritchard, 2017).

Pumping rates for individual City wells in recent years have ranged from about 200 gpm to almost 1,500 gpm. However, the pumping rates for most wells have ranged from about 600 to 1,300 gpm. (Provost & Pritchard, 2017).

The average water level-decline in the City's wells from 2007 to 2014 was 1.5 feet per year. These wells represent an area of about 15,200 acres. When extrapolated over the acreage associated with the SOI boundary (21,100 acres) and the General Plan boundary (47,500 acres), the change in storage is 3,800 and 8,550 acre-feet per year, respectively. (Provost & Pritchard, 2017).

HISTORICAL GROUNDWATER PUMPING

The water system was initially constructed near the turn of the 20th century, when the first municipal well was installed, and, up until July 2004, the City's sole source of drinking water was groundwater. The City currently obtains groundwater from 36 active wells and one standby well, which have a total capacity of approximately 37,690 gallons per minute (gpm). There are also six planned wells, adding an additional planned capacity of 4,750 gpm, bringing the total well capacity to 42,440 gpm. Two of the existing active wells (Wells 10 and T-5) are offline due to TCP and PFAS water quality concerns, and one well is listed as standby due to iron and manganese concerns. TCP, PFAS, DBCP and high iron (Fe) and manganese (Mn) are the main water quality constraints in the Clovis area. Five (5) more of the City's wells are currently on inactive status due to being dry or producing too much sand (Wells 3, 11, 33, T-1, and T-3). (Provost & Pritchard, 2021B).

In 2020, groundwater provided approximately 49 percent of the total potable water use. The historical volume of groundwater pumped by the City over the past five years is ranged from 10,956 in 2019 to as high as 13,187 in 2016. The groundwater extraction has reduced since 2016 and is expected to continue to be reduced, as discussed later in this section. (Provost & Pritchard, 2021B).

In 2020, recharge was 5,316 AF, while the City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. In the past 30 years, the groundwater table has dropped 48 feet, from a depth of 92 feet in 1991 to a depth of 140 feet in 2019. Recharge efforts began in 1974, and in 2004, the City began utilizing surface water with the goal of reducing groundwater extraction. Recharge efforts by the City have not been enough to stem the decline as the basin is shared with other users who either don't recharge or inadequately recharge. (Provost & Pritchard, 2021B).

WATER SUPPLY ASSESSMENT

A more complete analysis of the water demand and supply for the City of Clovis and the proposed Project is provided in Section 3.14 Utilities.

Flooding

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

Regionally, the major flood issues are associated with the San Joaquin River, the Kings River, and their tributaries. Three major dams have been constructed to control flows on the rivers, including Friant and Mendota Dams on the San Joaquin River and Pine Flat Dam on the Kings River. In addition, a number of reservoirs, detention basins, and canals have been constructed on streams east of the Fresno-Clovis area to prevent flooding and to convey flows around developed areas.

The majority of the Project site is located within the 500-year flood zone (Zone X), which depicts areas with a 0.2-percent (500-year) annual chance flood. The northern and northeastern portion of the Project site, largely outside the Development Area, is within the 100-year flood zone (Zone AH). It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. Figure 3.9-2 shows the 100- and 500-year flood boundaries. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard.

DAM FAILURE

The Project site is located within dam failure inundation areas. Potential inundation from the Big Dry Creek Dam is shown in Figure 3.9-3. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. Larger dams that are higher than 25 feet or with storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, Division of Safety of Dams (DSD). The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

SEICHE

Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents or earthquakes. The effect of this phenomenon is a standing wave that would occur when influences by the external causes. Large, inland bodies of water that could generate seiches are retention basins and reservoirs, including the Big Dry Creek Dam, located approximately one mile northeast of the Project site.

TSUNAMI

A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. A tsunami can cause catastrophic damage to shallow or exposed shorelines. The Project site is approximately 117 miles from the coastline of the Pacific Ocean, which is sufficiently distant to preclude effects from a tsunami.

MUDFLOW

A mudflow is a type of mass wasting or landslide, where earth and surface materials are rapidly transported downhill under the force of gravity. Mudflow events are caused by a combination of factors, including soil type, soil profile, precipitation, and slope. Mudflow may be triggered by heavy rainfall that the soil is not able to sufficiently drain or absorb. As a result of this super-saturation, soil and rock materials become unstable and eventually slide away from their existing location. Soils most susceptible to mudflow are saturated, loose, non-plastic, uniformly graded, and fine-grained sand deposits. The Project site is relatively flat making the potential of mudflows low.

Stormwater Quality

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point source pollutants are controlled with pollutant discharge regulations or waste discharge requirements (WDRs). Non-point source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas.

Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, and the amount and frequency of rainfall and irrigation practices. Runoff in developed areas typically contains oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the "first flush."

303(d) Impaired Water Bodies

Water quality in the City is governed by the Central Valley Regional Water Quality Control Board (CVRWQCB) (Region 5), which sets water quality standards in their Water Quality Control Plan for the respective basins (Basin Plans). The Basin Plans identify beneficial uses for surface water and groundwater and establish water quality objectives to attain those beneficial uses.

Section 303(d) of the federal CWA requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

There are several areas within Fresno County which are considered Section 303(d) impaired waterbodies. Those areas include Fresno Slough, Hume Lake, James Bypass, Kings River, Long Meadow Creek, Los Gatos Creek, Mill Creek, Panoche Creek, Pine Flat Reservoir, Ramona Lake, and an unnamed tributary near Table Mountain Rancheria. The pollutant categories include: pesticides, nutrients, metals, pathogens, salinity, sediment, and total toxics. The pollutants include: chlorpyrifos, dissolved oxygen, pH, toxicity, alkalinity as CaCO3, selenium, mercury, sedimentation/siltation, lead, and indicator bacteria.

Storm water runoff may play a role in the water quality impairments described above. Runoff that occurs as overland flow across yards, driveways, and public streets is intercepted by the storm water drainage system and conveyed to local drainages before eventually being routed to the Pacific. This storm water can carry pollutants that can enter the local waterways and result in the types of water quality impairments described above. Common sources of storm water pollution in the City include litter, trash, pet waste, paint residue, organic material (yard waste), fertilizers, pesticides, sediments, construction debris, metals from automobile brake pad dust, air pollutants that settle on the ground or attach to rainwater, cooking grease, illegally dumped motor oil, and other harmful fluids.

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm, which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminates in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980s. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules, which categorize urban runoff as a point source (an identifiable source) subject to NPDES permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies, these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

3.9.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including the Federal Emergency Management Agency, the US Environmental Protection Agency, the State Water Resources Board, and the Regional Water Quality Control Board. The following is an overview of the federal, state and local regulations that are applicable to the proposed Project.

FEDERAL

Clean Water Act

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The CWA establishes the basic structure for regulating the discharges of pollutants into the waters of the United States and gives the US Environmental Protection Agency (EPA) the authority to implement pollution control programs. The statute’s goal is to regulate all discharges into the nation’s waters and to restore, maintain, and preserve the integrity of those waters. The CWA sets water quality standards for all contaminants in surface waters and mandates permits for wastewater and stormwater discharges.

The CWA also requires states to establish site-specific water quality standards for navigable bodies of water and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The following CWA sections assist in ensuring water quality for the water of the United States:

CWA Section 208 requires the use of best management practices (BMPs) to control the discharge of pollutants in stormwater during construction. CWA Section 303(d) requires the creation of a list of impaired water bodies by states, territories, and authorized tribes; evaluation of lawful activities that may impact impaired water bodies, and preparation of plans to improve the quality of these water bodies. CWA Section 303(d) also establishes TMDLs, which is the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards. CWA Section 404 authorizes the US Army Corps of Engineers to require permits that will discharge, dredge or fill materials into waters in the US, including wetlands.

In California, the EPA has designated the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) with the authority to identify beneficial uses and adopt applicable water quality objectives.

The SWRCB is responsible for implementing the CWA and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for storm water discharges (individual permits and general permits).

Federal Emergency Management Agency

FEMA operates the National Flood Insurance Program (NFIP). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the California Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Flood Control Act

The Flood Control Act (1917) established survey and cost estimate requirements for flood hazards in the Sacramento Valley. All levees and structures constructed per the Act were to be maintained locally, but controlled federally. All rights of way necessary for the construction of flood control infrastructure were to be provided to the Federal government at no cost.

Federal involvement in the construction of flood control infrastructure, primarily dams and levees, became more pronounced upon passage of the Flood Control Act of 1936.

Flood Disaster Protection Act (FDPA)

The FDPA of 1973 was a response to the shortcomings of the NFIP, which were experienced during the flood season of 1972. The FDPA prohibited Federal assistance, including acquisition, construction, and financial assistance, within delineated floodplains in non-participating NFIP communities. Furthermore, all Federal agencies and/or federally insured and federally regulated lenders must require flood insurance for all acquisitions or developments in designated Special Flood Hazard Areas (SFHAs) in communities that participate in the NFIP.

Improvements, construction, and developments within SFHAs are generally subject to the following standards:

- All new construction and substantial improvements of residential buildings must have the lowest floor (including basement) elevated to or above the base flood elevation (BFE).
- All new construction and substantial improvements of non-residential buildings must either have the lowest floor (including basement) elevated to or above the BFE or dry-floodproofed to the BFE.
- Buildings can be elevated to or above the BFE using fill, or they can be elevated on extended foundation walls or other enclosure walls, on piles, or on columns.
- Extended foundation or other enclosure walls must be designed and constructed to withstand hydrostatic pressure and be constructed with flood-resistant materials and contain openings that will permit the automatic entry and exit of floodwaters. Any enclosed area below the BFE can only be used for the parking of vehicles, building access, or storage.

National Flood Insurance Program (NFIP)

Per the National Flood Insurance Act of 1968, the NFIP has three fundamental purposes: *Better indemnify individuals for flood losses through insurance; Reduce future flood damages through State and community floodplain management regulations; and Reduce Federal expenditures for disaster assistance and flood control.*

While the Act provided for subsidized flood insurance for existing structures, the provision of flood insurance by FEMA became contingent on the adoption of floodplain regulations at the local level.

National Pollutant Discharge Elimination System (NPDES)

NPDES permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal CWA, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal CWA and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the CWA's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Individual projects in the City that disturb more than one acre would be required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMP) the discharger would use to prevent and retain storm water runoff. The SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

Rivers and Harbors Appropriation Act of 1899

One of the country’s first environmental laws, this Act established a regulatory program to address activities that could affect navigation in Waters of the United States.

Water Pollution Control Act of 1972

The Water Pollution Control Act (WPCA) established a program to regulate activities that result in the discharge of pollutants to waters of the United States

STATE

California Fish and Wildlife Code

The California Department of Fish and Wildlife (CDFW) protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Section 1600 to 1616 of the California Fish and Game Code. The California Fish and Game Code establishes that ”an entity may not substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river stream, or lake” (Fish and Game Code Section 1602(a)) without notifying the CDFW, incorporating necessary mitigation and obtaining a streambed alteration agreement. The CDFWs jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

California Government Code

Relevant sections of the California Government Code are identified below.

SECTION 65302

Revised safety elements must include maps of any 200-year flood plains and levee protection zones within the Planning Area.

SECTION 65584.04

Any land having inadequate flood protection, as determined by FEMA or DWR, must be excluded from land identified as suitable for urban development within the planning area.

SECTION 8589.4

California Government Code §8589.4, commonly referred to as the Potential Flooding-Dam Inundation Act, requires owners of dams to prepare maps showing potential inundation areas in the event of dam failure. A dam failure inundation zone is different from a flood hazard zone under the National Flood Insurance Program (NFIP). NFIP flood zones are areas along streams or coasts where storm flooding is possible from a “100-year flood.” In contrast, a dam failure inundation zone is the area downstream from a dam that could be flooded in the event of dam failure due to an earthquake or other catastrophe. Dam failure inundation maps are reviewed and approved by the California Office of Emergency Services (OES). Sellers of real estate within inundation zones are required to disclose this information to prospective buyers.

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund (“SRF”) and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

Consumer Confidence Report Requirements

The preparation of Consumer Confidence Reports (CCRs) is required by Health & Safety Code §116470 and California Code of Regulations, Title 22, Article 20. Health & Safety Code §116470(b) also requires public water systems with more than 10,000 service connections that detect contaminants above their public health goals (PHGs) to provide PHG exceedance reports every three years and to hold public hearings regarding their reports.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the Federal CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Assembly Bill 162

Assembly Bill (AB) 162 requires a general plan's land use element to identify and annually review those areas covered by the general plan that are subject to flooding as identified by flood plain mapping prepared by FEMA or DWR. The bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the general plan to identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management. By imposing new duties on local public officials, the bill creates a State-mandated local program.

This bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the safety element to identify, among other things, information regarding flood hazards and to establish a set of comprehensive goals, policies, and objectives, based on specified information for the protection of the community from, among other things, the unreasonable risks of flooding.

Assembly Bill 70

AB 70 provides that a city or county may be required to contribute its fair and reasonable share of the property damage caused by a flood to the extent that it has increased the State's exposure to liability for property damage by unreasonably approving, as defined, new development in a previously undeveloped area, as defined, that is protected by a State flood control project, unless the city or county meets specified requirements.

Senate Bill 610 and Assembly Bill 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed Project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Senate Bill 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

200-Year Flood Protection in the Central Valley

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in order to approve development. The new law restricts approval of development after 2016 if "adequate progress" towards achieving this standard is not met. Urban and urbanizing areas protected by State-Federal project levees cannot use "adequate progress" as a condition to approve development after 2028. Adequate progress is defined as meeting all of the following:

1. The project scope, cost and schedule have been developed;
2. In any given year, at least 90% of the revenues scheduled for that year have been appropriated and expended consistent with the schedule;
3. Construction of critical features is progressing as indicated by the actual expenditure of budget funds;
4. The city or county has not been responsible for any significant delay in completion of the system; and
5. The above information has been provided to the DWR and the Central Valley Flood Protection Board and the local flood management agency shall annually report on the efforts to complete the project.

State Updated Model Landscape Ordinance

Under AB 1881, the updated Model Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance. Clovis Development Code Chapter 9.28 includes landscaping water use standards. Clovis Development Code Chapter 6.5, Article 5 includes the City's Water Efficient Landscape Requirements that were modeled after the State's Model Ordinance.

NPDES Construction General Permit

SWRCB Order No. 2009-0009-DWQ known as the "Construction General Permit" was adopted on September 2, 2009 and was amended by Order No 2012-0006-DWQ, which became effective on July 17, 2012. This NPDES permit establishes a risk-based approach to stormwater control requirements for construction projects by identifying three project risk levels. The main objectives of the General Permit are to:

- Reduce erosion
- Minimize or eliminate sediment in stormwater discharges
- Prevent materials used at a construction site from contacting stormwater
- Implement a sampling and analysis program
- Eliminate unauthorized non-stormwater discharges from construction sites
- Implement appropriate measures to reduce potential impacts on waterways both during and after construction of projects
- Establish maintenance commitments on post-construction pollution control measures

California mandates requirements for all construction activities disturbing more than one acre of land to develop and implement SWPPPs. The SWPPP documents the selection and implementation of BMPs for a specific construction project, charging owners with stormwater quality management responsibilities. A construction site subject to the General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit.

Water Quality Control Basin Plan

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), amended by the CVRWQCB in 2018, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and SJR basins, including the Delta.

State and federal laws mandate the protection of designated "beneficial uses" of water bodies. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050[f]). Additional protected beneficial uses of the SJR include groundwater recharge and freshwater replenishment.

State Water Resources Control Board Storm Water Strategy

The Storm Water Strategy is founded on the results of the Storm Water Strategic Initiative, which served to direct the State Water Board's role in storm water resources management and evolve the Storm Water Program by a) developing guiding principles to serve as the foundation of the storm water program, b) identifying issues that support or inhibit the program from aligning with the guiding principles, and c) proposing and prioritizing projects that the Water Boards could implement to address those issues.

The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Storm Water (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board's Storm Water Program.

REGIONAL AND LOCAL

Fresno-Clovis Storm Water Quality Management Program

The Storm Water Quality Management Program (SWQMP) was developed pursuant to Order No. R5-2013-0080, issued by the Central Valley RWQCB in 2013. The municipal National Pollutant Discharge Elimination System (NPDES) stormwater permit (MS4 Permit) was issued to the FMFCD, the Cities of Fresno and Clovis, the County of Fresno, and the California State University at Fresno by the Central Valley RWQCB on May 31, 2013. The SWQMP includes specific pollution prevention and control practices for Fresno-Clovis urban drainage system planning, design, construction, and maintenance. It also includes public education to prevent stormwater pollution; specifies construction, industrial/commercial, municipal, and new development stormwater quality control practices; procedures to prevent and respond to illicit discharges and connections; monitoring to assess municipal stormwater impacts on receiving waters; and program effectiveness assessments (PEA) to evaluate the effectiveness of best management practices (BMPs).

The SWQMP “control measures” refer to activities intended to minimize, reduce, eliminate, or prohibit the discharge of pollutants with the goal of improving water quality. The benefits of these control measures are assessed through evaluation of associated performance standards. The performance standards include schedules and milestones for implementation.

City of Clovis General Plan

The City of Clovis General Plan includes several policies relevant to hydrology and water quality. General Plan goals and policies applicable to the Project are identified below:

ENVIRONMENTAL SAFETY ELEMENT

- Goal 1: Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural hazards.
- Policy 1.1: Flood Zone - Prohibit development within the 100-year flood zone and dam inundation areas unless adequate mitigation is provided against flood hazards. Participate in the National Flood Insurance Program.

OPEN SPACE AND CONSERVATION ELEMENT

- Goal 3: A built environment that conserves and protects the use and quality of water and energy resources.
- Policy 3.1: Stormwater management. Encourage the use of low impact development techniques that retain or mimic natural features for stormwater management.
- Policy 3.2: Stormwater pollution. Minimize the use of non-point source pollutants and stormwater runoff.

City of Clovis Municipal Code

The City of Clovis Municipal Code Chapter 6.7 establishes the City’s Urban Storm Water Quality Management and Discharge Control Ordinance. The purpose of the ordinance is to protect and enhance the water quality of watercourses and water bodies by reducing pollutants in urban storm water discharges to the maximum extent practicable and by effectively prohibiting non-storm water discharges to the storm drain system. The ordinance prohibits any discharge that could result in or contribute to a violation of the municipal NPDES storm water discharge permit. It requires Best Management Practices (BMPs) to control the volume, rate, and potential pollutant load of storm water runoff from new development and redevelopment projects.

Chapter 8.7 requires payment of local drainage fees to fund construction of local drainage facilities and improvements.

Chapter 8.12 provides for floodplain management and regulates development in floodplains. A development permit must be obtained before construction or development within any area of special flood hazard. Permits require provisions for flood hazard reduction, including anchoring, flood-resistant materials, and construction methods to floodproof the structure.

Chapter 9.110 provides subdivision design and improvement requirements. Per Section 9.110.040, a grading plan is required to be submitted to and approved by the City Engineer prior to issuance of a subdivision-level building permit. Subdivisions are required to incorporate appropriate erosion and sediment control measures.

Chapter 9.28 contains landscaping standards and requires a landscape design plan, irrigation design plan, and soil analysis in order to reduce runoff and control soil erosion as part of the landscape documentation package.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with hydrology and water quality if it will:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
  - Result in substantial erosion or siltation on- or off-site;
  - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
  - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
  - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and/or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

IMPACTS AND MITIGATION

Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements. (Less than Significant)

CONSTRUCTION PHASE

According to the United States Environmental Protection Agency, polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. Soil erosion is one of the most common sources of polluted stormwater runoff during construction activities. When left uncontrolled, storm water runoff can erode soil and cause sedimentation in waterways, which collectively result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges which adversely affect the quality of our nation's waters. The program uses the National Pollutant Discharge Elimination System (NPDES) permitting mechanism to require the implementation of controls designed to prevent harmful pollutants, including soil erosion, from being washed by stormwater runoff into local water bodies. The construction activities for the proposed Project would be governed by the General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), which states:

> *"…Particular attention must be paid to large, mass graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded…"*

General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ) further states that:

> *"Sediment control BMPs should be the secondary means of preventing storm water contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed…Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions…All measures must be periodically inspected, maintained and repaired to ensure that receiving water*

> *quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended…"*

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities could also result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. To ensure that construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), projects in California must prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the RWQCB as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency.

In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a **less than significant** impact relative to this topic.

OPERATIONAL PHASE

The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways, and residential structures. Normal activities in residentially developed areas include the use of various automotive petroleum products (i.e., oil, grease, and fuel), common household hazardous materials, heavy metals, pesticides, herbicides, fertilizers, and sediment. Within urban areas, these pollutants are generally called non-point source pollutants. The pollutant levels vary based on factors, such as time between storm events, volume of storm event, type of uses, and density of people.

Stormwater runoff in the City of Clovis is conveyed through a system of street gutters, underground storm drains, retention/detention basins, pumping stations, and open channels that are maintained by the FMFCD. FMFCD's stormwater drainage system discharges to irrigation canals, creeks, and the San Joaquin River. The system is designed to accept the peak flow rate of runoff from a two-year intensity storm event (a storm that has a 50 percent probability of occurring in any given year) (FMFCD, 2022b). When storm events occur that exceed the two-year intensity, ponding begins to occur in the streets until the pipeline system can remove the water. If the storm is of sufficient intensity to generate more water than the street can store, the water will continue to rise until it reaches a topographic outlet where it can escape down gradient.

The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. Stormwater throughout the City is collected in FMFCD's facilities.

Additionally, there are various non-structural and structural stormwater BMPs that can be implemented to reduce water pollution. Non-structural BMPs are typically aimed at prevention of pollution through public education and outreach. Non-structural BMPs include: school educational programs, newsletters, website information, commercial, billboards/advertisements, river cleanups, and storm drain stenciling. Structural BMPS are aimed at the physical collection, filtering, and detaining of stormwater. Structural BMPs include items such as drop inlet filters, vault filters, hydrodynamic separators, surface detention basins, and underground detention facilities.

The following are standards rules implemented in the form of BMPs to reduce the amount of pollution in stormwater discharged from the Project site.

- Pollution Prevention/Good Housekeeping
    - Prior to clearing, grading, and disturbances to the ground, such as stockpiling, or excavation in each phase of the Project, the Project proponent shall develop a spill response and prevention plan as a component of (1) SWPPPs prepared for construction activities, (2) SWPPPs for facilities subject to the NPDES Stormwater Permit, and (3) spill prevention control and countermeasure plans for qualifying facilities. The spill response and prevention plan shall be implemented during all construction activities.
    - Streets and parking lots in all non-residential portions, including the right-of-way, of the Project site shall be swept at least once every two weeks.
- Extended Detention Facilities: Extended detention refers to the facilities proposed for the Project site that would detain and temporarily store stormwater runoff to reduce the peak rates of discharge to the storm drainage system. Detention of stormwater allows particles and other pollutants to settle and thereby potentially reduce concentrations and mass loading of contaminants in the discharge.
- Grassed Swales: A swale is a vegetated, open channel management practice designed to treat and attenuate stormwater runoff for a specified water quality volume. Stormwater

runoff flowing through these channels is treated by being filtered through vegetation in the channel, through a subsoil matrix, and/or through infiltration into the underlying soils. Swales can be used throughout the proposed Project area where feasible in the landscape design to treat street right-of-way parking runoff.

- Proprietary Devices: There are a variety of commercially available stormwater treatment devices designed to remove contaminants from drainage once flows enter the conveyance systems. StormFilter™ units, or equivalent filtration-type systems, and Bioswales are recommended for streets and parking areas. Drop inlet filters should also be used to control drainage runoff water quality.

BMPs will be implemented through the SWPPP program, and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.9-2: The proposed Project has the potential to substantially deplete groundwater supplies or interfere substantially with groundwater recharge. (Less than Significant)

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement, significantly reduce infiltration capacity and increase surface water runoff.

Table 3.9-2 identifies the soils in the Project site and the soils infiltration rate.

TABLE 3.9-2: SOILS HYDROLOGIC RATING

NAME	% OF DEVELOPMENT AREA	% OF NON-DEVELOPMENT AREA	HYDROLOGIC RATING
An - Alamo clay	0.0%	0.3%	D
ArA - Atwater sandy loam, 0 to 3 percent slopes	13.8%	21.1%	A
Gf - Grangeville fine sandy loam, 0 to 1 percent slopes, MLRA 17	29.4%	11.1%	A/D
Gg - Grangeville fine sandy loam, saline alkali	4.3%	0.1%	B
Re - Ramona loam, hard substratum	26.0%	40.3%	C
Rh - Riverwash	1.0%	0.1%	N/A
SeA - San Joaquin loam, 0 to 3 percent slopes	14.7%	16.5%	C
TzbA - Tujunga loamy sand, 0 to 3 percent slopes	0.0%	2.4%	A
VaA - Visalia sandy loam, 0 to 3 percent slopes	10.7%	8.1%	A

SOURCE: NCRS 2022

The soils contained on the Project site have a hydrologic rating ranging from “A,” which is indicative of soils having a high infiltration rate (low runoff potential) when thoroughly wet, to “D,” which is indicative of soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. Figure 3.2-2 identifies Project site soils.

The infiltration rate of the soils on the Project site ranges from low to high. As indicated in the Geotechnical Report (Krazan & Associates, 2019), cemented silty sand and silty sand with trace clay, locally referred to as "hardpan," were encountered in several of the borings at the Project site. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project’s storm drainage system and eventually flow into the San Joaquin River.

The Project site is located in the Kings Groundwater Subbasin. As previously stated, the Kings Subbasin is recharged by water from sources including streams, percolation of rainfall and irrigation water, inflow from other groundwater basins, and intentional recharge at numerous facilities. Intentional recharge is conducted in recharge ponds and on some farm fields with compensation to landowners. The hardpan encountered on the Project site generally does not allow for a high infiltration rate. While the proposed Project would result in an increase in the amount of impervious surfaces within the Project site when compared to existing conditions, it is not anticipated that the proposed development would interfere with groundwater recharge, as much of the groundwater recharge in the basin occurs in the sand and gravels along the San Joaquin River from Sierra Nevada snowmelt flowing downstream.

Groundwater Extraction: Since the 2015 UWMP, SGMA has become effective and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040, as required. The supply from groundwater sources has been modified to reflect this change in the City’s supply portfolio. In the 2010 and 2015 UWMPs, the City’s groundwater supplies were shown to be increasing with population growth into the future. The historical volume of groundwater pumped by the City from 2016 to 2020 ranged from 10,956 in 2019 to as high as 13,187 in 2016. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B). The City’s 30-year average groundwater recharge quantity is approximately 8,412 AFY. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

The City has been searching for additional land to construct another dedicated groundwater recharge facility in the City. The facility will likely be in North Clovis upgradient of City wells. A minimum of 20 to 40 acres is desired with a minimum recharge capability of 1,500 to 3,000 AF per year. An additional project that the City is pursuing in cooperation with FID, FMFCD, and the City of Fresno, is either reoperation of Big Dry Detention Basin, known as the Redbank-Fancher Creeks Flood Control Project, to allow storage of East Side Stream Flood releases or a project to increase recharge capabilities upstream of the Basin. This is currently in the study phase. (Provost & Pritchard, 2021B).

In addition, there are two banking facilities, the Waldron Banking Facilities (WBF) and Boswell Groundwater Banking Facility (BGBF), have been constructed in central Fresno County. The City entered into an agreement with the FID to participate in the financing of the construction of a dedicated water banking facility called the Waldron Banking Facilities. The City is entitled to receive up to ninety percent (9,000 AF) of the annual yield. The City plans on taking the water in dry years to augment supply. (Provost & Pritchard, 2021B).

The groundwater supplies the City relies upon are not in the process of adjudication. The surface water supplies have either long-range contracts or newly executed contracts to document quantities and availability to the City. (Provost & Pritchard, 2021B).

Recycled water is considered a consistent source; however, because it is mainly dependent upon indoor residential use, it is susceptible to water rationing. In 2020, the City utilized approximately 28 percent of its treated wastewater, an increase over past years; however, the use primarily was limited by its existing infrastructure and seasonal need. The amount of recycled water the City intends to use for beneficial purposes is expected to increase as additional infrastructure is built, wastewater generation increases, and the Clovis Water Reuse Plant expands. (Provost & Pritchard, 2021B).

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City's planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The 'sustainable yield' is defined as the amount of groundwater pumping that can occur while maintaining groundwater at sustainable levels and avoiding undesirable results. The sustainable yield can be estimated as the total groundwater recharge (from natural and artificial sources) minus the groundwater outflow (as shown below). The GSP of the North Kings Groundwater Sustainability Agency indicates that the sustainable yield of the groundwater basin is approximately 1,140,000 AFY/acre (1,360,000 AF -220,000 AF).

CONCLUSION

A full water supply assessment is provided in Section 3.14 Utilities. The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

For the reasons mentioned above, the proposed Project would not cause the substantial depletion of groundwater supplies or interfere substantially with groundwater recharge. As such, implementation of the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.9-3: The proposed Project has the potential to alter the existing drainage pattern in a manner which would result in substantial erosion, siltation, flooding, or polluted runoff. (Less than Significant)

Currently, runoff from within the Project site is collected in a system of shallow agricultural and roadside ditches. Public storm drain facilities are not currently installed in the agricultural fields. Planned urbanization of the Project site would result in changes to land use and infiltration characteristics and would introduce new sources of water pollutants, producing "urban runoff." Pollutants contained within urban runoff may include, but are not limited to, sediment, oxygen-demanding substances (e.g., organic matter), nutrients (primarily nitrogen and phosphorus), heavy metals, bacteria, oil and grease, and toxic chemicals that can degrade receiving waters. Urban runoff pollutants may stem from erosion of disturbed areas, deposition of atmospheric particles derived from automobile or industrial sources, corrosion or decay of building materials, rainfall contact with toxic substances, decomposing plant materials, animal excrement, and spills of toxic materials on surfaces, which receive rainfall and generate runoff. New residential uses within the Project site may also generate urban runoff from streets and driveways. Yard areas may produce fertilizer wastes and/or bacterial contamination from animal excrement.

Stormwater runoff in the City of Clovis is conveyed through a system of street gutters, underground storm drains, retention/detention basins, pumping stations, and open channels that are maintained by the Fresno Metropolitan Flood Control District (FMFCD). The FMFCD operates under a Storm Water Quality Management Program, which is assessed on an annual basis to demonstrate compliance with the National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) municipal stormwater permit (CA0085324) for the FMFCD. The FMFCD is the lead permit agency, and Co-Permittees are the Cities of Fresno and Clovis, the County of Fresno, and California State University, Fresno (CSUF).

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

FMFCD will require lot coverage to be provided prior to submittal of improvement plans. The lot coverage is calculated by the District to include the front yard walkway, sidewalk walkway and the rear yard patio equaling an additional 6% of impervious area in addition to the City's typical lot coverage calculation. This calculation cannot be calculated at this time given that building plans and lot specific landscaping and site improvements have not been prepared. This very detailed level of design would be performed at either the improvement plan or building plan phase of the project. Ultimately, FMFCD charges a drainage fee that is calculated commensurate with the lot coverage calculation.

FMFCD reviews all grading and improvement plans for consistency with the FMFCD Master Plan. This review ensures that grading does not have an adverse impact to major storm conveyance and to the passage of storm water to the adjacent roadways and existing storm drainage pipelines and inlets. They require all projects to provide the appropriate surface flowage easements or covenants for any portion of the development area that cannot convey storm water to the public right-of-way without crossing private property.

The initial review by FMFCD has indicated that the "Development Area" is currently located within FMFCD's adopted Rural Master Plan Drainage Area "BY1." The adopted Rural Master Plan drainage system is designed to serve the existing land uses of open space, range/pasture and rural residential housing densities ranging from 0 to 0.7 dwelling unit/acre (du/ac). FMFCD has indicated that the existing planned drainage facilities do not have capacity to serve the proposed higher urban density residential land use. FMFCD has indicated that the "Development Area" is required to mitigate the impacts of the increased runoff from the proposed higher density residential land use to the adopted rural planned rate. FMFCD indicated that the "Development Area" may either make improvements to the existing pipeline system to provide additional capacity or may use some type of onsite permanent peak reducing facility in order to match the adopted Rural Master Plan flow rates and eliminate any adverse impacts on the downstream drainage system. FMFCD requested that the grading Engineer contact the District as early as possible to review the proposed site grading for verification and acceptance of design prior to preparing a grading plan.

FMFCD noted that the construction of the Optional Master Plan Facilities and Optional Non-Master Plan Facilities (as shown on Exhibit No. 1 of their letter), will provide permanent drainage service to the portion of the "Development Area" located north of Heirloom Avenue. The construction of the Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, will provide permanent drainage service to the portion of the "Development Area" located south of Heirloom Avenue upon construction of facilities by in Tracts 6292 and 6344. If these optional facilities are not constructed, FMFCD recommends temporary facilities until permanent service is available.

FMFCD noted that the "Development Area" shall not block the historical drainage patterns of existing homes located within the parcels to the east and west side of the "Development Area." The "Development Area" shall verify to the satisfaction of FMFCD that runoff from these areas has the ability to surface drain to adjacent streets or be collected into PER-3, as shown on Exhibit No. 1. Either a stub street, channel, or a combination of both shall be provided for those areas, as shown on Exhibit No. 1.

FMFCD noted that the “Development Area” must identify what streets will pass the major storm and provide calculations that show structures will have adequate flood protection. Based on historical drainage patterns, some of the streets located within the “Development Area” may need to be resized or reconfigured (including, but not limited to, streets that include traffic calming curbs) to pass larger event storms. FMFCD approval is not extended to street configuration. A drainage report indicating the path of the major storm flow and calculations confirming there is adequate protection of finished floors will be necessary.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD’s stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD’s requirements, the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.9-4 The proposed Project has the potential to otherwise substantially degrade water quality. (Less than Significant)

Water Quality Impacts from Discharges to 303(d) Listed Water Bodies: Section 303(d) of the federal Clean Water Act (CWA) requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

According to the California Water Quality Control Monitoring Council, which is part of California Environmental Protection Agency, Natural Resources, there are many areas within the San Joaquin County which are considered Section 303(d) impaired waterbodies. Those areas in the regional vicinity of the Project site that are impaired are referred as Delta Waterways (Southern Portion) by the Water Quality Control Monitoring Council. This includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown).

The San Joaquin River is specifically listed by the Central Valley Regional Water Quality Control Board (CVRWQCB) as an impaired water body due to mercury under the Clean Water Act. Mercury is a sediment-based pollutant that can be released into the water column during various in-water construction activities (e.g., construction of the storm drain outfall) that may disturb the sediment and cause turbidity. As a result, such activities may increase the likelihood of mercury exposure to the public and wildlife that utilize the San Joaquin River.

In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the

RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the RWQCB as part of the permitting process. The SWPPP, once approved, is kept on-site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB.

The ongoing operational phase of the proposed Project (all phases) requires discharge of stormwater into the on-site detention basins, which would ultimately flow into FMFCD system. The discharge of stormwater must be treated through BMPs prior to its discharge. The standards and regulations contained above would ensure that BMPs are implemented to reduce the amount of pollution in stormwater discharged from the Project site into the FMFCD system. Storm water drainage is managed through the implementation of BMPs to the extent they are technologically achievable to prevent and reduce pollutants. The City requires reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. The management of water quality through BMPs is intended to ensure that water quality does not degrade to levels that would violate water quality standards.

The use of BMPs is intended to treat runoff close to the source during the construction and long-term operational phase of the Project to reduce stormwater quality impacts. The previously described control measures listed are existing regulatory requirements. Development of proposed Project in compliance with the regulatory control measure requirements, would have a **less than significant** impact relative to this topic.

Impact 3.9-5 The proposed Project would place housing or structures that could impede/redirect flows within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. (Less than Significant)

As shown on Figure 3.9-2, the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be **less than significant** and no new structures would be constructed within the 100-year flood plain.

Impact 3.9-6 The proposed Project has the potential to expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, seiche, tsunami, or mudflow. (Less than Significant)

A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. A tsunami can cause catastrophic damage to shallow or exposed shorelines. The Project site is approximately 117 miles from the coastline of the Pacific Ocean, which is sufficiently distant to preclude effects from a tsunami.

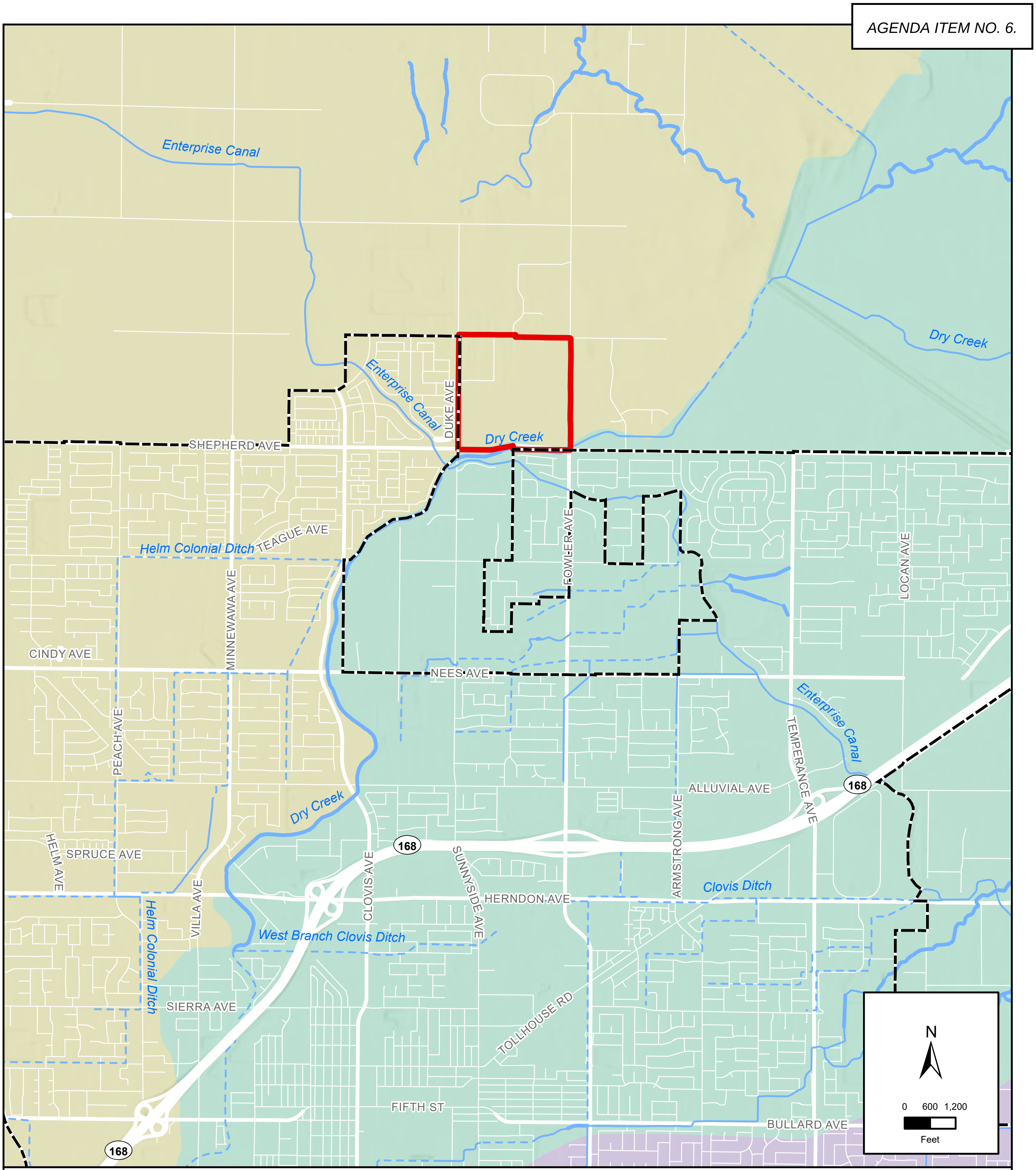
Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents or earthquakes. The effect of this phenomenon is a standing wave that would occur when influenced by the external causes. The Project site is not adjacent to any lakes that pose a significant risk from a seiche event.

A mudflow is a type of mass wasting or landslide, where earth and surface materials are rapidly transported downhill under the force of gravity. Mudflow events are caused by a combination of factors, including soil type, soil profile, precipitation, and slope. Mudflow may be triggered by heavy rainfall that the soil is not able to sufficiently drain or absorb. As a result of this super-saturation, soil and rock materials become unstable and eventually slide away from their existing location. Soils most susceptible to mudflow are saturated, loose, non-plastic, uniformly graded, and fine-grained sand deposits. The Project site is relatively flat making the potential of mudflows low.

The Project site is subject to flood inundation as a result of dam failure. Figure 3.9-3 shows areas that are susceptible to dam inundation. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. As discussed previously, larger dams that are higher than 25 feet or with storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, DSD. DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

The proposed Project is not anticipated to result in the exposure of people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, seiche, tsunami, or mudflow. This impact is considered **less than significant**.



LEGEND

🟥 Project Boundary

▭ Clovis City Limits

Waterways

- Perennial Stream
- Pipeline, Connector, or Artificial Path
- Canal or Ditch

Watersheds

- 🟪 Dog Creek-Fish Slough
- 🟩 Dry Creek
- 🟨 James Bypass

SHEPHERD NORTH PROJECT

Figure 3.9-1 Watershed

Sources: Fresno County GIS; USGS; NHD; WBD. Map date: May 8, 2023.

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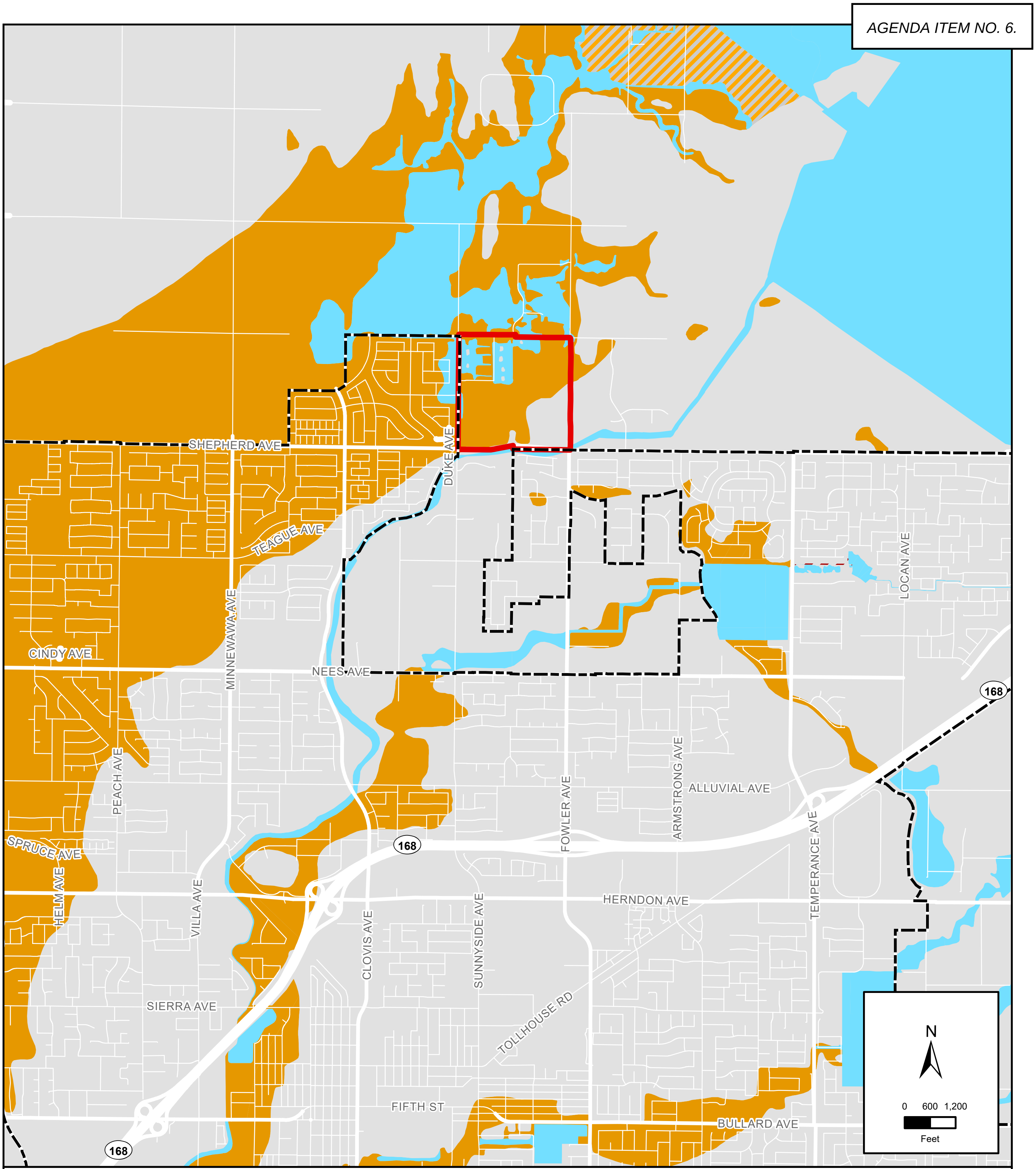

LEGEND

🟥 Project Boundary

▭ Clovis City Limits

FEMA Designation

🟦 100-Year Flood Zone

🟧 500-Year Flood Zone

▨ Regulatory Floodway

⬜ Area of Minimal Flood Hazard

▨ Area with Reduced Flood Risk due to Levee

SHEPHERD NORTH PROJECT

Figure 3.9-2 FEMA Flood Zones

Sources: Fresno County GIS; FEMA. Map date: May 8, 2023.

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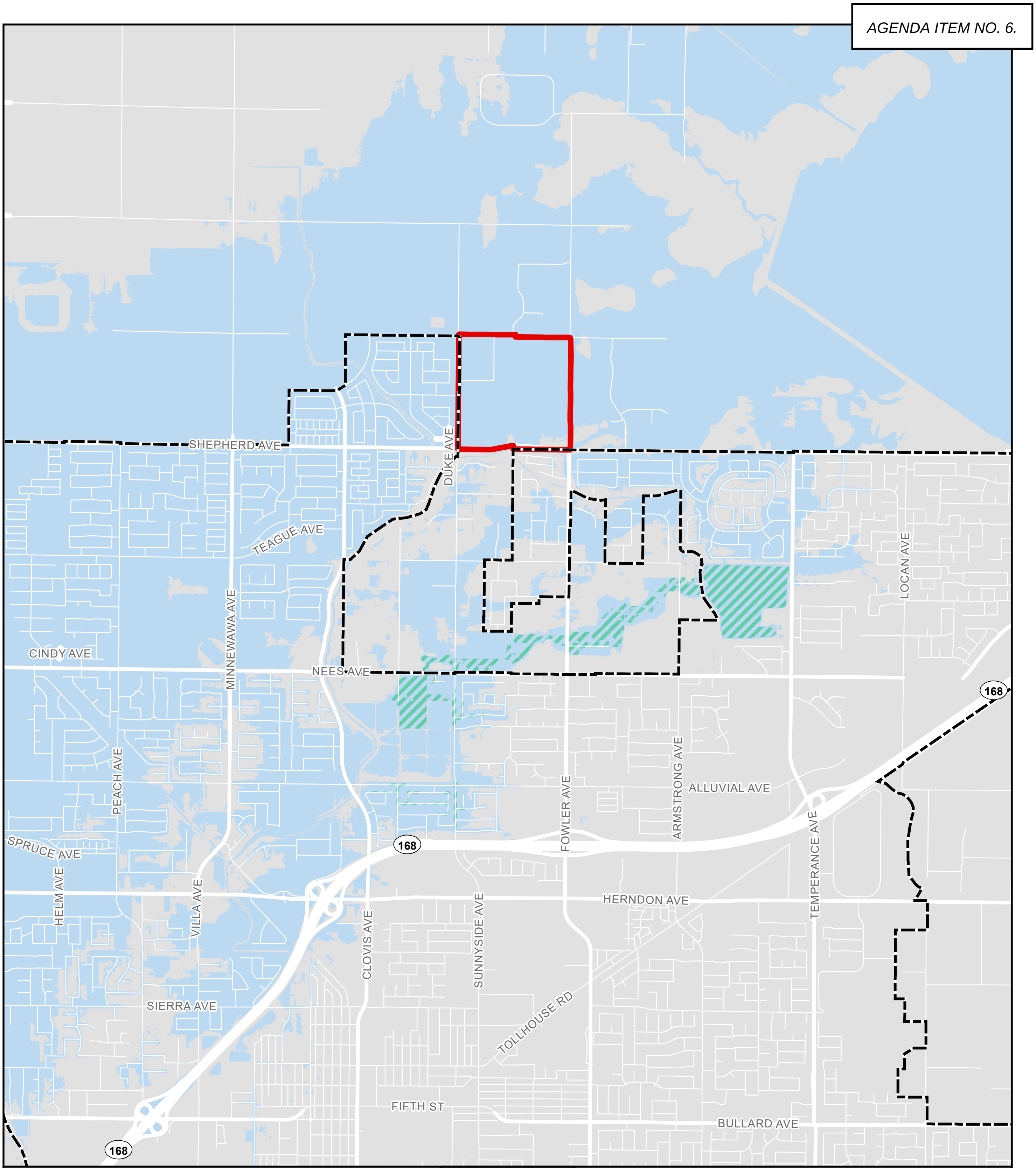

LEGEND

🟥 Project Boundary

▭ Clovis City Limits

▨ Alluvial Drain Detention Dam Inundation Area

🟦 Big Dry Creek Dam Inundation Area

Sources: Fresno County GIS; DWR. Map date: May 8, 2023.

N

0 600 1,200

Feet

SHEPHERD NORTH PROJECT

Figure 3.9-3 Dam Inundation

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LAND USE, POPULATION, AND HOUSING 3.10

This section describes the existing land uses on the Project site and in the surrounding area, describes the applicable land use regulations, and evaluates the environmental effects of implementation of the proposed Project related to land use, population, and housing. Information in this section is based on information provided in the proposed Project materials and the following reference documents:

- *2014 Clovis General Plan (City of Clovis, 2014);*
- *2014 Clovis General Plan Draft Program Environmental Impact Report (City of Clovis, 2014);*
- *2000 Fresno County General Plan (City of Clovis, 2000);*
- *2018 Fresno County Zoning Ordinance (City of Clovis, 2018);*
- *City of Clovis Municipal Code, Title 9 – Development Code (City of Clovis, 2022).*
- *A Landscape of Choice: Strategies for Improving Patterns of Community Growth (The Growth Alternatives Alliance, April 1998)*

There were no comments received during the public review period or scoping meetings for the Notice of Preparation regarding this topic.

3.10.1 ENVIRONMENTAL SETTING

EXISTING PHYSICAL ENVIRONMENT

The Clovis Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue.

The City of Clovis is in the central portion of Fresno County, approximately 6.5 miles northeast of the City of Fresno downtown area. The City is surrounded by portions of unincorporated Fresno County to the north, east, and south and by the City of Fresno to the west and southwest. At the local level, the Plan Area is generally bounded by Copper Avenue on the north, Willow Avenue on the west, Academy Avenue on the east, and Shields Avenue on the south. State Route 168 (SR-168) bisects the City from the southwest to the northeast.

Project Site

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
    - o Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Tract Map, and Residential Site Plan Review.

- Non-Development Area - Includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use.

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area, and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area, but is outside of the City's existing Sphere of Influence and contains existing single-family residences. Each SubArea is uniquely different and is described below:

> Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and East Lexington Avenue. North Purdue Avenue and East Lexington Avenue are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
>
> Expansion SubArea East: Includes single-family residences located between the Project site and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

Figure 2.0-6 shows aerial imagery of the existing site uses within the Project site.

Surrounding Land Uses

The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development.

DEMOGRAPHICS

Population Trends

The City experienced a population increase from 2000 to 2010 of 27,163 persons (39.7%) as shown in Table 3.10-1. During the period from 2010 to 2022, population continued to increase in the City, resulting in a total population of 123,665 in 2022.

TABLE 3.10-1: POPULATION GROWTH

YEAR	*POPULATION*	*CHANGE*	*PERCENT CHANGE*
2000	68,468	--	--
2010	95,631	27,163	39.7%
2020	123,665	28,034	29.3%

SOURCES: CITY OF CLOVIS GENERAL PLAN EIR, TABLE 5.13-1; CA DOF, 2020.

Housing Stock

Table 3.10-2 summarizes the growth of the City's housing stock between 2000 and 2022. The number of housing units increased from 25,265 in 2000 to 35,226 in 2010. This represents 39.4 percent growth in the City's housing stock. The City's housing stock totaled 45,835 units in 2022.

TABLE 3.10-2: HOUSING UNIT GROWTH

YEAR	*HOUSING UNITS*	*CHANGE*	*PERCENT CHANGE*
2000	25,265	--	--
2010	35,226	9,961	39.4%
2020	45,835	10,609	30.1%

SOURCES: CITY OF CLOVIS GENERAL PLAN EIR, TABLE 5.13-2; CA DOF, 2020.

Persons Per Dwelling Unit

According to the most recent Department of Finance (2022) estimate, the average number of persons residing in a dwelling unit in the City of Clovis is 2.81.

3.10.2 REGULATORY SETTING

STATE

Government Code

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a jurisdiction and of any land outside its boundaries that, in the jurisdiction's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the jurisdiction's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (Government Code, Section 65860, subd. [c]).

State of California Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

The Cortese-Knox-Hertzberg Local Government Reorganization Act establishes procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. In approving an annexation, the Local Agency Formation Commission (LAFCo) will consider the following factors:

- Population and population density; land area and land use; per capita assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas; and the likelihood of significant growth in the area and in adjacent incorporated and unincorporated areas during the next ten years.
- The need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for those services and controls; and the probable effect of the proposed incorporation, formation, annexation, exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas.
- The effect of the proposed action and of alternative actions on adjacent areas, on mutual social and economic interests, and on the local government structure of the county.
- The conformity of both the proposal and its anticipated effects with both the adopted commission policies on providing planned, orderly, and efficient patterns of urban development, and the policies and priorities set forth in Government Code section 56377.
- The effect of the proposal on maintaining the physical and economic integrity of agricultural lands, as defined by Government Code section 56016.
- The definiteness and certainty of the boundaries of the territory, nonconformance of proposed boundaries with lines of assessment or ownership, creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.
- Consistency with city or county general and specific plans.
- The sphere of influence of any local agency that may be applicable to the proposal being reviewed.
- The comments of any affected local agency.
- The ability of the newly formed or receiving entity to provide the services that are the subject of the application to the area, including the sufficiency of revenues for those services following the proposed boundary change.

- Timely availability of water supplies adequate for projected needs as specified in Government Code section 65352.5.
- The extent to which the proposal will affect a city or cities and the county in achieving their respective fair shares of the regional housing needs, as determined by the appropriate council of governments consistent with Housing Element laws.
- Any information or comments from lawmakers.
- Any information relating to existing land use designations.

In addition to the above factors, LAFCo may also consider any resolution raising objections to the action that may be filed by an affected agency; and any other matters which the commission deems material.

Senate Bill 330

Senate Bill 330 "The Housing Crisis Act of 2019" is a statewide bill intended to reduce the time it takes to approve housing developments in California. SB 330 would declare a statewide housing emergency to be in effect until January 1, 2030. During that period, cities and counties found to have high rents and low rental vacancy rates would:

- Be prohibited from reducing housing densities, increasing development fees, or taking a range of other actions affecting housing development (both for-sale and rental);
- Have any such actions taken since January 1, 2018 declared null and void;
- Be prohibited from imposing fees on new units that are deed restricted for families earning less than 80% of the area median income;
- Be prohibited from enforcing requirements that new developments include parking;
- Be required to process housing development applications under the general plan and zoning ordinance in effect at the time the application is deemed complete.

Other provisions of SB 330 would apply to all jurisdictions not only those with high rents and low vacancy rates. These include requiring cities and counties to process housing development applications under the general plan and zoning ordinance in effect at the time the application is deemed complete, a ban on holding more than three de novo public hearings on a project, and a requirement that cities and counties post all development standards online. The bill would also call for the State Department of Housing and Community Development to update building standards for "occupied substandard buildings."

LOCAL

Fresno Council of Governments

The Fresno Council of Governments (FCOG) is an association of local governments from cities within Fresno County. The member agencies include City of Clovis, City of Coalinga, City of Firebaugh, City of Fowler, City of Fresno, City of Huron, City of Kerman, City of Kingsburg, City of Mendota, City of Orange Cove, City of Parlier, City of Reedley and City of San Joaquin, City of Sanger, City of Selma, and County of Fresno. FCOG is responsible for the preparation of, and updates to, the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the region. The RTP/SCS provides a 25-year transportation vision and strategies for air emissions reduction. The 2018 MTP/SCS was adopted by the FCOG board in July 2017.

REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

The 2018 RTP is a long-range plan for transportation improvements in the region. The RTP identifies existing and future transportation related needs, while considering all modes of travel, analyzing alternative solutions, and identifying anticipated available funding for the over 3,000 projects and multiple programs. The plan is based on projections for growth in population, housing, and jobs. FCOG determines the regional growth projections by evaluating baseline data (existing housing units and employees, jobs/housing ratio, and percent of regional growth share for housing units and employees), historic reference data (based upon five- and ten-year residential building permit averages and historic county-level employment statistics), capacity data (General Plan data for each jurisdiction), and current RTP data about assumptions used in the most recent RTP/SCS. FCOG staff then meets with each jurisdiction to discuss and incorporate more subjective considerations about planned growth for each area. Finally, FCOG makes a regional growth forecast for new homes and new jobs, based upon an economic analysis provided by a recognized expert in order to estimate regional growth potential based on market analysis and related economic data. This growth forecast is then incorporated into the RTP/SCS.

REGIONAL HOUSING NEEDS PLAN

California General Plan law requires each city and county to have land zoned to accommodate a fair share of the regional housing need. The share is known as the Regional Housing Needs Allocation (RHNA). FCOG is the lead agency for developing the RHNA that includes Fresno County and the City of Clovis. If a jurisdiction failed to make adequate sites available to accommodate the RHNA in the previous planning period, AB 1233 (Government Code Section 65584.09) requires the jurisdiction to identify and, if necessary, rezone sites in the first year of the current planning period to address the unaccommodated lower-income RHNA from the previous planning period. This requirement is in addition to the requirement to identify other specific sites to accommodate the RHNA for the current planning period. The City may not count capacity on the same sites for both planning periods.

Fresno Local Agency Formation Commission

The Fresno LAFCo is responsible for coordinating orderly reorganization to local jurisdictional boundaries, including annexations. Any annexation of the Project site to the City is subject to LAFCo approval, and LAFCo will review proposed annexations for consistency with LAFCo's Annexation Policies and Procedures.

Fresno LAFCo has adopted Policies and Procedures for Annexation and Detachment to and from all agencies within their jurisdiction. It is Fresno LAFCo policy (102-01) that "within the sphere of influence each agency should implement an orderly, phased annexation program. A proposal should not be approved solely because the area falls within the sphere of influence of an agency." The City of Clovis follows the Policies and Procedures for Annexation and Detachment when annexing land into the City. LAFCo recommends that each local agency fulfill this policy through the exercise of one or more of the following basic principles and actions:

1. The annexation program is consistent with LAFCo's Sphere of influence (SOI) for the City.

Suggested actions:

- City and county shall reach agreement on development standards and planning and zoning requirements within the sphere to ensure that development within the sphere occurs in a manner that reflects the concerns of the affected city and is accomplished in a manner that promotes the logical and orderly development of areas within the sphere. GC §56425
- City responds to a request to extend service outside of its city limits and SOIs in consultation with GC §56133 and Fresno LAFCo policy.

2. The annexation program clearly implements the city's general plan.

Suggested actions:

- City annexation applications shall describe how the proposal implements the City's general plan and support these statements with information from other official sources, such as the annual budget, capital improvement plan, and so forth.
- A prezoning ordinance shall not be encumbered with extraneous conditions that preclude the ordinance's effective date by the time of LAFCo hearing on the annexation.

3. The annexation program emphasizes the use of cities' resolution of application versus property owner/registered voter petitions.

Suggested action:

- For the City to consider opposing property owner petition-initiated reorganizations as these would not have proceeded through the process of City development review and approval, which is an important step in the management of a City's general plan.

4. The annexation program supports orderly growth by identifying areas to be annexed, general time frames for growth, and a plan for extension of services to these areas.

Suggested actions:

- Capital improvement plan and/or facilities plans include all lands within the SOI;
- Development impact fees that fund the extension of services are established and maintained;
- Impacts to service delivery are assessed in the City's EIR or project-specific CEQA documents and appropriately-scaled mitigation is approved and implemented.
- The City coordinates its public policy documents in support of the annexation program.

5. The annexation program anticipates changes of organization of existing service districts and service areas in the SOI or adjacent to the SOI.

Suggested action:

- The Program should describe the transition of services that will occur when the City annexes/detaches (CID, NCFPD, FCFPD, KRCD, etc.); inversely, the document describes the status of or continuation of services when annexations do not result in detachment (FID, FMFCD, etc.).

6. The annexation program anticipates the location of Disadvantaged Unincorporated Communities within a City’s sphere of influence.

Suggested action:

- Cities should become proficient in implementing their responsibilities under Senate Bill 244, should review Fresno LAFCo DUC policy and review Senate Bill 244 Technical Advisory.

7. The annexation program informs citizens in annexation areas of their rights, benefits, and changes that will occur on annexation.

Suggested actions:

- City to establish and maintain on its website a description of the information above, how citizens can engage the process, how the City engages citizens and stakeholders and other information related to annexation. This information should include a description of the SOI, protest processes, and how LAFCo is involved.
- For those portions of a City’s SOI that contain a large number of rural residential parcels that are planned for urban uses, the City is strongly encouraged to develop a long-term plan to annex and serve these areas.

8. The annexation program will be coordinated with LAFCo’s Municipal Services Review (MSR) for the City.

Suggested action:

- City applications should include an assessment of current MSR determinations and recommendations.

9. The annexation program is managed by an assigned and responsible City staff member.

Suggested action:

- City identifies a staff member to serve as a genuine point of contact with LAFCo, that is, a staff member responsible and accountable for managing applications, knowledgeable of the project and of LAFCo’s process, and empowered to facilitate the City’s annexation program.

10. City entitlement analysis is integrated with LAFCo policies

Suggested action:

- Local agencies, including Fresno County, are strongly advised to include Fresno LAFCo in their initial request for comments.

- When initial planning applications that will eventually require annexation are submitted to cities, they are encouraged to submit a pre-application to LAFCo, so that LAFCo can track the project at its beginning and provide comments that would facilitate annexation in time for these to be considered in a timely and efficient manner.

City of Clovis General Plan

As noted above, General Plans are prepared under a mandate from the State of California, which requires each city and county to prepare and adopt a comprehensive, long-term general plan for its jurisdiction and any adjacent related lands. State law requires General Plans to address seven mandated components: circulation, conservation, housing, land use, noise, open space, and safety. In addition to those components required by State law, the Clovis General Plan also contains optional elements, including Environmental Safety, Economic Development, Public Facilities and Services, and Air Quality.

GENERAL PLAN

The City of Clovis General Plan includes an introduction and eight separate chapters that establish goals and policies for each given set of topics. The chapters cover all of the topics required by California State Government Code Section 65302, as well as topics of particular interest to Clovis. The General Plan structure is summarized as follows:

- **Land Use Element:** establishes the general distribution, location, and extent of future land uses and provides standards for the intensity and density of the built environment. It establishes policies to guide land use, development, and redevelopment.

- **Economic Development Element:** links land use and development to economic growth, jobs and income, and municipal revenues and expenditures.

- **Circulation Element:** determines the transportation system necessary to accommodate the planned land use and development.

- **Housing Element:** serves as the City’s principal guide for housing programs and strategies to address housing needs. State law (Government Code Sections 65580-65589.8) requires that every City and County in California adopt a Housing Element as a part of its General Plan. The Housing Element must be updated every eight years and is subject to detailed statutory requirements and mandatory review by the California Department of Housing and Community Development (HCD).

- **Public Facilities and Services Element:** defines the nature and types of public facilities, services, and activities necessary to maintain a high quality of life in Clovis.

- **Environmental Safety Element:** focuses the protection of the community from environmental and man-made hazards.

- **Open Space and Conservation Element:** seeks to protect and preserve open space, productive agricultural areas, and environmental resources. This element also establishes goals for the maintenance and provision of new and existing parks.

- **Air Quality Element:** addresses the role of local land use planning in improving regional air quality.

General Plan Land Use Map

The General Plan Land Use Map portrays the ultimate uses of land in the City of Clovis through land use designations. The Land Use Map designates the Project site as Rural Residential (RR). Figure 2.0-6 in Chapter 2.0 depicts the Clovis General Plan land use designations for the Project site and the surrounding areas.

Rural Residential (RR): Very low-density residential uses and small-scale agricultural operations. Rural residential uses may be dispersed uniformly across the land or be sited so to leave more acreage for orchards, pastures, or other agricultural or open space activities. The allowable maximum density for this land use designation is one dwelling unit per two acres.

General Plan Policies

The following policies of the General Plan related to land use, population and housing are applicable to the proposed Project:

- Land Use Policy 3.5: Fiscal sustainability. The City shall require establishment of community facility districts, lighting and landscaping maintenance districts, special districts, and other special funding or financing tools in conjunction with or as a condition of development, building or permit approval, or annexation or sphere of influence amendments when necessary to ensure that new development is fiscally neutral or beneficial.

- Land Use Policy 4.1: Clovis leadership. The city shall take a leadership role in the land use planning for the sphere of influence and entire Clovis General Plan Area.

- Land Use Policy 4.3: Future environmental clearance. The city shall monitor development and plan for additional environmental clearance as development levels approach those evaluated in the General Plan EIR.

- Housing Policy 1.1: Consistency analysis of the proposed project with the State Planning Law, California Complete Streets Act, and City of Clovis Development Code would be the same for both the 2035 scenario and full buildout.

- Housing Policy 1.2: Support mixed-use projects that promote and enhance the adopted goals and policies of the Clovis General Plan.

- Housing Policy 1.3: Encourage and participate in efforts designed to achieve economies and efficiencies that will facilitate the production of quality, affordable housing.

- Housing Policy 1.4: Promote balanced, orderly growth to minimize unnecessary development costs adding to the cost of housing.
- Housing Policy 2.3: Encourage a diversity of housing types in mixed-use areas, village centers, and other areas in the City to support the Clovis community values.
- Housing Policy 4.3: Encourage development of sound new housing on vacant land within existing neighborhoods that have the necessary service infrastructure.
- Housing Policy 4.4: Support and encourage all public and private efforts to rehabilitate and improve the existing stock, including use of federal, state, and local programs for this purpose.
- Housing Policy 4.5: Promote public awareness of the need for housing and neighborhood conservation.
- Housing Policy 4.9: Encourage available public and private housing rehabilitation assistance programs in neighborhoods where such action is needed to ensure preservation of the living environment.
- Housing Policy 4.10: Manage neighborhood environmental factors to focus on neighborhood preservation and stabilization.
- Economic Development Policy 1.2: Jobs-housing ratio. Improve the City's job-housing ratio by promoting growth in jobs suited to the skills and education of current and future residents with the objective of the number of jobs in Clovis being equal to the number of employed residents.

City of Clovis Municipal Code, Title 9 – Development Code

The City's Development Code implements the policies of the Clovis General Plan and applicable specific plans by classifying and regulating the uses of land and structures within the City of Clovis. This Development Code is adopted to protect and to promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses in the City.

ZONING MAP

The Zoning Map identifies zoning districts within the City at the parcel level. The Zoning Map does not designate the Project site because the site is not located within the City limits.

County of Fresno General Plan

The Fresno County General Plan is a policy guide for physical and economic growth of the County. Unincorporated land located within the Project site is currently under the jurisdiction of the County. Figure 2.0-8 in Chapter 2.0 identifies the Fresno County land use designations and zoning for the Project site and the surrounding area. The Development Area is designated as Low Density Residential by the County's General Plan Land Use Map. The Non-Development Area is designated as Rural Residential by the County's General Plan Land Use Map.

Fresno County Municipal Code, Division VI – Zoning Division

The purpose of the Zoning Division is to classify and regulate the highest and best use of buildings, structures, and land located in the unincorporated area of the County of Fresno in a manner consistent with the Fresno County General Plan. This Division incorporates zoning regulations implementing the Fresno County General Plan and all of its elements, including the Fresno County Open Space Plan.

ZONING MAP

The Zoning Map identifies zoning districts within the County at the parcel level. Figure 2.0-7 identifies the Fresno County zoning for the Project site and the surrounding area. The Development Area is zoned AL-20 (Limited Agricultural) by the County. The Non-Development Area is zoned RR (Rural Residential) by the County.

Below is a general description of County zoning within the Project site.

AL-20 (Limited Agricultural): The "AL" District is a limited agricultural district. It is intended to protect the general welfare of the agricultural community by limiting intensive uses in agricultural areas where such uses may be incompatible with, or injurious to, other less intensive agricultural operations. The District is also intended to reserve and hold certain lands for future urban use by permitting limited agriculture and by regulating those more intensive agricultural uses which, by their nature, may be injurious to non-agricultural uses in the vicinity or inconsistent with the express purpose of reservation for future urban use. The "AL" District shall be accompanied by an acreage designation which establishes the minimum size lot that may be created within the District. Acreage designation of 640, 320, 160, 80, 40, and 20 are provided for this purpose. Parcel size regulation is deemed necessary to carry out the intent of this District.

RR (Rural Residential): The "R-R" District is intended to create or preserve rural or very large lot residential homesites where a limited range of agricultural activities may be conducted. The "R-R" District is intended to be applied to areas designated as Rural Residential by the General Plan. The minimum lot size that may be created within the "R-R" District without a special acreage designation shall be two acres. The "R-R" District accompanied by the acreage designation of five establishes that the minimum lot size that may be created within the District shall be five acres.

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on land use, population, or housing if it will:

- Physically divide an established community;
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: The proposed Project would not physically divide an established community. (No Impact)

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have **no impact** with regard to the physical division of an established community.

Impact 3.10-2: The proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect. (Less than Significant)

Land use plans, policies, and regulations that govern the land uses on the Project site and have jurisdiction over the Project include the Fresno County General Plan, Fresno County Municipal Code, Clovis General Plan, Clovis Municipal Code, and the Fresno LAFCo Policies and Procedures for Annexation and Detachment.

FRESNO COUNTY GENERAL PLAN AND FRESNO COUNTY MUNICIPAL CODE

As noted previously, the Project site is currently within Fresno County and not within the City of Clovis' Sphere of Influence. The Fresno County General Plan and Fresno County Municipal Code are the current governing documents for the Project site.

The proposed Project includes an annexation of three APNs totaling approximately 77 acres. This acreage includes the Development Area. Figure 2.0-8 illustrates the Sphere of Influence Expansion and Annexation Area. Upon annexation of the Development Area, the Fresno County General Plan and Fresno County Municipal Code would not apply to the Development Area.

CITY OF CLOVIS GENERAL PLAN

Since general plans often contain numerous policies emphasizing differing legislative goals, a development project may be "consistent" with a general plan, taken as a whole, even though the project appears to be inconsistent or arguably inconsistent with some individual policies. (Sequoyah Hills Homeowners Association v. City of Oakland (1993) 23 Cal.App.4th 704, 719.) The Project is consistent with the key land use issues and development concepts of the Clovis General Plan, which provide for logical growth of the City, emphasize community form, scale, and identify, encourage attractive, sustainable neighborhoods, support public transit and bicycle and pedestrian circulation, encourage housing opportunity, promote employment and economic development, encourage a mix of land uses that balance public services and fiscal sustainability, and promote access to open space. The Project is located adjacent to the City of Clovis' Sphere of Influence and current City limits, and will provide for housing opportunities.

When land uses are not consistent with a General Plan, there are two courses of action: 1) the uses are not allowed due to the inconsistency, or 2) the land uses are changed through an amendment to the General Plan to create consistency. The proposed Project will require a General Plan Land Use Amendment to adjust the land use designation from Low Density (L) to Medium High Density (MH) for the Development Area to accommodate the proposed development density. The proposed General Plan land use designation for the Development Area is shown on Figure 2.0-8. Approval of the General Plan amendment would ensure that the proposed Project would be substantially consistent with the Clovis General Plan land use requirements.

Additionally, the proposed Project is generally consistent with the vast majority of the applicable General Plan policies, which aim to avoid or mitigate an environmental effect. As shown in Table 3.10-3, the Project is consistent with the City's existing General Plan policies and would not conflict with policies adopted to avoid or mitigate an environmental effect.

TABLE 3.10-3: GENERAL PLAN EXISTING POLICY CONSISTENCY

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
LAND USE ELEMENT	
LU-Policy 3.6: Mix of housing types and sizes. Development is encouraged to provide a mix of housing types, unit sizes, and densities at the block level. To accomplish this, individual projects five acres or larger may be developed at densities equivalent to one designation higher or lower than the assigned designation, provided that the density across an individual project remains consistent with the General Plan.	**Consistent.** One of the proposed Project's main objectives is to "Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand." As discussed in Chapter 2.0, Project Description, the proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles.
LU-Policy 6.1: Amendment criteria. The City Council may approve amendments to the General Plan when the City Council is	**Consistent.** The proposed Project will require a General Plan Land Use Amendment to adjust the land use from Low Density (L) to Medium High Density (MH) for the Development Area to accommodate the proposed

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
satisfied that the following conditions are met: A. The proposed change is and will be fiscally neutral or positive. B. The proposed change can be adequately served by public facilities and would not negatively impact service on existing development or the ability to service future development. C. The proposed change is consistent with the Urban Village Neighborhood Concept when within an Urban Center. D. General Plan amendments proposing a change from industrial, mixed-use business campus, or office (employment generating) land use designations to non-employment-generating land use designation shall be accompanied by an analysis of the potential impacts on the City's current and long-term jobs-housing ratio, as well as an evaluation on the change or loss in the types of jobs. E. This policy does not apply to: i. County designations within the Clovis Planning Area or changes made by the City Council outside of the sphere boundary to reflect changes made by the County of Fresno. ii. Changes initiated by public agencies (such as school districts, flood control) for use by public agencies. iii. Changes initiated by the City within a specific plan.	development density. The MH designation identifies areas appropriate small lot single-family detached homes, townhouses, duplexes, and apartments. The allowable density range is 7.1 to 15.0 units per acre. The proposed General Plan land use designation for the Development Area is shown on Figure 2.0-8 in Chapter 2.0. The proposed Project would be fiscally positive as the proposed residences would be subject to property tax, and the future residents of the Project would participate in the local job market and economy, thus providing sales tax revenue. As discussed in Section 3.12, Public Services and Recreation, all impacts related to this topic would be less than significant. It is also noted that the Project site is not within an Urban Center, as shown in Figure LU-3 of the City's General Plan.
CIRCULATION ELEMENT	
CIR-Policy 1.3: Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.	**Consistent.** The proposed Project includes a hierarchy of roadways to accommodate the capacity needs of the existing street network. The neighborhoods within the Development Area will include a network of public and private residential streets to provide an efficient flow of traffic through the area. Sidewalks will also be included per the City standards. The City's roadway and sidewalk standards ensure that all potential users, including children, seniors, and persons with disabilities, are accommodated.
CIR-Policy 1.4: Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles travelled and effectively utilize the existing transportation infrastructure.	**Consistent.** The proposed Project is not considered an infill development. However, the site has many infill characteristics, including underutilized lands within existing development patterns. The Project site is designated for residential uses by the City's General Plan Land Use Map.

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
	While the proposed Project is not located near a job center, commercial areas and services are in the Project vicinity.
CIR-Policy 1.5: Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).	**Consistent.** The proposed transportation network provides multimodal access and connects to adjacent developments via proposed roadways in the north, south, east, and west portions of the site. Sidewalks will also be included per the City standards.
CIR-Policy 1.6: Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), the proposed transportation network utilizes a modified-grid street pattern with block lengths within 200 to 600 feet (depending on the location).
CIR-Policy 1.8: Network completion. New development shall complete the extension of stub streets planned to connect to adjacent streets, where appropriate.	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), the proposed transportation street extends sub streets planned and/or existing to adjacent streets. For example, the northern portion of the Project includes an extension of an existing roadway that connects to the residential uses to the north, Perrin Road.
CIR-Policy 2.1: Level of service. The following is the City's level of service (LOS) standards: A. Achieve LOS D vehicle traffic operations during the a.m. and p.m. peak hours B. Allow exceptions on a case-by-case basis where lower levels of service would result in other public benefits, such as: i. Preserving agriculture or open space land; ii. Preserving the rural/historic character of a neighborhood; iii. Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts; iv. Avoiding adverse impacts to pedestrians, cyclists, and mass transit riders; v. Where right-of-way constraints would make capacity expansion infeasible.	**Consistent.** As discussed in Section 3.13, Transportation and Circulation, the existing General Plan includes a policy within the Transportation Element which requires maintenance of a level of service (LOS) D standard on City roadways, with some exceptions. Because LOS is no longer a CEQA significance metric, an analysis of LOS is provided for the purposes of policy consistency analysis. Chapters 8 and 9 of the Transportation Impact Analysis, included in Appendix I, discuss the LOS analysis for the Project. Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. Table 9-A of Appendix E summarizes the recommended improvements for study intersections for all analysis scenarios. Tables 9-B, 9-C, and 9-D of Appendix E summarize the post-improvement intersection LOS under existing, near- term, and cumulative conditions, respectively. Table 9-E of Appendix E summarizes the recommended improvements for roadway segments for all analysis scenarios. Tables 9-F and 9-G of Appendix E summarize the post-improvement roadway segment LOS under near- term and cumulative conditions, respectively.
CIR-Policy 2.2: Fair share costs. New development shall pay its fair share of the cost for circulation improvements in accordance with the City's traffic fee mitigation program.	**Consistent.** As discussed in Section 3.13, with recommended improvements described in Chapters 8 and 9 of the Transportation Analysis Report (provided in Appendix I of this EIR), all intersections would operate at LOS D or better with the addition of project trips. Furthermore, in the absence of a fee program where the project has an impact

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
	on the roadway network, the project will pay its respective fair share for the proposed improvements.
CIR-Policy 3.1: Traffic calming. Employ traffic-calming measures in new developments and existing neighborhoods to control traffic speeds and maintain safety.	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), the proposed Project includes traffic-calming measures, such as traffic circles, curb bulbouts, and center roadway pedestrian refuges.
CIR-Policy 3.4: Road diets. Minimize roadway width as feasible to serve adjacent neighborhoods while maintaining sufficient space for public safety services.	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), the proposed Project includes private streets with minimized widths (37.2-feet-wide). Modified curbs for emergency vehicles are provided on the private streets.
CIR-Policy 3.6: Soundwalls. Design roadway networks to disperse traffic to minimize traffic levels. Discourage soundwalls along new collector and local streets when feasible.	**Consistent.** The proposed transportation network utilizes a modified-grid street pattern to disperse traffic and traffic noise. As discussed in Section 3.11, Noise, to meet the exterior residential standards, the unshielded residential private yards within 100 feet of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows, which would not be shielded by the 6-foot sound walls. These soundwalls are not included as part of the Project, and the Project discourages soundwalls. However, as determined by the Project-specific noise analysis, soundwalls are required in certain cases. See Mitigation Measures 3.11-3 and 3.11-4 in Section 3.11 for the sound wall mitigation requirements discussed above.
CIR-Policy 3.7: Conflict points. Minimize the number of and enhance safety at vehicular, pedestrian, and bicycle conflict points.	**Consistent.** As discussed in Section 3.13, the proposed Project will construct sidewalks on internal streets, providing adequate connections to and throughout the site for pedestrians. The Project proposes to provide pedestrian improvements/sidewalks both internal to the project site and along the Project frontage. The project proposes to provide 8-feet wide bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. Additionally, the Project will install a 12-foot trail (Class II Bike Path) adjacent to the Project along Shepherd Avenue. The Project proposes to construct a total of 0.67 miles of bike lanes along Shepherd Avenue and Sunnyside Avenue. Additionally, the Project would not conflict with a program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities, as discussed in Impact 3.13-2. The City's General Plan and Active Transportation Plan aim to reduce conflicts between vehicular, pedestrian, and bicycle users.
CIR-Policy 3.8: Access management. Minimize access points and curb cuts along arterials and prohibit them within 200 feet of	**Consistent.** As shown in Figures 2.0-10a through 2.0-10c (in Chapter 2.0), North Sunnyside Avenue and East Shepherd Avenue are the main arterial roadways providing access to

GENERAL PLAN POLICY	*PROJECT CONSISTENCY*
an intersection where possible. Eliminate and/or consolidate driveways when new development occurs or when traffic operation or safety warrants.	the Development Area. The accesses to the site from these main arterial roadways are consolidated to one access at each roadway.
CIR-Policy 3.10: Pedestrian access and circulation. Entrances at signalized intersections should provide sidewalks on both sides of the entrance that connect to an internal pedestrian pathway to businesses and throughout nonresidential parking lots larger than 50 spaces.	**Consistent.** The Project does not include and is not located at any signalized intersections.
CIR-Policy 3.11: Right-of-way design. Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community's appearance and encourage non-motorized transportation.	**Consistent.** The Project will include visual components that will enhance the appearance of the neighborhood once developed. These improvements include landscaping improvements like new street trees and other neighborhood greenery. The Project also includes pedestrian paths to encourage non-motorized transportation. Additionally, in order to reduce the visual impacts of the development, development within the Project site is required to be consistent with the General Plan and the Clovis Zoning Ordinance, as described above, which includes design standards. The design standards will ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design requirements will produce a project that will be internally cohesive, while maintaining an aesthetic feel similar to that of the surrounding uses.
CIR-Policy 3.12: Residential orientation. Where feasible, residential development should face local and collector streets to increase visibility and safety of travelers along the streets and encourage pedestrian and bicycle access.	**Consistent.** The neighborhoods within the Development Area will include a network of public and private residential streets to provide an efficient flow of traffic through the area. The residences would be oriented facing the internal roadway system.
CIR-Policy 5.1: Complete-street amenities. Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety, consistent with the Bicycle Transportation Master Plan and other master plans.	**Consistent.** As discussed in Section 3.13, the Project proposes to provide 8-feet wide bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. Additionally, the Project will install a 12-foot trail (Class II Bike Path) adjacent to the Project along Shepherd Avenue. The Project proposes to construct a total of 0.67 miles of bike lanes along Shepherd Avenue and Sunnyside Avenue. Similar to pedestrian facilities, these bicycle design features included in the Project can encourage increase active transportation mode share in the area. As such, the existing streets along the western and southern boundaries would be upgraded as part of the Project. Further, the Project

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	includes new streets internal to the site, which would also have bicycle and pedestrian facilities.
CIR-Policy 5.2: Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.	**Consistent.** As discussed previously, the Project would fund and construct bicycle improvements along existing and proposed roadways. The Project proposes to construct bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. The improvements are consistent with the City's Active Transportation Plan, which supersedes the Bicycle Transportation Plan.
CIR-Policy 5.5: Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers and to provide general pedestrian connectivity throughout the city.	**Consistent.** As discussed previously, the Project would provide pedestrian facilities on-site and on the adjacent roadways. These proposed facilities would provide internal connectivity and connectivity to adjacent off-site uses.
AIR QUALITY ELEMENT	
AIR-Policy 1.1: Land use and transportation. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.	**Consistent.** As discussed previously, the Project includes well-designed pedestrian and bicycle systems. These systems would help reduce mobile GHG emissions by reducing vehicle-miles-traveled (VMT). Beyond the proposed improvements, as required by Mitigation Measure 3.13-1 in Section 3.13 of the Draft EIR, the applicant would be required to implement measures, which are identified in the California Air Pollution Control Officers Association's (CAPCOA) Draft Handbook for Analyzing GHG Emission Reductions, assessing Climate Vulnerabilities, and Advancing Health and Equity (GHG Handbook). Many of the strategies listed in this mitigation measure pertain to transit, pedestrian, and bicycle systems.
AIR-Policy 1.2: Sensitive Land Uses. Prohibit, without sufficient mitigation, the future siting of sensitive land uses within the distances of emission sources as defined by the California Air Resources Board.	**Consistent.** As discussed in Impact 3.3-4 in Section 3.3, Air Quality, of the Draft EIR, the California Air Resources Board (CARB) published the Air Quality and Land Use Handbook: A Community Health Perspective (CARB, 2005) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. Residences are proposed as part of the Project, which are considered traditional sensitive receptors. However, the residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, since the proposed Project would not site land uses that would generate a significant risk of public exposure to TACs, the proposed Project would have a less than significant impact relative to this topic.

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AIR-Policy 1.3: Construction activities. Encourage the use of best management practices during construction activities to reduce emissions of criteria pollutants as outlined by the San Joaquin Valley Air Pollution Control District (SJVAPCD).	**Consistent.** As discussed in Section 3.3, the SJVAPCD requires construction related mitigation in accordance with their rules and regulations. The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the mitigation measures provided by the SJVAPCD for construction-related PM10 emissions, including those provided in Mitigation Measures 3.3-1 through 3.3-4.
AIR-Policy 1.8: Trees. Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.	**Consistent.** The Project includes greenspace and landscaping which would include planting of trees. These trees would provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
ENVIRONMENTAL SAFETY ELEMENT	
ES-Policy 1.1: Flood Zone - Prohibit development within the 100-year flood zone and dam inundation areas unless adequate mitigation is provided against flood hazards. Participate in the National Flood Insurance Program.	**Consistent.** As shown on Figure 3.9-2 in Section 3.9, Hydrology and Water Quality, the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. The area under the 100-year flood designation will undergo a Letter of Map Revision (LOMR) process with FEMA, whereby the grading design will elevate the first floor of any structure one foot above the flood elevation. This process is an engineering level process that is performed during the preparation of grading and improvement plans. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway
ES-Policy 1.3: Geologic and seismic risk. Prohibit development on unstable terrain, excessively steep slopes, and other areas deemed hazardous due to geologic and seismic hazards, unless acceptable mitigation measures are implemented. Require that underground utilities be designed to withstand seismic forces and accommodate ground settlement.	**Consistent.** As discussed in Section 3.6 Geology and Soils, some limited potential for slope instability risk could arise during grading and construction activities, where slopes could be over-steepened. However, this risk is mitigated by adhering to relevant California Building Code requirements. Additionally, the Project site is subject to potential ground shaking caused by seismic activity. Seismic activity could come from a known active fault, such as the Clovis fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. As discussed under Section 3.6.2 Regulatory Setting, the California Building Code, Title 24, Part 2, Chapter 16 addresses structural design and Chapter 18 addresses soils and foundations. Collectively, these requirements, which have been adopted by the City of Clovis (Chapter 8.1), include design standards and requirements that are intended to

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	minimize impacts to structures in seismically active areas of California. Section 1613 of the California Building Code specifically provides structural design standards for earthquake loads. Further, the Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent.
ES-Policy 2.1: Safe storage and maintenance. The use and storage of hazardous materials shall comply with applicable federal, state, and local laws to prevent and mitigate hazardous materials releases.	**Consistent.** As discussed in Section 3.8, Hazards and Hazardous Materials, the proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas including: paints, cleaners, and cleaning solvents. The Project would be subject to regulations pertaining to the transport and use of hazardous materials. For example, hazardous materials regulations, which are codified in CCR Titles 8 and 22, and their enabling legislation set forth in Chapter 6.5 (Section 25100 et seq.) of the California Health and Safety Code, were established at the State level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. Additionally, these residential hazardous materials would be stored and handled in accordance with best management practices approved by Fresno County Department of Community Health, Environmental Health System (FCEHS) and the Clovis Fire Department.
ES-Policy 3.11: Airport land use compatibility. Approve land uses in a manner that is consistent with the Fresno Yosemite International Airport Land Use Compatibility Plan.	**Consistent.** As discussed in Section 3.8, there are no documented public airports or public use airports within close proximity to the Project site. The nearest airport facility within the vicinity of the Project site is the Fresno Yosemite International Airport, located approximately six miles south. The Project site is not located within the airport influence area or within the Airport's noise exposure contours for the Fresno Yosemite International Airport as identified in the Airport Land Use Compatibility Plan (ALUCP).
OPEN SPACE AND CONSERVATION ELEMENT	
OSC-Policy 1.1: Parkland standard. Provide a minimum of 4 acres of public parkland for every 1,000 residents.	**Consistent.** As discussed in Section 3.12, Public Services and Recreation, the Project proposes to include approximately 5.54 acres of open space, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.04, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be

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	calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.
OSC-Policy 1.3: New parks and recreation facilities. Provide a variety of parks and recreation facilities in underserved and growing areas of the community.	**Consistent.** As noted above, the Project would provide approximately 5.54 acres of open space, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project would also be subject to the City's Park Acquisition and Development fee. These fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update.
OSC-Policy 1.8: Funding. Require new development to provide pocket and neighborhood parks, dedicate land for area parks, and pay impact fees for community and regional parks. Require new development to establish lighting and landscape maintenance districts to fund operations and maintenance.	**Consistent.** As noted above, the Project would provide greenspace and would pay impact fees for community and regional parks.
OSC-Policy 2.2: New development. Encourage new development to incorporate on-site natural resources and low impact development techniques.	**Consistent.** The natural resources on the Project site (i.e., limited agricultural habitat for some animal species) would be converted by the Project, however the project will include trees and greenspace to provide new resources. However, the Project includes low impact development techniques and implementation of best management practices, such as the proposed stormwater drainage system.
OSC-Policy 2.3: Visual resources. Maintain public views of open spaces, parks, and natural features. Enhance views along roadways and trails. Preserve Clovis' viewshed of the surrounding foothills and orient new development to capitalize on views of the Sierra Nevada.	**Consistent.** As discussed in Section 3.1, Aesthetics and Visual Resources, Policy 2.3 of the Clovis General Plan Update's Open Space and Conservation Element gives substantial consideration to the preservation of scenic vistas, corridors, and scenic resources, such as maintaining public views of open spaces, parks, and natural features; enhancing views along roadways and trails; preserving Clovis' viewshed of the surrounding foothills; and orienting new development to capitalize on views of the Sierra Nevada. Chapter 9 of the Clovis Development Code also establishes requirements for fences, walls, and hedges to ensure that these elements minimize screening of scenic

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	views and sunlight by outlining provisions such as height limitations, design and construction materials, site plan review requirements, allowable fencing materials, etc. per Section 9.24.060 (Fences, Walls, and Hedges); and screening and buffering requirements of adjoining land uses, utility equipment, and refuse areas are detailed in Section 9.24.090 (Screening and Buffering). Development in accordance to these code requirements would ensure that the implantation of the proposed project would not have a substantial adverse impact on scenic vistas, corridors, or resources in the City of Clovis to the greatest extent feasible.
OSC-Policy 2.5: Right to farm. Support, encourage, and protect agricultural operations within Clovis and recognize their right to farm.	**Consistent.** As discussed in Impact 3.2-3 of Section 3.2, Agricultural Resources, there is no immediately adjacent agricultural land that poses a potential for conflict. The City's General Plan anticipates that some agricultural lands within the City's Planning Area would ultimately develop with urban uses. The City has a Right to Farm Ordinance that is intended to reduce the occurrence of any conflict between nonagricultural and agricultural land uses within the City through requiring the transferor of any property in the City to provide a disclosure statement describing that the City permits agricultural operations, including those that utilize chemical fertilizers and pesticides.
OSC-Policy 2.6: Biological resources. Support the protection of biological resources through the conservation of high-quality habitat area.	**Consistent.** High quality habitat is not found on-site. The Project site contains limited habitat for special-status plant and animal species. In the cases where low or moderate quality habitat exists for some species, mitigation measures are included in Section 3.4, Biological Resources, of the Draft EIR.
OSC-Policy 3.1: Stormwater management. Encourage the use of low impact development techniques that retain or mimic natural features for stormwater management.	**Consistent.** As noted previously, the Project includes low impact development techniques and implementation of best management practices, such as the proposed stormwater drainage system.
OSC-Policy 3.2: Stormwater pollution. Minimize the use of non-point source pollutants and stormwater runoff.	**Consistent.** As noted previously, the Project includes low impact development techniques and implementation of best management practices, such as the proposed stormwater drainage system. As discussed in Section 3.9, Hydrology and Water Quality,
OSC-Policy 3.4: Drought-tolerant landscaping. Promote water conservation through the use of drought-tolerant landscaping on existing and new residential properties. Require drought-tolerant landscaping for all new commercial and industrial development and city-maintained landscaping, unless used for recreation purposes	**Consistent.** The Project includes landscaping and greenspace, which would be subject to the City's Water Efficient Landscape Requirements set forth in the City's Municipal Code.
NOISE ELEMENT	

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NOI-Policy 3.1: Land use compatibility. Approve development and require mitigation measures to ensure existing and future land use compatibility as shown in the Noise Level Exposure and Land Use Compatibility Matrix and the City's noise ordinance.	**Consistent.** Section 3.11, Noise, of the Draft EIR includes analysis of the potential noise impacts which may result from the Project. Impacts related to operational noise, construction noise, and cumulative noise would be less-than-significant with mitigation included in Section 3.11. Impacts related to excessive groundborne vibration, groundborne noise levels, and airport noise would be less than significant.
NOI-Policy 3.2: Land use and traffic patterns. Discourage land use and traffic patterns that would expose sensitive land uses or noise-sensitive areas to unacceptable noise levels.	**Consistent.** As discussed above, with mitigation, sensitive land uses or noise sensitive areas would not be exposed to unacceptable noise levels.
NOI-Policy 3.3: New residential. When new residential development is proposed adjacent to land designated for industrial or commercial uses, require the proposed development to assess potential noise impacts and fund feasible noise-related mitigation measures.	**Consistent.** Land designated for General Commercial (GC) uses is located at the southwest corner of E. Shepherd Avenue and North Fowler Avenue, near the southeastern corner of the Project site. This GC area includes developed commercial uses, such as the Clovis Meat Market, Me n Ed's Pizzeria, and Ivory Bridal Boutique. As discussed above, with mitigation, sensitive land uses or noise sensitive areas would not be exposed to unacceptable noise levels. These noise-related mitigation measures would be implemented and funded by the Project applicant.
NOI-Policy 3.4: Acoustical study. Require an acoustical study for proposed projects that have the potential to exceed acceptable noise thresholds or are exposed to existing or future noise levels in excess of the thresholds in the City's noise ordinance.	**Consistent.** A Noise Impact Study has been prepared by MD Acoustics for the Shepherd North Project and is included in Appendix H. The results of the study are included in Section 3.11, Noise, of the Draft EIR.
NOI-Policy 3.5: Site and building design. Minimize noise impacts by requiring appropriate site, circulation, equipment, and building design, and sound walls, landscaping, and other buffers.	**Consistent.** The Project is located in an area surrounded by existing residential development and, as such, is appropriately located. Additionally, the proposed transportation network utilizes a modified-grid street pattern to disperse traffic and traffic noise. Sound walls would also be required, as necessary, via mitigation measures in Section 3.11. The Project also includes landscaping and greenspace.
NOI-Policy 3.11: Airport land use compatibility. Approve land uses in a manner that is consistent with the Fresno Yosemite International Airport Land Use Compatibility Plan.	**Consistent.** As discussed in Section 3.8, there are no documented public airports or public use airports within close proximity to the Project site. The nearest airport facility within the vicinity of the Project site is the Fresno Yosemite International Airport, located approximately six miles south. The Project site is not located within the airport influence area or within the Airport's noise exposure contours for the Fresno Yosemite International Airport as identified in the ALUCP.
NOI-Policy 3.14: Control sound at the source. Prioritize using noise mitigation measures to control sound at the source before buffers, soundwalls, and other perimeter measures.	**Consistent.** Section 3.11, Noise, includes the following mitigation measures which require various noise controls (upgraded residential glass and sound walls) to control sound at the source:

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	• Mitigation Measure 3.11-3: A 6-foot-tall barrier shall be constructed along the south boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue, in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department. • Mitigation Measure 3.11-4: The Project developer will ensure that any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.
PUBLIC FACILITIES AND SERVICES ELEMENT	
PFS-Policy 1.1: New development. New development shall pay its fair share of public facility and infrastructure improvements.	**Consistent.** As discussed in Section 3.12, the Project would be required to pay the police facility fee in accordance with Clovis Municipal Code Chapter 4.11, Police Department Fees. Additionally, the Project would be required to pay the community facility fee in accordance with Clovis Municipal Code Chapter 4.10, Fire Facility Development Impact Fee. Further, the Project would be required to pay the school impact fees in accordance with Education Code Section 17620 and Government Code Section 65995. Lastly, the Project would be subject to development impact fees, library fees, and parkland fees, as required by Chapter 3.10, Development Impact Fees, Chapter 7.8, Library Facilities Development Impact Fees, and Chapter 3.04, Park Acquisition and Development, of the City's Municipal Code.

SOURCE: DE NOVO PLANNING GROUP, 2023.

Overall, the proposed Project would have a **less than significant** impact relative to the General Plan.

CLOVIS ZONING CODE

The Clovis Zoning Code implements the General Plan. The Project site is currently within the jurisdiction of Fresno County. The Fresno LAFCo will require the Project site to be pre-zoned by the City of Clovis in conjunction with the proposed annexation. The pre-zoning request is for R-1-PRD zoning designation over these lots.

- Single-Family Planned Residential Development Zoning (R-1-PRD). This designation identifies areas appropriate for single-family small lot uses, including attached and detached single-family structures on small lots. The allowable density range is 4.1 to 15.0 units per acre, with the level of density determined by compliance with performance standards. The R-1-PRD district required a planned development permit. The R-1-PRD district is consistent with the Medium and Medium-High Density Residential land use designation of the General Plan.

The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-9.

The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The zoning ordinance establishes permitted uses, development densities and intensities, and development standards for each zone to ensure that public health, safety, and general welfare are protected, consistent with the purpose of the Zoning Code. All existing City development standards and zoning requirements for the proposed zoning are applicable to any activities on the Project site. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code and will have a **less than significant** impact relative to this topic.

FRESNO LAFCO

The Project site is currently in an unincorporated portion of Fresno County, adjacent to the City of Clovis City limits, outside the Clovis SOI (as defined in the Clovis General Plan). The proposed Project requires annexation of 77 acres of the Project site into the City limits.

LAFCo is serving as a responsible agency for this EIR pursuant to their Annexation Policies and Procedures. When LAFCo is a Responsible Agency under CEQA, in order to approve the annexation, the Commission will certify that it has reviewed the Lead Agency's environmental documents and, if required, adopt findings for approval and statements of overriding considerations in accordance with Sections 15091 and 15903 of the CEQA Guidelines.

The Fresno LAFCo will review the proposed annexation for consistency with the Annexation Policies and Procedures. These policies and procedures govern Fresno LAFCo determinations regarding annexations to all agencies. The following policies will be reviewed as part of the annexation process by the Fresno LAFCo.

1. The annexation program is consistent with LAFCo's Sphere of influence (SOI) for the City.

Suggested actions:

- City and county shall reach agreement on development standards and planning and zoning requirements within the sphere to ensure that development within the sphere occurs in a manner that reflects the concerns of the affected City and is accomplished in a manner that promotes the logical and orderly development of areas within the sphere. GC §56425

- City responds to a request to extend service outside of its City limits and SOIs in consultation with GC §56133 and Fresno LAFCo policy.

Project discussion:

The proposed Project includes an amendment of the City's SOI to include the entirety the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno LAFCo. The SOI amendment would be reviewed by the City and LAFCo prior to proceeding with the requested annexation. If the SOI Amendment is approved, the Project would then be able to begin the annexation process.

2. The annexation program clearly implements the City's general plan.

Suggested actions:

- City annexation applications shall describe how the proposal implements the City's general plan, and support these statements with information from other official sources such as the annual budget, capital improvement plan, and so forth.
- A prezoning ordinance shall not be encumbered with extraneous conditions that preclude the ordinance's effective date by the time of LAFCo hearing on the annexation.

Project discussion:

The proposed Project includes the adoption of pre-zoning for the proposed annexation area, which will serve to regulate the uses of land and structures within the Project area. The Project site is currently located outside of the Clovis City limits, and therefore does not have City-designated zoning. The proposed Project includes a request for Development Area pre-zoning (which is consistent with the proposed General Plan Land Use designation). The pre-zoning request is for Single-Family Planned Residential Development Zoning (R-1-PRD) zoning designation over the Development Area lots. The R-1-PRD district is consistent with the proposed Medium-High Density Residential land use designation of the General Plan. The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-9. The Project will be subject to the development standards as described in the Municipal Code. The Municipal Code is proposed to ensure consistency between land use and zoning designations.

3. The annexation program emphasizes the use of cities' resolution of application versus property owner/registered voter petitions.

Suggested action:

- For the City to consider opposing property owner petition-initiated reorganizations as these would not have proceeded through the process of City development review and approval, which is an important step in the management of a City's general plan.

Project discussion:

No opposing property owner petition-initiated reorganizations exist for this Project.

4. The annexation program supports orderly growth by identifying areas to be annexed, general time frames for growth, and a plan for extension of services to these areas.

Suggested actions:

- Capital improvement plan and/or facilities plans include all lands within the SOI;
- Development impact fees that fund the extension of services are established and maintained;
- Impacts to service delivery are assessed in the City's EIR or project-specific CEQA documents and appropriately-scaled mitigation is approved and implemented.
- The City coordinates its public policy documents in support of the annexation program.

Project discussion:

The Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan.

5. The annexation program anticipates changes of organization of existing service districts and service areas in the SOI or adjacent to the SOI.

Suggested action:

- The Program should describe the transition of services that will occur when the City annexes/detaches (CID, NCFPD, FCFPD, KRCD, etc.); inversely, the document describes the status of or continuation of services when annexations do not result in detachment (FID, FMFCD, etc.).

Project discussion:

As noted previously, the Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan.

6. The annexation program anticipates the location of Disadvantaged Unincorporated Communities within a City's sphere of influence.

Suggested action:

- Cities should become proficient in implementing their responsibilities under Senate Bill 244, should review Fresno LAFCo DUC policy and review Senate Bill 244 Technical Advisory.

Project discussion:

> The Project site is not located in or adjacent to a Disadvantaged Unincorporated Communities.

7. The annexation program informs citizens in annexation areas of their rights, benefits, and changes that will occur on annexation.

Suggested actions:

- City to establish and maintain on its website a description of the information above, how citizens can engage the process, how the City engages citizens and stakeholders and other information related to annexation. This information should include a description of the SOI, protest processes, and how LAFCo is involved.
- For those portions of a City's SOI that contain a large number of rural residential parcels that are planned for urban uses, the City is strongly encouraged to develop a long-term plan to annex and serve these areas.

Project discussion:

> As noted previously, the Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan. It is noted, however, the proposed annexation area was not included in the City's latest Municipal Service Review.

8. The annexation program will be coordinated with LAFCo's Municipal Services Review (MSR) for the City.

Suggested action:

- City applications should include an assessment of current MSR determinations and recommendations.

Project discussion:

As noted previously, the Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan. It is noted, however, the proposed annexation area was not included in the City's latest Municipal Service Review.

9. The annexation program is managed by an assigned and responsible City staff member.

Suggested action:

- City identifies a staff member to serve as a genuine point of contact with LAFCo, that is, a staff member responsible and accountable for managing applications, knowledgeable of the project and of LAFCo's process, and empowered to facilitate the City's annexation program.

Project discussion:

This requirement applies to the City and not individual development projects.

H10. City entitlement analysis is integrated with LAFCo policies

Suggested action:

- Local agencies, including Fresno County, are strongly advised to include Fresno LAFCo in their initial request for comments.
- When initial planning applications that will eventually require annexation are submitted to cities, they are encouraged to submit a pre-application to LAFCo so that LAFCo can track the project at its beginning and provide comments that would facilitate annexation in time for these to be considered in a timely and efficient manner.

Project discussion:

This City has coordinated with LAFCo through the release of the Notice of Preparation and invitation to the Scoping meeting. The City will ultimately coordinate with LAFCo if the City decides that the Project site should be annexed into the City of Clovis. At that time, the City would submit the appropriate applications and documentations for LAFCo's consideration of the City's annexation approval.

The policies discussed above are intended to ensure orderly reorganization to local jurisdictional boundaries, including annexations. Ultimately, LAFCo will determine whether the proposed annexation would first require an update to the *Clovis Municipal Service Review* in order to approve the annexation. This LAFCo policy was not specifically adopted to avoid or mitigate an environmental effect, rather it is intended to ensure orderly and logical reorganization to local jurisdiction boundaries, including annexations. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts. As such, implementation of the proposed Project will have a **less than significant** impact relative to this topic.

Impact 3.10-3: The proposed Project would not induce substantial population growth in an area. (Less than Significant)

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

> *The way in which a proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth…It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.*

Based on the CEQA Guidelines, growth inducement is any growth that exceeds planned growth of an area and results in new development that would not have taken place without implementation of the project. A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand (*Napa Citizens for Honest Government v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342). Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply or wastewater treatment/collection in an area where this service historically limited growth could be considered growth-inducing.

The State CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

Components of Growth: The timing, magnitude, and location of land development and population growth in a region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California. It is noted that the City of Clovis Housing Element specifically mentions the Project site for residential development, which means that the growth is consistent with anticipated growth for the City.

GROWTH EFFECTS OF THE PROJECT

Direct Population Growth: The proposed Project proposes housing that would result in direct population growth. The proposed Project includes the addition of 605 residential units. Using the most recent Department of Finance (2022) estimate for the average number of persons residing in a dwelling unit in the City of Clovis of 2.81, the addition of 605 housing units could increase the population of the City by an estimated 1,700 persons.

The proposed Project will require a General Plan Land Use Amendment to adjust the land use from Rural Residential (RR) for the Development Area to accommodate the proposed development density. The proposed General Plan land use designation for the Project site is shown on Figure 2.0-8 in Chapter 2.0.

Indirect Population Growth: Projects that include employment generating uses have the potential to result in indirect population growth through the creation of jobs or the extension of infrastructure into areas that were not previously served. As noted in Chapter 2.0, Project Description, the proposed Project does not include the development of employment generating uses within the Development Area. In addition, the proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a **less than significant** impact relative to this topic.

Impact 3.10-4: The proposed Project would not displace substantial numbers of people or existing housing. (No Impact)

The Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use (pecan orchards). Development of the Project would add 605 residential units. Therefore, because no housing is located in the Development Area, the proposed Project would not displace substantial numbers of people or existing housing. The proposed Project will have **no impact** related to the displacement of substantial numbers of people or existing housing.

NOISE 3.11

This section provides a general description of the existing noise sources in the Project vicinity, a discussion of the regulatory setting, and identifies potential noise impacts associated with the proposed Project. Project impacts are evaluated relative to applicable noise level criteria and to the existing ambient noise environment. Mitigation measures have been identified for significant noise-related impacts. A Noise Impact Study has been prepared by MD Acoustics for the Shephard North Project and is included in Appendix H.

There were no comments received during the NOP scoping process related to this environmental topic.

3.11.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response. A-weighted dB values are expressed as dBA.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community noise equivalent level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
$L_{(n)}$	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L_{50} is the sound level exceeded 50 percent of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
SEL	Sound exposure levels. A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dB) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dB is generally perceived as a doubling in loudness. For example, a 70-dB sound is half as loud as an 80-dB sound, and twice as loud as a 60-dB sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to L_{dn}, but includes a +5-dB penalty for evening noise. Table 3.11-1 lists several examples of the noise levels associated with common situations.

TABLE 3.11-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	*NOISE LEVEL (DB)*	*COMMON INDOOR ACTIVITIES*
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. SEPTEMBER 2013.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual’s past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a 1 dB change cannot be perceived;
- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference;

- A change in level of at least 5-dB is required before any noticeable change in human response would be expected; and
- A 10-dB change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE AND VIBRATION ENVIRONMENTS

Existing Ambient Noise Levels

To quantify the existing ambient noise environment in the Project Vicinity, three 15-min ambient noise measurements were conducted at or near the Project site. The noise measurements were taken to determine the existing ambient noise levels. Noise data indicates that traffic along Shepherd Avenue is the primary source of noise impacting the Project site and the adjacent uses. The results of the short-term noise data are presented in Table 3.11-2. Appendix H shows the complete results of the noise monitoring survey.

The sound level meters were programmed to collect hourly noise level intervals at each site during the survey. The maximum value (L_{max}) represents the highest noise level measured during an interval. The average value (L_{eq}) represents the energy average of all of the noise measured during an interval. The median value (L_{50}) represents the sound level exceeded 50 percent of the time during an interval.

TABLE 3.11-2: EXISTING SHORT-TERM NOISE MEASUREMENT DATA

DATE	*TIME*	*AVERAGE MEASURED HOURLY NOISE LEVELS, DB(A)*							
		L_{EQ}	L_{MAX}	L_{MIN}	L_2	L_8	L_{25}	L_{50}	L_{90}
12/20/2022	7:53AM-8:08AM	46.4	68.0	38.0	53.3	46.9	45.2	43.9	41.6
12/20/2022	8:27AM-8:42AM	69.1	82.2	55.7	77.4	72.0	68.7	66.4	62.6
12/20/2022	9:01AM-9:16AM	46.0	63.5	34.5	56.8	48.8	39.4	37.3	35.6

SOURCE: MD ACOUSTICS, 2023.

Noise data shown in Table 3.11-2 above indicates the ambient noise level ranged from 46 to 69 dBA Leq at the Project site. Maximum levels reached up to 82 dBA at location 2 as a result of traffic of heavy trucks along Shepherd Avenue.

Construction Vibration

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (100/D_{rec})^n$$

Where: PPV_{ref} = reference PPV at 100ft.
D_{rec} = distance from equipment to receiver in ft.
n = 1.1 (the value related to the attenuation rate through ground)

Table 3.11-3 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

TABLE 3.11-3: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

EQUIPMENT	*PEAK PARTICLE VELOCITY (INCHES/SECOND) AT 25 FEET*	*APPROXIMATE VIBRATION LEVEL LV (DVB) AT 25 FEET*
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT, FEDERAL TRANSIT ADMINISTRATION, MAY 2006.

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 3.11-4 (below) provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

TABLE 3.11-4: GUIDELINE VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA

STRUCTURE AND CONDITION	MAXIMUM PPV (IN/SEC)	
	TRANSIENT SOURCES	CONTINUOUS/FREQUENT INTERMITTENT SOURCES
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

NOTES:

TRANSIENT SOURCES CREATE A SINGLE ISOLATED VIBRATION EVENT, SUCH AS BLASTING OR DROP BALLS. CONTINUOUS/FREQUENT INTERMITTENT SOURCES INCLUDE IMPACT
PILE DRIVERS, POGO-STICK COMPACTORS, CRACK-AND-SEAT EQUIPMENT, VIBRATORY PILE DRIVERS, AND VIBRATORY COMPACTION EQUIPMENT.

SOURCE: TABLE 19, TRANSPORTATION AND CONSTRUCTION VIBRATION GUIDANCE MANUAL, CALTRANS, SEPT. 2013.

3.11.2 REGULATORY SETTING

FEDERAL

There are no federal regulations related to noise that apply to the proposed Project.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, indicate that a significant noise impact may occur if a Project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under the Thresholds of Significance section.

California State Building Codes

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartment houses and dwellings other than single-family dwellings. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L_{dn} or CNEL in any habitable room.

Title 24 also mandates that for structures containing noise-sensitive uses to be located where the L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

CITY OF CLOVIS

The City of Clovis General Plan

The City of Clovis General Plan Noise Element contains goals, policies, and implementation measures for assessing noise impacts within the City. Listed below are the noise goals, policies, and implementation measures that are applicable to the proposed Project:

POLICES: NOISE ELEMENT

- Policy 3.1. Land use compatibility. Approve development and require mitigation measures to ensure existing and future land use compatibility as shown in the Noise Level Exposure and Land Use Compatibility Matrix and the City's noise ordinance.
- Policy 3.2. Land use and traffic patterns. Discourage land use and traffic patterns that would expose sensitive land uses or noise-sensitive areas to unacceptable noise levels.
- Policy 3.3. New residential. When new residential development is proposed adjacent to land designated for industrial or commercial uses, require the proposed development to assess potential noise impacts and fund feasible noise-related mitigation measures.
- Policy 3.4. Acoustical study. Require an acoustical study for proposed projects that have the potential to exceed acceptable noise thresholds or are exposed to existing or future noise levels in excess of the thresholds in the City's noise ordinance.
- Policy 3.5. Site and building design. Minimize noise impacts by requiring appropriate site, circulation, equipment, and building design, and sound walls, landscaping, and other buffers.
- Policy 3.6. Noise impacts. Minimize or eliminate persistent, periodic, or impulsive noise impacts of business operations.
- Policy 3.7. Mixed-use buildings. Require that mixed-use structures be designed to prevent transfer of noise and vibration between uses.
- Policy 3.8. Existing uses. Require the use of noise abatement devices for existing uses that exceed acceptable noise thresholds.
- Policy 3.9. Caltrans facilities. Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of new highway projects or improvements to existing facilities.
- Policy 3.10. Airport changes. Coordinate with the Fresno Yosemite International Airport to minimize noise impacts on properties in Clovis due to changes in flight patterns or airport expansion.
- Policy 3.11. Airport land use compatibility. Approve land uses in a manner that is consistent with the Fresno Yosemite International Airport Land Use Compatibility Plan.

- Policy 3.12. Truck traffic. Plan and maintain truck routes that avoid noise-sensitive land uses and areas. Encourage business delivery areas to be located away from residential properties and to mitigate associated noise impacts.
- Policy 3.13. Small aircraft and helicopters. Minimize the noise impact of small aircraft and helicopters on residential neighborhoods.
- Policy 3.14. Control sound at the source. Prioritize using noise mitigation measures to control sound at the source before buffers, soundwalls, and other perimeter measures.

The guidelines rank noise land use compatibility in terms of clearly compatible, normally compatible, normally incompatible, and clearly incompatible as illustrated in Exhibit D [Table 3.11-5].

TABLE 3.11-5: LAND USE AND NOSIE COMPATIBILITY MATRIX

LAND USE	*ENERGY AVERAGE (CNEL)*						
	<	*55*	*60*	*65*	*70*	*75*	*80>*
Amphitheater, concert hall, auditorium, meeting hall	B	B	C	C	D	D	D
Mobile home	A	A	B	C	C	D	D
Hospital, library, school, faith/religious uses	A	A	B	C	C	D	D
Hotel, motel, transient lodging	A	A	B	B	C	C	D
Single family, multifamily, faith/religious uses	A	A	B	B	C	D	D
Parks	A	A	A	B	C	D	D
Office building, research & development, professional office, city office building, and hotel	A	A	A	B	B	C	D
Amusement park, miniature golf, go-cart track, health club, equestrian center	A	A	A	B	B	D	D
Golf courses, nature centers, cemeteries, wildlife reserves, wildlife habitat	A	A	A	A	B	C	C
Commercial retail, bank, restaurant, movie theater	A	A	A	A	B	B	C
Automobile service station, auto dealer, manufacturing, warehousing, wholesale, utilities	A	A	A	A	B	B	B
Agriculture	A	A	A	A	A	A	A

SOURCE: CITY OF CLOVIS GENERAL PLAN, NOISE ELEMENT, EXHIBIT D.

City of Clovis Municipal Code Noise Ordinance

Chapter 9.22.080 and 9.22.100 General Performance Standards of the City's Municipal Code outlines the City's noise ordinance.

9.22.080 - NOISE

The following noise standards, unless otherwise specifically indicated, shall apply to all property with a designated noise zone:

TABLE 3.11-6: MAXIMUM EXTERIOR NOISE STANDARDS

NOISE ZONE	*TYPE OF LAND USE*	*ALLOWABLE EXTERIOR NOISE LEVEL (15-MINUTE LEQ)*	
		7 A.M. TO 10 P.M.	*10 P.M. TO 7 A.M.*
I	Single-, two- or multiple-family residential	55 dBA	50 dBA
II	Commercial	65 dBA	60 dBA
III	Residential portions of mixed use properties	60 dBA	50 dBA
IV	Industrial or manufacturing	70 dBA	70 dBA

SOURCE: SECTION 9.22.080, CLOVIS MUNICIPAL CODE.

TABLE 3.11-7: MAXIMUM INTERIOR NOISE STANDARDS

NOISE ZONE	*TYPE OF LAND USE*	*ALLOWABLE EXTERIOR NOISE LEVEL (15-MINUTE LEQ)*	
		7 A.M. TO 10 P.M.	*10 P.M. TO 7 A.M.*
I	Residential	45 dBA	40 dBA
II	Administrative/professional office	50 dBA	--
III	Residential portions of mixed use properties	45 dBA	40 dBA

SOURCE: SECTION 9.22.080, CLOVIS MUNICIPAL CODE.

If the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

It is unlawful for any person to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any property measured at the property line, to exceed either of the following within the incorporated area of the City:

- The noise standard for the applicable zone for any fifteen (15) minute period;
- A maximum impulsive noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response). Impulsive noise which repeats four (4) or more times in any hour between 10:00 p.m. and 7:00 a.m. shall be measured as continuous sound and meet the noise standard for the applicable zone.

When properties of two (2) different noise zones abut one another, the maximum exterior noise level shall be the lower of the two (2) noise zones where one zone is residential, and in other contexts shall be the average of the two (2) zones.

Commercial, industrial, and recreational uses which create impulsive noise as part of their regular processes, such as through the use of pile drivers, forge hammers, punch presses, and gunshots, shall not be located in any zone district adjacent to a residential zone district unless a noise study is completed demonstrating the impulsive noise does not exceed the standards at the property line for the residential zone district. Impulse noise from these uses shall be measured as continuous sound. The noise study shall be subject to review and approval by the Director or his or her designee, and shall be completed as part of any discretionary permit process for the use or prior to obtaining a building permit. This provision shall not apply to uses existing on the effective date of the ordinance codified in this title.

Emergency electrical generators in residential zone districts shall comply with the California Building Code and California Residential Code, as amended, for the installation and operation of the emergency generator. Test cycle operation shall be limited to the hours between 10:00 a.m. and 4:00 p.m. Emergency electrical generators are intended to provide emergency power to run air conditioning, medical equipment and other household appliances in the event of a rolling blackout or other power grid failure.

Measurement of sound levels. Measurement of sound levels shall be as follows:

- Sound level meter. Sound levels shall be measured on the A-weighting network of a sound level meter meeting the requirements of ASA Standards S14-1971 for General Purpose Sound Level Meters, or the latest revision published by the American National Standards Institute, Inc., using the slow meter response. The meter shall be calibrated and used according to the manufacturer's instructions.

- Location of microphone. Measurements shall be taken with the microphone located at any point on the property line of the noise source, but no closer than three feet (3') from any wall and not less than three feet (3') above the ground.

- Minimum of two (2) readings. A minimum of two (2) readings shall be taken for a period of ten (10) minutes each with ten (10) minute intervals between measurements. The sound level shall be the average of these readings.

Activities exempt from regulations. The following activities shall be exempt from the provisions of this section:

- Emergency exemption. The emission of sound for the purpose of alerting persons to the existence of an emergency, or the emission of sound in the performance of emergency work.

- Warning devices. Warning devices necessary for the protection of public safety, (e.g., ambulance, fire, and police sirens, and train horns).

- Railroad activities. All locomotives and rail cars operated by a railroad that is regulated by the State Public Utilities Commission.

- Federal or State pre-exempted activities. Any activity, to the extent regulation thereof has been pre-exempted by Federal or State law.

- Pre-existing uses. Uses existing at the time of the effective date of the ordinance codified in this title, which are in compliance with all applicable standards in effect prior to adoption, and which are not otherwise operating as a nuisance in violation of Article 6 of Chapter 27 of Title 5.

- Public health and safety activities. All transportation, flood control, and utility maintenance and construction operations conducted by government entities or utility companies at any time on public rights-of-way, and those situations that may occur on private property deemed necessary to serve the best interests of the public and to protect the public's health and well-being, including, but not limited to: debris and limb removal; removal of damaged poles and vehicles; removal of downed wires; restoring electrical service; repairing traffic signals; repair of water hydrants; repair of mains, gas lines, oil lines, and sewers; repair and maintenance of flood control and storm water facilities; repair and maintenance of streets and sidewalks.

- Ordinary municipal activities. Ordinary municipal activities conducted by the City or other entity having jurisdiction in the City, including, but not limited to: solid waste collection; street sweeping; operation, maintenance, and repair of water production, treatment, and distribution facilities; operation, maintenance, and repair of sewage treatment, collection and distribution facilities; and vacuuming catch basins.

- Public safety training activities. Training activities by fire, law enforcement, and public utility officials that cannot reasonably take place within the parameters of this section, including but not limited to training that involves: hydrant testing, pumping hose lays, running chain saws, operating power tools, demolition, vehicle noise, and use of generators.

- Public celebrations. Public celebrations, holidays, or occasions generally celebrated, or public parades held under authorized permits; any sporting event or activity conducted under the direction and supervision of any public or private school.

Acts deemed violations of section. The following acts are a violation of this section:

- Noise-related nuisances defined in Chapter 27 of Title 5. Violations of Article 6 of Chapter 27 of Title 5 pertaining to unlawful noise-related nuisances shall also be considered a violation of this section.

- Construction noise. Construction activities shall be subject to the provisions of Section 5.27.604, which sets forth the permissible hours for construction activity. At all other times, no person shall operate, or cause to be operated, tools or equipment used in alteration, construction, demolition, drilling, or repair work so that the sound creates a noise disturbance across a residential property line, except for emergency work. Stationary equipment (e.g., generators) shall not be located adjacent to any existing residences unless enclosed in a noise attenuating structure, subject to the review and approval of the Director.

- Places of public entertainment. Operating, playing, or allowing the operation or playing of a drum, musical instrument, phonograph, radio, sound amplifier, television, or similar device that produces, reproduces, or amplifies sound in a place of public entertainment at a sound level greater than ninety-five (95) dBA (read by the slow response on a sound level meter) at any point that is normally occupied by a customer is prohibited, unless conspicuous signs are located near each public entrance, stating "Warning: Sound Levels Within May Cause Hearing Impairment."

- Stationary nonemergency signaling devices. Sounding or allowing the sounding of an electronically amplified signal from a stationary bell, chime, siren, whistle, or similar device intended primarily for nonemergency purposes, from any place, for more than ten (10) consecutive seconds in any hourly period is prohibited.

- Compacting mechanisms. Operating or allowing the operation of the compacting mechanism of any motor vehicle that compacts refuse and that creates, during the compacting cycle, a sound level in excess of eighty-five (85) dBA when measured at fifty feet (50') from any point of the vehicle is prohibited between the hours of 9:00 p.m. and 5:00 a.m.

- Vehicle or motorboat repairs and testing. Repairing, rebuilding, modifying, or testing any motor vehicle, motorcycle, or motorboat in a manner as to cause a noise disturbance across property lines or within a noise-sensitive zone is prohibited.

Responsibility to eliminate or reduce acts deemed violations of section. Improvements to eliminate or reduce negative impacts between uses deemed violations of this section shall be provided by the new use, rather than the existing use. (§ 2, Ord. 14-13, eff. October 8, 2014; § 1(2) (Atts. 1, 2), Ord. 20-18, eff. February 3, 2021)

9.22.100 VIBRATIONS

Uses that generate vibrations that may be considered a nuisance or hazard on any adjacent property shall be corrected, cushioned, or isolated to prevent the continued generation of vibrations. Uses shall be operated in compliance with the following provisions.

- Not perceptible along property line. Uses shall not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line of the parcel containing the activities which generate the vibration;

- No discomfort or annoyance. Uses, activities, and processes shall not generate ground vibration that causes discomfort or annoyance to reasonable persons of normal sensitivity or which endangers the comfort, health, or peace of residents whose property abuts the property lines of the subject parcel.

- No interference. Uses shall not generate ground vibration that interferes with the operations of equipment and facilities on adjoining parcels.

- Temporary construction exempt. Vibrations from temporary construction/demolition and vehicles that leave the subject parcel (e.g., trucks) are exempt from the provisions of this section. (§ 2, Ord. 14- 13, eff. October 8, 2014).

3.11.3 IMPACTS AND MITIGATION MEASURES

STUDY METHOD AND PROCEDURE

The following section describes the noise modeling procedures and assumptions used for this noise impact assessment.

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent to the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

MD conducted the sound level measurements in accordance with the City's and Caltrans's (TeNS) technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5 feet above the ground for all measurements
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on "A" and slow response
- Results of the long-term noise measurements were recorded on field data sheets
- During any short-term noise measurements, any noise contaminations such as barking dogs, local traffic, lawnmowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

Noise monitoring locations were selected based on the nearest sensitive receptors relative to the proposed onsite noise sources. Three (3) short-term 15-min noise measurement was conducted at or near the Project site and are illustrated in Exhibit E of Appendix H. Appendix H includes photos, a field sheet, and measured noise data.

Traffic noise from vehicular traffic was projected using a computer program that replicates the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Roadway volumes correspond to the LSA Associates, Inc. segment projections in Appendix E. It's assumed that the peak hour is 10% of the ADT. The referenced traffic data was applied to the model and is in Appendix H. The following outlines the key adjustments made to the REMEL for the roadway inputs:

- Roadway classification – (e.g., freeway, major arterial, arterial, secondary, collector, etc.),
- Roadway Active Width – (distance between the center of the outermost travel lanes on each side of the roadway)
- Average Daily Traffic Volumes (ADT), Travel Speeds, Percentages of automobiles, medium trucks, and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g., soft vs. hard)
- Percentage of total ADT which flows each hour throughout a 24-hour period

Table 3.11-8 indicates the vehicle distribution utilized for this study.

TABLE 3.11-8: TYPICAL NOISE LEVELS

MOTOR-VEHICLE TYPE	*DAYTIME % (7AM TO 7 PM)*	*EVENING % (7 PM TO 10 PM)*	*NIGHT % (10 PM TO 7 AM)*	*TOTAL % OF TRAFFIC FLOW*
Automobiles	75.5	14.0	10.5	97.42
Medium Trucks	48.9	2.2	48.9	1.84
Heavy Trucks	47.3	5.4	47.3	0.74

SOURCE: MD ACOUSTICS, 2023.

MD utilized segment projections from LSA Associates, Inc. obtained January 2023. The following outlines key adjustments to the REMEL for Project site parameter inputs:

- Vertical and horizontal distances (Sensitive receptor distance from noise source)
- Noise barrier vertical and horizontal distances (Noise barrier distance from sound source and receptor)

- Traffic noise source spectra
- Topography

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RNCM), together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, % usage factor, and baseline parameters for the Project site. The Project was analyzed based on the different construction phases. Construction noise is expected to be loudest during the grading, concrete, and building phases of construction. The construction noise calculation output worksheet is located in Appendix H.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact related to noise if it will result in:

Would the Project:

a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
b. Generate excessive groundborne vibration or groundborne noise levels?
c. For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: Operational Noise - The Proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant with Mitigation)

To predict existing and cumulative noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the levels are shown for comparative purposes only to show the difference between with and without project conditions. In addition, the noise contours for 55, 60, 65, and 70 dBA CNEL were calculated. The potential off-site noise impacts caused by an increase of traffic from operation of the proposed Project on the nearby roadways were calculated for existing, existing plus Project, cumulative 2046, and cumulative 2046 plus project scenarios.

Table 3.11-9 and 3.11-10 compare the existing and existing plus project scenario. A change of 3 dB or more is required to have a perceptible difference in noise levels.

TABLE 3.11-9: EXISTING PLUS PROJECT SCENARIO - NOISE LEVELS ALONG ROADWAYS (DBA CNEL)

ROADWAY	*SEGMENT*	*EXISTING*	*EXISTING WITH PROJECT*	
		CNEL @ 50' DBA	*CNEL @ 50' DBA*	*CHANGE IN NOISE LEVEL*
Behymer Avenue	Willow Avenue to Minnewawa Avenue	60.4	60.5	0.1
Behymer Avenue	Minnewawa Avenue to Sunnyside Avenue	62.5	62.5	0.0
Behymer Avenue	Sunnyside Avenue to Fowler Avenue	62.4	62.4	0.0
Shepherd Avenue	Willow Avenue to Minnewawa Avenue	67.7	68.2	0.5
Shepherd Avenue	Minnewawa Avenue to Clovis Avenue	67.3	68.2	0.9
Shepherd Avenue	Clovis Avenue to Sunnyside Avenue	66.6	68.2	1.6
Shepherd Avenue	Sunnyside Avenue to Project Intersection (Fordham Avenue) 3	65.1	66.8	1.7
Shepherd Avenue	Project Intersection (Fordham Avenue) 3 to Fowler Avenue	65.1	65.8	0.7
Herndon Avenue	State Route 168 Eastbound Ramps to Clovis Avenue	69.4	69.6	0.2
Willow Avenue	Behymer Avenue to Shepherd Avenue	72.4	72.5	0.1
Minnewawa Avenue	Behymer Avenue to Shepherd Avenue	63.5	63.5	0.0
Clovis Avenue	Shepherd Avenue to Teague Avenue	64.1	65.3	1.2
Clovis Avenue	Teague Avenue to Nees Avenue	66.3	66.9	0.6
Clovis Avenue	Nees Avenue to Alluvial Avenue	67.9	68.4	0.5
Clovis Avenue	Alluvial Avenue to Herndon Avenue	69.9	70.2	0.3
Sunnyside Avenue	Project Intersection 1 to Shepherd Avenue	54.4	60.5	6.1
Sunnyside Avenue	Shepherd Avenue to Teague Avenue	60.3	61.6	1.3

ROADWAY	SEGMENT	EXISTING	EXISTING WITH PROJECT	
		CNEL @ 50' DBA	CNEL @ 50' DBA	CHANGE IN NOISE LEVEL
Sunnyside Avenue	Teague Avenue to Nees Avenue	60.6	61.8	1.2
Fowler Avenue	Behymer Avenue to Ticonderoga	63.4	63.5	0.1
Fowler Avenue	Ticonderoga to Shepherd Avenue	64.4	64.4	0.0
Fowler Avenue	Shepherd Avenue to Teague Avenue	65.1	65.7	0.6
Fowler Avenue	Teague Avenue to Nees Avenue	65.1	65.7	0.6
Fowler Avenue	Nees Avenue to State Route 168 Westbound Ramps	69.9	70.1	0.2

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM MD ACOUSTICS. 2023.

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB.

NOISE IMPACTS TO ON-SITE RECEPTORS DUE TO PROJECT GENERATED TRAFFIC

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards of 65 dBA CNEL, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls. The noise calculations show that along Shepherd Avenue a 6’ soundwall placed at 70 feet from the centerline would result in noise attenuation from 69.1 dBA CNEL down to a range of 62.7 to 63.1 dBA CNEL depending on the precise location along Shepherd Avenue. This range is below the 65 dBA CNEL noise standards with the 6’ soundwall.

The noise calculations also show that along Sunnyside Avenue a 6’ soundwall placed at 47 feet from the centerline would result in noise attenuation from 69.9 dBA CNEL down to a range of 63.7 dBA CNEL. This is below the 65 dBA CNEL noise standards with the 6’ soundwall.

OPERATIONAL NOISE INCREASES

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

EXTERIOR TRAFFIC NOISE AT PROPOSED USES

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan. Thus, this is considered a potentially significant impact.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls as required by Mitigation Measure 3.11-1. As previously discussed, the noise calculations show that along Shepherd Avenue a 6’ soundwall placed at 70 feet from the centerline would result in noise attenuation from 69.1 dBA CNEL down to a range of 62.7 to 63.1 dBA CNEL depending on the precise location along Shepherd Avenue. This range is below the 65 dBA CNEL noise standards with the 6’ soundwall.

The noise calculations also show that along Sunnyside Avenue a 6’ soundwall placed at 47 feet from the centerline would result in noise attenuation from 69.9 dBA CNEL down to a range of 63.7 dBA CNEL. This is below the 65 dBA CNEL noise standards with the 6’ soundwall.

Furthermore, as required by Mitigation Measure 3.11-2, any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6-foot sound walls. Implementation of the following mitigation measures will ensure that these potential impacts are reduced to a **less than significant** level.

INTERIOR NOISE IMPACTS AT PROPOSED RESIDENTIAL USES

Modern construction typically provides a 25-dB exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB L_{dn}, or less, will typically comply with the City of Clovis 45 dB L_{dn} interior noise level standard. Additional noise reduction measures, such as acoustically-rated windows, are generally required for exterior noise levels exceeding 70 dB L_{dn}.

As mentioned before, the Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along

Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a **less than significant** impact.

MITIGATION MEASURE(S)

Mitigation Measure 3.11-1: *A 6-foot-tall barrier shall be constructed along the south boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue, in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department.*

Mitigation Measure 3.11-2: *The Project developer will ensure that any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.*

Impact 3.11-2: Construction Noise - The Proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant with Mitigation)

CONSTRUCTION NOISE

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise. Mitigation Measure 3.11-3 embodies a preexisting legal requirement from City of Clovis Municipal Code Section 5.27.604 that ensures that construction activities are performed within specific hours. Mitigation Measure 3.11-4 provides specific requirements for attenuating noise during construction. With implementation of the Mitigation Measure 3.11-3 and 3.11-4, the potential impacts are reduced to a **less than significant** level.

Mitigation Measure 3.11-3: *Construction activities shall adhere to the requirements of the City of Clovis Municipal Code with respect to hours of operation. This requirement shall be noted in the improvements plans prior to approval by the City's Public Utilities Department.*

Mitigation Measure 3.11-4: *The contractor shall ensure that the following noise attenuating strategies are implemented during project construction:*

- *During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices.*
- *Idling equipment shall be turned off when not in use.*
- *Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.*

Impact 3.11-3: Cumulative Noise - The Proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant)

To predict existing and cumulative noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the levels are shown for comparative purposes only to show the difference between with and without project conditions. In addition, the noise contours for 55, 60, 65, and 70 dBA CNEL were calculated. The potential off-site noise impacts caused by an increase of traffic from operation of the proposed Project on the nearby roadways were calculated for existing, existing plus Project, cumulative 2046, and cumulative 2046 plus project scenarios.

Table 3.11-9 and 3.11-10 compare the without and with project scenario and shows the change in traffic noise levels as a result of the proposed Project. It takes a change of 3 dB or more to hear a perceptible difference

TABLE 3.11-10: 2046 SCENARIO - NOISE LEVELS ALONG ROADWAYS (DBA CNEL)

ROADWAY	SEGMENT	EXISTING	EXISTING WITH PROJECT	
		CNEL @ 50' DBA	CNEL @ 50' DBA	CHANGE IN NOISE LEVEL
Behymer Avenue	Willow Avenue to Minnewawa Avenue	66.4	66.4	0.0
Behymer Avenue	Minnewawa Avenue to Sunnyside Avenue	67.0	67.0	0.0
Behymer Avenue	Sunnyside Avenue to Fowler Avenue	63.3	63.4	0.1
Shepherd Avenue	Willow Avenue to Minnewawa Avenue	71.9	72.1	0.2
Shepherd Avenue	Minnewawa Avenue to Clovis Avenue	71.2	71.6	0.4
Shepherd Avenue	Clovis Avenue to Sunnyside Avenue	70.8	71.5	0.7
Shepherd Avenue	Sunnyside Avenue to Project Intersection (Fordham Avenue) 3	69.0	69.8	0.8
Shepherd Avenue	Project Intersection (Fordham Avenue) 3 to Fowler Avenue	69.0	69.3	0.3
Herndon Avenue	State Route 168 Eastbound Ramps to Clovis Avenue	70.5	70.6	0.1
Willow Avenue	Behymer Avenue to Shepherd Avenue	76.3	76.3	0.1
Minnewawa Avenue	Behymer Avenue to Shepherd Avenue	68.6	68.6	0.0
Clovis Avenue	Shepherd Avenue to Teague Avenue	69.9	70.2	0.3
Clovis Avenue	Teague Avenue to Nees Avenue	69.9	70.2	0.3
Clovis Avenue	Nees Avenue to Alluvial Avenue	70.9	71.1	0.3
Clovis Avenue	Alluvial Avenue to Herndon Avenue	71.8	72.1	0.2
Sunnyside Avenue	Project Intersection 1 to Shepherd Avenue	68.7	69.2	0.5
Sunnyside Avenue	Shepherd Avenue to Teague Avenue	64.1	64.7	0.6
Sunnyside Avenue	Teague Avenue to Nees Avenue	63.9	64.5	0.6
Fowler Avenue	Behymer Avenue to Ticonderoga	64.3	64.3	0.0
Fowler Avenue	Ticonderoga to Shepherd Avenue	67.9	67.9	0.0

ROADWAY	*SEGMENT*	*EXISTING*	*EXISTING WITH PROJECT*	
		CNEL @ 50' DBA	*CNEL @ 50' DBA*	*CHANGE IN NOISE LEVEL*
Fowler Avenue	Shepherd Avenue to Teague Avenue	68.4	68.7	0.3
Fowler Avenue	Teague Avenue to Nees Avenue	67.9	68.2	0.3
Fowler Avenue	Nees Avenue to State Route 168 Westbound Ramps	71.4	71.6	0.1

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM MD ACOUSTICS. 2023.

As shown in Table 3.11-10, the Cumulative 2046 scenario has a maximum change in noise level of 0.7 dBA CNEL. Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has a 0.5 dBA CNEL change. Future residential uses will be in the normally compatible level along that segment. Therefore, a **less than significant** impact would occur with regard to this impact.

Impact 3.11-4: The proposed Project has the potential to generate excessive groundborne vibration or groundborne noise levels. (Less than Significant)

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment. According to table 3.11-3, a large bulldozer has a vibration impact of 0.089 inches per second peak particle velocity (PPV) at 25 feet which is perceptible when close to the adjacent residential properties, but is below any threshold of risk to architectural damage when compared to table 3.11-4. Therefore, a **less than significant** impact would occur within regard to this impact.

Impact 3.11-5: For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels. (No Impact)

The Project site is outside the Fresno Yosemite International Airport Contours. There are no private airstrips, public airports, or public use airports within two miles of the Project site. Therefore, this impact is not applicable to the proposed Project.

PUBLIC SERVICES AND RECREATION 3.12

This section describes and evaluates potential impacts associated with the provision of police protection, fire protection and emergency services, parks and recreation, schools, and other public facilities for the proposed Project. The information in this section is primarily derived from the:

- *City of Clovis General Plan*; and
- *Clovis Master Service Plan Update* (City of Clovis, 2014).

There were no comments received during the NOP scoping process related to this environmental topic.

3.12.1 ENVIRONMENTAL SETTING

CITY OF CLOVIS SERVICES

The City of Clovis receives funds for the provision of public services through development impact fees, property taxes, and general funds and grants. As land is developed within the City and annexed into the City of Clovis, these fees apply. The City of Clovis periodically reviews these fee structures to ensure that they provide adequate financing to cover the ongoing provision of City services, determine the correct level of adjustment required, and assure funding for needed infrastructure going forward. The City's General Services Department is responsible for continual oversight to ensure that the fee structures are adequate.[1]

Police protection to the unincorporated areas is provided by the Fresno County Sheriff and California Highway Patrol. The City has a mutual aid assistance agreement with both agencies. Continued development and annexation will affect services, but the City has proposed future facilities to accommodate growth. The operations of the Police Department, now and as the City grows, will be funded through the General Fund, Community Facilities District (CFD) fund, and grants (2014 Update).

City of Clovis Police Department

Police protection services in the City of Clovis are provided by the Clovis Police Department (CPD). The CPD operates out of its headquarters located at the Clovis Civic Center. As of 2021, the CPD has 102 sworn officers (CPD, 2021B). The department serves a community of 122,000 (CPD, 2021A). Based on this data, the service ratio is approximately 0.82 police officers per 1,000 residents.

The department classifies calls for service as Priority 1, Priority 2 or Priority 3. Priority 1 calls are calls where a threat is posed to life or a crime of violence. Priority 2 calls are calls for service where there is an urgency or suspicious behavior. Priority 3 calls are calls for service where no emergency or serious problem is involved. As of 2021, the Department reached their service rating goal of over 90 percent, with an overall approval rating of 94.7 percent (CPD, 2021A). There was an increase in all Priority level calls from 2020 to 2021, due to the COVID-19 Pandemic. The top six incident types

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[1] It should be noted that fee laws do not allow any deficits in fees to be made up retroactively.

increased in 2021 from 2020: Assist, Check on Welfare, Alarm, Animal Complaint, Follow up, and Unwanted (CPD, 2021B).

ORGANIZATION

The Department is organized into four major divisions, which are composed of eight budgetary sections as shown below (City of Clovis, 2014).

Patrol Division

The Patrol Division is the most highly visible section of the Police Department and is overseen by a Police Captain. Uniformed Patrol, which includes traffic enforcement, a Gang Response Team, the Reserve Unit, and Community Service Officers respond to calls for service and represent the Police Department in their daily contact with the citizens of Clovis. The Patrol Division is also working with all City departments to enforce Muni-Code issues and resolve on-going issues with specific code enforcement. They also deal effectively and appropriately with the criminals they apprehend. The Police Chaplain Program assists the Department and victims of crime during traumatic events or at times of grief. The Patrol Division's aggressive and pro-active approach toward eliminating criminal activity and protecting its citizens has helped create a safe community for the citizens of Clovis (City of Clovis, 2014).

Planning and Neighborhood Services

Two Police Corporals are assigned to this division and are actively involved in reviewing new construction within the City, oversee alcohol licensing and permits, oversee massage parlors, and practitioners and run the police response to special events in the City (City of Clovis, 2014).

Communications

The Communications section provides dispatch services for the Police Department and serves as the primary answering point for 9-1-1 calls made from within the City limits. They serve as a resource to police officers, providing automated information as necessary to officers in the field (City of Clovis, 2014).

Investigations

The Investigations section is responsible for follow-up on all felony cases and preparing the cases for submittal to the District Attorney's Office. The section is divided into two main areas of responsibility: General Investigations and Narcotics. Computer Crime and Identity Theft cases are up significantly (200%) and are beginning to take a toll on other general investigators' responsibilities. Narcotics Investigators continue to work with Patrol as a team targeting street level dealers and their suppliers. Narcotics Detectives also assist in vice cases and the Gang Response Unit (City of Clovis, 2014).

Youth Services

The Youth Services unit is charged with providing services to prevent youth from drugs and alcohol abuse and prevent repeat juvenile offenders. Youth Services supports parents to manage their children and to utilize other youth services providers. The Youth Services Division is also responsible for graffiti removal throughout the City (City of Clovis, 2014).

Support Services

The Support Services unit encompasses diverse duties that focus on providing outstanding service to its customers and the citizens of Clovis. Division sections and functions include Communications/Dispatch, citizen and business services, fleet management, technology, department personnel training, department equipment and supplies management, and Records and Property (City of Clovis, 2014).

Administrative Services

The Administrative Services Division is the office of Chief of Police, which provides leadership and general direction and oversight for the entire department. The Administrative Services Division is responsible for several functions including administrative support to the Chief, special projects, research, internal audits and compliance, Homeland Security, grant administration, public information officer duties, employee injury, and oversight of workers' compensation issues. The office support staff also performs a variety of personnel functions regarding recruitment and hiring and also provides support for other division commanders (City of Clovis, 2014).

Animal Shelter

The Animal Services Division is responsible for responding to calls for service in the community, investigating cruelty to animal cases, operating the Adoption Center and stray animal facility. The Animal Services Division works closely with Clovis veterinarians to achieve the primary goal of increasing the pet adoption rate, and educating the public on the importance of reducing the pet population through spaying and neutering (City of Clovis, 2014).

TABLE 3.12-1: CLOVIS CRIME STATISTICS (2017-2019)

CATEGORY/CRIME	2017	2018	2019
Population	**108,419**	**111,759**	**114,170**
Total Violent Crimes	**243**	**221**	**243**
Homicide	0	1	0
Rape	44	46	54
Robbery	61	36	32
Assault	138	138	157
Total Property Crimes	**2,895**	**2,438**	**2,276**
Burglary	453	358	307
Larceny Theft	2,234	1,932	1,810
Motor Vehicle Theft	208	148	159
Arson	8	6	6

SOURCE: FBI CRIME STATISTICS; TABLE 8, YEARS 2017, 2018, 2019, ACCESSED HTTPS://UCR.FBI.GOV/.

As shown in the table, the majority of crimes committed in Clovis consist of property crimes, primarily larceny.

City of Clovis Fire Department

The Clovis Fire Department (CFD) is responsible for providing Fire Suppression, Technical Rescue, Hazardous Materials Spill/Release Mitigation, Emergency Medical Services (EMS), Life Safety and Enforcement Services and Emergency Preparedness for the citizens of Clovis. This responsibility includes the following functions: fire protection; emergency medical services; urban search and rescue; high angle, trench, water and confined space rescue; hazardous condition mitigation;

strategic planning; administration; fire cause and origin investigations; code enforcement; public education; emergency preparedness; disaster response and coordination. These responsibilities are distributed through two bureaus and eight divisions (City of Clovis, 2022A).

As of 2022, there are 67 well-trained and highly skilled professional firefighters, fire engineers, fire officers, chief officers, fire inspectors, and administrative staff. Together, emergency services are provided to approximately 120,124 residents with 26 square miles in the City's first due response area. In September of 2021, the CFD placed two new fire engines in-service to replace fire engines which were over 15 years old and in October, an additional three personnel were hired to fill vacancies. The CFD added a second Training Captain to the Training Division to provide support to the 13 newly hired firefighters. (CFD, 2021).

The CFD maintains response time goals for various types of calls. The CFD received a total of 12,244 calls in 2022 (CFD, 2022). Table 3.12-2 presents CFD response time goals, and actual response times from 2021. As shown in Table 3.12-2, the Department did not meet its goal times for any type of call.

TABLE 3.12-2: 90TH PERCENTILE RESPONSE GOALS AND RESPONSE TIME PERFORMANCE

RESPONSE GOAL	*GOAL RESPONSE TIME*	*ACTUAL RESPONSE TIME*
FIRST UNIT ARRIVAL, TOTAL RESPONSE TIME:		
EMS	6 Minutes, 30 seconds	7 Minutes, 35 seconds
MVA/Rescue	7 Minutes	7 Minutes, 31 seconds
Fire	7 Minutes	7 Minutes, 43 seconds
EFFECTIVE RESPONSE FORCE (DAILY STAFFING OF 19):		
Fire	10 Minutes, 30 seconds	11 Minutes, 54 seconds
TURNOUT TIME FOR ALL PRIORITY RESPONSES:	1 Minute, 30 seconds	1 Minute, 36 seconds

SOURCE: CFD 2022 ANNUAL REPORT

ISO RATING

The Insurance Services Office (ISO) Public Protection Classification Program currently rates the CFD as a 2 on a scale of 1 to 10, with 1 being the highest possible protection rating and 10 being the lowest. The ISO rating measures individual fire protection agencies against a Fire Suppression Rating Schedule, which includes such criteria as facilities and support for handling and dispatching fire alarms, first-alarm response and initial attack, and adequacy of local water supply for fire-suppression purposes. The ISO ratings are used to establish fire insurance premiums (City of Clovis, 2022A).

FIRE STATIONS

There are currently six stations in operational use: Stations 1 through 6. In July 2021, hiring took place which made it possible to add the sixth fire company in service. Station 6 serves nearly 25,000 residents in the neighborhoods east of Temperance Avenue and south of Bullard Avenue; the new station opened in September 2022.[2] The new station is strategically located to meet the needs of the growing Loma Vista Community. The CFD fire stations and locations are each listed below.

- Station 1 – 633 Pollasky Avenue (operational)
- Station 2 – 2300 Minnewawa Avenue (operational)
- Station 3 – 555 North Villa Avenue (operational)
- Station 4 – 2427 Armstrong Avenue (operational)
- Station 5 – 790 North Temperance Avenue (operational)
- Station 6 – 2388 Encino Avenue (operational) In addition, the CFD operates out of the Training Center, located at 3455 Lind Avenue, as well. (City of Clovis, 2022B).

City of Clovis Parks and Recreation Division

The General Services Department provides a range of services for residents and visitors, such as, Senior Services, Transit, and Clovis Recreation programs (City of Clovis, 2022C). The Parks Division falls under the direction of the Public Utilities Department and is overseen by a full time Parks Manager with a staff of approximately 20 employees. The goal of the Division is to maintain recreational facilities, streetscape, parks, trails, and other landscaped open space areas, City trees, and building grounds. (City of Clovis, 2018). The City of Clovis Recreation Section is responsible for operating the City of Clovis Batting Cages, Clovis Rotary Skatepark, Adult slow-pitch softball at Clovis Rotary Park, and the youth and adult programs at the Clovis Recreation Center (City of Clovis, 2022D).

The City of Clovis currently owns and maintains 81 parks, two of which are jointly maintained by a homeowners association (HOA) (i.e. Harlan Ranch,TR6200)). These parks range from passive (Dry Creek Trailhead and Cottonwood) to active (Rotary and Sierra Bicentennial), and are a mix of smaller pocket parks to larger basin parks. All parks are classified as either Pocket Park, Neighborhood Park, Area Park, Community Park, Regional Park, School Park, or Basin Park based on the parks standards outlined by the City. In addition to these facilities, Clovis maintains over 28.1 miles of trails. These trails are comprised of four primary trails (Clovis Old Town Trail, Dry Creek Trail, Enterprise Trail, and PG&E Trail) as well as a series of greenbelt paths in the northeast corner of the City and Paseos in the southeast (City of Clovis, 2018).

The Parks Division maintains approximately 452 total acres of City parks and landscaping; 81 parks totaling 173 acres; 263 acres of green belts, street gardens, trails, paseos, and landscaped median islands; 6 acres of building grounds; 12 acres of undeveloped park land and miscellaneous public right-of-way property; approximately 40,000 City street trees; and 28.1 existing miles of trails with 36 miles planned for the future (City of Clovis, 2018).

The Clovis General Plan establishes a goal of four acres of parkland per 1,000 residents, which exceeds the requirement set forth by the Quimby Act. Based on the 2017 population of 110,762

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[2] See: https://www.clovisroundup.com/clovis-fire-station-6-opens-for-added-public-safety/

residents and the park goals laid out by the General Plan, the City is working successfully toward meeting the park area goals. Currently, the City has 81 designated City parks that total approximately 173 acres. The goal for future planning increases the park area to approximately 380 acres and also substantially increases the number of trails (City of Clovis, 2018).

Types of Parks

POCKET PARKS

Pocket Parks are the smallest park classification at up to one acre in size. These parks are centrally located in residential neighborhoods and planned for families and children. Intended to offer a small open space/recreational venue of a more passive or intimate nature internal to a specified residential development. Typically, these parks provide picnic and sitting areas and should be accessible by foot or bicycle. Currently, the City has 1.58 acres of Pocket Parks made up of eight locations (City of Clovis, 2018).

NEIGHBORHOOD PARKS

Typically, a neighborhood park ranges from one to two acres in size. These parks are uniquely tailored to the neighborhoods they serve and provide active recreation and a balance of amenities that appeal to a broad range of individuals. Currently, the City has 44.38 acres of Neighborhood Parks comprised of 50 parks. Three of these are HOA maintained (City of Clovis, 2018).

AREA PARKS

Area Parks function much like Neighborhood Parks, but are typically larger, ranging from 3 to 20 acres, and serve a larger population. These are intended to provide amenities for multiple age groups and connect to neighborhoods via trails or sidewalks. Currently, the City has 11 Neighborhood Parks totaling 41.99 acres (City of Clovis, 2018).

COMMUNITY PARKS

Community Parks are considerably larger in scale, ranging from 15 to 100 acres. The intent of these parks is to meet a wide range of community recreation and social needs focused on both passive and active recreation. The purpose of a community park is to bring people together to recreate, socialize, and find quiet space. Amenities may include those similar to a Neighborhood Park, as well as group picnic facilities, internal trails, and athletic facilities. Currently, the City has five Community Parks totaling 67.51 acres (City of Clovis, 2018).

REGIONAL PARKS

Regional Parks typically service multiple cities, cross political jurisdictions, and exceed 100 acres in size. The purpose of the parks is to preserve natural resources, remnant landscapes, and open space. These parks can include passive activities, such as hiking and nature viewing, as well as active recreation areas, gardens, picnic facilities, and other special uses. There are currently no existing Regional Parks in the City of Clovis (City of Clovis, 2018).

- **Woodward Park** is three miles west of the City’s western limits. This regional park is approximately 300 acres and includes amenities such as a multi-use amphitheater, a

Japanese garden, **[3]fenced dog park, exercise par course, playgrounds, a lake, picnic areas, mountain bike courses, and miles of multipurpose trails that are part of the San Joaquin River Parkway's Lewis S. Eaton Trail. There are six shelters located throughout the park.

- **Millerton Lake State Recreation Area** is 6.6 miles north of the SOI beyond the non-SOI Plan Area boundary. It spans over 6,800 acres of land; Millerton Lake (Reservoir) spans an additional 4,900 acres when full. The land portion of the recreation area is operated by the California Department of Parks and Recreation. Millerton Lake is managed by the U.S. Bureau of Reclamation. Recreational facilities include boat launch ramps, picnic areas, hiking trails, mountain biking trails, campgrounds, and boating campsites.
- **Lost Lake Recreation Area** is a Fresno County facility on the San Joaquin River. It is 4.5 miles north of the SOI and includes a 38-acre lake, campground, picnic area, softball field, volleyball courts, hiking trail, nature study area, playgrounds, and restrooms.

BASIN PARK

This classification pertains to Fresno Metropolitan Flood Control basins used in concert with, or in lieu of, other classes of parks to meet open space needs. These sites typically range from five to 20 acres and their uses are generally limited to dry periods due to their main priority as flood control facilities. Basin Parks offer connections to the larger community via trails or sidewalks. There are currently three Basin Parks totaling 21.13 acres (City of Clovis, 2018).

SCHOOL PARK

The School Park classification pertains to school sites used in concert with, or in lieu-of, other classes of parks to meet open space needs. The City maintains an "open gate" policy for Clovis Unified School District (CUSD) land and facilities available for recreational use after normal school hours and during the summer. These sites are best suited for community-based recreational programs and youth athletic facilities. Currently there are approximately 271 acres of CUSD Sites available for shared use.

The inventory of parks for the City of Clovis lists existing facilities found in every park. The parks are organized according to their classification type. Typical facilities within the Clovis Parks include, but are not limited to, playgrounds, benches, grill stations/BBQs, open lawns, and generous tree canopies. The data for the asset inventory was collected by Land Design and Green play, and this information was supplemented with GIS data from the City and additional site inventory visits (City of Clovis, 2018).

City Parks

City contains approximately 81 parks totaling 173 acres; 263 acres of green belts, street gardens, trails, paseos, and landscaped median islands; 6 acres of building grounds; 12 acres of undeveloped park land and miscellaneous public right-of-way property; approximately 40,000 City-street trees;

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[3] **Nearby Regional Recreation Areas. The following regional recreation areas are near the Clovis Plan Area and accessible to its residents and visitors. However, they are not part of the SOI Area or within the City limits.

and 28.1 existing miles of trails with 36 miles planned for the future. The Clovis General Plan establishes a goal of four acres of parkland per 1,000 residents. Table 3.12-3 summarizes the City's park facilities by category. Table 3.12-2 utilizes the 2022 population of the City, 123,665, to determine the current acreage ratio (DOF, 2022).

TABLE 3.12-3: SUMMARY OF PARKS AND RECREATION FACILITIES

PARK TYPE	*NUMBER*	*ACREAGE*	*CURRENT RATIO (ACRES PER 1,000 RESIDENTS)*
Pocket Parks	8 locations	1.58	0.013
Neighborhood Parks	50 parks	44.38	0.36
Area Parks	11 parks	41.99	0.34
Community Parks	5 parks	67.51	0.55
Regional Parks	3 sites*	~1,238	10.01
Basin Parks	3 parks	21.13	0.17
School Parks	--	271	2.19
TOTAL	**--**	**1,685.6**	**--**

SOURCE: CLOVIS PARKS MASTER PLAN, 2018

**SITES ARE NOT WITHIN CITY BORDER OR SOI BUT SERVICE CLOVIS POPULATIONS*

When the acreage is broken down into functional categories, it displays that the City currently does not meet park acreage standards for any category. While Regional Parks acreage surpasses the City's goal of four acres per 1,000 residents, no Regional Parks are within the City of Clovis; Regional Parks typically service multiple cities across political jurisdictions (City of Clovis, 2018). Further, the City has a long-standing joint use agreement with CUSD for use of school district recreational facilities by the public. Due to limited access, these facilities are calculated at half their acreage and facility quantities in the Level of Service (LOS) analysis.[4] Thus, of the 271 acres of CUSD school playfields, approximately 135 acres are credited toward meeting the City's parkland standard. (City of Clovis, 2018).

The City's Parks Master Plan identifies additional facility needs required over the next five to ten years. The goal for future planning increases the park area to approximately 380 acres and also substantially increases the number of trails. This amount is approximate and could be met by a combination of utilizing existing undeveloped parkland and acquiring new parkland to develop (City of Clovis, 2018).

Typical facilities within the Clovis Parks include, but are not limited to, playgrounds, benches, grill stations/BBQs, open lawns, and generous tree canopies (City of Clovis, 2018).

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[4] Level of Service (LOS) standards and analysis is a commonly-used method to examine how well a community's park and recreation needs are being met through a comparison to standards of national, state, and comparable municipality; population size is an important factor for assessing park and recreational needs.

OTHER AGENCY SERVICES

Clovis Unified School District

The City of Clovis and its sphere of influence lies primarily within the CUSD. Only a small portion of the southwest area of the City lies in the Fresno Unified Scholl District (FUSD). A small portion of the southeast area of the proposed sphere of influence lies within the Sanger Unified School District (SUSD). These districts are affected by residential growth in the Clovis area. CUSD is managing the growth by financing new facilities through bonds, development fees, and state schools funding (City of Clovis, 2014).

The CUSD provides school services for grades TK through 12 throughout most of Clovis, 20 percent of Fresno and a small portion of unincorporated Fresno County. The CUSD is approximately 200 square miles and serves more than 42,000 students at 44 comprehensive schools. (CUSD, 2022A). Table 3.12-4 provides the CUSD school inventory for K-6 grade schools, 7-8 grade schools, and 9-12 grade schools. Table 3.12-4 does not include the CUSD's education service schools or programs.

TABLE 3.12-4: PUBLIC SCHOOLS SERVING CLOVIS

SCHOOL	*GRADES SERVED*	*ENROLLMENT 2021-2022 SCHOOL YEAR*	*ADDRESS*
K-6 SCHOOLS			
Virginia R. Boris Elementary	K-6	632	7071 E Clinton Ave, Fresno,
Bud Rank Elementary	K-6	677	3650 Powers Ave
Cedarwood Elementary	K-6	762	2851 Palo Alto Ave
Century Elementary	K-6	628	965 N Sunnyside Ave
Clovis Elementary	K-6	651	1100 Armstrong Ave
Cole Elementary	K-6	669	615 W Stuart Ave
Copper Hills Elementary	K-6	593	1881 E Plymouth Way, Fresno
Dry Creek Elementary	K-6	921	1273 N Armstrong Ave
Fancher Creek Elementary	K-6	680	5948 E Tulare Ave, Fresno
Fort Washington Elementary	K-6	575	960 E Teague Ave, Fresno
Freedom Elementary	K-6	712	2955 Gettysburg Ave
James S Fugman Elementary	K-6	794	10825 N Cedar Ave, Fresno
Garfield Elementary	K-6	595	1315 N Peach Ave
Gettysburg Elementary	K-6	663	2100 Gettysburg Ave
Jefferson Elementary	K-6	610	1880 Fowler Ave
Liberty Elementary	K-6	611	1250 E Liberty Hill Rd, Fresno
Lincoln Elementary	K-6	679	774 E Alluvial Ave, Fresno

SCHOOL	*GRADES SERVED*	*ENROLLMENT 2021-2022 SCHOOL YEAR*	*ADDRESS*
Maple Creek Elementary	K-6	521	2025 E Teague Ave, Fresno
Mickey Cox Elementary	K-6	623	2191 Sierra Ave
Miramonte Elementary	K-6	558	1590 Bellaire Ave
Mountain View Elementary	K-6	567	2002 E Alluvial Ave
Nelson Elementary	K-6	475	1336 W Spruce Ave, Fresno
Roger S. Oraze Elementary	K-6	820	3468 N Armstrong Ave, Fresno
Pinedale Elementary	K-6	490	7171 North Sugarpine, Fresno
Reagan Elementary	K-6	682	3701 Ashlan Ave
Red Bank Elementary	K-6	768	1454 N Locan Ave
Riverview Elementary	K-6	655	2491 E Behymer Ave, Fresno
Sierra Vista Elementary	K-6	484	510 Barstow Ave
Tarpey Elementary	K-6	658	2700 Minnewawa Ave
Temperance Kutner Elementary	K-6	591	1448 N Armstrong Ave, Fresno
Valley Oak Elementary	K-6	469	465 E Champlain Dr, Fresno
Weldon Elementary	K-6	575	150 Dewitt Ave
Woods Elementary	K-6	688	700 Teague Ave
Janet L. Young Elementary	K-6	639	3140 N Locan Ave, Fresno
INTERMEDIATE SCHOOLS			
Alta Sierra Intermediate	7-8	1304	380 W Teague Ave
Clark Intermediate	7-8	1495	902 5th St
Granite Ridge Intermediate	7-8	1122	2770 E International Ave, Fresno
Kastner Intermediate	7-8	1141	7676 N First St, Fresno
Reyburn Intermediate	7-8	1516	2901 N De Wolf Ave
HIGH SCHOOLS			
Buchanan High	9-12	2685	1560 N Minnewawa Ave
Clovis High	9-12	2928	1055 Fowler Ave
Clovis East High	9-12	2733	2940 Leonard Ave
Clovis North High	9-12	2442	2770 E International Ave, Fresno
Clovis West High	9-12	2096	1070 E Teague Ave, Fresno

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION 2021-22ENROLLMENT BY GRADE

As shown in Table 3.12-4, the schools serving the City had a total enrollment of approximately 41,177 students, of which 21,715 were enrolled in elementary (K-6), 6,578 were enrolled in intermediate school (grades 7-8) and 12,884 were enrolled in high school (grades 9 – 12).

District-wide CUSD Schools have a total enrollment of 42,699 students for the 2021-2022 school year. Table 3.12-5 provides a summary of the enrollment by grade within CUSD.

TABLE 3.12-5: ENROLLMENT BY GRADE CUSD (2021-2022)

CLOVIS UNIFIED	*GRADE LEVEL*													
	K	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*TOTAL 2021-2022*
Total	3,287	2,946	3,074	3,074	3,159	3,245	3,287	3,287	3,415	3,501	3,458	3,287	3,586	**42,699**
% Total	7.7	6.9	7.2	7.3	7.4	7.6	7.7	7.7	8.0	8.2	8.1	7.7	8.4	**100%**

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION 2021-22 ENROLLMENT BY GRADE.

The CUSD's school building capacity was determined to be 21,916 for grades TK-6, 6,561 for grades 7-8, and 12,135 for grades 9-12. The CUSD does not have existing capacity to accommodate projected students from new development. Therefore, the CUSD will need additional school facilities during the next five years for approximately 2,339 students in grades TK-6, 496 students in grades 7-8, and 1,034 students in grades 9-12 (Odell Planning, 2022).

The CUSD adopted Level I and II School Facilities (Developer) Fees in June 2022. Developer Fees are utilized to enhance and maintain existing facilities; they are also put towards construction and expansion of new facilities (CUSD, 2022B).

The City of Clovis has a unique partnership with the school districts, in which the schools provide and operate most recreation programs for the youth and teens of the community. While the schools do provide programming, the City of Clovis also operates youth and adult programs through the Clovis Recreation Center and additional programing and events for the community (City of Clovis, 2018).

Library Services

Library services are provided by Fresno County and funded by the County General Fund and countywide sales tax override. A branch library is located in the Clovis Civic Center (1155 Fifth Street). New library facilities are proposed for inclusion in each of the Urban Villages outlined in the 1993 General Plan Update (City of Clovis, 2014).

The Fresno County Public Library provides collections and services through its Central Resource Library and 34 branches. It is part of the San Joaquin Valley Library System (SJVLS), a cooperative network of 10 public library jurisdictions in the counties of Fresno, Kern, Kings, Madera, Mariposa, Merced and Tulare (FCPL, 2022A).

The Clovis branch is 8,627 square feet and is open to the public seven days a week; from 9:00 AM to 9:00 PM Mondays through Thursdays, 9:00 AM to 5:00 PM Fridays and Saturdays, and 12:00 PM to 5 PM on Sundays. The Clovis branch has ten laptops available for checkout and other technologic tools available to the public. The library offers black & white and color printing, as well as a photocopier and a recycling drop-off bin (FCPL, 2022B).

Clovis Senior Center

The Community Services Division administers various senior citizen programs at the Clovis Senior Center. The Clovis Senior Center is open to anyone age 50 or older and is located at 850 Fourth Street between the Clovis Veterans Memorial District Building and the San Joaquin Valley College of Law. Clovis Senior Services sponsors a wide range of classes, programs, and activities to promote healthy and independent living for individuals 50 years and older. No membership fee is required, although some classes and sessions have a small activity fee and/or registration fee (City of Clovis, 2022E).

Clovis Health Care Facilities.

Health care facilities within Clovis encompass Community Health Systems, Kaiser Permanente Clovis Medical Offices, residential care facilities, as well as private physicians and other medical practitioners.

Community Health System is a locally owned, not-for-profit, public-benefit organization based in Fresno, California. Four acute-care hospitals– Community Regional Medical Center, Clovis Community Medical Center, Fresno Heart & Surgical Hospital and Community Behavioral Health Center-, a cancer institute along with several long-term care, outpatient and other healthcare facilities are in operation. The Clovis Community Center is located on the northeast corner of Herndon and Temperance Avenues. The Clovis Community Medical Center houses 208 licensed beds, and has plans to add 144 more in 2022, bringing the total number of private rooms from 208 to 352 (Community Health System, 2022).

3.12.2 REGULATORY SETTING

STATE

Police Protection

There are no federal or state regulations related to police protection services applicable to the proposed Project.

Fire Protection and Emergency Response

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

EMERGENCY RESPONSE/EVACUATION PLANS

The State passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

CALIFORNIA FIRE CODE

The 2019 California Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Fire Code contains specialized technical regulations related to fire and life safety.

CALIFORNIA HEALTH AND SAFETY CODE

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

NFPA 1710

The National Fire Protection Association (NFPA) 1710 Standards are applicable to urban areas and where staffing is comprised of career firefighters. According to these guidelines, a career fire department needs to respond within six minutes, 90 percent of the time with a response time measured from the 911 call to the time of arrival of the first responder.

The standards are divided as follows:

- Dispatch time of one minute or less for at least 90 percent of the alarms;
- Turnout time of one minute or less for EMS calls (80 seconds for fire and special operations response);
- Fire response travel time of four minutes or less for the arrival of the first arriving engine company at a fire incident and eight minutes or less travel time for the deployment of an initial full alarm assignment at a fire incident;
- Eight minutes or less travel time for the arrival of an advanced life support (ALS) (4 minutes or less if provided by the fire department.

Parks/Recreation

QUIMBY ACT

The Quimby Act (California Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map." Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The City collects impact fees at the time of building permits and final maps that include both capital impacts and land acquisition.

Schools

CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations, Chapter 4.9, Payment of Fees, Charges, Dedications, or Other Requirements Against a Development Project. *Section 65995-65998 (h)* The payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities.

CALIFORNIA DEPARTMENT OF EDUCATION

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by state regulations and the policies of the SFPD relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;

- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

THE KINDERGARTEN-COMMUNITY COLLEGE PUBLIC EDUCATION FACILITIES BOND ACT OF 2016 (PROP 51)

The Kindergarten-Community College Public Education Facilities Bond Act of 2016 was the first education-related bond measure to appear on the ballot since 2006. This act was approved by California voters in November 2016 and provided for a bond issued of $9 billion with $7.0 billion earmarked for K-12 school facilities and $2 billion earmarked for community college facilities. The $7.0 billion for K-12 school facilities was allocated as follows: $3 billion for the construction of new school facilities, $500 million for providing school facilities for charter schools, $3 billion for the modernization of school facilities, and $500 million for providing facilities for career technical education programs. The $2 billion allocated to community college facilities was for acquiring, constructing, renovating, and equipping community college facilities.

LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)

The "Leroy F. Greene School Facilities Act of 1998," also known as Senate Bill 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district's authority to levy school impact fees. This comprehensive legislation, together with the $9.2 billion education bond act approved by the voters in November 1998 known as "Proposition 1A," reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- Level I fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.

- Level II fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district's bonding capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.

Level III fees are outlined in Government Code Section 655995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

LOCAL

City of Clovis Municipal Code

Municipal Code Chapter 3.4, Park Acquisition and Development, establishes a method for coordinated acquisition and development of City park facilities. This Chapter states that any residential projects shall pay parks acquisition and development fees per dwelling unit.

Title 4 of the City Municipal Code is dedicated to Public Safety. The purposes of Chapter 4.2, Emergency Services, are to provide for the preparation and carrying out of plans for the protection of persons and property within the City in the event of an emergency; the direction of the Emergency Organization; and the coordination of the emergency functions of the City with all other public agencies, corporations, organizations, and affected private persons. Chapters 4.3 and 4.4 pertain to Fire Department and Fire Prevention; Chapter 4.4 codifies the adoption of the California Fire Code. Chapter 4.10, Fire Facility Development Impact Fee, claims that any owner/developer who constructs or causes a dwelling unit or a “dwelling unit equivalent” to be constructed in the City shall pay a fire department fee in addition to any other fees required to be paid by the City. Chapter 4.11, Police Department Fee, mirrors Chapter 4.10 in that this Chapter requires the payment of a fee for a specific public service, in the case of Chapter 4.11, the fee goes towards police facilities.

The purpose of Chapter 7.8, Library Facilities Development Impact Fees, is to create and establish a library facilities development impact fee (“library fee”) for the City, which shall be used to mitigate adverse impacts to public library facilities and equipment attributed to new development. The library fee shall be used by the City to pay a portion of the costs of designated library facilities and equipment impacted by new development. The library fee shall be based on a method designed to ensure that developers pay their fair share of the cost of such library facilities and equipment required to serve the City’s growing population.

Section 9.22.060, Fire protection, is under Chapter 9.22, Performance Standards. Section 9.22.060 explains that all new or modified development shall be built per the currently adopted California Fire Code, related Municipal Code provisions, and current Clovis Fire Code standards and policies.

Title 10 is dedicated to Parks and Recreation. This title regulates street trees and plants (Chapter 10.1); use of City parks and other City public facilities (Chapter 10.2); prohibited acts (Chapter 10.3); violations (Chapter 10.4); and skate park facilities (Chapter10.5).

Clovis Parks Master Plan (2018)

The City of Clovis Parks Master Plan provides strategic guidance in the provision of parks services to best develop, promote, utilize, manage, and maintain a functional park system for the City of Clovis. The master plan will guide policy development, prioritize demands and opportunities, and generate a strategic action plan for the next 5 to 10 years. The Plan addresses current and aging areas of the City park system, as well as future growth of the City and identifies opportunities that will expand and complement the City Parks Division and address the needs of the community.

City of Clovis General Plan

The General Plan includes several policies relevant to public services. It is noted that the currently adopted General Plan is the City of Clovis General Plan, adopted in August 2014; policies applicable to the Project are identified below:

Land Use Element

- Policy 6.1 Amendment criteria. The City Council may approve amendments to the General Plan when the City Council is satisfied that the following conditions are met:
    - A. The proposed change is and will be fiscally neutral or positive.
    - B. The proposed change can be adequately served by public facilities and would not negatively impact service on existing development or the ability to service future development.
    - C. The proposed change is consistent with the Urban Village Neighborhood Concept when within an Urban Center.
    - D. General Plan amendments proposing a change from industrial, mixed-use business campus, or office (employment generating) land use designations to non-employment-generating land use designation shall be accompanied by an analysis of the potential impacts on the City's current and long-term jobs-housing ratio, as well as an evaluation on the change or loss in the types of jobs.
    - E. This policy does not apply to:
        - i. County designations within the Clovis Planning Area or changes made by the City Council outside of the sphere boundary to reflect changes made by the County of Fresno.
        - ii. Changes initiated by public agencies (such as school districts, flood control) for use by public agencies.
        - iii. Changes initiated by the city within a specific plan.

Circulation Element

- Policy 1.3 Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.
- Policy 1.5 Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).

Public Facilities and Services Element

- Policy 1.1 New development. New development shall pay its fair share of public facility and infrastructure improvements.
- Policy 1.4 Development-funded facilities. The City may require developments to install onsite or offsite facilities that are in excess of a development's fair share. However, the City shall establish a funding mechanism for future development to reimburse the original development for the amount in excess of the fair share costs.
- Policy 3.4 Joint use of facilities. Partner with public and private educational institutions to jointly use facilities for both civic and educational purposes.
- Policy 4.3 Lifelong learning. Enhance and expand Clovis' library facilities to meet the evolving educational and lifelong learning needs of the community. Coordinate with local educational institutions to offer courses and learning opportunities outside the classroom.
- Policy 4.4 Recreation programs. Provide and/or sponsor recreational programs and services that are accessible and affordable to residents of all ages and abilities and encourage active and healthy living.
- Policy 4.5 Youth programs. Coordinate with public and private schools, local nonprofits, service clubs, and other agencies to provide opportunities for youth to explore and enjoy sports, creative and performing arts, future career paths, civic activities, and volunteer opportunities.
- Policy 4.6 Senior programs. Collaborate with service providers to provide a wide variety of senior services and programs, including daily opportunities for seniors to have physical activity, social interaction, and mental stimulation.
- Policy 4.7 Childcare and childhood development. Encourage efforts to expand the overall capacity of and access to local childcare and early childhood development centers.
- Policy 4.8 Access to community facilities. Improve transit connections to community facilities for people who are transit-dependent.
- Policy 5.9 Proximity to emergency medical services. Require senior care facilities and other services providers that may need frequent emergency medical services to locate in proximity to fire stations and medical service providers.
- Policy 6.1 Fire and police service. Maintain staffing, facilities, and training activities to effectively respond to emergency and general public service calls.
- Policy 6.2 Resource allocation. Periodically conduct service level studies to analyze crime and emergency service performance data, to evaluate the effectiveness of prevention and reduction strategies, and to allocate resources accordingly.
- Policy 6.3 Emergency medical calls. Explore options to lessen the demand on fire and police services or expand reimbursement programs to ensure the service pays for measured impacts.
- Policy 6.4 Skilled medical facilities. Consider options to offset or apportion the higher cost of providing emergency medical service to facilities with existing skilled medical personnel on staff.

- Policy 6.5 Public safety hot spots. Prioritize improvement and enforcement activities to minimize existing and prevent future public safety hot spots. Reevaluate siting and development standards for facilities that generate high demands for service calls.
- Policy 6.6 Interagency support. Participate in mutual aid system and automatic aid agreements to back up and supplement capabilities to respond to emergencies.
- Policy 6.7 Interagency communications. Maintain an effective communication system between emergency service providers within Clovis and neighboring jurisdictions.
- Policy 6.8 Emergency preparedness planning. Maintain an emergency operations plan, an emergency operations center, and a hazard mitigation plan to prepare for actual or threatened conditions of disaster or extreme peril.
- Policy 6.9 Community outreach. Conduct outreach in the community to promote personal and public safety in daily life and in cases of emergency. Regularly update and inform the public on the real levels of crime and safety to strengthen their perceived sense of personal security.

Environmental Safety Element

- Policy 1.5 Critical and public facilities. Locate and design critical and public facilities to minimize their exposure and susceptibility to flooding, seismic and geological effects, fire, and explosions. Ensure critical use facilities (e.g., hospital, police, and fire facilities) can remain operational during an emergency.
- Policy 1.6 Public information and emergency preparedness. Provide the public with accurate and reliable information regarding natural hazards to prevent and mitigate potential risks and exposure for life and property. Continue to maintain a local hazard mitigation plan and conduct programs to inform the general public of the City's emergency preparedness and disaster response procedures.

Open Space and Conservation Element

- Policy 1.1 Parkland standard. Provide a minimum of 4 acres of public parkland for every 1,000 residents.
- Policy 1.2 Existing parks. Upgrade and rehabilitate existing parks as necessary to meet the needs of the community and as the financial resources of the city allow.
- Policy 1.3 New parks and recreation facilities. Provide a variety of parks and recreation facilities in underserved and growing areas of the community.
- Policy 1.4 Joint use of education facilities. Provide a balanced system of parks and recreation facilities through joint use of facilities owned by school districts.
- Policy 1.5 Multipurpose open space. Design public facilities as multipurpose open space and recreation to serve the community's infrastructure needs while preserving and enhancing open space and water features. Prioritize the use of existing basins for existing areas, and for future areas prioritize the development of separate park facilities available year-round.
- Policy 1.7 Sustainability. Develop new and maintain existing parks and recreation facilities to achieve fiscal and environmental sustainability.
- Policy 1.8 Funding. Require new development to provide pocket and neighborhood parks, dedicate land for area parks, and pay impact fees for community and regional parks. Require

new development to establish lighting and landscape maintenance districts to fund operations and maintenance.

- Policy 1.9 Master plan. Periodically update the Parks Master Plan to direct the implementation of the city's open space facilities.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on public services if it would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
    - Fire Protection;
    - Police Protection;
    - Schools;
    - Parks; and
    - Other public facilities.
- An increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- If it includes recreational facilities or requires the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: The proposed Project has the potential to require the construction of police department facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The proposed Project would introduce new residential uses and residents to the City. The Project proposes 605 single-family units be developed. This will create an increased demand for police protection services compared to existing conditions. The City's Existing General Plan designates the Development Area as Rural Residential (RR) and therefore, anticipated potential development in and around the area. To the extent that the Project would have an incremental increase in demand on police protection services provided by the CPD, the Project would be required to pay the police facility fee in accordance with Clovis Municipal Code Chapter 4.11, Police Department Fees. The fee is imposed on residential development within the City for the purposes of assuring that the current level of service goals of the City are met with respect to additional demands placed on police facilities from such development.

According to the most recent Department of Finance (2022) estimates, the Clovis population is 123,665 and the average number of persons residing in a dwelling unit is 2.81; therefore, the Project is estimated to increase the population by 1,700 residents (based on 2.81 persons per household). As of 2021, the CPD has 102 sworn officers (CPD, 2021B). With the addition of 1,700 residents, that equates to a staffing level of approximately 0.81 officers per 1,000 residents. This is not a significant change from the current service ratio of 0.82 officers per 1,000 residents. The City has anticipated additional officers would be hired as the City population grows. The City and CPD periodically monitor response times and reports annually on the results to ensure adequate police protection service levels are provided.

Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered police protection facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities. The Project would be required to pay the City's development fee specific to police, which in accordance with the Clovis Municipal Code, shall be used solely and exclusively for the purpose of funding police station improvements. Payment of the fee would offset the incremental increase in demand for police protection services associated with the Project. In addition, the Development Area would be required to annex into the City of Clovis Public Safety Community Facilities District.

Based on the ability of the CPD to serve the City, it is anticipated that the existing police department facilities are sufficient to serve the proposed Project and the construction of new or expanded police department facilities would not be required. Consequently, any impacts would be **less than significant**.

Impact 3.12-2: The proposed Project has the potential to require the construction of fire department facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The CFD will be the responding agency to fires and emergencies at the Project site. For low-risk fires, three CFD personnel will respond; moderate risk structure fires will have a response of 16 CFD personnel, and high risk structure fires will have a response of 19 CFD personnel. Three personnel will respond to all low and moderate risk EMS incidents. Low and moderate risk technical rescue and hazardous materials (HazMat) incidents will receive three personnel; ten personnel will respond to high-risk technical rescue and HazMat incidents (CFD, 2017). Average response times for the CFD are presented in Table 3.12-2. As shown in Table 3.12-2, as of 2021, the CFD did not meet or exceed its response-time goals, as it has in past years. While the CFD has not met response time goals as of 2021, the Department has recently opened a new station (Station 6) for commission. Station 6 opened in August of 2022, and allows the CFD to serve more people within their jurisdiction at a faster rate (CFD, 2021).

The proposed Project would introduce new residential uses to the City (i.e. 605 single-family residences). This would create an increased demand for fire services compared to existing conditions. The City's Existing General Plan designates the Development Area as Rural Residential (RR) and therefore, anticipated potential development. Although a General Plan Amendment would be required as part of the proposed Project, to the extent that the Project would have an incremental increase in demand on fire services provided by the CFD, the Project would be required to pay the community facility fee in accordance with Clovis Municipal Code Chapter 4.10, Fire Facility Development Impact Fee. The fee is imposed on residential development within the City for the purposes of assuring that the current level of service goals of the City are met with respect to additional demands placed on fire facilities from such development.

The Project does not propose and would not create a need for new or physically altered fire protection facilities to maintain acceptable service ratios, response times, or other performance objectives. Development fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. In addition, the Project Site would be required to annex into the city of Clovis Public Safety Community Facilities District. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with fire protection services. Therefore, the impact of the proposed Project on the need for additional fire services facilities is **less than significant** and would not require the construction of additional fire department facilities.

Impact 3.12-3: The proposed Project has the potential to require the construction of school facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The proposed Project is located within the service boundaries of the CUSD. Specifically, the Project site is nearest to Woods Elementary, approximately one mile southwest of the Project site, and Buchanan High School, approximately 1.7 miles southwest of the Project site.

The proposed Project would provide up to 605 residential units, which would directly cause population growth, including school-aged children that would attend the schools that serve the Project site and surrounding area. Utilizing the student generation rates provided by the CUSD in the Development Fee Justification Study/School Facilities Needs Analysis (dated April 2022), the proposed Project would be expected to generate roughly 342 new students[5], broken down by grades as follows:

- TK–6: 205 students
- 7-8: 48 students
- 9-12: 90 students

Students within the Project site would most likely attend Woods Elementary and Buchanan High School, as they are the closest educational locations to the Project site. However, student placement is subject to CUSD's determination.

The CUSD's school building capacity was determined to be 21,916 for grades TK-6, 6,561 for grades 7-8, and 12,135 for grades 9-12. The CUSD does not have existing capacity to accommodate projected students from new development. Therefore, the CUSD will need additional school facilities during the next five years for approximately 2,339 students in grades TK-6, 496 students in grades 7-8, and 1,034 students in grades 9-12. The CUSD currently owns four elementary school sites (Fowler-McKinley, Minnewawa-Perrin, Minnewawa-International, and an elementary site in the Millerton Specific Plan Area) as well as the Bradley Educational Center site, which would accommodate a future high school, intermediate school, and elementary school. The CUSD, therefore, has school site capacity for all projected students in all grade levels, and thus no site acquisition costs are needed. (Odell, 2022).

School districts are authorized to collect fees on new residential and commercial/industrial development in accordance with Education Code Section 17620 and Government Code Section 65995. This Development Fee Justification Study/School Facilities Needs Analysis provides the information and analysis necessary to demonstrate that the CUSD is justified in collecting Level I fees on new residential and commercial/industrial development ($4.79 and $0.78 per square foot, respectively), and Level II and Level III fees of $5.36 per square foot and $10.73 per square foot for residential development, respectively. (Odell, 2022). The CUSD adopted Level I and II School Facilities (Developer) Fees in June 2022 (CUSD, 2022B). The development fees collected by the CUSD may be used for construction and reconstruction of school facilities, site development, relocatable classrooms on existing or future sites and other facilities necessitated by students generated by new development (Odell, 2022).

Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from taxes, would fund capital and labor costs associated with school services. The adequacy

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[5] Calculations based on the CUSD Development Fee Justification Study/School Facilities Needs Analysis (2022), which states that Single family residential development generates an average of 0.3395 students grades TK-6; 0.0793 students for grades 7-8; and 0.1473 students for grades 9-12 per unit.

of fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund improvements associated with school services. According to Government Code Section 65996, the development fees authorized by SB 50 (1998) are deemed to be "full and complete school facilities mitigation" for any demands or impacts on school facilities caused by new development Therefore, the impact of the proposed Project on the need for additional school facilities is **less than significant**.

Impact 3.12-4: The proposed Project has the potential to have effects on other public facilities. (Less than Significant)

The proposed Project will bring residents to the area which may require the use of other public services such as libraries, civic centers, etc. Public services such as the Clovis branch of the Fresno County Public Library and the Clovis Senior Center would serve Project residents. The City collects impact fees from new development based upon projected impacts from each development, including impacts on other public services as required by Chapter 3.10, Development Impact Fees and Chapter 7.8, Library Facilities Development Impact Fees of the City's Municipal Code. The City reviews the adequacy of impact fees on an annual basis to ensure that the fee is commensurate with services provided. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with these other public services.

The proposed Project does not trigger the need for new facilities associated with other public services. Consequently, new facilities for other public services are not proposed at this time. The proposed Project would not result in the need for new facilities for other public services, thus it will have a **less than significant** impact relative to this topic.

Impact 3.12-5: The proposed Project has the potential to require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The proposed Project directly increases the number of persons in the area as a result of new residential development. The proposed Project provides 605 single-family residential units. According to the most recent Department of Finance (2022) estimates, the average number of persons residing in a dwelling unit in the City of Clovis is 2.81; therefore, the Project is estimated to increase the population by 1,700 residents (based on 2.81 persons per household).

The City's General Plan identifies a park standard based on a goal of four acres of parkland per 1,000 residents within the City limits. The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a **less than significant** impact.

Impact 3.12-6: The proposed Project has the potential to increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated. (Less than Significant)

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site, and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a **less than significant** impact relative to this topic.

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TRANSPORTATION AND CIRCULATION 3.13

This section of the EIR analyzes the potential impacts of the proposed Project on the surrounding transportation system including roadways, bicycle/pedestrian facilities, rail, and transit facilities/services. This section identifies the significant impacts of the proposed Project. An evaluation of vehicular access to the proposed Project is also provided. All technical calculations are in the Transportation Analysis Report prepared by LSA for the proposed Project (provided in Appendix I of this EIR).

Comments were received during the public review period or scoping meetings for the Notice of Preparation regarding this topic. Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

3.13.1 INTRODUCTION

PROJECT LOCATION

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 2.0-1 and 2.0-2 show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 2.0-3 illustrates the Project location on the USGS Clovis, California, 7.5-minute series quadrangle map.

PROJECT SITE DEFINED

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.
    - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

STUDY AREA

The Local Transportation Analysis (LTA) for the project examines traffic operations in the vicinity of the proposed Project under the following five scenarios:

- Existing Conditions
- Existing Plus Project Conditions
- Near-Term Plus Project Conditions
- Cumulative without Project Conditions
- Cumulative Plus Project Conditions

Traffic conditions at study intersections and roadway segments were examined for weekday a.m. and p.m. peak-hour conditions. The a.m. peak hour is defined as the 1 hour of highest traffic volumes occurring between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is the 1 hour of highest traffic volumes occurring between 4:00 p.m. and 6:00 p.m. Additionally, since the Project is estimated to be completed in 2028, the Near-Term condition was evaluated for the year 2028.

As per the City’s Transportation Impact Analysis (TIA) Guidelines, the extent of the ‘Study Area’ includes the following:

- Pedestrian, bicycle, and transit facilities within 0.5 mile from the project site boundary
- All intersections of major streets that would provide direct access to the Project
- All signalized intersections within 0.5 mile of the Project site boundary where the project would add 50 or more peak-hour trips, and signalized intersections beyond 0.5 mile where the project would add 100 or more peak-hour trips
- All unsignalized intersections within a 0.5 mile of the project site boundary where the project would add more than 50 peak-hour trips

Based on the aforementioned criteria and as per discussion with the City and adjacent jurisdictions during the scoping agreement process, the following intersections and roadway segments have been included in the LTA. Figure 3.13-1 illustrates the Study Area Roadway Classifications.

Study Intersections

Twenty-six existing intersections were selected for study. The study intersections include:

1. Willow Avenue/Behymer Avenue (Clovis/Fresno)
2. Willow Avenue/Shepherd Avenue (Clovis/ Fresno)
3. Minnewawa Avenue/Behymer Avenue (Clovis)
4. Minnewawa Avenue/Shepherd Avenue (Clovis)
5. Clovis Avenue/Shepherd Avenue (Clovis)
6. Clovis Avenue/Teague Avenue (Clovis)
7. Clovis Avenue/Nees Avenue (Clovis)
8. Clovis Avenue/Alluvial Avenue (Clovis)

9. State Route 168 (SR-168) Westbound Ramps/Herndon Avenue (Caltrans)
10. SR-168 Eastbound Ramps/Herndon Avenue (Caltrans)
11. Clovis Avenue/Herndon Avenue (Clovis)
12. Sunnyside Avenue/Behymer Avenue (Clovis)
13. Sunnyside Avenue/Shepherd Avenue (Clovis)
14. Sunnyside Avenue/Teague Avenue (Clovis)
15. Sunnyside Avenue/Nees Avenue (Clovis)
16. Fowler Avenue/Behymer Avenue (Clovis)
17. Fowler Avenue/Ticonderoga (Clovis)
18. Fowler Avenue/Shepherd Avenue (Clovis)
19. Fowler Avenue/Teague Avenue (Clovis)
20. Fowler Avenue/Nees Avenue (Clovis)
21. Fowler Avenue/SR-168 Westbound Ramps (Caltrans)
22. Fowler Avenue/SR-168 Eastbound Ramps (Caltrans)
23. Sunnyside Avenue/Project Driveway 1 (Clovis)
24. Sunnyside Avenue/Project Driveway 2 (Clovis)
25. Project Driveway 3/Shepherd Avenue (Clovis)
26. Project Driveway 4-Stanford Avenue/Perrin Road (Clovis)

Roadway Segments

Twenty-three roadway segments were analyzed in the LTA. The roadway segments include:

1. Behymer Avenue, between Willow Avenue and Minnewawa Avenue (Clovis)
2. Behymer Avenue, between Minnewawa Avenue and Sunnyside Avenue (Clovis)
3. Behymer Avenue, between Sunnyside Avenue and Fowler Avenue (Clovis)
4. Shepherd Avenue, between Willow Avenue and Minnewawa Avenue (Clovis)
5. Shepherd Avenue, between Minnewawa Avenue and Clovis Avenue (Clovis)
6. Shepherd Avenue, between Clovis Avenue and Sunnyside Avenue (Clovis)
7. Shepherd Avenue, between Sunnyside Avenue and Project Driveway 3 (Clovis)
8. Shepherd Avenue, between Project Driveway 3 and Fowler Avenue (Clovis)
9. Herndon Avenue, between State Route 168 Eastbound Ramps and Clovis Avenue (Clovis)
10. Willow Avenue, between Behymer Avenue and Shepherd Avenue (Clovis/Fresno)
11. Minnewawa Avenue, between Behymer Avenue and Shepherd Avenue (Clovis)
12. Clovis Avenue, between Shepherd Avenue and Teague Avenue (Clovis)
13. Clovis Avenue, between Teague Avenue and Nees Avenue (Clovis)
14. Clovis Avenue, between Nees Avenue and Alluvial Avenue (Clovis)
15. Clovis Avenue, between Alluvial Avenue and Herndon Avenue (Clovis)
16. Sunnyside Avenue, between Project Driveway 1 and Shepherd Avenue (Clovis)
17. Sunnyside Avenue, between Shepherd Avenue and Teague Avenue (Clovis)
18. Sunnyside Avenue, between Teague Avenue and Nees Avenue (Clovis)
19. Fowler Avenue, between Behymer Avenue and Ticonderoga (Clovis)

20. Fowler Avenue, between Ticonderoga and Shepherd Avenue (Clovis)
21. Fowler Avenue, between Shepherd Avenue and Teague Avenue (Clovis)
22. Fowler Avenue, between Teague Avenue and Nees Avenue (Clovis)
23. Fowler Avenue, between Nees Avenue and State Route 168 Westbound Ramps (Clovis)

For each roadway segment, the highest volume on any part of the segment has been considered as the analysis volume for the entire segment.

STUDY SCENARIOS

The study intersections were evaluated for the following five scenarios:

1. ***Existing Conditions*** – Analyzes operations as they exist today.
2. ***Existing Plus Project Conditions*** – Analyzes existing operations with the addition of trips generated from the Development Area.
3. ***Near-Term Plus Project Conditions*** – Analyzes cumulative year volumes with the addition of trips generated from the Development Area in the near-term (2028)
4. ***Cumulative No Project Conditions*** – Analyzes cumulative year volumes based on the forecast volumes obtained from the Fresno Council of Governments.
5. ***Cumulative Plus Project Conditions*** – Analyzes cumulative year volumes with the addition of trips generated from the Development Area in the long-term (2046).

3.13.2 ANALYSIS METHODOLOGY

DATA COLLECTION

Traffic volumes for Existing Conditions are typically developed using existing count data collected at Study Area intersections and roadway segments.

Traffic volumes under Near-Term Plus Project Conditions were developed by adding traffic volumes from approved and pending projects located near the Study Area and Project traffic to existing traffic volumes.

Traffic volumes for cumulative year without project conditions were developed by using forecast volumes obtained from the Fresno COG ABM. The methodology to develop cumulative year without project traffic volumes at Study Area intersections and roadway segments were consistent with the COG's procedures for post-processing of modeled traffic volumes. The resulting intersection and roadway segment LOS will be calculated using the previously discussed methodologies.

Existing and Cumulative year Plus Project traffic volumes were developed by adding Project traffic to the traffic volumes for the corresponding without Project scenarios.

VMT ANALYSIS METHODOLOGY

On December 28, 2018, the California Office of Administrative Law cleared the revised CEQA Guidelines for use. Among the changes to the CEQA Guidelines was the removal of vehicle delay and LOS from consideration under CEQA. With the adopted CEQA Guidelines, transportation impacts are to be evaluated based on a project's effect on VMT. The City's TIA Guidelines includes screening criteria, VMT analysis methodology, VMT impact thresholds, and VMT mitigation measures. Therefore, the City's TIA Guidelines were used in the evaluation of the Project's VMT analysis.

VMT METHODOLOGY

The TIA Guidelines provide multiple project types and thresholds for land use projects. The Project was compared with the screening criteria established in the "Project Screening" section of the TIA Guidelines to check if the project can be screened out. The following is a brief description of the project in relation with the project screening criteria:

Small Project: The TIA Guidelines states that projects generating less than 500 daily trips could be screened out of a detailed VMT analysis. As discussed in Section 6.1, Project Trip Generation, the project is estimated to generate 5,705 daily trips. Therefore, the Project does not satisfy this screening criteria.

- **Provision of Affordable Housing:** The project proposes to develop market-rate, single-family dwelling units. Therefore, this screening criteria does not apply to the project.
- **Local-Serving Retail:** The project consists of residential land use only; therefore, this screening criteria does not apply to the project.
- **Project Located in a High-Quality Transit Area (HQTA):** The project is not located within an HQTA; therefore, this screening criteria does not apply to the project.
- **Project Located in Low VMT Area:** The project is not located in a low VMT area; therefore, this criteria does not apply to the project.

As shown above, the Project could not be screened out from a detailed VMT analysis. As such, pursuant to the TIA Guidelines, a detailed VMT analysis was conducted to assess the Project's VMT impact.

THRESHOLDS OF SIGNIFICANCE

The Project consists of residential land use. The TIA Guidelines established VMT per capita as the appropriate metric to evaluate residential land use projects while defining Fresno County as the "region" for determining VMT thresholds. The Project would have a significant VMT impact if the baseline Project VMT per capita is greater than 87 percent of the baseline Fresno County VMT per capita. Based on the TIA Guidelines, baseline City of Clovis VMT per capita is 16.1 and the corresponding threshold is 14.1 (which is 87 percent of 16.1). Therefore, the Project will have a significant VMT impact if the Project VMT per capita is greater than 14.1.

As recommended in the TIA Guidelines, the Fresno COG ABM was used for the Project VMT analysis. The model inputs were updated with the Project land uses to calculate Project VMT. The Project VMT was calculated from a Fresno COG ABM model run as described in the following sections.

LOCAL TRANSPORTATION ANALYSIS METHODOLOGY

Study intersections were analyzed using procedures and methodologies contained in the Highway Capacity Manual – 6th Edition (Transportation Research Board, 2016). These methodologies were applied using Synchro 11 software which considers traffic volumes, lane configurations, signal timings, signal coordination, and other pertinent parameters of intersection operations.

Level of Service (LOS)

The operational performance of the roadway network is commonly described with the term Level of Service (LOS). LOS is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions. For signalized intersections, roundabouts and all way stop control intersections, LOS is based on the average delay experienced by all vehicles passing through the intersection:

- **Signalized Intersections**
    - If the project triggers a signalized intersection operating at an acceptable LOS to operate at an unacceptable LOS;
    - If the project increases the average delay for average delay for a signalized intersection that is already operating at an unacceptable LOS.
- **Unsignalized Intersections**
    - If the project triggers an unsignalized intersection operating at acceptable LOS to operate at unacceptable LOS (from E or better to F) and meet the signal warrants criteria;
    - If the project increases the applicable delay for an unsignalized study intersection that is already operating at unacceptable LOS and meets the signal warrant criteria.

The City of Clovis considers LOS D as the LOS standard for study intersections and roadway segments under near-term conditions, unless a finding of overriding consideration was adopted in the City’s General Plan EIR. The same criterion holds for long-term conditions, except for roadway segments that are adopted in the City’s General Plan EIR to operate at LOS E or F. The City’s TIA Guidelines do not define an LOS standard under Existing Plus Project conditions. For the purpose of this analysis, an LOS standard of D has been considered for intersections and roadway segments under Existing Plus Project conditions. The City of Clovis considers the following operational deficiency criteria for study intersections.

Per the City of Fresno Traffic Impact Study Report Guidelines, updated February 2009, LOS D is considered the LOS standard for study intersections and roadway segments under near-term conditions. The same criterion holds for long-term conditions, except for roadway segments that are adopted in the City’s Master General Plan to operate at LOS E or F. The City’s TIA Guidelines do not define an LOS standard under Existing Plus Project conditions.

It should be noted that all City of Fresno study intersections and roadway segments are located within the City of Fresno Traffic Impact Zone (TIZ) III. Per the City of Fresno's General Plan, all intersections and roadway segments within TIZ III should maintain a peak-hour LOS standard of D or better. Therefore, an LOS standard of D has been considered for intersections and roadway segments within Fresno for all analysis conditions. The City of Fresno considers the following operational deficiency criteria for study intersections:

- An operational deficiency is created if the addition of the Project traffic results in any one of the following:
    - Causes the intersection LOS to change from acceptable to unacceptable levels;
    - Causes the intersection LOS to change from an unacceptable LOS (LOS E) to LOS F;
    - Increases the average delay at a study intersection that is already operating at an unacceptable LOS.

City of Fresno's Traffic Impact Study guidelines do not define an operational deficiency criterion for roadway segments. Therefore, for purposes of this analysis, at intersections under City of Fresno jurisdiction, an operational deficiency has been considered when the project causes an unsatisfactory condition (deterioration from LOS A through D to E or F) or when the project contributes to an existing or forecast deficiency.

Caltrans considers an acceptable LOS to be between LOS C and D at all intersections under its jurisdiction (delay of 45 seconds at signalized intersections). Caltrans does not have any operational deficiency criteria for study intersections. Therefore, an operational deficiency occurs when the project causes an unsatisfactory condition (deterioration from LOS A through D to E or F) for intersections or when the project contributes to an existing or forecast deficiency. The project needs to identify improvements to improve the intersection LOS to an acceptable level.

Although LOS cannot be used as a CEQA metric to identify significant transportation impacts, intersection operations were analyzed for the proposed Project and are discussed in section 3.13.8, Impact Analysis.

3.13.3 EXISTING CONDITIONS

This subsection presents the existing bicycle, pedestrian, and transit facilities as well as intersection operations under Existing Conditions.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

The vision of the City of Clovis Active Transportation Plan (ATP), updated January 2022, is a "City with a complete and connected network of trails, walkways, and bikeways that provides convenient and intuitive connections to key destinations and supports travel within and between neighborhoods. The network improves quality of life by encouraging walking and bicycling for transportation and recreation." The ATP identifies different strategies to improve safety and accessibility for active modes of transportation such as walking and biking. There are four different types of bicycle facilities in the City:

1. Class I Bikeway: Trails
2. Class II Bikeway: Bicycle Lanes
3. Class II Bikeway: Buffered Bicycle Lanes
4. Class III Bikeway: Bicycle Routes

One of the long-term visions of the City includes upgrading existing or recommended Class II Bicycle Lanes and Buffered Bicycle Lanes to Class IV Separated Bicycle Lanes.

Figures 3.13-2 and 3.13-3 illustrate the existing and proposed bicycle facilities within the City. At present, Class II bicycle lanes exist along Clovis Avenue, Willow Avenue, and some segments of Shepherd Avenue and Fowler Avenue within the Study Area. However, as shown in Figure 3.13-3, different bicycle facilities are proposed along other roadways within the Study Area, such as Sunnyside Avenue, Teague Avenue, Nees Avenue, and Alluvial Avenue.

PEDESTRIAN

The City has an extensive pedestrian network, with sidewalks along most of the major roads. However, since a portion of the Study Area falls within recently incorporated areas of the City, sidewalks are not present because they were previously developed as per unincorporated Fresno County design guidelines. Figure 3.13-4 illustrates the existing sidewalk facilities within the City of Clovis.

The City's ATP has identified improvements to the pedestrian network based on a citywide sidewalk network gap analysis. Additionally, several potential locations have been identified to install mid-block crossings to improve trail connectivity throughout Clovis. Two trails (i.e., the Dry Creek Trail and the Enterprise Trail) currently exist within the Study Area. However, additional trails are being proposed in the Study Area with potential mid-block crossings.

TRANSIT SERVICE

Clovis Transit Stageline Routes 10 and 80 operate within the Study Area. Route 10 operates from Monday through Saturday, while Route 80 operates only on school days, based on the Clovis Unified School District schedule. Route 10 provide access to Fresno State University and Route 80 provides access to the Buchanan Education Complex. Fresno Area Express (FAX) operates within the Study Area along Willow Avenue 7 days a week. The route connects communities in Fresno to the different campuses of Clovis Community College. In addition to fixed route services, Round Up is the Clovis paratransit service for disabled City residents. Round Up transit vehicles are all accessible in accordance with the Americans with Disabilities Act (ADA) standards.

EXISTING INTERSECTION OPERATIONS

An intersection LOS analysis was conducted for Existing Conditions using the methodologies previously discussed. Existing Signal timing Sheets were obtained from the City and Caltrans for all signalized analysis intersections. The signal timing sheets are included in Appendix C of the

Transportation Impact Report (Appendix I of this EIR). It should be noted that the existing signal timings were utilized to analyze traffic operations under near-term and cumulative (2046) scenarios as a conservative approach. Table 8-A summarizes the results of this analysis and shows that the following intersections operate at an unsatisfactory LOS under existing conditions:

- Minnewawa Avenue/Behymer Avenue (a.m. peak hour only)
- Fowler Avenue/Shepherd Avenue (a.m. peak hour only)
- Fowler Avenue/State Route 168 Eastbound Ramps (p.m. peak hour only)

All other study intersections operate at a satisfactory LOS under existing conditions.

A roadway segment LOS analysis was conducted for Existing Conditions using the methodologies previously discussed. Table 8-B summarizes the results of this analysis and shows that all the study roadway segments currently operate at a satisfactory LOS under existing conditions.

Technical calculations are displayed in Appendix E of the Transportation Analysis Report prepared by LSA for the proposed Project (contained within Appendix I of this EIR).

3.13.4 EXISTING PLUS PROJECT CONDITIONS

PROJECT TRIP GENERATION

The trip generation for the proposed Project was developed using rates from the *Trip Generation Manual 11th Edition* (Institute of Transportation Engineers, 2021) for Land Use 210 – "Single-Family Detached Housing." Table 3.13-3 summarizes the project trip generation. As shown in Table 6-A, the Project is anticipated to generate 424 trips in the a.m. peak hour, 569 trips in the p.m. peak hour, and 5,705 daily trips.

TABLE 3.13-3: PROJECT TRIP GENERATION

LAND USE	*UNITS*	*AM PEAK HOUR*			*PM PEAK HOUR*		
		IN	*OUT*	*TOTAL*	*IN*	*OUT*	*TOTAL*
Single-Family Residential Detached Housing (ITE 210)	605 DU	109	315	424	357	212	569

NOTES: TRIP GENERATION IS BASED ON TRIP RATES PUBLISHED IN TRIP GENERATION MANUAL 11TH EDITION (INSTITUTE OF TRANSPORTATION ENGINEERS, 2021).
SOURCE: LSA, 2023

PROJECT TRIP DISTRIBUTION

The Project trip distribution was developed using select zone model runs obtained from the Fresno COG ABM. Appendix A of Transportation Impact Report (Appendix I of this EIR) includes the select zone model plots for the proposed Project. Figure 3.14-5 illustrates the Project trip distribution. The Project trip generation was applied to the corresponding trip distribution pattern to develop the Project trip assignment. Figure 3.14-6 illustrates the Project trip assignment.

EXISTING PLUS PROJECT INTERSECTION OPERATIONS

Analysis of the existing with Project scenario is provided to identify direct Project-related operational deficiency if the Project were to be built and in operation today. This scenario eliminates the effects of ambient growth and other cumulative projects and deals specifically with operational deficiencies only due to the Project traffic. Figure 3.13-7 illustrates the study intersection geometrics and traffic control under all 'plus Project' scenarios.

An intersection LOS analysis was conducted for Existing Plus Project Conditions using the methodologies previously discussed. The following intersections are forecasted to operate at an unsatisfactory LOS under Existing Plus Project conditions:

- Minnewawa Avenue/Behymer Avenue (a.m. peak hour only)
- Sunnyside Avenue/Shepherd Avenue (p.m. peak hour only)
- Sunnyside Avenue/Nees Avenue (p.m. peak hour only)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/State Route 168 Eastbound Ramps (p.m. peak hour only)

Based on the operational deficiency criteria stated in Section 3.2 of this TIA, the Project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under Existing Plus Project conditions.

It should be noted that out of the five intersections forecasted to operate at a deficient LOS, three intersections are currently operating at a deficient LOS. As such, the Project is forecast to add to the existing deficiencies at these intersections.

A roadway segment LOS analysis was conducted for Existing Plus Project Conditions using the methodologies previously discussed. Table 8-B summarizes the results of this analysis and shows that all study roadway segments are forecasted to operate at a satisfactory LOS under Existing Plus Project conditions.

3.13.5 NEAR-TERM CUMULATIVE (2028) CONDITIONS ANALYSIS

A Near-Term Cumulative Conditions analysis was performed to identify potential impacts of the Project under Cumulative AM and PM peak hour conditions. The analysis reflects near-term development in the City of Clovis and other nearby jurisdictions.

NEAR-TERM PLUS PROJECT INTERSECTION OPERATIONS

An intersection LOS analysis was conducted for Near-term Plus Project conditions using the methodologies previously discussed. The following intersections are forecasted to operate at an unsatisfactory LOS under near-term plus project conditions:

- Minnewawa Avenue/Behymer Avenue (a.m. peak hour only)

- Minnewawa Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Shepherd Avenue (p.m. peak hour only)
- Clovis Avenue/Nees Avenue (p.m. peak hour only)
- Clovis Avenue/Herndon Avenue (p.m. peak hour only)
- Sunnyside Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/SR-168 Eastbound Ramps (p.m. peak hour only)

Based on the operational deficiency criteria stated in Section 3.2 of the Transportation Impact Report (as provided in Appendix I of this EIR), the Project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under Near-Term Plus Project conditions.

3.13.6 CUMULATIVE (2046) CONDITIONS ANALYSIS

A Cumulative Conditions analysis was performed to identify potential impacts of the Project under Cumulative AM and PM peak hour conditions. The analysis reflects long-term development in the City of Clovis and other nearby jurisdictions.

CUMULATIVE NO PROJECT INTERSECTION OPERATIONS

An intersection LOS analysis was conducted for Cumulative Without Project conditions using the methodologies previously discussed. The following intersections are forecasted to operate at an unsatisfactory LOS under Cumulative Without Project conditions:

- Willow Avenue/Shepherd Avenue (p.m. peak hour only)
- Minnewawa Avenue/Behymer Avenue (a.m. and p.m. peak hours)
- Minnewawa Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Shepherd Avenue (p.m. peak hour only)
- Clovis Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Herndon Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Teague Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/SR-168 Eastbound Ramps (p.m. peak hour only).

All other study intersections are forecasted to operate at a satisfactory LOS under Cumulative (2046) Without Project conditions.

A roadway segment LOS analysis was conducted for cumulative without project conditions using the methodologies previously discussed. Table 8-F summarizes the results of this analysis and shows that the following roadway segments are forecast to operate at an unsatisfactory LOS under Cumulative Without Project conditions:

- Behymer Avenue, between Minnewawa Avenue and Sunnyside Avenue (a.m. peak hour only)
- Shepherd Avenue, between Willow Avenue and Minnewawa Avenue (p.m. peak hour only)
- Shepherd Avenue, between Clovis Avenue and Sunnyside Avenue (p.m. peak hour only)
- Minnewawa Avenue, between Behymer Avenue and Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue, between Shepherd Avenue and Project Driveway 1 (a.m. and p.m. peak hours)
- Fowler Avenue, between Ticonderoga and Shepherd Avenue (a.m. and p.m. peak hours).

All other roadway segments are forecasted to operate at a satisfactory LOS under cumulative without project conditions.

CUMULATIVE PLUS PROJECT INTERSECTION OPERATIONS

An intersection LOS analysis was conducted for Cumulative Plus Project Conditions using the methodologies previously discussed. The following intersection is forecasted to operate at an unsatisfactory LOS under Cumulative Plus Project Conditions:

- Willow Avenue/Shepherd Avenue (p.m. peak hour only)
- Minnewawa Avenue/Behymer Avenue (a.m. and p.m. peak hours)
- Minnewawa Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Shepherd Avenue (p.m. peak hour only)
- Clovis Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Alluvial Avenue (a.m. peak hour only)
- Clovis Avenue/Herndon Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Teague Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/SR-168 Eastbound Ramps (p.m. peak hour only)
- Sunnyside Avenue/Project Driveway 1 (a.m. and p.m. peak hours)
- Sunnyside Avenue/Project Driveway 2 (a.m. and p.m. peak hours)

Based on the operational deficiency criteria, the Project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under cumulative plus project conditions. It should be noted that out of the 14 intersections forecast to operate at a deficient LOS, 11 intersections forecast to operate at a deficient LOS under cumulative (2046) without project conditions. As such, the project is forecast to add to the forecasted deficiencies at these 11 intersections. Detailed intersection LOS worksheets are included in Appendix I.

A roadway segment LOS analysis was conducted for cumulative plus project conditions using the methodologies previously discussed. Table 8-F summarizes the results of this analysis and shows that the following roadway segments are forecast to operate at an unsatisfactory LOS under Cumulative Plus Project Conditions:

- Behymer Avenue, between Minnewawa Avenue and Sunnyside Avenue (a.m. peak hour only)
- Shepherd Avenue, between Willow Avenue and Minnewawa Avenue (p.m. peak hour only)
- Shepherd Avenue, between Clovis Avenue and Sunnyside Avenue (a.m. and p.m. peak hours)
- Shepherd Avenue, between Sunnyside Avenue and Project Driveway 3 (p.m. peak hour only)
- Minnewawa Avenue, between Behymer Avenue and Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue, between Shepherd Avenue and Project Driveway 1 (a.m. and p.m. peak hours)
- Fowler Avenue, between Ticonderoga and Shepherd Avenue (a.m. and p.m. peak hours)

Based on the operational deficiency criteria, the Project is forecasted to create an operational deficiency at these roadway segments. All other roadway segments are forecasted to operate at a satisfactory LOS under Cumulative Plus Project Conditions. It should be noted that out of the seven roadway segments forecast to operate at a deficient LOS, six segments are forecast to operate at a deficient LOS under Cumulative (2046) Without Project Conditions. As such, the Project is forecast to add to the forecasted deficiencies at these six roadway segments.

3.13.7 REGULATORY SETTING

Existing transportation polices, laws, and regulations that would apply to the proposed Project are summarized below. This information provides a context for the impact discussion related to the Project's consistency with applicable regulatory conditions and development of significance criteria for evaluating Project impacts.

STATE

Senate Bill 743

Senate Bill (SB) 743 was signed into law in 2013 and is leading to substantial changes in the way transportation impact analyses are being prepared. Notably, it precludes the use of level of service (LOS) to identify significant transportation impacts in CEQA documents for land use projects, recommending instead that VMT be used as the preferred metric. On December 28, 2018, the CEQA Guidelines were amended to add Section 15064.3, Determining the Significance of Transportation

Impacts, which states that generally, VMT is the most appropriate measure of transportation impacts. According to 15064.3(a), "Except as provided in subdivision (b)(2) (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact." Beginning on July 1, 2020, the provisions of 15064.3 applied statewide.

To aid in SB 743 implementation, OPR released a *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory) in December 2018. The Technical Advisory provides advice and recommendations to CEQA lead agencies on how to implement the SB 743 changes. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion and with the provision of substantial evidence to support alternative approaches.

The Technical Advisory identifies "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The Technical Advisory suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT:

1. **Small projects** – projects consistent with a SCS and local general plan that generate or attract fewer than 110 trips per day.

2. **Projects near major transit stops** – certain projects (residential, retail, office, or a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor.

3. **Affordable residential development** – a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.

4. **Local-serving retail** – local-serving retail development tends to shorten trips and reduce VMT. The Technical Advisory encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The Technical Advisory suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant).

5. **Projects in low VMT areas** – residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The Technical Advisory also identifies recommended numeric VMT thresholds for residential, office, and retail projects. The residential threshold is described below.

1. Residential development that would generate vehicle travel exceeding 13 percent below existing (baseline) residential VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as a regional VMT per capita or as city VMT per capita.

LEVEL OF SERVICE (LOS)

As previously noted, LOS may no longer be used to identify significant transportation impacts in CEQA documents for land use projects. However, this analysis includes a LOS analysis to determine if the proposed Project would result in deficient intersection operations per the City of Clovis standards. Policy 2.1 of the General Plan strives for LOS D or better.

LOCAL

City of Clovis General Plan

The City of Clovis General Plan includes several policies that are relevant to an evaluation of the visual quality of the Project site. The policies applicable to the Project are identified below:

POLICIES: CIRCULATION ELEMENT

1. Policy 1.1. Multimodal network. The city shall plan, design, operate, and maintain the transportation network to promote safe and convenient travel for all users: pedestrians, bicyclists, transit riders, freight, and motorists.
2. Policy 1.2. Transportation decisions. Decisions should balance the comfort, convenience, and safety of pedestrians, bicyclists, and motorists.
3. Policy 1.3. Age and mobility. The design of roadways shall consider all potential users, including children, seniors, and persons with disabilities.
4. Policy 1.4. Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles travelled and effectively utilize the existing transportation infrastructure.
5. Policy 1.5. Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).
6. Policy 1.6. Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.
7. Policy 1.7. Narrow streets. The City may permit curb-to-curb dimensions that are narrower than current standards on local streets to promote pedestrian and bicycle connectivity and enhance safety.
8. Policy 2.1. Level of service. The following is the City's level of service (LOS) standards:
    A. Achieve LOS D vehicle traffic operations during the a.m. and p.m. peak hours.
    B. Allow exceptions on a case-by-case basis where lower levels of service would result in other public benefits, such as:
        i. Preserving agriculture or open space land;
        ii. Preserving the rural/historic character of a neighborhood;
        iii. Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts;
        iv. Avoiding adverse impacts to pedestrians, cyclists, and mass transit riders;

v. Where right-of-way constraints would make capacity expansion infeasible.

9. Policy 2.2. Fair share costs. New development shall pay its fair share of the cost for circulation improvements in accordance with the city's traffic fee mitigation program.
10. Policy 2.3. Right-of-way dedication. The city may require right-of-way dedication essential to the circulation system in conjunction with any development or annexation. The City shall request the County of Fresno to apply the same requirements in the Clovis planning area.
11. Policy 3.1. Traffic calming. Employ traffic-calming measures in new developments and existing neighborhoods to control traffic speeds and maintain safety.
12. Policy 3.4. Road diets. Minimize roadway width as feasible to serve adjacent neighborhoods while maintaining sufficient space for public safety services.
13. Policy 3.5. Roadway widening. Only consider street widening or intersection expansions after considering multimodal alternative improvements to non-automotive facilities.
14. Policy 3.6. Soundwalls. Design roadway networks to disperse traffic to minimize traffic levels. Discourage soundwalls along new collector and local streets when feasible.
15. Policy 3.7. Conflict points. Minimize the number of and enhance safety at vehicular, pedestrian, and bicycle conflict points.
16. Policy 3.8. Access management. Minimize access points and curb cuts along arterials and prohibit them within 200 feet of an intersection where possible. Eliminate and/or consolidate driveways when new development occurs or when traffic operation or safety warrants.
17. Policy 3.9. Park-once. Encourage "park-once" designs where convenient, centralized public parking areas are accompanied by safe, visible, and well-marked access to sidewalks and businesses.
18. Policy 3.10. Pedestrian access and circulation. Entrances at signalized intersections should provide sidewalks on both sides of the entrance that connect to an internal pedestrian pathway to businesses and throughout nonresidential parking lots larger than 50 spaces.
19. Policy 3.11. Right-of-way design. Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community's appearance and encourage non-motorized transportation.
20. Policy 3.12. Residential orientation. Where feasible, residential development should face local and collector streets to increase visibility and safety of travelers along the streets and encourage pedestrian and bicycle access.
21. Policy 5.2. Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
22. Policy 5.3. Pathways. Encourage pathways and other pedestrian amenities in Urban Centers and new development 10 acres or larger.
23. Policy 5.4. Homeowner associations. The city may require homeowner associations to maintain pathways and other bicycle and pedestrian facilities within the homeowner association area.
24. Policy 5.5. Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity.

City of Clovis Active Transportation Plan

The Clovis Active Transportation Plan is a comprehensive guide that supports walking, bicycling, transit, and use of other emerging modes of personal transport as alternatives to driving within Clovis, to neighboring cities, and regional destinations. The Plan identifies strategies to improve safety and accessibility for active forms of travel such as walking and bicycling and proposes a framework for implementing projects, programs, and policies.

Fresno County Regional Transportation Plan

Fresno Council of Government's (Fresno COG's) 2022 Regional Transportation Plan (RTP) comprehensively assesses all forms of transportation available in Fresno County as well as travel and goods movement needs through 2046.

Fresno County Regional Traffic Impact Fee

The Regional Transportation Impact Fee (RTIF) is a county-wide, multi-jurisdiction capital improvement funding program intended to cover a portion of the costs for new transportation facilities required to serve new development within the County.

3.13.8 THRESHOLDS OF SIGNIFICANCE

This section describes the thresholds or criteria that determine whether the Project causes a significant impact on the roadway, bicycle, pedestrian, rail, and/or transit systems. These thresholds are based on California Environmental Quality Act (CEQA), policies from the General Plans for the City of Clovis and Fresno County, and Caltrans policies. For the purposes of this Draft EIR, the Project would cause a significant impact if it would result in any of the following listed criteria:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and/or
4. Result in inadequate emergency access.

Appendix G of the CEQA Guidelines indicates that impacts may be significant if a project conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The proposed Project would have a significant impact on transit, bicycles, or pedestrians if it would conflict with adopted policies, plans, or programs regarding these systems, or create or exacerbate disruptions to the performance or safety of these systems.

Appendix G of the CEQA Guidelines indicates that impacts may be significant if a project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Impacts may also be significant if a project results in inadequate emergency access. The proposed Project would have a significant impact on the transportation system if it would increase hazards due to a design feature, incompatible uses, or inadequate emergency access.

The existing General Plan includes a policy within the Transportation Element which requires maintenance of a level of service (LOS) D standard on City roadways, with some exceptions. Because LOS is no longer a CEQA significance metric, an analysis of LOS is provided for the purposes of policy consistency analysis.

3.13.9 IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Project implementation would not result in VMT increases that are greater than 87 percent of Baseline conditions. (Significant and Unavoidable)

The proposed development was evaluated against the screening criteria in OPR's Technical Advisory. The following criteria is applicable to residential developments.

1. Small projects – projects consistent with a Sustainable Communities Strategy and local general plan that generate or attract fewer than 110 trips per day.
2. Projects near major transit stops – certain projects (residential, retail, office, or a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
3. Affordable residential development – a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
4. Projects in low VMT areas – residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The SB 743 Memorandum identifies the recommended numeric VMT thresholds for residential projects. Based on the VMT thresholds, a residential project would result in a less-than-significant transportation impact if:

5. Under existing (baseline) conditions, the residential development would generate home-based VMT per dwelling unit equal or below 87 percent of the existing (baseline) City of Clovis average for the same housing category (single family, multi-family, or age-restricted); and
6. Under cumulative conditions, the residential development would generate home-based VMT per dwelling equal or below 87 percent of the cumulative City of Clovis average for the same housing category (single family, multi-family, or age-restricted).

Alternatively, the project would result in a less-than-significant transportation impact if:

7. The residential development would cause the total VMT in the model area to decrease under baseline AND cumulative conditions.

The proposed development does not constitute a small project, is not located within ½ mile of an existing major transit stop and is not a redevelopment project. Therefore, the development is not eligible to be screened out based on these criteria.

A detailed VMT analysis was conducted using methodology discussed in Appendix I of this EIR. The proposed residential development would result in a significant transportation impact if it would 1). generate vehicle travel exceeding 87 percent of the established baseline VMT under existing (baseline) or cumulative conditions, or 2). result in an increase in total VMT in the model area.

Table 3.13-5 summarizes the regional threshold and Project VMT per capita. As shown in Table 3.13-5, the Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact.

TABLE 3.13-2: EXISTING (2019) REGIONAL AND PROJECT VMT PER CAPITA

REGION (FRESNO COUNTY)[1]	*PROJECT*	*DIFFERENCE*	*PERCENTAGE DIFFERENCE*
14.1	17.0	2.9	20.7%

NOTES: [1] *THE CITY OF CLOVIS VMT PER CAPITA WAS OBTAINED FROM THE TRANSPORTATION IMPACT ANALYSIS GUIDELINES, CITY OF CLOVIS (SEPTEMBER 15, 2022)*
VMT= VEHICLE MILES TRAVELED
SOURCE: FRESNO COUNCIL OF GOVERNMENTS' ACTIVITY-BASED MODE

When a lead agency identifies a significant CEQA impact, the agency must identify feasible mitigation measures in order to avoid or substantially reduce that impact. VMT impacts can be mitigated through more behavioral changes. Enforcement of mitigation measures will be subject to the mitigation monitoring requirements under CEQA, as well as the regular police powers of the agency. These measures can also be incorporated as a part of plans, policies, regulations, or project designs. Project design features that encourage mode shift from automobiles to transit or non-motorized modes can therefore help reduce Project VMT as well. Typically, VMT reduction and benefits from these Project design features are not accounted in the Project VMT calculations conducted using the regional travel demand model. Therefore, VMT reduction credit can be accounted for these design features similar to VMT mitigation measures to help reduce the Project's VMT impact.

Evaluation of VMT reductions should be evaluated using state-of-the-practice methodologies recognizing that many of the VMT mitigation strategies/project design features are dependent on building tenant performance over time. Following is a detailed description of both and the corresponding potential reduction that could be achieved with implementation of these measures.

PROJECT DESIGN FEATURES AND MITIGATION MEASURES

VMT reduction that can be achieved by the Project design features have been estimated using the most California Air Pollution Control Officers Association's (CAPCOA) "*Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity – Designed for Local Governments, Communities, and Project Developers*" dated December 2021. As per information provided by the Project Description, the Project intends to implement the following Project design features that will help reduce Project VMT.

- **Pedestrian Infrastructure:** The Project proposes to provide pedestrian improvements/sidewalks both internal to the Project site and along the Project frontage. Providing sidewalk/pedestrian improvements encourage people to walk instead of drive and thus reduces VMT. CAPCOA transportation measure **T-18: Provide Pedestrian Network Improvement** was used to estimate the VMT reduction due to Project related enhancements in pedestrian access and connectivity. The CAPCOA methodology requires existing sidewalk length in the Project study area in addition to the length of sidewalk being provided by the Project. In order to estimate the existing sidewalk length, a survey was conducted along the proposed Project frontage. Based on the survey, the Project study area includes approximately 10 miles of sidewalk. The Project proposes to add approximately another 2.3 miles of sidewalk/pedestrian access. Therefore, this measure may reduce the Project's VMT by approximately 1.17 percent.
- **Improve Street Connectivity:** The Project proposes to provide an internal circulation network. Projects with higher density of intersections would help increase street connectivity, reduce trip lengths, and promote use of alternative transportation modes of travel. CAPCOA handbook, identifies measure **T-17: Improve Street Connectivity** to evaluate Project street network. The measure is recommended as an appropriate design feature for plans within urban or suburban areas. The Project is located in suburban/rural area type setting, so this measure was explored as a potential VMT reduction design feature.

  Measure T-17 estimates that an increased density of vehicular intersections improves street connectivity and helps in reduction in GHG emissions and corresponding VMT. As included in the CAPCOA handbook, this measure could be applied to a project for:

  > *'Projects that increase intersection density would be building a new street network in a subdivision or retrofitting an existing street network to improve connectivity (e.g., converting cul-de-sacs or dead-end streets to grid streets)'.*

  The measure establishes the following numerical formula of VMT reduction due to increased intersection density and improved street connectivity:

  $$A = \frac{B - C}{C} * D$$

  Where,
  A = Percent Reduction in GHG/VMT emission from vehicle Travel
  B = Intersection Density in project site with measure

C = Average Intersection Density for Typical developments (36)
D = Elasticity of VMT with respect to intersection density (-0.14)

The CAPCOA handbook establishes the variable C using an average density of intersections within a square mile in a typical development as included in the Proposed Trip Generation, Distribution, and Transit Mode Split Forecasts for the Bayview Waterfront Project Transportation Study, Fehr & Peers. 2009. This establishes the average suburban intersection density for the entire United States.

The CAPCOA handbook adapts the variable D, Elasticity of VMT with respect to intersection density from the report ‘Does Compact Development Make People Drive Less?’ published in the Journal of the American Planning Association, 2016, authored by Mark R. Stevens. The elasticity was determined from a meta-regression analysis from data of fifteen studies, having studied in different urban/suburban geographic regions within the Country.

While the increased intersection density helps facilitate greater number of short trips, the project consists of only single land use type (residential) and the amount of internal capture (trips that can be fulfilled within the project; with both origin and destinations within the project site) would be minimal. Also, CAPCOA suggests application of different VMT mitigation measures at different scales – project/site scale or community/plan scale. Based on CAPCOA handbook, this measure is applicable at a plan/community scale. However, this measure was explored as a VMT reduction design feature at a project scale with appropriate limitations as described below.

While all the internal intersections can be considered to estimate the VMT reduction due to increased street connectivity, given the above limitations (project location area type, single land use type, and CAPCOA applicability scale), only project driveways were reviewed for applicability for this measure. As indicated in section “1.1 – Project Description,” the Project has four driveways (two on Sunnyside Avenue, one of Perrin Road, and one on Shepherd Avenue) for Project access. Except for the driveway on Shepherd Avenue, all other Project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out Left-In (RIROLI) driveway. However, all 4 Project driveways were considered as Project intersections for the mitigation purposes. The proposed Project site is approximately 77 acres. Therefore, the intersection density of the Project would be approximately 33.25 intersections per square mile.

Since Project intersection density is lower than the countrywide average intersection density of 36 intersections per square mile as identified in the CAPCOA handbook, no direct VMT reduction has been accounted for this Project design feature.

- **Bicycle Infrastructure/Improvements:** The Project proposes to provide 8-feet wide bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. Additionally, the Project will install a 12-foot trail (Class I Bike Path) adjacent to the Project along Shepherd Avenue. The Project proposes to construct a total of 0.67 miles of bike lanes along Shepherd Avenue and Sunnyside Avenue. Similar to pedestrian facilities, these bicycle design features included in the Project can encourage increase active transportation mode share in the area. The CAPCOA manual was utilized to estimate the reduction of Project VMT due to proposed bicycle improvements. Specifically, CAPCOA transportation measure "T-19A: Construct or Improve Bike Facility" was deemed applicable to estimate the VMT reduction due to Project bicycle features. According to the measure, providing bicycle infrastructure helps to improve biking conditions within an area. This encourages a mode shift on the roadway parallel to the bicycle facility from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. Based on CAPCOA estimates, the Project bicycle design features have a potential to reduce up to 0.01 percent of the Project VMT.

- **Provide Electric Vehicle (EV) Parking and EV Charging Infrastructure:** Accessible EV parking and provision of charging for electric vehicles in the residential units will encourage the use of EVs. The latest California Green Building Standards (CALGreen), California Building Code, requires provision of infrastructure to accommodate electric vehicle chargers for new single-family and attached dwelling units/town houses. For new construction projects such as apartments, condos, hotels, and motels, CALGreen code requires the project to provide EV charging stations as a percentage of the total Project parking. While it is understood that provision of electric charging infrastructure/stations might not reduce VMT, it will reduce GHG, which can be considered equivalent to reduction in VMT. According to CAPCOA, provision of additional electric charging stations, in addition to CALGreen requirements, can be considered as a GHG/VMT mitigation. Provision of EV charging infrastructure has a potential to achieve a maximum VMT reduction of up to 11.9 percent. However, the Project is a single-family residential development and as such, doesn't propose to provide electric charging stations beyond the CALGreen code requirements. Additionally, there is no guarantee that residents would be using electric vehicles even if charging stations are available. As such, while this Project design feature has the potential to reduce GHG emissions, no direct VMT reduction has been accounted for this Project design feature.

Table 2-B in the Transportation Impact Report (Appendix I of this EIR) provides methodology, assumptions, and parameters used in the estimation/calculation of VMT reduction for the Project along with the potential amount of VMT reduction that can be achieved.

In conclusion, Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. A combination of measures from several VMT reduction strategies were incorporated into the Project design to achieve this VMT reduction as outlined above. This included strategies that are aimed at reducing the number of automobile trips generated by the Project, shift more trips from automobile to non-automobile modes, and/or reduce the distances that people drive. Ultimately, however, the City of Clovis is a suburban community with land use characteristics that are more spread out when compared to dense urban communities. The land use and transportation characteristics of suburban communities such as Clovis, can make it difficult, or impossible to achieve VMT reductions to levels that the City has established as a goal, and ultimately, as a threshold of significance for CEQA analysis. The Project design features are estimated to offset some of the VMT impacts of the Project by reducing VMT by up to 1.18 percent, but this reduction will not reduce the impact to a less than significant level. Therefore, the Project will have a **significant and unavoidable** relative to this topic.

Impact 3.13-2: Project implementation may conflict with a program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities. (Less than Significant)

The City of Clovis ATP (2022) and City of Clovis General Plan (2014) were reviewed to determine if the proposed Project results in any inconsistencies with adopted transportation related policies.

ACTIVE TRANSPORTATION PLAN (ATP)

At the present, Class II bicycle lanes exist along Clovis Avenue, Willow Avenue, and some segments of Shepherd Avenue and Fowler Avenue within the vicinity of the Project Site. Furthermore, two pedestrian trails (i.e., the Dry Creek Trail and the Enterprise Trail) currently exist within the vicinity of the Project site. However, additional trails are being proposed in the vicinity of the Project site with potential mid-block crossings.

The proposed Project will also construct sidewalks on internal streets, providing adequate connections to and throughout the site for pedestrians. As mentioned before, the Project proposes to provide pedestrian improvements/sidewalks both internal to the Project site and along the Project frontage. The Project proposes to provide 8-feet wide bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. Additionally, the Project will install a 12-foot trail (Class II Bike Path) adjacent to the Project along Shepherd Avenue. The Project proposes to construct a total of 0.67 miles of bike lanes along Shepherd Avenue and Sunnyside Avenue.

CITY OF CLOVIS GENERAL PLAN

It is noted that the proposed Project will require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium High Density (MH) for the Development Area to accommodate the proposed development density.

Additionally, the proposed Project is consistent with policies identified in the Circulation Element of the City of Clovis General Plan, as described below:

Policies: Circulation Element

1. Policy 2.1. Level of service. The following is the City's level of service (LOS) standards:
   - A. Achieve LOS D vehicle traffic operations during the a.m. and p.m. peak hours.
   - B. Allow exceptions on a case-by-case basis where lower levels of service would result in other public benefits, such as:
     - i. Preserving agriculture or open space land;
     - ii. Preserving the rural/historic character of a neighborhood;
     - iii. Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts;
     - iv. Avoiding adverse impacts to pedestrians, cyclists, and mass transit riders;
     - v. Where right-of-way constraints would make capacity expansion infeasible.
2. Policy 1.6. Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet.
3. Policy 2.2. Fair share costs. New development shall pay its fair share of the cost for circulation improvements in accordance with the city's traffic fee mitigation program.
4. Policy 3.6. Soundwalls. Design roadway networks to disperse traffic to minimize traffic levels. Discourage soundwalls along new collector and local streets when feasible.
5. Policy 3.10. Pedestrian access and circulation. Entrances at signalized intersections should provide sidewalks on both sides of the entrance that connect to an internal pedestrian pathway to businesses and throughout nonresidential parking lots larger than 50 spaces.
6. Policy 3.12. Residential orientation. Where feasible, residential development should face local and collector streets to increase visibility and safety of travelers along the streets and encourage pedestrian and bicycle access.
7. Policy 5.2. Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
8. Policy 5.5. Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity.

As mentioned before, an analysis of the study intersections and roadway segments was performed to determine LOS as a result of Project implementation. Results of this analysis and shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Although LOS cannot be used as a CEQA metric to identify significant transportation impacts, intersection operations were analyzed for the proposed Project and are discussed in Chapters 8 and 9 of the Transportation Impact Analysis, included in Appendix I of this EIR. Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. It should be noted that as shown in Tables 8-A, 8-C, and 8-E of the Traffic Impact Analysis, the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, as shown in Tables 10-B and 10-C of the Traffic Impact Analysis, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. As shown in Tables 9-C, and 9-D of the Traffic Impact Analysis, the intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, as shown in Tables 10-E and 10-F of the Traffic Impact Analysis, and discussed in chapter 10.0 of this report, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Table 9-E of Appendix E of the Transportation Impact Report (Appendix I of this EIR) summarizes the recommended improvements for roadway segments for all analysis scenarios. Tables 9-F and 9-G of the Transportation Impact Report (Appendix I of this EIR) summarize the post-improvement roadway segment LOS under near- term and cumulative conditions, respectively.

It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements described in those chapters, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered **less than significant**.

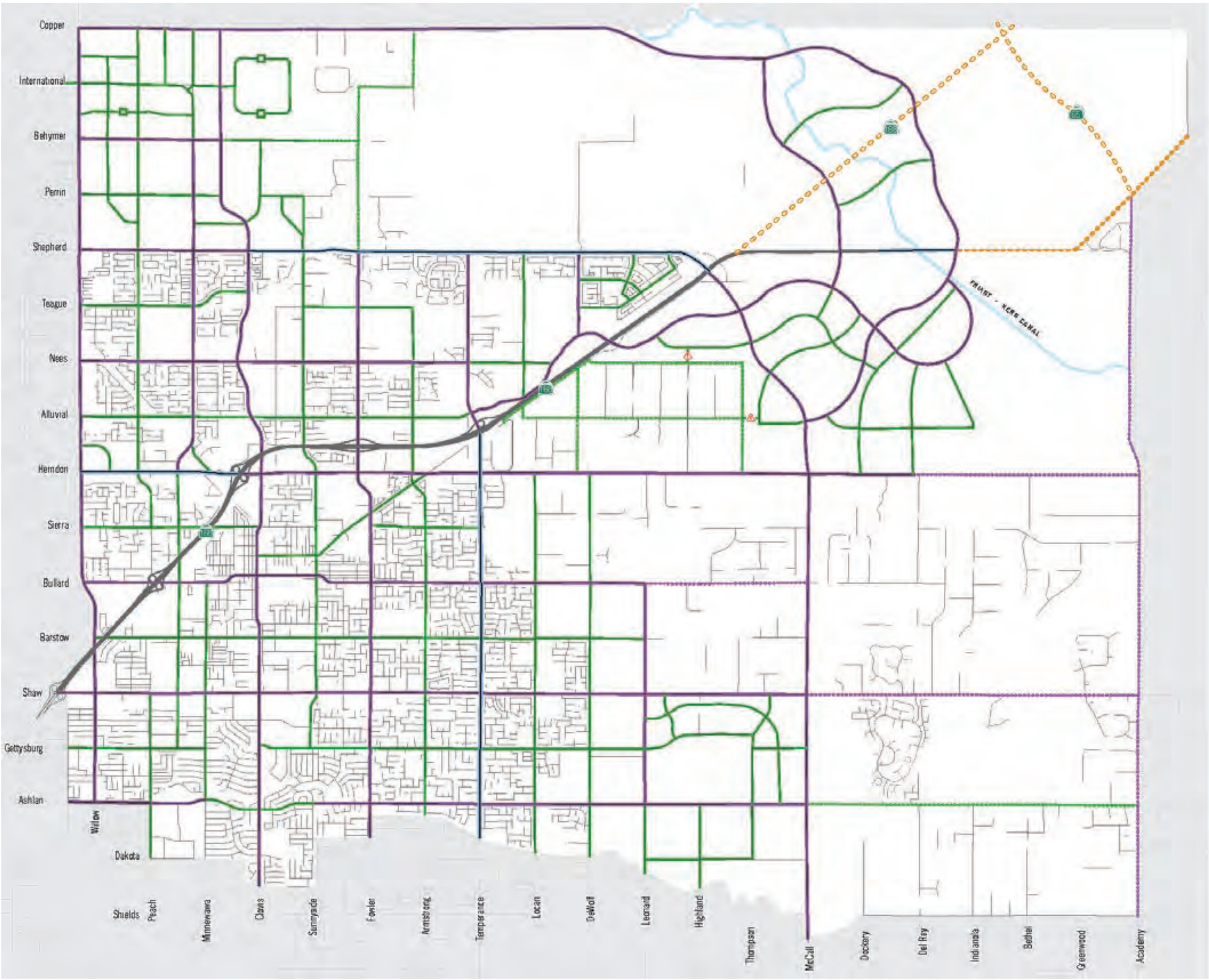
Impact 3.13-3: Project implementation may increase hazards due to a design feature, incompatible uses, or inadequate emergency access. (Less than Significant)

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways as part of the Transportation Impact Report by LSA, included in Appendix I of this EIR. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, LSA recommends that a signal to be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be **less than significant** relative to this topic.



LSA

FIGURE 3.13-1

Roadway Classification
- Freeway
- Conceptual 2-4 Lane State Highway
- State Highway
- Expressway
- Arterial
- Rural Arterial
- Collector
- Rural Collector
- Local

Shepherd North Project
Transportation Impact Analysis

City of Clovis Roadway Classifica

SOURCE: Clovis General Plan, August 2014

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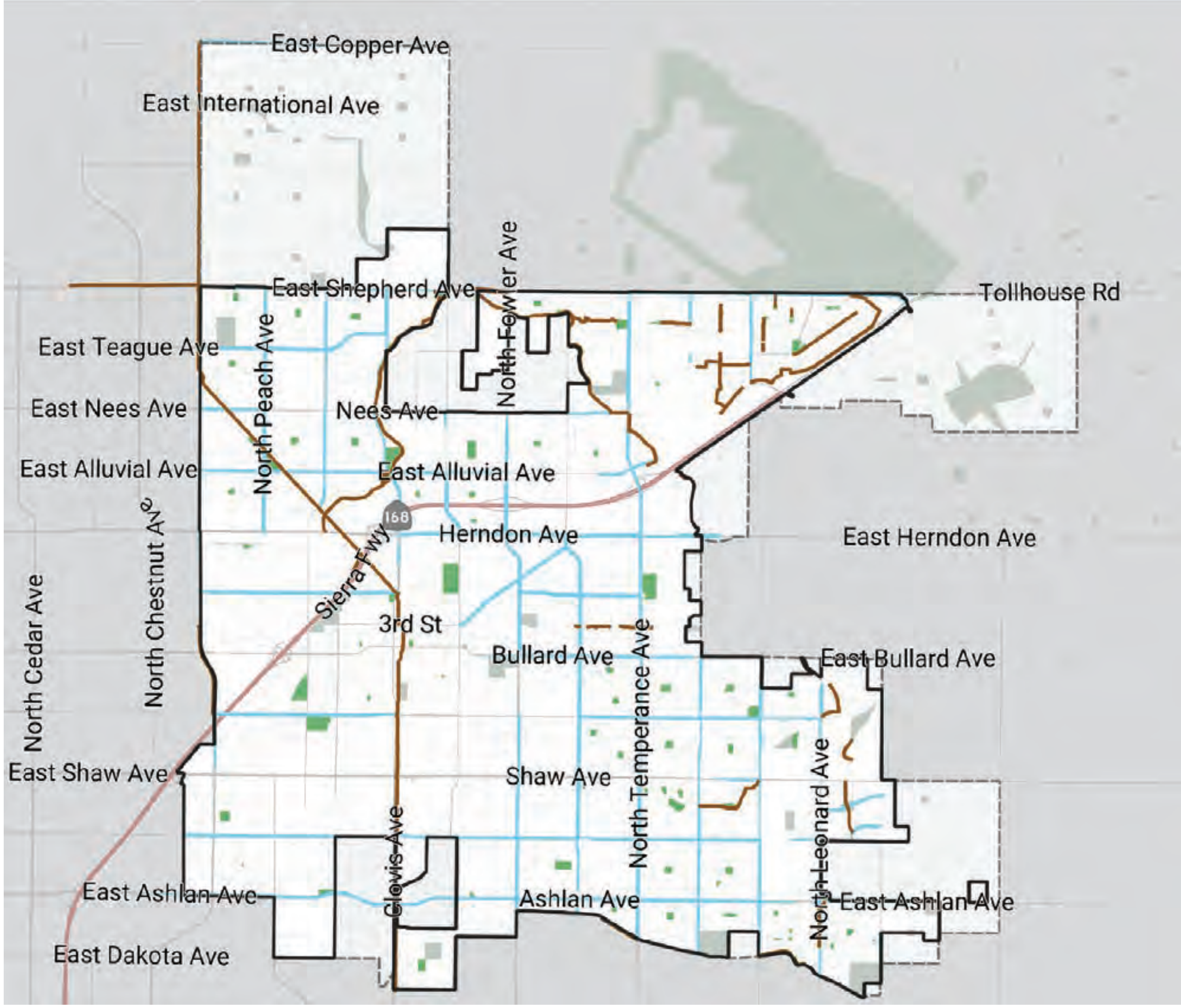

LSA

N

▭ City Limits
⬚ Sphere of Influence

Bikeways

Trails (Class I)

— Existing

Bike Facilities

— Existing Class II Facilities

🟩 Existing Parks

▨ Planned Parks

FIGURE 3.13-2

Shepherd North Project
Transportation Impact Analysis

City of Clovis Existing Bicycle Facil

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft

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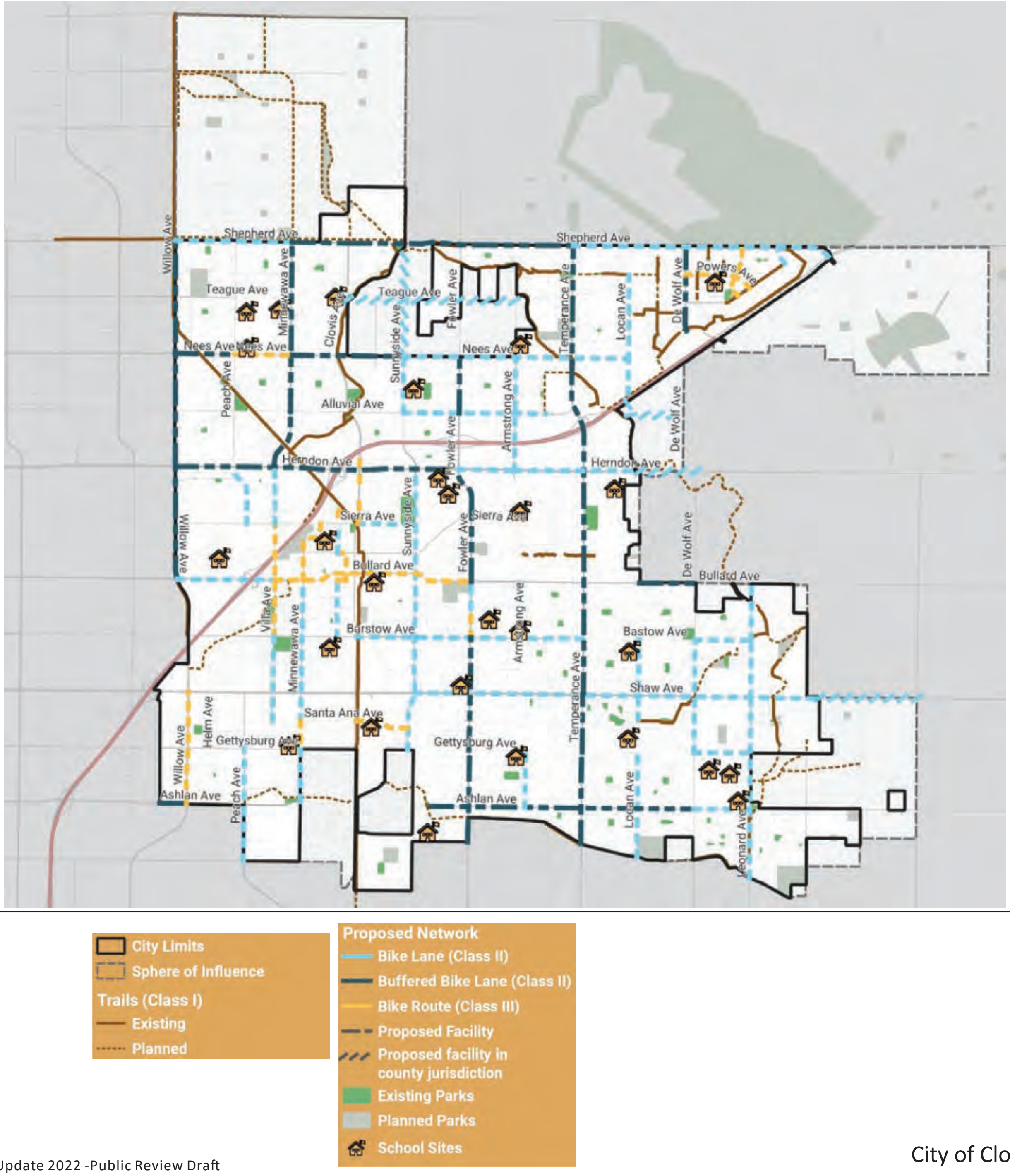

LSA

FIGURE 3.13-3

Shepherd North Project
Transportation Impact Analysis

City of Clovis Proposed Bicycle Faci

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft
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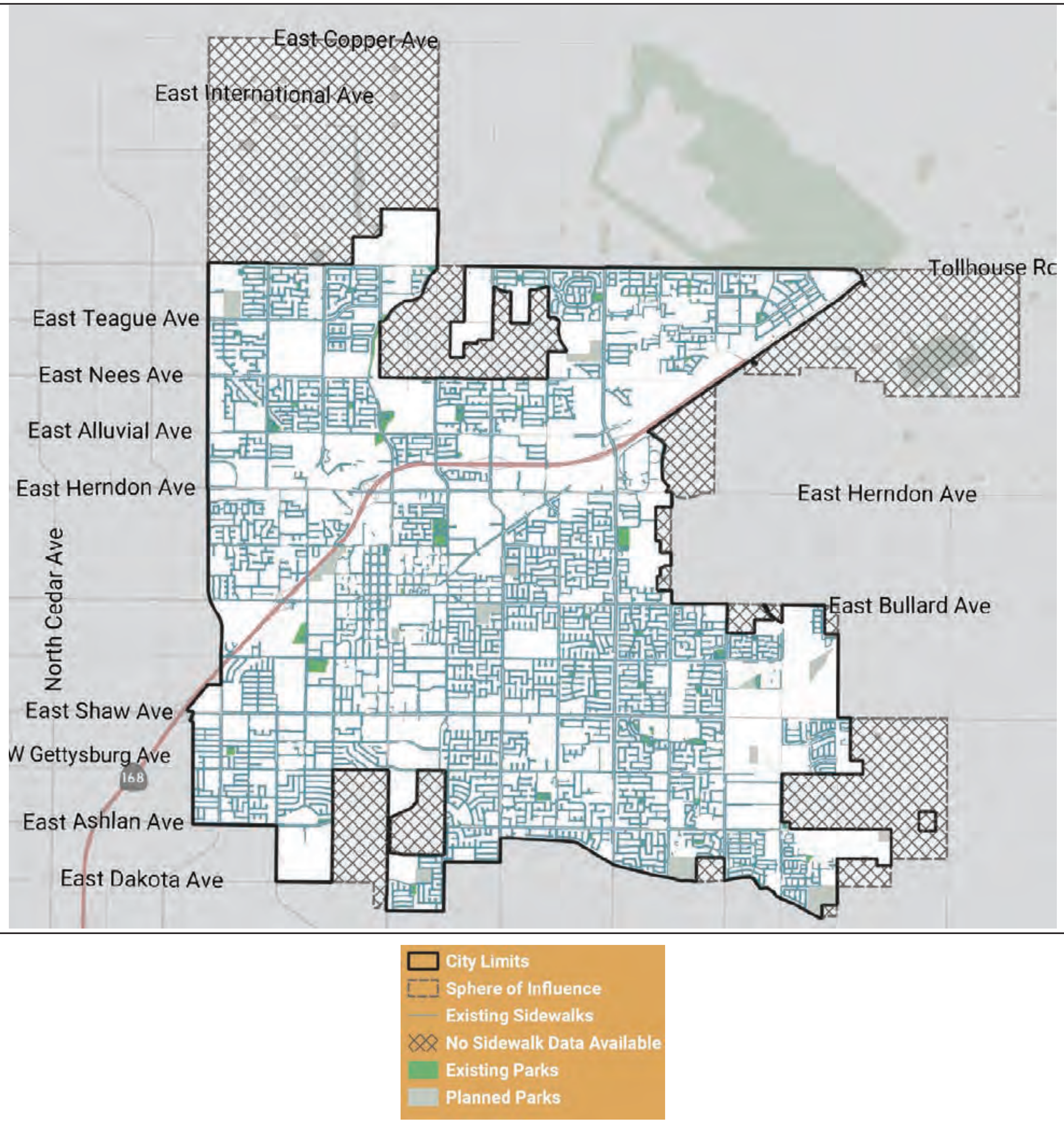

LSA

FIGURE 3.13-4

Shepherd North Project
Transportation Impact Analysis

City of Clovis Existing Sidewalks Facil

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft
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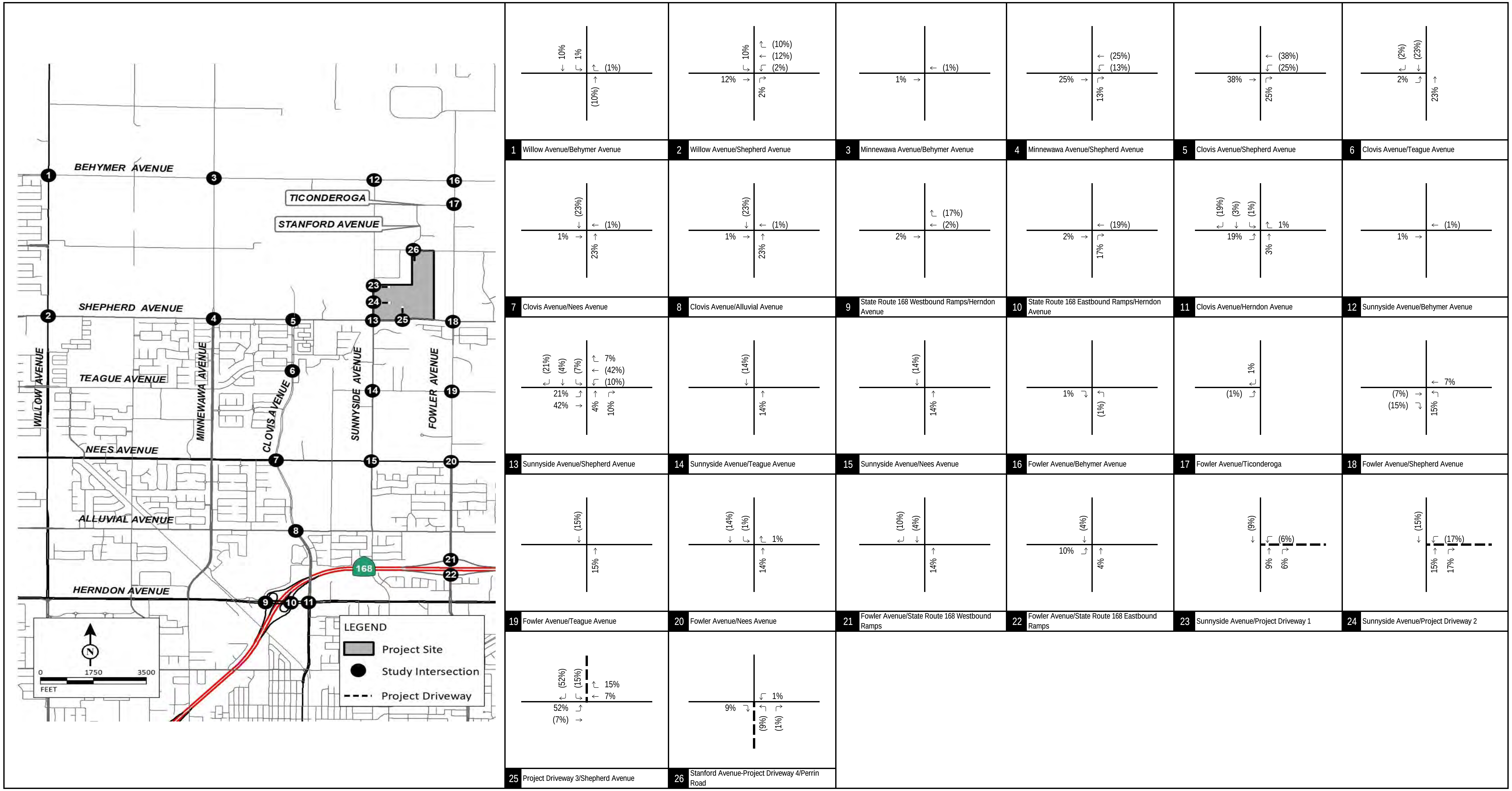

LSA

FIGURE 3.13-5

XX% (YY%)
Inbound (Outbound) Distribution
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Project Trip Distribution

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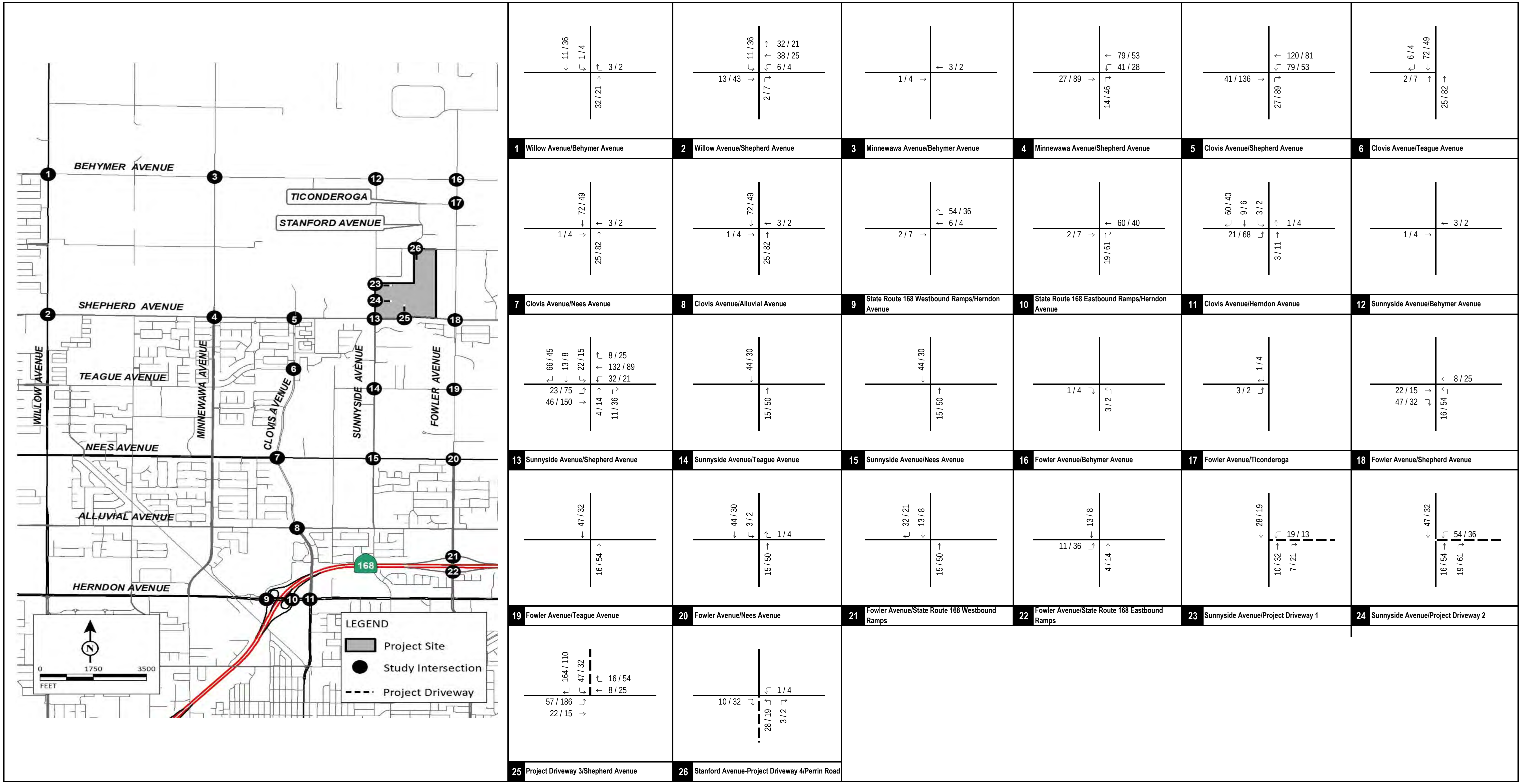

FIGURE 3.13-6

XXX / YYY
AM / PM Peak Hour Traffic Volumes
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Project Trip Assignment

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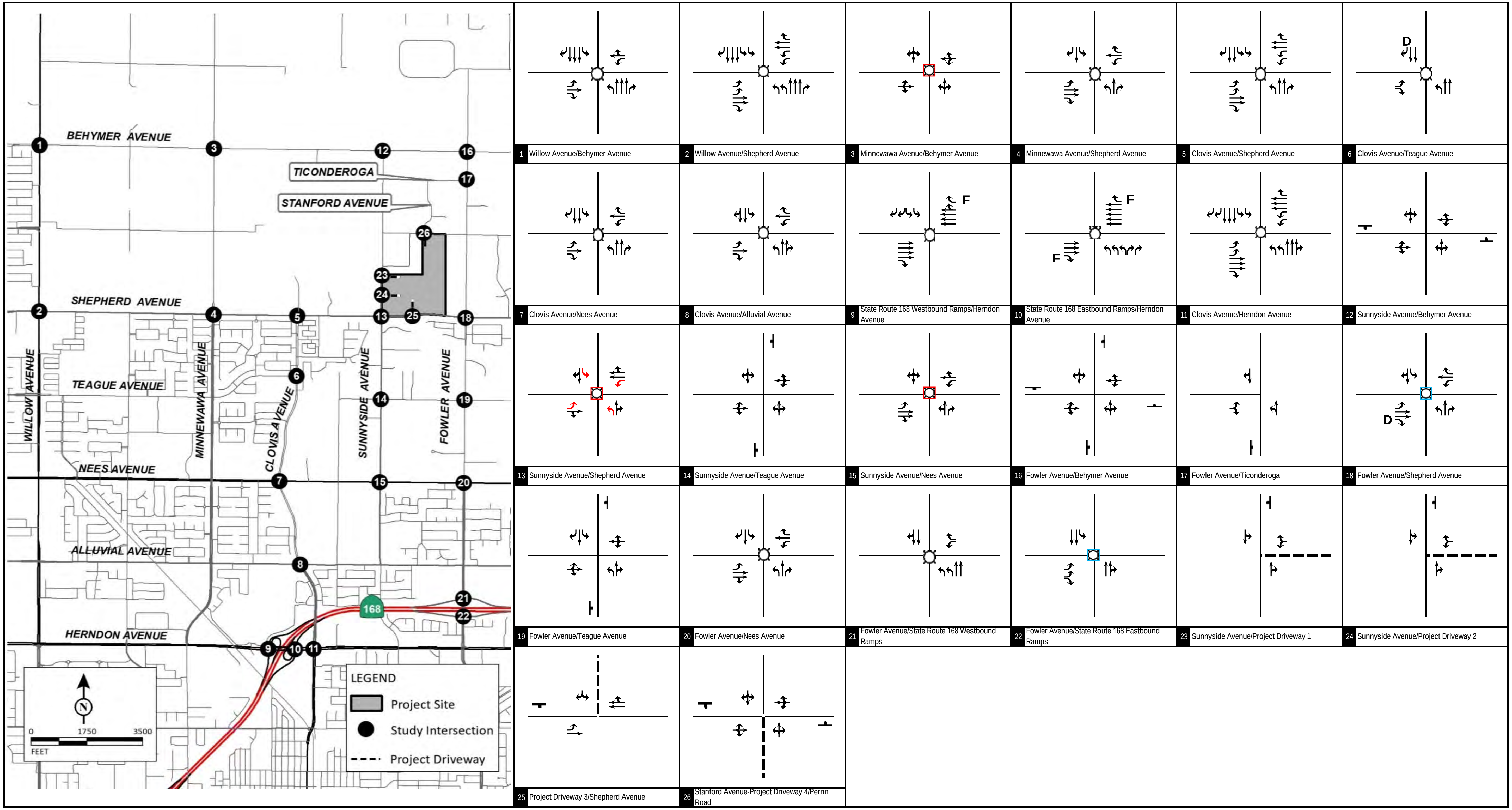

LSA

FIGURE 3.13-7

Legend

☼ Signal	**F** Free right-turn	----- Project Driveway	↰ Recommended Improvements
⊥ Stop Sign	**O** Right-turn overlap	☼ Optimize Signal Timing	
D Defacto right turn	**Y** Yield	☼ Install Traffic Signal	

Shepherd North Project
Transportation Impact Analysis
Existing Plus Project with Improvements Study Intersection Geometrics and Traffic Control

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UTILITIES 3.14

This section describes the regulatory setting, impacts associated with wastewater services, water services, storm drainage, and solid waste disposal that are likely to result from Project implementation, and measures to reduce potential impacts to wastewater, water supplies, storm drainage, and solid waste facilities. Information in this section is derived primarily from:

- *City of Clovis Urban Water Management Plan 2020 Update (Provost & Pritchard, 2021B);*
- *City of Clovis Water Shortage Contingency Plan 2020 Update (Provost & Pritchard, 2021A);*
- *City of Clovis Wastewater Master Plan Update Phase 3 (Provost & Pritchard, 2017);*
- *City of Clovis Recycled Water Master Plan (Provost & Pritchard, 2017);*
- *City of Clovis Water Master Plan Update Phase III (Provost & Pritchard, 2017);*
- *2014 Master Service Plan Update (City of Clovis, 2014);*
- *Provost & Pritchard Consulting Group. 2022. Water Supply Assessment, Northwest Sphere of Influence Expansion Area;*
- *Fresno- Clovis Storm Water Quality Management Program (Fresno Metropolitan Flood Control, 2013).*

There were several comments received during the NOP scoping process related to this environmental topic. Two members of the public are concerned about water supply, reliability, and availability with regards to private groundwater wells. Both the Fresno Irrigation District and Fresno Metropolitan Flood Control District provided comments as well, addressing water usage and stormwater management, respectively. These concerns have been addressed below.

3.14.1 WASTEWATER SUPPLY

ENVIRONMENTAL SETTING

A large portion of the City of Clovis' wastewater is treated at the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), located southwest of the City of Fresno. It is approximately 16 miles by trunk sewer to the City of Clovis. Currently, the water is treated to the secondary level and then some is spread in percolation ponds and some is used directly on non-food crops. The plant can utilize extraction wells on the treatment plant property to pump water to reduce groundwater mounding under the plant. The pumped water can then be put into Dry Creek and the Houghton Canal for use by farmers downstream. FID in exchange can provide the City of Fresno approximately one AF of surface water for each two AF of water pumped and put into the canals, which is designated to be used as recharge on the east side of the District. Because Clovis contributes a percentage of the flow to the plant and pays a percentage share of maintenance, operations, and capital improvement costs, Clovis is also entitled to a proportionate share of any exchanged water and will be meeting with the City of Fresno and FID to discuss how to obtain said water. (Provost & Pritchard, 2021B).

Wastewater Collection System

The City's wastewater collection system is divided into seven major service areas. These seven major wastewater service areas also represent the City's entire water service area. Under existing conditions, the Herndon, Fowler, Sierra, and Peach service areas discharge into the City's regional trunks, which convey flows to the RWRF. Flow from the remaining three service areas (Northwest, Northeast, and Southeast) are conveyed to the Sewer Treatment - Water Reuse Facility (ST-WRF).

According to the 2017 Wastewater Collection System Master Plan, the City currently generates an Average Daily Flow of 7.018 million gallons per day (mgd) (7,861 Acre-Feet per Year (AFY)). In 2020, approximately 5.547 mgd (6,213 AFY) was conveyed to the RWRF, while 2.229 mgd (2,496 AFY) was treated at the ST-WRF; a total average daily flow of 7.775 mgd (8,710 AFY). (Provost & Pritchard, 2021B).

The City is exploring ways to recover the treated effluent either directly through a recycled water pipeline project or indirectly through exchanges.

Wastewater Treatment

Through a Joint Powers Agreement with the City of Fresno, the City of Clovis conveys much of its wastewater to the RWRF and is entitled to a maximum capacity of 9.3 mgd. The RWRF is operated by the City of Fresno and currently has a maximum capacity of 80 mgd. If required, the City has the capability to acquire additional capacity at the RWRF. (Provost & Pritchard, 2021B).

The City constructed a ST-WRF, which began service in 2009. The ST-WRF produces a disinfected tertiary treated water supply. The plant serves the new growth areas of the City in the Southeast, Northwest, and ultimately the Northeast Urban Centers. The ST-WRF is located on Ashlan Avenue, approximately 600 feet west of McCall Avenue. The facility was designed to treat an average daily flow of 2.8 million gallons per day (3,136 AFY) of wastewater. The plant is designed to accommodate future expansion and will ultimately treat 8.4 million gallons per day (9,400 AFY). In 2020, approximately 2,496 Acre-feet (AF) of wastewater was treated at the ST-WRF and 6,213 AF was treated at the RWRF. Of the 2,496 AF treated at the ST-WRF, 710 AF was used within the service area, while the remainder was discharged. (Provost & Pritchard, 2021B).

RECYCLED WATER

Currently, recycled water is used for irrigation of mostly public and some private landscape within the service area. 574 AF of recycled water was used in 2020 to irrigate landscape, while 136 AF was used for agricultural irrigation. Current areas receiving recycled water include Freeway 168 between Shepherd Avenue and Sierra Avenue, Clovis Community Medical Center, and multiple City parks and landscape areas.

Landscape irrigation will continue to be the main use of recycled water in the future for the City. All public landscape areas within three-quarters of a mile of the distribution system are considered potential recycled water use areas. Clovis Unified School District is evaluating the use of recycled water for its landscape areas. Caltrans has expanded their use of recycled water along Freeway 168 from Armstrong Avenue west to Sierra Avenue. This increase in volume and expansion of uses is expected to increase due to proactive actions taken by the City, which are described in a subsequent section. The City is very interested in exploring the use of recycled water for groundwater recharge. The water could be provided to recharge facilities during periods when no raw water supplies are available or to supplement raw water supplies.

Recycled water produced by the tertiary treatment plant is used for agricultural purposes when excess water is available. The City currently has a farmer adjacent to the ST-WRF that uses surplus recycled water to irrigate agricultural crops. The crops to be irrigated include almonds, citrus, and alfalfa. Farmers in the International Water District area are also interested in utilizing the water to irrigate crops which mainly are citrus. Currently, this area is not in the City's service area. Excess recycled water supplies are currently discharged to Fancher Creek and conveyed through irrigation canals to agricultural lands southwest of Clovis, or to the Little Dry Creek Diversion channel.

There are currently no wildlife habitat areas or wetlands within the Clovis service area. Potentially, the water discharged to FID could be used for wetlands or wildlife habitat enhancement areas.

The water could also potentially be used by future industrial customers within the new growth areas of the City; however, it will depend on their needs and their proximity to the recycled water transmission and distribution lines. At this point none have been specifically identified.

REGULATORY SETTING

Clean Water Act (CWA) / National Pollutant Discharge Elimination System (NPDES) Permits

The CWA is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The CWA regulates discharges from "non-point source" and traditional "point source" facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES regulatory program, which makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, stormwater associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of five key parameters: (1) biochemical oxygen demand (BOD), (2) total suspended solids (TSS), (3) pH acid/base balance, (4) Ammonia, and (5) Nitrate. These levels can be achieved by well-operated sewage plants employing "secondary" treatment with denitrification. Primary treatment involves screening and settling, while secondary treatment uses biological treatment in the form of "activated sludge." Denitrification uses the activated sludge process to remove nitrogen from the wastewater.

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another CWA program called pretreatment. "Indirect" dischargers send their wastewater into a city sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering surface water.

The City's current Waste Discharge Requirements and Master Recycling Permit, which regulates the wastewater effluent quantity and quality upon discharge, was issued by the Central Valley Regional Water Quality Control Board and is Order R5-2019-0021 NPDES No. CA0085235.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State is required to adopt policies, plans, and objectives that will protect the State's waters for the use by and enjoyment of Californians. In California, the State Water Resources Control Board (SWRCB) has the authority and responsibility for establishing policy related to the State's water quality. Regional authority is delegated by the SWRCB to a Regional Water Quality Control Board (RWQCB). The Porter-Cologne Act authorizes the SWRCB and RWQCB to issue NPDES permits.

Under the Central Valley Regional Water Quality Control Board (CVRWQCB) NPDES permit system, all existing and future municipal and industrial discharges to surface water within the City would be subject to regulation. NPDES permits are required for operators of municipal separate storm sewer systems, construction projects, and industrial facilities. These permits contain limits on the amount of pollutants that can be contained in each facility's discharge.

City of Clovis General Plan

Policies: Land Use Element

- Policy 3.5 Fiscal sustainability. The City shall require establishment of community facility districts, lighting and landscaping maintenance districts, special districts, and other special funding or financing tools in conjunction with or as a condition of development, building or permit approval, or annexation or sphere of influence amendments when necessary to ensure that new development is fiscally neutral or beneficial.

Policies: Public Facilities & Services Element

- Policy 1.1 New development. New development shall pay its fair share of public facility and infrastructure improvements.
- Policy 1.3 Annexation. Prior to annexation, the city must find that adequate water supply and service and wastewater treatment and disposal capacity can be provided for the proposed annexation. Existing water supplies must remain with the land and be transferred to the City upon annexation approval.
- Policy 1.4 Development-funded facilities. The City may require developments to install onsite or offsite facilities that are in excess of a development's fair share. However, the City shall establish a funding mechanism for future development to reimburse the original

development for the amount in excess of the fair share costs.

- Policy 1.6 Master plans. Periodically update water, recycled water, wastewater, and stormwater master plans and require all new development to be consistent with the current master plans.
- Policy 1.8 Water facility protection. Protect existing and future water, wastewater, and recycled water facilities from encroachment by incompatible land uses that may be allowed through discretionary land use permits or changes in land use or zoning designations.

Policies: Environmental Safety Element

- Policy 1.3 Geologic and seismic risk. Prohibit development on unstable terrain, excessively steep slopes, and other areas deemed hazardous due to geologic and seismic hazards unless acceptable mitigation measures are implemented. Require that underground utilities be designed to withstand seismic forces and accommodate ground settlement.

City of Clovis Municipal Code

Municipal Code Chapter 3.10 Development Impact Fees, The purpose of this chapter is to establish a uniform set of procedures applicable to AB 1600 development impact fees that are adopted pursuant to the authority set forth in Government Code Section 66000 et seq. and the Municipal Code. These procedures are intended to apply to all AB 1600 development impact fees adopted by the City regardless of whether there is an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee. If there is a conflict between this chapter and an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee, the provisions of this chapter shall control.

Municipal Code Chapter 6.4 pertains to Sewage Disposal regulations. This chapter establishes the sewer connections and permits required to safely create a functioning sewer system both in tandem with the City system, and outside the City. This Chapter also establishes sewer service charges and fees. Chapter 6.8, Recycled Water Use, provides for and encourages the use of recycled water in a manner that ensures the health, safety, and general welfare of the residents pursuant to and consistent with all applicable laws including, but not limited to, the California Code of Regulations Title 17 and 22.

The City Municipal Code also contains Chapter 8.6, Plumbing Code. This Chapter adopts the California Plumbing Code and includes specific amendments.

Clovis Wastewater Master Plan (2017)

The Clovis Wastewater Master Plan Update, Phase 3 was adopted in 2017. The Wastewater Master Plan Update process consisted generally of developing design criteria, defining wastewater service areas, developing wastewater flow projections, analyzing and designing collection system pipelines, and summarizing results. The Wastewater Master Plan Update, Phase 3, (2017 Master Plan) is the latest phase of an effort begun in 1995 to update the City’s Wastewater Master Plan. The preceding phase, referred to as the Wastewater Master Plan Update, Phase 2, (2008 Master Plan) was documented in a final report dated June 30, 2008. Under the 2017 Master Plan, the core of the City is planned to discharge to regional trunk sewers and on to the Fresno-Clovis RWRF in southwest Fresno.

Clovis Recycled Water Master Plan (2017)

The City of Clovis released a Recycled Water Master Plan in 2017. This Plan demonstrates how the water systems in the City will accommodate future population growth. Due to the impact of a five-year drought throughout the State, the scarcity of water supplies has resulted in significant motivation to continue investment in the use of recycled water to meet water demands. The purpose of the Clovis Recycled Water Master Plan Update is to evaluate current recycled water use, identify additional market opportunities as defined in the adopted General Plan and produce an implementation plan incorporating recycled water as a significant portion of the Clovis' water supply. The efficient use of surface water and groundwater resources is critical to maintaining sustainability of communities throughout the Central Valley. To help alleviate potable water demands placed on these supplies, recycled water is a key source of supply many communities, including Clovis, utilize to enhance management of local water resources.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with Utilities if it will:

- Require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the providers existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: The proposed Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the providers existing commitments (Less than Significant)

WASTE DISCHARGE REQUIREMENTS (WDRS) BOARD ORDER NUMBER NO. 5-2019-0021 (NPDES PERMIT NO. CA0085235).

A large portion of the City of Clovis' wastewater is treated at the Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF), located southwest of the City of Fresno. Through a Joint Powers Agreement with the City of Fresno, the City of Clovis conveys much of its wastewater to the RWRF and is entitled to a maximum capacity of 9.3 mgd. The RWRF is operated by the City of Fresno and currently has a maximum capacity of 80 mgd.

The ST-WRF serves the new growth areas of the City in the Southeast, Northwest, and ultimately the Northeast Urban Centers. With a total average daily flow of 2.8 million gallons per day (3,136 AFY), the plant is designed to accommodate future expansion and will ultimately treat 8.4 million gallons per day (9,400 AFY). The Project site would be served by a new wastewater collection system installed within proposed public utilities easements that would ultimately be conveyed to the ST-WRF.

The proposed Project would increase the amount of wastewater requiring treatment. According to the City's 2017 Wastewater Master Plan Update, single family residential uses are estimated to generate 55 gallons per capita per day or 175 gallons per day per equivalent dwelling unit (edu). The Project site includes up to 605 single family residential units. Using this rate, the proposed Project would generate approximately 105,875 gallons per day of wastewater. Occupancy of the proposed Project would be prohibited without sewer allocation. An issuance of sewer allocation from the City's available capacity would ensure that there would be a final determination by the wastewater treatment and/or collection provider that there is adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments. Additionally, any planned expansion to the RWTF with a subsequent allocation of capacity to the proposed Project would ensure that there would not be a determination by the wastewater treatment and/or collection provider that there is inadequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments.

The ST-WRF is currently in compliance with the WDR requirements of Order Number No. 5-2019-0021 (NPDES Permit No. CA0085235). The projected flows of the proposed Project are not expected to exceed the treatment capacity available for treatment. Full buildout of the proposed Project would slightly increase the existing treatment demand at the ST-WRF. As described above, the City must also periodically review and update their Utility Master Plans, including the Wastewater Master Plan, and as growth continues to occur within the City, the City will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development. These pre-existing proactive efforts ensure the City would be able to reliably treat the wastewater as the community expands its population up to and through the next plant expansion, including with implementation of the proposed Project.

The City General Plan designates the Development Area as Rural Residential and therefore anticipated potential development. Given that projected wastewater generation volumes associated with the buildout of the Development Area would not exceed the projected wastewater generation volumes described in the Wastewater Master Plan and the Urban Water Management Plan, this impact would be **less than significant**, and no mitigation is required.

Impact 3.14-2: The proposed Project would not require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects (Less than Significant)

As Clovis continues to develop in the future, there will be an increased need for water and wastewater services, including a reliable source of recycled water. These needs have been addressed in the Clovis Wastewater Master Plans and will require that the City continue to implement improvements to some pump stations, and sewer mains when triggered by growth.

The overall collection sewer strategy for the City of Clovis, including the proposed Project, consists of a combination gravity sewer collection system with pump or lift stations located along the collection system to convey wastewater to influent the ST-WRF.

The Project site would be served by a new wastewater collection and conveyance system installed within proposed public utilities easements. The proposed wastewater conveyance facilities would connect to the existing sewer mains as part of the City of Clovis collection and treatment system. Wastewater treatment would be provided at the ST-WRF, although in the interim it may receive treatment at the existing Fresno-Clovis Regional Wastewater Treatment Plant in the City of Fresno.

The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's existing infrastructure requirements. New wastewater collection and conveyance infrastructure needed for the proposed Project will require trenching/excavation of earth, and placement of pipe within the trenches at specific locations, elevations, and gradients. The applicant will refine the wastewater collection/conveyance infrastructure design through the development of improvement plans which undergo review by the City of Clovis Engineering Department to ensure consistency with the City of Clovis standards and specifications. This improvement plan process will include full engineering design (i.e., location, depth, slope, etc.) of all conveyance infrastructure as well as a review of new sewer pump stations and new force mains if needed. Ultimately, the sanitary sewer collection system will be an underground collection system installed as per the City of Clovis standards and specifications.

CONCLUSION

The construction of the new wastewater facilities, which are associated with future buildout of the proposed Project, has the potential to cause environmental impacts. The potential for environmental impacts associated with the installation of the wastewater system, and all construction activities within the Development Area of the Project site, are addressed throughout this EIR. There are no other anticipated impacts associated with the infrastructure construction activities beyond what is already discussed throughout this EIR.

The installation of the wastewater collection and conveyance system infrastructure to serve the proposed Project would have a less than significant impact relative to this topic. The wastewater treatment plant would not require upgrades or improvements in order to serve the proposed Project. Development of the proposed Project would have a **less than significant** impact relative to this topic.

3.14.2 WATER SUPPLIES

The following information is based on the *City of Clovis Urban Water Management Plan 2020 Update (Provost & Richard, 2021B); City of Clovis Water Shortage Contingency Plan 2020 Update (Provost & Pritchard, 2021A);* and the *City of Clovis Water Master Plan Update Phase III (Provost & Pritchard, 2017),* which is included as Appendix J of this Draft EIR.

ENVIRONMENTAL SETTING

The City of Clovis water service area largely aligns with the City's annexed boundaries. According to the *City of Clovis Urban Water Management Plan 2020 Update* (UWMP), the City's water system provides water supplies to approximately 122,350 people throughout the City of Clovis and the county island of Tarpey Village. The overall system demands have been increasing in the past five years due to population growth. However, the water use per person saw a sharp decline in 2015 in response to mandatory drought restrictions, followed by a slight increase as the 2012-2016 drought ended. Usage has remained well below pre-drought levels since 2016. (Provost & Pritchard, 2021B).

The City has three main water supply sources: groundwater, surface water, and recycled water. As the City continues to grow, it intends to expand its surface water supply use, recycled water use, and to continue intentional groundwater recharge efforts to relieve pressure on the groundwater aquifer. (Provost & Pritchard, 2021B).

The City's Public Utilities Department is responsible for water service within the City (Provost & Pritchard, 2021B). The City's water supply operates via a network of water mains and wells, and maintains treatment and/or disinfection facilities on all City wells thus ensuring high quality drinking water that meets all state and federal standards. The Public Utilities Department operates and maintains the City's Surface Water Treatment Plant and manages all surface water supplies including the acquisition of new supplies for developing areas of the City. This Public Utilities Department also conducts groundwater recharge programs, the water conservation program, rate analyses, and master planning.

The City has 37 water wells to provide for the needs of its residents. Some of these have wellhead treatment facilities to treat contaminated water. The wells discharge water into a distribution main grid, based on a minimum of 12-inch mains, spaced at half-mile intervals.

The City began operations of the Surface Water Treatment Plant (SWTP), located on the Enterprise Canal on the east side of Clovis, in 2004. Kings River water is supplied to the plant via Fresno Irrigation District's (FID) Enterprise Canal. This 22.5 million-gallons-per-day plant allows Clovis to serve existing users and new growth areas, while lessening the demand on groundwater.

City of Clovis Water Service Area

The City is located in the northeast quadrant of the Fresno-Clovis Metropolitan Area and is situated in the midst of the agriculturally rich San Joaquin Valley. The City limits currently encompass 25.9 square miles. The City's Sphere of Influence (SOI) covers 34.9 square miles, while the City's General Plan encompasses approximately 74.3 square miles. (Provost & Pritchard, 2021B).

According to the UWMP, the City's Public Utilities Department is the only municipal water purveyor in the City and provides service to approximately 122,350 City-customers. The City's service area encompasses the City limits and the small unincorporated community of Tarpey Village. The City's 2020 population was 118,741 while Tarpey Village has an estimated population of 3,609 and is mainly comprised of residential housing. (Provost & Pritchard, 2021B).

Within the City's General Plan Area but outside of the SOI are three county service areas (CSA) and one waterworks district (WWD) that provide water service. Currently, the three CSAs and WWD are considered independent of the City's utilities and service system. (Provost & Pritchard, 2021B).

Current and Projected Population

According to data collected from the California Department of Finance (DOF), the City's population for the year 2020 was approximately 118,741, while the American Community Survey, 5-year estimates (2015-2019) reported that Tarpey Village had a population of 3,609. This corresponds to a service area population of 122,350. The Tarpey Village area is considered built-out; therefore, the population is assumed to remain constant. The City's population increase over the last ten years has averaged 2.2 percent annually, from 100,895 in 2011 to 118,741 in 2020. It is generally accepted by the City the population growth will slow, meeting the 2040 projection of 174,500 (for Clovis only), yielding a growth rate of 1.9 percent annually. (Provost & Pritchard, 2021B).

Within the City's service area, the documented population is served water supply through the City's water system and, as the City develops, it is currently anticipated the projected population will be served by the City's water system; therefore, all population projections are utilized in water system demand projections. (Provost & Pritchard, 2021B).

TABLE 3.14-1: EXISTING AND PROJECTED POPULATION

	2020	*2025*	*2030*	*2035*	*2040*
Total Water Demand	122,350	135,015	148,045	162,367	178,109

SOURCE: PROVOST & PRITCHARD, 2021B

Climate

The climate in the City can be classified as a Mediterranean-type climate. Summers are hot and dry, and winters are cool with an average precipitation of about 10.72 inches per year. The area is subject to significant variations in annual precipitation. Most of the annual precipitation occurs during the period from November through April. (Provost & Pritchard, 2021B).

The mean annual precipitation is approximately 10 inches. The City experiences hot summer temperatures with many days in the 90°F range from June to September. The average annual temperature is 64.6 degrees Fahrenheit (°F), although it is not unusual for summer readings to reach well over 100°F. Nighttime temperatures from June to September hover around mid-sixties. The winter temperatures are much colder, with nighttime highs in the forties. Spring and fall provide moderate temperature ranges. A greater quantity of water is evaporated during May through August in correlation to high temperatures and low humidity, which results in high water demand for landscape irrigation. (Provost & Pritchard, 2021B).

City of Clovis Water Demands

At the General Plan planning horizon in 2035, total demand within the sphere of influence (SOI) is projected to be over 46,000 acre-feet per year (AFY). Total supply is expected to be 65,034 AFY. Development to the limits of the SOI is expected to continue the present course of development of surface supplies. The level of reliance on groundwater is planned to stay the same and additional supplies are planned to be served by an expansion of 22.5 MGD at the current SWTP and construction of a second SWTP with capacity of approximately 20 MGD. If there are opportunities for expanded intentional recharge, they are expected to be pursued. (ICF, 2018).

The City UWMP buildout is projected for the year 2083, at which time the population of Clovis is estimated to be 280,000. The average demand for City water at buildout will be approximately 65,400 AFY based on land use demand factors. Surface water requirements are anticipated to increase significantly by 2083. Much of the planned development outside the SOI is in an area with limited groundwater resources and will require the acquisition of surface water supplies. Since this area is outside organized irrigation and water district agencies, it will also be important for the City to contract for surface supplies long before they are needed. Expansion of the surface water treatment facilities is estimated to total approximately 45 MGD. Projected growth will more than double the peak need for water deliveries. The City plans to add new supplies in accordance with increased demands. The City's existing system has sufficient supplies to meet the demands of planned development within the City's current SOI boundary to 2035.

City potable and non-potable water demand in 2020 was approximately 30,144 AF. Table 3.14-1 represents the total sum of projected water demands for potable and raw use within the service area. These demands represent the City's total water demand in the future (recycle water is included). The 2020 data reflects actual 2020 water usage. Table 3.14-2 is completed for 'normal' years when no drought conditions are present and water supplies are available in their expected quantities. (Provost & Pritchard, 2021A).

TABLE 3.14-2: EXISTING AND PROJECTED TOTAL WATER DEMAND IN NORMAL YEARS, AFY

	2020	*2025*	*2030*	*2035*	*2040*
Total Water Demand	30,854	39,737	42,824	46,422	52,598

SOURCE: PROVOST & PRITCHARD 2021B; TABLE 4.6

DRY YEAR WATER DEMAND

The City currently has a water conservation program in place, as described in the City 2020 Water Shortage Contingency Plan (WSCP). The City has six triggering levels which correspond to water shortage levels. The water shortage levels are defined based on the percent reduction in available water supply when compared to a typical year. Each water shortage level has an accompanying goal for water consumption reduction varying from 10 percent to more than 50 percent. The water shortage levels, and their respective anticipated reduction in potable water demand, are shown in 3.14-3.

TABLE 3.14-3: WATER SHORTAGE CONTINGENCY PLAN PROJECTED DEMAND REDUCTION

LEVEL	PERCENT SUPPLY REDUCTION
I	Up to 10 percent
II	Up to 20 percent
III	Up to 30 percent
IV	Up to 40 percent
V	Up to 50 percent
VI	Over 50 percent

SOURCE: PROVOST & PRITCHARD, 2021A, TABLE 4-1

As discussed in the City's 2020 UWMP (Provost & Pritchard, 2021B), the reliability of the water system is reasonably robust; however, in a multiple dry year condition, the City will need to enact the WSCP to reduce demands. Table 3.14-4 displays the normal, single-dry, and multiple dry year demand comparisons. All years of the multiple dry year scenario utilize WSCP levels of conservation efforts. (Provost & Pritchard, 2021A).

TABLE 3.14-4: PROJECTED FUTURE DRY YEAR POTABLE AND RAW WATER DEMAND

HYDROLOGIC CONDITION	2025	2030	2035	2040
Normal Dry Year, AFY	39,737	42,824	46,422	52,598
Single Dry Year, AFY	34,272	37,359	40,957	47,133
Multiple Dry Year 1	36,489	39,422	42,840	48,707
Multiple Dry Year 2	34,183	36,962	40,200	45,758
Multiple Dry Year 3	31,346	33,969	37,028	42,277
Multiple Dry Year 4	28,005	30,474	33,353	38,293
Multiple Dry Year 5	37,825	40,758	44,176	50,043

SOURCE: PROVOST & PRITCHARD, 2021B; TABLES 7-3 AND 7-4

WATER SUPPLIES

Surface Water Supply

The City has access to surface water through several different contracts, all of which are delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River. The Central Valley Project is a planned supply for the future. The average delivery the City has received of its total allocation is just over 17,000 AF per year, with the smallest delivery being 9,452 AF in 2015 and the largest of 24,958 in 2017. The City executed a new, firm water supply, agreement with FID in 2019 that provides a surface water supply that does not fluctuate with the FID entitlement or allocation and will be available to the City on a consistent basis. This agreement provides for up to 7,000 AF per year by 2045, beginning at 1,000 AF in 2020. As the City grows and annexes portions of the Garfield and International Water Districts, those CVP, Class I water rights will be transferred to the City and added to the overall water supply portfolio. (Provost & Pritchard, 2021B).

FID's average gross annual entitlement is 452,541 AF. Within the last fifty years, the smallest entitlement received was 158,109 AF, which occurred in 2015. The City's allocation from the Kings River is proportional to the total acreage of the City's included area to the total FID area receiving water. Over time, the City has received on average 17,011 AFY, though this has varied from 9,452 AF in the severe drought of 2015 to over 24,958 AF in 2017. (Provost & Pritchard, 2021B).

Two additional water districts are located within the City's General Plan Boundaries: Garfield Water District (GWD) and International Water District (IWD). Both have access to Class I CVP surface water supplies. The GWD holds a Class 1 CVP contract for 3,500 AFY. With half of GWD within the City's SOI, an estimated 1,750 AFY is expected to be added to the City's supply upon development. The IWD holds a Class 1 CVP contract for 1,200 AFY. The City's General Plan designates a portion of the District's area as industrial and residential use. At build-out it is estimated that the entire 1,200 AFY supply will be added to the City's Supply. As the districts urbanize, supplies associated with these areas are expected to be added to the City's supply. The City uses their surface water supplies in two primary ways: (1) as potable water supply after being treated at the City's Surface Water Treatment Plant (SWTP) or (2) as groundwater recharge in various basins located in and around the City's service area. (Provost & Pritchard, 2021B).

Groundwater Supply

The City's groundwater supplies stem from the basin underlying the area, the Kings Subbasin; the Subbasin holds a status of being critically over drafted. The Kings Subbasin, a non-adjudicated basin, is a high-priority basin which lies within the Tulare Lake Hydrologic Basin. This Basin contains multiple interconnected subbasins that transmit, filter, and store water. These subbasins are Kaweah and Tulare Lake to the south, Westside and Delta Mendota to the west, and Madera to the North. (Provost & Pritchard, 2021B).

The Kings Subbasin (Subbasin 5-22.08) covers a surface area of approximately 976,000 acres (1,530 square miles). The Department of Water Resources estimated that the total basin storage was about 93,000,000 AF to a depth of more than 1,000 feet. The two major rivers overlying the subbasin are the San Joaquin River and Kings River. The Fresno Slough and James Bypass are along the western edge of the southern basin and connect the Kings River to the San Joaquin River. (Provost & Pritchard, 2021B).

The subbasin does have localized water quality impairments, including Dibromochloropropane (DBCP); Nitrate; Ethylene-Dibromide; 1,2,3-Trichloropropane (TCP); Methyl Tert-butyl Ether (MTBE); uranium; arsenic; hexavalent chromium; perfluoroalkyl substances (PFAS) and petroleum hydrocarbons. High concentrations of fluoride, boron, and sodium can be found in localized areas of the subbasin. (Provost & Pritchard, 2021B).

In 2014, the Sustainable Groundwater Management Act (SGMA) was signed into law to provide a framework for management of groundwater supplies by local agencies and restricts state intervention, if required. SGMA provides an opportunity for local agencies overlying the basin to form a Groundwater Sustainability Agency (GSA), which is the primary agency responsible for achieving sustainability. As part of the region's compliance with SGMA, the North Kings Groundwater Sustainability Agency (NKGSA) was formed and includes representatives from Bakman Water Company, Biola Community Services District, City of Fresno, City of Clovis, City of Kerman, County of Fresno, Fresno Irrigation District, Fresno Metropolitan Flood Control District, Garfield

Water District, and International Water District. The North Kings Groundwater Sustainability Agency adopted a Groundwater Sustainability Plan (GSP) in late 2019.

NORTH KINGS GROUNDWATER SUSTAINABILITY AGENCY

The City is a member of the North Kings Groundwater Sustainability Agency (NKGSA). The NKGSA is working collaboratively, under a coordination agreement with the other six (6) Groundwater Sustainability Agencies in the Kings Subbasin to achieve sustainable groundwater conditions by 2040 in accordance with the Sustainable Groundwater Management Act of 2014 (SGMA) for critically over drafted groundwater basins such as the Kings Subbasin. (Provost & Pritchard, 2021B).

SGMA identifies six (6) sustainability indicators to be monitored and reported in order to document sustainability: lowering groundwater levels, reduced [groundwater] storage, seawater intrusion, degraded [groundwater] quality, land subsidence, and surface water depletion. The NKGSA documents five (5) of those with seawater intrusion not being applicable to this region. (Provost & Pritchard, 2021B).

The City will continue increasing its surface water and recycled water supply usage to a point where the groundwater extraction is not greater than the sustainable yield in a normal year. The sustainable yield is currently estimated at 9,400 AF per year (AFY) for the SOI). (Provost & Pritchard, 2021B).

Potable water production consists of municipal groundwater wells and a Surface Water Treatment Plant (SWTP). The total groundwater pumping that occurs within the City boundaries include City-owned municipal wells and City-owned park irrigation wells. It is noted that there are other wells within the boundaries of the City of Clovis including CUSD irrigation wells and rural residential domestic wells. The following section provides a summary of the estimated groundwater pumping that occurs within the current City limits and planning area.

City-Produced Groundwater

The City's system contains more than 37 active permitted wells with a total capacity of approximately 37,690 gallons per minute with another 4,750 gpm of additional capacity planned in the next few years. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B).

Wells are spaced at intervals across the City and are connected to a distribution system. The pipes are sized for local distribution and have, in certain instances, presented some restrictions to cross-town water supply distribution. The transmission network consists primarily of 12-inch mains on a one-half mile grid with extensive looping. The wells are controlled by a telemetry system that controls pump operation as well as independent controls in case of remote computer failure. The production rate of the existing wells varies from approximately 300 gallons per minute (gpm) to approximately 2,200 gpm. (Provost & Pritchard, 2017).

HISTORICAL GROUNDWATER PUMPING

The water system was initially constructed near the turn of the 20th century, when the first municipal well was installed, and up until July 2004, the City's sole source of drinking water was groundwater. The City currently obtains groundwater from 37 active permitted wells and one standby well, which have a total capacity of approximately 37,690 gallons per minute (gpm). There are also six planned wells, adding an additional planned capacity of 4,750 gpm, bringing the total well capacity to 42,440 gpm. In 2023, seven of the existing active wells (Wells 10, 18, 31, 32, 36, 40, and T-5) are offline due to Nitrate, Iron, Manganese, TCP, or PFAS water quality concerns, and one well (Well 20) is listed as standby due to iron and manganese concerns. TCP, PFAS, DBCP and high iron (Fe) and manganese (Mn) are the main water quality constraints in the Clovis area. Four (4) more of the City's wells are currently on inactive status due to being dry or producing too much sand (Wells 3, 11, T-1, and T-3). (Provost & Pritchard, 2021B).

In 2020, groundwater provided approximately 49 percent of the total potable water use. The historical volume of groundwater pumped by the City over the past five years is provided in Table 3.14-5. The groundwater extraction has reduced since 2016 and is expected to continue to be reduced, as discussed later in this section. (Provost & Pritchard, 2021B).

In 2020, recharge was 5,316 AF, while the City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. In the past 30 years the groundwater table has dropped 48 feet, from a depth of 92 feet in 1991 to a depth of 140 feet in 2019. Recharge efforts began in 1974, and in 2004 the City began utilizing surface water with the goal of reducing groundwater extraction. Recharge efforts by the City have not been enough to stem the decline as the basin is shared with other users who either don't recharge or inadequately recharge. (Provost & Pritchard, 2021B).

Groundwater pumping by City wells (potable and irrigation) from 2016 to 2020 is summarized in Table 3.14-5.

TABLE 3.14-5: HISTORICAL GROUNDWATER PRODUCTION

	2016	*2017*	*2018*	*2019*	*2020*
Groundwater Supply, AFY	13,187	12,001	11,991	10,956	12,105

SOURCE: PROVOST & PRITCHARD, 2021B; TABLE 6-2

Recycled Water

The City's ST-WRF produces tertiary treated effluent that can be used for a variety of applications but is primarily used either as agriculture or landscape irrigation, with the remaining being discharged to nearby creeks. The City intends to continue to expand the beneficial users of the recycled water supply and show the volumes in the water supply portfolio. Use of recycled water in this manner will continue to offset the City's use of potable sources for non-potable demands, such as irrigation. (Provost & Pritchard, 2021B).

Currently, the City provides recycled water for landscape and agricultural irrigation at 66 metered sites (through 129 metered services). There is a goal of expanding the users to include schools within the Clovis Unified School District in the future as discussed in the City's Recycled Water Master Plan (RWMP) (Provost & Pritchard, 2021B).

A total of 574 AF of recycled water was used in 2020 to irrigate landscape, while 136 AF was used for agricultural irrigation. Current areas receiving recycled water include Freeway 168 between Shepherd Avenue and Sierra Avenue, Clovis Community Medical Center, and multiple City parks and landscape areas. (Provost & Pritchard, 2021B).

Potable Water Supply Availability and Reliability

The City's surface water and groundwater supply reliability as described in the City's 2020 UWMP is summarized below.

SURFACE WATER RELIABILITY

Surface water is supplied from the Kings River and conveyed to the City by the FID. The Kings River is impacted by the level of snowmelt and precipitation received in the area and is susceptible to dry conditions. The City's contract with FID ensures that the City receives a percentage of the total FID entitlement, approximately 2.1 AF per acre within the FID boundary; the City's area is capped at 7.12 percent of the FID boundary or approximately 32,100 AFY in a normal water year. Additionally, the City has recently executed an additional contract with FID for development of a new, firm water supply starting at 1,000 AFY in 2020 and increasing to a maximum of 7,000 AFY by 2045 and thereafter; this new supply will not have the variability of the existing supply based on water year. Historically, FID's entitlement on the Kings River has been considered reliable although it was affected significantly by the recent drought.

The most probable water supply in the City's portfolio to be impacted by climate change is the surface water supply. The NKGSP examined the reliability of the Kings River supply and concluded that the agencies reliant on the Kings Subbasin could continue to plan on those supplies with climate change factored in, stating specifically, "Kings River water supplies available to the Kings Subbasin will be managed in the future to maintain historical levels of water supplies." Evaluation of the Kings River supplies into the future, considering climate change impacts of warmer temperatures, showed more precipitation occurring as rainfall and less as snowfall and that the snowfall (snowpack) will have a tendency to melt sooner in the season. The biggest impact this shift will have is on water management, including additional reservoir storage and increased recharge during low-use periods. The GSP further states that "climate change will have no significant impact on Kings River diversions." (Provost & Pritchard, 2021B).

The supply is greater than the demand for each year and reflects the projected surplus during a normal water year. During a single-dry year, surface water allotments are anticipated to be reduced by as much as 66 percent for Kings River surface water supplies, and CVP Class II supplies are eliminated completely in dry years. In the future, as the City becomes more reliant on surface water supplies, the impact of surface water reductions in dry years will be more significant. Demand reductions due to water shortage measures are included in the demand estimates. During a single-dry year demands will be reduced by temporarily eliminating groundwater recharge activities and implementing the water shortage contingency plan as necessary. (Provost & Pritchard, 2021B).

To provide protection for the system, planning for a 20 percent supply excess over demands is a guiding principle. Therefore, while during the first-year adequate supplies are available for normal demands and no demand reductions are required, voluntary conservation will be promoted, and recharge activities may be curtailed to maintain an adequate supply buffer for the system. During the subsequent second, third, and fourth years, the Water Shortage Contingency Plan will be implemented with varying levels of mandatory conservation required for all users. In addition, the City may choose to reduce groundwater recharge activities and will be utilizing banked groundwater to augment the City's supply. As with the 2012-2016 drought period, it is anticipated the final year will begin to see an improvement in supply availability and some restrictions may be relaxed; however, if that is not the case, the City may need to continue mandatory conservation strategies. (Provost & Pritchard, 2021B).

The water obtained from the Central Valley Project comes from the diversion and storage of water from the San Joaquin River behind Friant Dam. The total available water on the San Joaquin River has been estimated at 2,200,000 AF. Of that, 800,000 AF have been designated as Class I supply. Class I supply is considered to be dependable in most years with shortages only in very dry years. Class II water is in excess of Class I and is therefore much less dependable. FID has a contract with the United States Bureau of Reclamation for 75,000 AF of Class II water from this source. The agreement between the City and FID requires the District to make available to the City the proportional share of all surface water available to the District although it does not allow the City to directly receive FID's Central Valley Project supplies. Therefore, FID is required to make a like amount of Kings River (or any other surface) water available to the City for its proportional share of Class II Central Valley Project supplies. FID's Class II contract has received an average 13,577 AFY with the actual number ranging from zero to the full 75,000 AF depending upon the nature of each water year over that period. (Provost & Pritchard, 2021B).

GROUNDWATER RELIABILITY

There are many factors that can affect groundwater supply reliability, including current storage conditions, water quality, seasonal groundwater level variations and climate change. Reduced use by the City, combined with seasonal variations such as intense wet seasons, can result in increased groundwater table elevation.

Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040, as required. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. In the 2010 and 2015 UWMPs, the City's groundwater supplies were shown to be increasing with population growth into the future. The historical volume of groundwater pumped by the City from 2016 to 2020 ranged from 10,956 in 2019 to as high as 13,187 in 2016. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B). The City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

The City has been searching for additional land to construct another dedicated groundwater recharge facility in the City. The facility will likely be in North Clovis upgradient of City wells. A minimum of 20 to 40 acres is desired with a minimum recharge capability of 1,500 to 3,000 AF per year. An additional project that the City is pursuing in cooperation with FID, FMFCD, and the City of Fresno, is either reoperation of Big Dry Creek Detention Basin, known as the Redbank-Fancher Creeks Flood Control Project, to allow storage of East Side Stream Flood releases or a project to increase recharge capabilities upstream of the Basin. This is currently in the study phase. (Provost & Pritchard, 2021B).

In addition, there are two banking facilities, the Waldron Banking Facilities (WBF) and Boswell Groundwater Banking Facility (BGBF), have been constructed in central Fresno County. The City entered into an agreement with the FID to participate in the financing of the construction of a dedicated water banking facility called the Waldron Banking Facilities. The City is entitled to receive up to ninety percent (9,000 AF) of the annual yield. The City plans on taking the water in dry years to augment supply. (Provost & Pritchard, 2021B).

The groundwater supplies the City relies upon are not adjudicated. The surface water supplies have either long-range contracts or newly executed contracts to document quantities and availability to the City. (Provost & Pritchard, 2021B).

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The ’sustainable yield’ is defined as the amount of groundwater pumping that can occur while maintain groundwater at sustainable levels and avoiding undesirable results. The sustainable yield can be estimated as the total groundwater recharge (from natural and artificial sources) minus the groundwater outflow (as shown below). The GSP of the North Kings Groundwater Sustainability Agency indicates that the sustainable yield of the groundwater basin is approximately 1,140,000 AFY/acre (1,360,000 AF -220,000 AF).

With regards to the 2020 groundwater supply, as provided by the City’s UWMP, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources. Groundwater pumping accounted for 26 percent of the City’s total available water supply, but will be reduced over the planning horizon for the UWMP. The actual 2020 supply for the service area consisted of surface water, groundwater, supply water from storage and recycled water; the overall supply available to the City for 2020 was 53,748 AF. (Provost & Pritchard, 2021B). Future supply projections through 2040 are shown in Table 6-13.

TABLE 3.14-6: PROJECTED GROUNDWATER SUPPLY, AFY

	2020	*2025*	*2030*	*2035*	*2040*
Assumed Groundwater Supply	12,105	11,429	10,753	10,076	9,400

SOURCE: PROVOST & PRITCHARD, 2021B, TABLE 6-13.

REGULATORY SETTING

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund (“SRF”) and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for Methyl Tertiary Butyl Ether (MTBE) and other oxygenates.

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

Urban Water Management Planning Act

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An “urban water supplier” is a public or private water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier’s water demand management measures. The urban water supplier should make every effort to ensure the appropriate level of reliability in its water service is sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Department of Water Resources must receive a copy of an adopted urban water management plan.

Safe Drinking Water Act

The federal Safe Drinking Water Act, as passed in 1947 and amended in 1986 and 1996, is the Country's primary law regulating drinking water quality and is implemented by the United States Environmental Protection Agency (US EPA). The Safe Drinking Water Act authorizes the US EPA to set national health-based standards for drinking water and requires actions to protect drinking water and its sources. Additionally, it provides for treatment, monitoring, sampling, analytical methods, reporting, and public information requirements. Implementation of the Act, in California, is under the jurisdiction of the California Department of Public Health (CDPH), Division of Drinking Water and Environmental Management. Drinking Water regulations are set forth in the California Code of Regulations (CCR), Titles 7 and 22.

Water Conservation Projects Act

California's requirements for water conservation are codified in the Water Conservation Projects Act of 1985 (Water Code Sections 11950 – 11954).

Consistent with California Water Code Sections 11950 – 11954, the City has implemented various water conservation efforts, as well as a Water Shortage Contingency Plan that identifies actions that can be taken to respond to catastrophic interruption of water supply.

California Water Code

Water Code section 10910 states:

> *10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).*
>
> *10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.*
>
> *10910(d)(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:*

> *(A) Written contracts or other proof of entitlement to an identified water supply.*
>
> *(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.*
>
> *(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.*
>
> *(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.*

> *10910(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.*

Additionally, Water Code section 10910 states:

> *10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.*
>
> *10910(f)(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.*
>
> *10910(f)(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as over drafted or has projected that the basin will become over drafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long term overdraft condition.*

> *10910(f)(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.*
>
> *A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.*
>
> *10910(f)(4) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.*
>
> *A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.*

Senate Bill (SB) 610

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910 et seq. The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as a WSA required under SB 610.

Water Code Section 10910 (c)(4) states "If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

Water supply planning under SB 610 requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand for the general region over the next 20 years, under a broad range of water conditions. This information is typically found in the current UWMP for the project area. SB 610 requires the identification of the public water supplier for a project.

In addition, SB 610 requires the preparation of a WSA if a project meets the definition of a “Project” under Water Code Section 10912 (a). The code defines a “Project” as meeting any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a “Project” includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system.

Based on the following, SB 610 applies to the proposed Project:

1. The proposed Project is subject to CEQA and an EIR is required.
2. The proposed Project, with up to 605 proposed residential dwelling units, meets the definition of a “Project” as specified in Water Code section 10912(a) paragraph (1) as defined for residential development.

The proposed Project has not been the subject of a previously adopted WSA and has not been included in an adopted WSA for a larger project. Thus, a WSA, as required by these criteria under SB 610, has been prepared for the Project. The WSA is included in Appendix J of this EIR.

Senate Bill (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a “sufficient water supply” exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

Executive Order B-37-16

In May 2016, Governor Edmund G. Brown, Junior, signed Executive Order B-37-16 (Executive Order), Making Water Conservation a California Way of Life. The Executive Order directed DWR to work with the State Water Resources Control Board (State Water Board) to develop new water use targets as part of a permanent conservation framework for urban water agencies. The targets will build upon requirements established in the 2009 Water Conservation Act, but will strengthen standards for indoor residential per capita water use, outdoor irrigation, commercial, industrial and institutional (CII) water use, and water lost through leaks. DWR will be establishing interim water use targets by 2018, with final standards to be published by 2021. Agencies will need to demonstrate progress towards achieving final compliance in 2025 (DWR, 2017).

City of Clovis General Plan

Policies: Land Use Element

- Policy 4.2 Surface water entitlements. The city should not approve annexation unless any and all surface water entitlements are retained; any and all surface water entitlements shall be transferred to the city upon development.

Policies: Public Facilities and Services Element

- Policy 1.1 New development. New development shall pay its fair share of public facility and infrastructure improvements.
- Policy 1.2 Water supply. Require that new development demonstrate contractual and actual sustainable water supplies adequate for the new development's demands.
- Policy 1.3 Annexation. Prior to annexation, the city must find that adequate water supply and service and wastewater treatment and disposal capacity can be provided for the proposed annexation. Existing water supplies must remain with the land and be transferred to the City upon annexation approval.
- Policy 1.4 Development-funded facilities. The City may require developments to install onsite or offsite facilities that are in excess of a development's fair share. However, the City shall establish a funding mechanism for future development to reimburse the original development for the amount in excess of the fair share costs.
- Policy 1.5 Recycled water. Use recycled water to reduce the demands for new water supplies. Support the expansion of recycled water infrastructure throughout Clovis and require new development to install recycled water infrastructure where feasible.
- Policy 1.6 Master plans. Periodically update water, recycled water, wastewater, and stormwater master plans and require all new development to be consistent with the current master plans.
- Policy 1.7 Groundwater. Stabilize groundwater levels by requiring that new development water demands not exceed the sustainable groundwater supply.

- Policy 1.8 Water facility protection. Protect existing and future water, wastewater, and recycled water facilities from encroachment by incompatible land uses that may be allowed through discretionary land use permits or changes in land use or zoning designations.

Policies: Open Space and Conservation Element

- Policy 3.5 Energy and water conservation. Encourage new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code.

City of Clovis Municipal Code

Municipal Code Chapter 3.10 Development Impact Fees, The purpose of this chapter is to establish a uniform set of procedures applicable to AB 1600 development impact fees that are adopted pursuant to the authority set forth in Government Code Section 66000 et seq. and the Municipal Code. These procedures are intended to apply to all AB 1600 development impact fees adopted by the City, regardless of whether there is an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee. If there is a conflict between this chapter and an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee, the provisions of this chapter shall control.

Chapter 6.5, Water System and Chapter 6.6, Wells, are contained within Title 6, Sanitation and Health. Chapter 6.5 contains five different articles that all pertain to specific aspects of the interconnected Water System the City and its residents rely on. Article 1 of Chapter 6.5 deals with Service Rates and Regulations; Article 2 discusses Main Extensions, Connections, and Frontage Chargers; Article 3 regulates Meters, Main Connections, and Laterals; Article 4 establishes rules for Heat Transfer Systems Utilizing Water; and Article 5 establishes Water Efficient Landscape Requirements. Chapter 6.6 regulates well drilling, prohibited acts, permits required, use requirements, recharge charges, and the use of drainage wells.

The City Municipal Code also contains Chapter 8.6, Plumbing Code. This Chapter adopts the California Plumbing Code and includes specific amendments.

Clovis Water Master Plan Update Phase III (2017)

The primary purpose of the Water Master Plan is to examine the feasibility of continued growth in the greater Clovis area from a water resource stand-point and develop a plan for implementation of facilities as well as development of a plan for acquisition of water supplies as the City continues to grow in an easterly direction with more limited groundwater supplies.

This report represents an update of the Phase 1 and 2 reports that were prepared in 1995 and 1999 respectively, that provided a blueprint for the future development of the city’s water system. This report documents the past years’ efforts in evaluating the existing system and developing the future plan for the system.

Clovis Wastewater Master Plan (2017)

The Clovis Wastewater Master Plan Update, Phase 3 was adopted in 2017. The wastewater master plan update process consisted generally of developing design criteria, defining wastewater service areas, developing wastewater flow projections, analyzing and designing collection system pipelines, and summarizing results. The Wastewater Master Plan Update, Phase 3, (2017 Master Plan) is the latest phase of an effort begun in 1995 to update the City's Wastewater Master Plan. The preceding phase, referred to as the Wastewater Master Plan Update, Phase 2, (2008 Master Plan) was documented in a final report dated June 30, 2008. Under the 2017 Master Plan, the core of the city is planned to discharge to regional trunk sewers and on to the Fresno-Clovis RWRF in southwest Fresno.

Clovis Recycled Water Master Plan (2017)

The City of Clovis released a Recycled Water Master Plan in 2017. This Plan demonstrates how the water systems in the City will accommodate future population growth. Due to the impact of a five-year drought throughout the state, the scarcity of water supplies has resulted in significant motivation to continue investment in the use of recycled water to meet water demands. The purpose of the Clovis Recycled Water Master Plan Update is to evaluate current recycled water use, identify additional market opportunities as defined in the adopted General Plan, and produce an implementation plan incorporating recycled water as a significant portion of the Clovis' water supply. The efficient use of surface water and groundwater resources is critical to maintaining sustainability of communities throughout the Central Valley. To help alleviate potable water demands placed on these supplies, recycled water is a key source of supply many communities, including Clovis, utilize to enhance management of local water resources.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-3: The proposed Project has the potential to require or result in the construction of new water treatment facilities or expansion of existing water facilities, the construction of which could cause significant environmental effects. (Less than Significant)

The Project area will be annexed to the City and will require an extension of existing potable and non-potable systems. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project.

The City's ST-WRF produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

POTABLE WATER SYSTEM

The Project Site would be served by a new potable water distribution system. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The proposed on-site water distribution system will have various points-of-connection to existing City mains. The Project will connect to the existing water main lines along nearby roadways. Additionally, an internal looped system of water lines will be installed within the Project Site.

NON-POTABLE WATER SYSTEM

The Project Site would include the development of an on-site non-potable water distribution system that would eventually provide irrigation water to planned parks, open space, and landscaped areas. This system will include a non-potable irrigation well which will be constructed by the project. All landscape irrigation is to be installed with non-potable components.

CONCLUSION

The proposed Project site will provide an adequate potable and non-potable water distribution systems in strict accordance with City Master Plans and standards. Furthermore, the construction of the new water facilities, which are associated with future buildout of the proposed Project, has the potential to cause environmental impacts. The potential for environmental impacts associated with the installation of the water system and all construction activities within the Development Area of the Project Site, are addressed throughout this EIR. There are no other anticipated impacts associated with the infrastructure construction activities beyond what is already discussed throughout this EIR. The installation of the water system infrastructure to serve the proposed Project would have a **less than significant** impact relative to this topic.

Impact 3.14-4: The proposed Project does not have the potential to have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. (Less than Significant)

The Project site would be served by a new potable and non-potable water distribution system. The proposed water system will be located within the proposed public utilities easements and be connected to existing city mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project. The City's ST-WRF produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

Proposed Project: The Project site is approximately 155 acres within 39 Assessor parcels (APNs). This includes the Development Area (77acres), and the Non-development Area (78 acres). The proposed Project includes an annexation of three APNs totaling approximately 77 acres; this includes the Development Area. The Tentative Subdivision Map would result in the subdivision of a total of approximately 77 acres into 605 single family residential units, with an additional 52 out lots for roads, utilities, greenspace, landscaping, and pedestrian paths. The Non-development area includes the parcels being annexed that will not be entitled for subdivision or development.

Projected Water Demand for the Proposed Project: As discussed above, water would be delivered to the Project via the City's existing and planned distribution system. The Project would receive water supply from the City's water distribution system, which relies on both groundwater and surface water supplies. According to the Water Supply Assessment prepared for the proposed Project, the proposed Project has an associated Land Use-based Water Demand Factor (WDF of 3.3 AFY/acre associated with Medium High Density Residential (MHDR) based on the City's UWMP. The projected water demand for the proposed Project is shown in Table 3.14-7. The total projected annual potable water demand for the Project is projected to be 255.8 AFY.

TABLE 3.14-7: PROJECTED WATER DEMAND FOR BUILDOUT OF THE PROPOSED PROJECT

LAND USE	UNIT FACTOR	ACREAGE	WATER DEMAND (AFY)
Medium High Density Residential (MHDR)	3.3	77.5	255.8
Total	**--**	**77.5**	**255.8**

NOTES: BASED ON LAND USE-BASED WATER DEMAND FACTOR (WDF) OF 0.7 AFY/ACRE. AFY = ACRE-FEET PER YEAR.

SOURCE: TRACT 6205, NORTHWEST SPHERE OF INFLUENCE EXPANSION AREA. WATER SUPPLY ASSESSMENT (PROVOST & PRITCHARD CONSULTING GROUP, 2022).

As shown in table 3.14-7, the total proposed water demand amounts to approximately 1.6% of the excess supply for year 2030 the City has in a normal year as shown in Table ES-3 of the 2020 UWMP. This indicates an ability of the City to serve this project in the interim while additional supplies are acquired to accommodate full build-out of the GP.

Projected Water Supply for the Proposed Project: Water demands for the proposed Project will be served using the City's existing and future portfolio of water supplies. The inclusion of existing and planned future supplies is specifically allowed by the Water Code:

> *Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

The applicants for the proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable water supplies to the Project site.

Determination of Water Supply Sufficiency Based on the Requirements of SB 610: Water Code section 10910 states:

> *10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.*

Pursuant to Water Code section 10910(c)(4) and based on the technical analyses described in the UWMP, the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project as shown in table 3.14-7, in addition to existing and planned future uses.

A comparison of the City's projected potable and raw water supplies and demands is shown in Table 3.14-8 for Normal, Single Dry, and Multiple Dry Years. Demand within the City's service area is not expected to exceed the City's supplies in any Normal year between 2020 and 2040. From this analysis, the City's water demands are not expected to exceed water supplies in Single Dry Years or Multiple Dry Years.

TABLE 3.14-8: SUMMARY OF POTABLE AND RAW WATER DEMAND VERSUS SUPPLY DURING HYDROLOGIC NORMAL, SINGLE DRY, AND MULTIPLE DRY YEARS

Hydrologic Condition		*Supply and Demand Comparison, AFY*			
		2025	*2030*	*2035*	*2040*
Normal Year					
Available Potable and Raw Water Supply		50,739	58,937	65,034	74,650
Total Water Demand		39,737	42,824	46,422	52,598
Potential Surplus (Deficit)		11,002	16,113	18,612	22,052
Supply Shortfall, Percent of Demand		-	-	-	-
Single Dry Year					
Available Potable and Raw Water Supply		37,839	43,587	47,233	53,109
Total Water Demand		34,272	37,359	40,957	47,133
Potential Surplus (Deficit)		3,567	6,228	6,276	5,976
Supply Shortfall, Percent of Demand		-	-	-	-
Multiple Dry Year					
Multiple Dry Year 1	Available Potable and Raw Water Supply	46,784	54,607	60,330	68,999
	Total Water Demand	36,489	39,422	42,840	48,707
	Potential Surplus (Deficit)	10,294	15,185	17,489	20,292
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 2	Available Potable and Raw Water Supply	45,093	52,576	57,958	66,095
	Total Water Demand	34,183	36,962	40,200	45,758
	Potential Surplus (Deficit)	**10,910**	**15,614**	**17,758**	**20,337**
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 3	Available Potable and Raw Water Supply	41,895	48,310	52,625	59,717
	Total Water Demand	31,346	33,969	37,028	42,277
	Potential Surplus (Deficit)	10,550	14,341	15,597	17,440
	Supply Shortfall, Percent of Demand	-	-	-	-
	Available Potable and Raw Water Supply	37,839	43,587	47,233	53,109
	Total Water Demand	28,005	30,474	33,353	38,293

Multiple Dry Year 4	Potential Surplus (Deficit)	9,834	13,112	13,881	14,815
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 5	Available Potable and Raw Water Supply	49,743	57,992	64,141	73,716
	Total Water Demand	37,825	40,758	44,176	50,043
	Potential Surplus (Deficit)	11,918	17,235	19,965	23,674
	Supply Shortfall, Percent of Demand	-	-	-	-

SOURCE: PROVOST & PRITCHARD, 2021B.

CONCLUSION

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a **less than significant** impact to water supplies.

3.14.3 STORMWATER

ENVIRONMENTAL SETTING

Stormwater throughout the City of Clovis is collected in Fresno Metropolitan Flood Control District's (FMFCD) basins. Unless the storm season is particularly wet, the collected stormwater is allowed to percolate into the soil as groundwater recharge. Additionally, the FMFCD allows the City to utilize 17 stormwater basins throughout the City's Service Area for recharge purposes. (Provost & Pritchard, 2021B).

FMFCD covers the entire Fresno/Clovis Metropolitan Area and is authorized to control storm waters within an urban and rural foothill watershed of approximately 400 square miles, known as the Fresno County Stream Group. The FMFCD provides storm drainage through a system of inlets, drainage pipes, drainage ponds, and a system of dams and channels upstream. This system provides the primary means of urban storm drainage control for the City of Clovis and its sphere of influence. New storm drainage improvements are made by either development fees or by formation of assessment or improvement districts. The City of Clovis has a representative on the FMFCD Board. (City of Clovis, 2014).

On September 16, 1994, the Central Valley Regional Water Quality Control Board (Regional Water Board) issued the first municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit No. CA0083500 to the Fresno Metropolitan Flood Control District (District) and four other Co-Permittees, including the City of Clovis. The Regional Water Board renewed the permit on May 31, 2013 (Order No. R5-2013-0080). (FMFCD, 2020).

The FMFCD operates and maintains all master plan improvements, including the retention basins. The City is responsible for operation and maintenance of all temporary facilities where master plan improvements are not complete. The City is also responsible for all surface flooding in streets and other areas where storm water cannot reach inlets and pipes quickly enough. Storm drainage collection facilities are designed for two-year storm capacity. Storm drain retention basins are designed for 50-year storm frequency. Development impact fees finance acquisition and construction of ponding basins. Storm drainage improvement districts fund development of storm drainage systems for existing urban areas. (City of Clovis, 2014).

Clovis is traversed by three natural stream systems. Each of these systems consists of sub streams or creeks that collect together to discharge to a centralized natural drainage channel. These systems are the Red Bank, Fancher, and Dog Creek System; the Dry and Dog Creek System; and the Pup Creek/Alluvial Drain System. The latter is a tributary of the original Dry Creek channel. These stream systems collect storm runoff from the foothills east of Clovis and convey such runoff through the Clovis/Fresno metropolitan areas to the Fresno Slough, which is located west of the City of Fresno. (County of Fresno, 2018).

The City's Public Utilities Department has three Stormwater Patrol teams, made up of 22 public utilities employees, to implement emergency flood control measures. The plan contains information and procedures to rapidly address flooding throughout the City. Contact information and team assignment data is updated regularly as are geographic locations subject to flooding. Appendices include suppliers/contractors, storm basin list, problem drain lists, and partnerships and agencies with shared responsibility for storm preparedness, mitigation, and response. (County of Fresno, 2018).

Existing City Stormwater and Flood Control Facilities

Flood protection in Clovis is afforded by Big Dry Creek Dam on Dry Creek. Big Dry Creek Dam is located approximately 3.5 miles upstream of the City of Clovis. Its main purpose is flood control, and it has a storage capacity of 16,250 acre-feet. Big Dry Creek Reservoir has prevented an estimated $15 million in damage in the Fresno-Clovis area since its completion in 1948. (County of Fresno, 2018).

The Big Dry Creek Dam impounds stormwater runoff from Big Dry Creek in the Big Dry Creek Reservoir. The Big Dry Creek Reservoir is owned and operated by the FMFCD and is intended primarily for flood control of winter runoff from the Dry Creek and Dog Creek watersheds. In the 1990s, modifications were made to increase the capacity of the reservoir, and it now provides protection against the 200-year flood. (County of Fresno, 2018).

Under wet conditions, the Big Dry Creek Reservoir captures runoff and controls releases into artificial ditches and canals, which drain into either Little Dry Creek, located north of the reservoir, or in a southerly direction into Mill Ditch. Flows from Little Dry Creek and Mill Ditch eventually drain to the San Joaquin River. Flows from the reservoir can also be diverted into Dog Creek, which also eventually drains into the San Joaquin River. During dry weather conditions, the reservoir does not discharge water and is normally empty, with the exception of a 156-acre-foot residual pool. The top of the pool remains below the elevation of an existing discharge gate. (County of Fresno, 2018).

Further, on average, FMFCD’s regional stormwater basin system captures 92 percent of annual rainfall, of which, 70-85 percent of the captured stormwater runoff is recharged into the local groundwater aquifer. The stormwater basins also remove 50-80 percent of the typical stormwater pollutants. (FMFCD, 2020).

Mitigation activities continue to be done in accordance with applicable state and federal requirements for floodplain management and in coordination with the FMFCD. Additional mitigation measures for critical infrastructure protection and rehabilitation are done through the City’s Capital Improvement Project (CIP) budget. To date, those mitigation projects have included fire station security, water/sewer infrastructure improvements and City Hall building rehabilitation. (County of Fresno, 2018).

Future Stormwater Drainage Demand and System Improvements

The 2016 Storm Fresno Metropolitan Flood Control District (FMFCD) Services Plan provides a comprehensive planning document to guide improvement and expansion of the City’s storm drainage system to meet current and future needs in a safe and reliable manner while maintaining compliance with all applicable regulations.

The FMFCD has finalized the design of the Dry Creek Extension Basin located near Brawley and Annadale Avenues. This will be a rural flood control basin located southwest of the City of Fresno. It will provide storage for floodwaters flowing through Dry Creek and other canals, which will provide groundwater recharge benefits. The initial design of the basin was for a 20-acre basin site which is fully excavated. The FMFCD added an adjacent 23-acre site to provide additional storage. This basin is being constructed by the District and is not part of the Federal Redbank and Fancher Creeks Project. (FMFCD, 2017).

The FMFCD has identified four primary groups of construction projects: (1) the Redbank-Fancher Creeks Flood Control Project; (2) District LCA enhancement projects; (3) new development projects; and (4) other routine District maintenance and construction projects. (FMFCD, 2017).

The Corps' Redbank-Fancher Creeks Project, completed in the summer of 1993, provides the points of control for the flows that will pass through the rural streams storm and flood conveyance system. Under the LCA with the Corps, the FMFCD is obligated to ensure proper functioning of the Redbank Fancher Creeks Project components. Through implementation of the rural streams program, the FMFCD will improve conveyance capacities of existing channels where necessary, restore obstructed and eradicated channels, and once adequate capacity is achieved, maintain appropriate project conveyance capabilities. These efforts will involve close coordination with private property owners and developers to obtain necessary channel easement dedications. These dedications preserve flooding rights-of-way and allow District access to the stream channels for operation and maintenance. (FMFCD, 2017).

As future development needs warrant, local drainage facilities will be added to augment the flood control facilities. The FMFCD will review new development plans to ensure appropriate design of channels according to the Rural Streams Design Manual, which is currently being developed by the District. Other routine District activities include construction, repair, and maintenance of flood control structures throughout the rural streams/flood control system. (FMFCD, 2017).

REGULATORY SETTING

Clean Water Act

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e); Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites": subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);

- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas": subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual State or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).
- Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

The California State Water Resources Control Board and RWQCBs enforce State of California statutes that are equivalent to or more stringent than the Federal statutes. RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters including the San Joaquin River, and other waters in the surrounding area. In the city the RWQCB is responsible for protecting surface and groundwater from both point and non-point sources of pollution. Water quality objectives for all of the water bodies within the City were established by the RWQCB and are listed in its Basin Plan.

National Pollutant Discharge Elimination System

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Federal Emergency Management Agency

Fresno County is a participant in the National Flood Insurance Program (NFIP), a federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Department of Water Resources

The Department of Water Resources' (DWR) major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources, planning, designing, constructing, operating, and maintaining the State Water Resources Development System, protecting and restoring the Sacramento-San Joaquin Delta, regulating dams, providing flood protection, assisting in emergency management to safeguard life and property, educating the public, and serving local water needs by providing technical assistance. In addition, the DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

> (a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:
>
> > (1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.
> >
> > (2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.
> >
> > (3) A person operating, or proposing to construct, an injection well.
>
> (b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.
>
> (c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

State Water Resource Control Board (State Water Board) Stormwater Strategy

The Stormwater Strategy is founded on the results of the Stormwater Strategic Initiative, which served to direct the State Water Board’s role in Stormwater resources management. The Stormwater Strategy developed guiding principles to serve as the foundation of the Stormwater program; identified issues that support or inhibit the program from aligning with the guiding principles; and proposed and prioritized projects that the Water Boards could implement to address those issues. The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Stormwater (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board’s Stormwater Program.

Stormwater Quality

The State Water Board adopted Order No. 2013-0001-DWQ in 2013, which requires that agencies regulate post-construction development (Provision E.12) through a number of different program elements. In response to this order, several permittees, including Clovis, and Fresno County collaborated together to develop the Fresno-Clovis Storm Water Quality Management Program, dated November 2013.

Fresno-Clovis Storm Water Quality Management Program (2013)

The Storm Water Quality Management Program (SWQMP) was developed pursuant to Order No. R5-2013-0080. The municipal NPDES stormwater permit (MS4 Permit) was issued to the Fresno Metropolitan Flood Control District (District), the cities of Fresno and Clovis, the County of Fresno (County), and the California State University at Fresno (CSUF) by the Central Valley Regional Water Quality Control Board (Regional Board) on May 31, 2013. The SWQMP represents the five-year management strategy for controlling the discharge of pollutants in stormwater and urban runoff from the Fresno-Clovis metropolitan area to the during the third Permit term (2013-2018).

The SWQMP includes specific pollution prevention and control practices for Fresno-Clovis urban drainage system planning, design, construction, and maintenance. The Program also includes public education to prevent stormwater pollution; specifies construction, industrial/commercial, municipal, and new development control practices; procedures to prevent and respond to illicit discharges and connections; monitoring to assess stormwater impacts on receiving waters; and program effectiveness assessments (PEA) to evaluate the effectiveness of best management practices (BMPs).

To address the core program objectives and targeted stormwater pollutants and to ensure compliance with MS4 Permit requirements, the SWQMP incorporates a series of control measures, performance standards, and implementation schedules that provide for a long-term, comprehensive, and multidisciplinary effort by the Permittees to continue to achieve water quality standards and protect beneficial uses of the San Joaquin River, creeks and canals.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region’s ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

City of Clovis General Plan

Policies: Public Facilities & Services Element

- Policy 1.6 Master plans. Periodically update water, recycled water, wastewater, and stormwater master plans and require all new development to be consistent with the current master plans.

Policies: Environmental Health Element

- Policy 1.1 Flood zone. Prohibit development within the 100-year flood zone and dam inundation areas unless adequate mitigation is provided against flood hazards. Participate in the National Flood Insurance Program.

Policies: Open Space & Conservation Element

- Policy 3.1 Stormwater management. Encourage the use of low impact development techniques that retain or mimic natural features for stormwater management.
- Policy 3.2 Stormwater pollution. Minimize the use of non-point source pollutants and stormwater runoff.
- Policy 3.3 Well water. Prohibit the use of new private wells in new development.

City of Clovis Municipal Code

The purpose and intent of Chapter 6.7, Urban Storm Water Quality Management and Discharge Control, is to ensure the health, safety, and general welfare of citizens, and protect and enhance the water quality of watercourses and water bodies in a manner pursuant to and consistent with the federal Clean Water Act (33 U.S.C. Section 1251 et seq.) by reducing pollutants in urban storm water discharges to the maximum extent practicable and by effectively prohibiting non-storm water discharges to the storm drain system.

Chapter 8.7, Planned Local Drainage Facilities and Improvements Development Requirements, Financing Mechanisms and Fees, was established due to the finding that the development of land substantially accelerates the concentration of surface and storm waters and that it is necessary to provide for the construction of and establish, and collect, fees to defray all or a part of the actual or the estimated cost of constructing planned local drainage facilities for the control and safe disposal of surface and storm waters from local drainage areas in order to promote and protect the public safety, peace, comfort, and convenience and the general welfare. Further, the Municipal Code also contains Chapter 8.12, Floodplain Management, which aims to promote the public health, safety, and general welfare of its citizenry through adequate floodplain and flood hazard management and mitigation.

Chapter 8.12 provides for floodplain management and regulates development in floodplains. A development permit must be obtained before construction or development within any area of special flood hazard. Permits require provisions for flood hazard reduction, including anchoring, flood-resistant materials, and construction methods to floodproof the structure.

Chapter 9.110 provides subdivision design and improvement requirements. Per Section 9.110.040, a grading plan is required to be submitted to and approved by the City Engineer prior to issuance of a subdivision-level building permit. Subdivisions are required to incorporate appropriate erosion and sediment control measures.

Chapter 9.28 contains landscaping standards and requires a landscape design plan, irrigation design plan, and soil analysis in order to reduce runoff and control soil erosion as part of the landscape documentation package.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-5: The proposed Project has the potential to require or result in the construction of new stormwater drainage facilities, the construction of which could cause significant environmental effects. (Less than Significant)

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

As shown on Figure 3.9-2, the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be **less than significant** and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

FMFCD will require lot coverage to be provided prior to submittal of improvement plans. The lot coverage is calculated by the District to include the front yard walkway, sidewalk walkway and the rear yard patio equaling an additional 6% of impervious area in addition to the City’s typical lot coverage calculation. This calculation cannot be calculated at this time given that building plans and lot specific landscaping and site improvements have not been prepared. This very detailed level of design would be performed at either the improvement plan or building plan phase of the project. Ultimately, FMFCD charges a drainage fee that is calculated commensurate with the lot coverage calculation.

FMFCD reviews all grading and improvement plans for consistency with the FMFCD Master Plan. This review ensures that grading does not have an adverse impact to major storm conveyance and to the passage of storm water to the adjacent roadways and existing storm drainage pipelines and inlets. They require all projects to provide the appropriate surface flowage easements or covenants for any portion of the development area that cannot convey storm water to the public right-of-way without crossing private property.

The initial review by FMFCD has indicated that the “Development Area” is currently located within FMFCD’s adopted Rural Master Plan Drainage Area “BY1.” The adopted Rural Master Plan drainage system is designed to serve the existing land uses of open space, range/pasture and rural residential housing densities ranging from 0 to 0.7 dwelling unit/acre (du/ac). FMFCD has indicated that the existing planned drainage facilities do not have capacity to serve the proposed higher urban density residential land use. FMFCD has indicated that the “Development Area” is required to mitigate the impacts of the increased runoff from the proposed higher density residential land use to the adopted rural planned rate. FMFCD indicated that the “Development Area” may either make improvements to the existing pipeline system to provide additional capacity or may use some type of onsite permanent peak reducing facility in order to match the adopted Rural Master Plan flow rates and eliminate any adverse impacts on the downstream drainage system. FMFCD requested that the grading Engineer contact the District as early as possible to review the proposed site grading for verification and acceptance of design prior to preparing a grading plan.

FMFCD noted that the construction of the Optional Master Plan Facilities and Optional Non-Master Plan Facilities (as shown on Exhibit No. 1 of their letter), will provide permanent drainage service to the portion of the “Development Area” located north of Heirloom Avenue. The construction of the Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, will provide permanent drainage service to the portion of the “Development Area” located south of Heirloom Avenue upon construction of facilities by in Tracts 6292 and 6344. If these optional facilities are not constructed, FMFCD recommends temporary facilities until permanent service is available.

FMFCD noted that the “Development Area” shall not block the historical drainage patterns of existing homes located within the parcels to the east and west side of the “Development Area.” The “Development Area” shall verify to the satisfaction of FMFCD that runoff from these areas has the ability to surface drain to adjacent streets or be collected into PER-3, as shown on Exhibit No. 1. Either a stub street, channel, or a combination of both shall be provided for those areas, as shown on Exhibit No. 1.

FMFCD noted that the “Development Area” must identify what streets will pass the major storm and provide calculations that show structures will have adequate flood protection. Based on historical drainage patterns, some of the streets located within the “Development Area” may need to be resized or reconfigured (including, but not limited to, streets that include traffic calming curbs) to pass larger event storms. FMFCD approval is not extended to street configuration. A drainage report indicating the path of the major storm flow and calculations confirming there is adequate protection of finished floors will be necessary.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD’s stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD’s requirements, the proposed Project would have a **less than significant** impact relative to this topic.

3.14.4 SOLID WASTE

ENVIRONMENTAL SETTING

The City Solid Waste Division coordinates the collection and disposal of solid waste generated by residential and commercial customers located within the City of Clovis. Private vendors, under City contract, collect waste from select commercial customers and recyclables and yard wastes from residential customers. (City of Clovis, 2014).

The City Solid Waste Division conducts all operations necessary to landfill City refuse in accordance with county, state, and federal requirements. The Clovis landfill is an active Class III landfill which accepts municipal solid waste that is currently permitted through the year 2066.

Community Cleanup Program provides single-family residents with a semiannual curbside removal of up to six cubic yards of non-hazardous residential waste. Eligible residents are permitted to place waste to be removed in front of the curb to their residence two weeks prior to their scheduled pick-up day. The program contributes to an overall cleaner community and discourages illegal dumping. (City of Clovis, 2014).

Waste Collection Services

The City of Clovis Public Utilities Department, and Solid Waste Division, oversee solid waste collection services for the Clovis area. Recycling and greenwaste collection in the City of Clovis is provided by a contract service with Republic Services. The Public Utilities Department works to meet commercial and residential demands in a low cost and environmentally conscious manor. The City of Clovis employs the “single stream” method of recycling in which all recyclable material (other than green waste) goes into the blue Recycling toter. (City of Clovis, 2022).

Waste Disposal Facilities

The City of Clovis is serviced by several landfills, but primarily by the City of Clovis Landfill and the American Avenue Disposal Site. In 2019, California Department of Resources Recycling and Recovery reports that the Clovis Landfill handled over 63,500 tons of waste, and the American Avenue Disposal Site saw over 11,500 tons of waste. (Cal Recycle, 2019).

CLOVIS LANDFILL

The Clovis Landfill is located at 15679 Auberry Road. The landfill has been in commission for several decades, and is consistently maintained by the City, and by BSK Associates; the City partners with BSK Associates to perform service tests that monitor landfill operations and impacts.

BSK’s environmental and geotechnical engineering services to the City at the Clovis Landfill date back to the mid-1970s with the preparation of a Landfill Master Plan, Design, Drainage, Liners and Seepage Control. Subsequent services included the installation of groundwater and soil gas monitoring network, monitoring identified releases of volatile organic compounds and the Evaluation Monitoring Program (EMP) was developed and implemented to investigate the extent of the problem. The site hydrogeology is complex; groundwater containing VOCs was found in fractured bedrock, metamorphic rock, decomposed metamorphic rock and alluvium. A creek at the base of the landfill effectively acts as a boundary to horizontal migration of VOCs. The extent of VOCs in groundwater has been defined. (BSK, 2022).

Additional issues confronting the City included excessive levels of methane at the landfill boundary, limited air space (active life) and shortage of cover material. To address these issues, BSK recommended in 1996 that a feasibility study be performed to evaluate the viability of reconstructing the unlined portion of the landfill (comprising about 20 acres with 2.5 million cubic yards of landfill materials). The feasibility study concluded that reconstruction would generate sufficient materials for daily cover needs, add an additional 15 years to the active life, and address landfill releases to groundwater through source elimination. Subsequent monitoring has identified concurrent declines in groundwater VOCs and in landfill gas methane concentrations. The landfill reclamation was completed in 2010 and extended the useful life of the landfill by an estimated 35 years. (BSK, 2022).

BSK currently performs the following Detection and Correction Action Monitoring Program tasks at the Clovis Landfill:

- Monthly sampling of landfill leachate
- Quarterly perimeter screening of methane monitoring wells
- Quarterly water level measurements
- Semi-annual groundwater monitoring
- Semi-annual monitoring of pan lysimeters/vadose zone
- Surface water sampling
- Preparation of Semi-Annual Monitoring Reports
- Five-Year Sampling for groundwater, leachate, and surface water
- Installation of groundwater monitoring wells

BSK also has provided the following services to Clovis Landfill:

- Evaluation Monitoring Program
- Sampling and Analysis Plan
- Non-Water Release Corrective Action Plan
- Water Release Corrective Action Financial Assurance Plan
- Subsurface Drainage Collection Design Consultation and Construction Oversight
- Liner Construction Earthwork Observation and Field Testing
- Geologic and Hydrogeologic Investigations
- Storm Water Pollution Prevention Plans
- Investigations of Subsurface Drainage Discharge Treatment and Reuse
- Soil Gas Monitoring Well Destruction

(BSK, 2022).

Solid Waste Generation Rates and Volumes

The California Department of Resources Recycling and Recovery (CalRecycle) tracks and monitors solid waste generation rates on a per capita basis. Per capita solid waste generation rates and total annual solid waste disposal volumes for the City of Clovis between 2010 and 2020 are shown in Table 3.14-9. As shown, the per capita waste generation rate decreased from 4.1 to 4.0 lbs./person/day over the 10-year (2010-2020) period. In addition, the total annual disposal tonnage in Clovis increased by 14,865 tons over the 2010-to-2020-time span. With the passage of SB 1016, per capita disposal rate is used to determine the diversion progress of a city and not the jurisdictional diversion rates. Therefore, a population increase resulting in the generation of more overall city waste does not affect the jurisdiction's ability to meet its waste goals.

TABLE 3.14-9: SOLID WASTE GENERATION RATES

YEAR	WASTE GENERATION RATE (LBS./PERSON/DAY)	POPULATION	TOTAL DISPOSAL TONNAGE (TONS/YEAR)
2010	4.10	95,480.00	71,202.74
2011	3.40	97,218.00	60,354.45
2012	3.30	98,611.00	60,132.17
2013	3.00	99,983.00	53,954.32
2014	3.20	102,188.00	59,098.66
2015	3.50	104,339.00	66,168.03
2016	3.70	108,109.00	73,642.65
2017	3.70	110,532.00	74,994.56
2018	3.90	113,895.00	80,919.57
2019	3.70	117,003.00	77,958.05
2020	4.00	118,741.00	86,067.32
2021	4.40	121,667.00	97,186.92

SOURCE: CAL RECYCLE, 2021

Table 3.14-10 presents the City's waste disposal rate targets relative to the actual rates achieved on a per capita basis. It is noted that the City is surpassing waste generation rate targets for over a decade. In accordance with AB 939, which required municipalities to aggressively pursue Municipal Solid Waste (MSW) source reduction and recycling, the City continues to meet and exceed all AB 939 goals. The various solid waste management actions adopted by the City include, but are not limited to, recycling and yard waste programs for residents and businesses, public education and public outreach awareness events, and school recycling and composting.

TABLE 3.14-10: CITY OF CLOVIS WASTE DISPOSAL RATE TARGETS (POUNDS PER PERSON/DAY)

YEAR	*POPULATION*		*EMPLOYMENT*	
	TARGET	*ACTUAL*	*TARGET*	*ACTUAL*
2010	4.7	4.10	15.5	15.80
2011	4.7	3.40	15.5	12.30
2012	4.7	3.30	15.5	12.30
2013	4.7	3.00	15.5	10.90
2014	4.7	3.20	15.5	10.40
2015	4.7	3.50	15.5	11.40
2016	4.7	3.70	15.5	12.10
2017	4.7	3.70	15.5	11.90
2018	4.7	3.90	15.5	12.90
2019	4.7	3.70	15.5	12.00
2020	4.7	4.00	15.5	13.20
2021	4.7	4.40	15.5	15.10

SOURCE: CAL RECYCLE, 2021.

Landfill Capacity

As stated, solid waste from Clovis is primarily landfilled at the City of Clovis Landfill. Clovis Landfill is currently permitted to accept no more than 2,000 tons per day. The allotted disposal area is 76.3 acres, and it is designed to hold 7.8 million cubic yards of inert or designated wastes. The remaining capacity is 7.74 million cubic yards. At that time the capacity is reached, the City can utilize other landfills and recycling facilities within the greater Fresno-Clovis area. Other landfills used in the region include Fairmead, Avenal, Rice Road Recycle and Jefferson Avenue Station, among others. All landfills in the region are summarized in Table 3.14-11 below. Table 3.14-12 summarizes the City of Clovis' disposal rate targets, as identified by Cal Recycle.

TABLE 3.14-11: CITY OF CLOVIS LANDFILL SUMMARY

LANDFILL	*LOCATION*	*MAXIMUM DAILY THROUGHPUT (TONS/DAY)*	*REMAINING CAPACITY (CUBIC YARDS)*	*ANTICIPATED CLOSURE DATE*
Clovis Landfill	Clovis	2,000	7.74 million	2066
American Avenue Disposal Site	Kerman	2,200	29.39 million	2031
Fairmead	Madera	1,100	5.55 million	2028
Avenal Regional Landfill	Avenal	6,000	28.9 million	2056
Rice Road Recycling & Transfer Station	Fresno	400	--	--
Jefferson Avenue Transfer Station	Fresno	1,250	--	--

SOURCE: CAL RECYCLE, 2022B.

REGULATORY SETTING

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the current Act governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA was an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency (EPA) to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the Federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the Federal program.

California Integrated Waste Management Act (AB 939 and SB 1322)

The California Integrated Waste Management Act of 1989 (AB 939 and SB 1322) requires every city and county in the state to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The purpose of AB 939 and SB 1322 is to “reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible.” The term “integrated waste management” refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal.

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a “model ordinance” relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include “adequate, accessible, and convenient areas for collecting and loading recyclable materials.” For subdivisions of single-family detached homes, recycling areas are required to serve only the needs of the homes within that subdivision.

California Green Building Standards Code (CALGreen)

CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects.

California Mandatory Commercial Recycling Law (AB 341)

Assembly Bill (AB) 341 directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. The final regulation was approved by the Office of Administrative Law on May 7, 2012. The purpose of AB 341 is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California.

Beginning on July 1, 2012, businesses have been required to recycle, and each jurisdiction has implemented programs that include education, outreach, and monitoring. Jurisdictions were required to start reporting on their 2012 Electronic Annual Report (due August 1, 2013) on their initial education, outreach, and monitoring efforts, and, if applicable, on any enforcement activities or exemptions implemented by the jurisdiction.

In addition to Mandatory Commercial Recycling, AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020. This is not written as a 75 percent diversion mandate for each jurisdiction. The 50 percent disposal reduction mandate still stands for cities, counties, and State agencies (including community colleges) under AB 939. CalRecycle continues to evaluate program implementation as it has in the past through the Annual Report review process for entities subject to either AB 939.

Assembly Bill 1826 Mandatory Commercial Organics Recycling

In October 2014 Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units (please note, however, that multi-family dwellings are not required to have a food waste diversion program). Organic waste (also referred to as organics) means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law phases in the mandatory recycling of commercial organics over time, while also offering an exemption process for rural counties. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Starting on January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services. If CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate 2 cubic yards or more of commercial solid waste per week. Additionally, certain exemptions may no longer be available if this target is not met.

SB 1374 (Construction and Demolition Waste Materials Diversion)

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the CIWMB to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

AB 2176 (Montanez, Chapter 879, Statues of 2004)

This law requires the largest venue facilities and events (as defined) in each city and county to plan and implement solid waste diversion programs, and annually report the progress of those upon the request of their local government. In turn, local jurisdictions must report to the CIWMB waste diversion information for the top 10 percent of venues and events by waste generation.

A large event is defined as:

1. Serves an average of more than 2,000 individuals per day of operation (both people attending the event and those working at it—including volunteers—are included in this number); and
2. Charges an admission price or is run by a local agency.

The bill specifically includes public, nonprofit, or privately owned parks, parking lots, golf courses, street systems, or other open space when being used for an event, including, but not limited to, a sporting event or a flea market in addition to events that meet both of the above.

A large venue is defined as:

- A permanent facility that annually seats or serves an average of more than 2,000 individuals within the grounds of the facility per day of operation (both people attending the event and those working at it—including volunteers too—are included in this number).

Venues include, but are not limited to airports, amphitheaters, amusement parks, aquariums, arenas, conference or civic centers, fairgrounds, museums, halls, horse tracks, performing arts centers, racetracks, stadiums, theaters, zoos, and other public attraction facilities.

Senate Bill 1383 Short-Lived Climate Pollutants: Organic Waste Methane Emissions Reductions

In September 2016, Governor Brown signed SB 1383, establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. The bill codifies the California Air Resources Board's Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605, in order to achieve reductions in the statewide emissions of short-lived climate pollutants. Actions to reduce short-lived climate pollutants are essential to address the many impacts of climate change on human health, especially in California's most at-risk communities, and on the environment.

As it pertains to solid waste, SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

City of Clovis General Plan

Policies: Community Facilities Element

- Policy 2.1 Minimize landfill disposal of solid waste. Promote solid waste source reduction, reuse, and recycling; composting; and the environmentally-safe transformation of wastes.
- Policy 2.2 Waste diversion rate. Meet the state's current and future waste diversion goals through the city's recycling and diversion programs.
- Policy 2.3 Expanded recycling. Increase recycling by commercial, industrial, and multifamily generators.
- Policy 2.4 Green and household hazardous materials waste. Encourage citywide participation in green waste reduction and household hazardous waste disposal programs.
- Policy 2.5 Clovis landfill. Maintain at least 15 years of ongoing landfill capacity.
- Policy 2.6 Solid waste facility encroachment. Protect existing or planned solid waste facilities from encroachment by incompatible land uses that may be allowed through discretionary land use permits or changes in land use or zoning designations.

Clovis Municipal Code

Municipal Code Chapter 3.10 Development Impact Fees, the purpose of this chapter is to establish a uniform set of procedures applicable to AB 1600 development impact fees that are adopted pursuant to the authority set forth in Government Code Section 66000 et seq. and the Municipal Code. These procedures are intended to apply to all AB 1600 development impact fees adopted by the City regardless of whether there is an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee. If there is a conflict between this chapter and an existing similar provision in the applicable chapter or section of the Municipal Code establishing the fee, the provisions of this chapter shall control.

The Municipal Code regulates garbage and trash operations through Chapter 6.3, Garbage and Rubbish. This Chapter allows the City monitor and regulate all garbage, rubbish, greenwaste, and recyclables, the containers the materials are collected in, and the collection process itself. This Chapter establishes collection and collection points (Chapter 6.3.06) and collection rates (Chapter 6.3.08). Chapter 6.3.1, Recycling and Diversion of Construction and Demolition Debris, and Chapter 6.3.2, Mandatory Organic Waste and Disposal Reduction Regulations, are also contained in this Title, and further authorize the City to maintain public services.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with Utilities if it will:

- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; and/or
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-6: The proposed Project has the potential to be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs and comply with federal, State, and local statutes and regulations related to solid waste. (Less than Significant)

As previously described, permitted maximum disposal at the Clovis Landfill (SWIS Number 10-AA-0004) is 2,000 tons per day. The total permitted capacity of the landfill is 7.8 million cubic yards, of which, 7.74 million cubic yards remain. This landfill has an expected cease operation date in the year 2066. Additionally, the American Avenue Landfill has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 29,358,535 cubic yards, with an estimated closure date of August 31, 2031. As noted previously, the vast majority of waste disposed from the City of Clovis went to Clovis Landfill.

The City already utilizes the American Avenue Disposal Site, Avenal Regional Landfill, and Fairmead Solid Waste Disposal Site; in 2019 Clovis disposed of 11,586 tons to the American site, 358 tons to the Avenal site and 1,956 tons to the Fairmead site. (Cal Recycle, 2022C, D, E).

The Avenal Regional Landfill has the furthest operation date; the landfill is expected to operate until March of 2056. Avenal has a remaining capacity of 28,900,000 cubic yards, and has a current maximum permitted throughput of 6,000 tons per day.

New residential land uses in the Development Area of the Project site would increase the amount of solid waste generated by residents. The increase in growth and development as a result of the implementation of the proposed Project could result in an increase of solid waste to transfer stations and landfills, and could contribute to an increased demand for solid waste services throughout the City. Solid waste generated by the proposed Project was estimated based on CalRecycle generation rate estimates by use. Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[1]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid

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[1] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

waste generated by the proposed Project is estimated to be 3.7 tons per day. This equates to roughly 0.185 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2066 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a **less than significant** impact.

3.14.5 ENERGY & TELECOMMUNICATIONS

ENVIRONMENTAL SETTING

Pacific Gas and Electric (PG&E) provides electrical service to the City of Clovis, its sphere of influence, and Fresno County. Electrical service is supplied by underground and overhead lines routed through three substations in the greater Clovis area. Telecommunications and phone services are provided by AT&T, and cable services are provided by Comcast. The hierarchy of establishing electrical power lines from generation stations to customers is as follows: transmission distribution; sub-transmission; and service. PG&E provides gas to customers through plastic and steel underground lines. The project site will not provide natural gas to the site. Residents not serviced by PG&E use propane fuel (City of Clovis, 2014).

REGULATORY SETTING

California Electrical Code

The California Electrical Code is codified in Title 24, CCR, Part 3. The Electrical Code contains regulations including, but not limited to, electrical materials, electrical wiring, overcurrent protection, grounding, and installation.

City of Clovis Municipal Code

Title 7, Public Works, of the Clovis Municipal Code contains Chapter 7.3, Underground Utility Districts, and Chapter 7.5, Underground Wiring. Chapter 7.3 regulates underground utility districts for the purposes of public necessity, health, safety, and welfare. Chapter 7.5 states that all utility facilities (including, but not limited to, electrical, communication and cable television lines) located within the boundaries of a development project property or to be installed in and for the purpose of supplying service to any development project shall be placed underground; and that the developer shall be responsible for compliance with the provisions of this section. It shall be the responsibility of the developer to make the necessary arrangements with the serving utility owner for the installation of an underground system, owned and operated by the utility owner. The developer shall submit satisfactory evidence thereof prior to the acceptance and approval of the development project.

The City officially adopts the California Electrical Code, and subsequent amendments, in Chapter 8.2, Electrical Code.

Chapter 9.42 Wireless telecommunications facilities, provides regulations regarding the location and design of wireless communications facilities, and intends to ensure that the installation of wireless communication facilities will not be detrimental to the City’s public health, safety, or welfare. It is the intention of this chapter to treat wireless communications facilities, including antennas, in the same way that other mechanical equipment (e.g., air conditioners) are treated, and to require proper screening and architectural compatibility.

City of Clovis General Plan

Policies: Public Services & Utilities Element

- Policy 1.1 New Development. New development shall pay its fair share of public facility and infrastructure improvements.

Policies: Open Space & Conservation Element

- Policy 3.5 Energy and water conservation. Encourage new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code.
- Policy 3.6 Renewable Energy. Promote the use of renewable and sustainable energy sources to serve public and private sector development.
- Policy 3.7 Construction and design. Encourage new construction to incorporate energy efficient building and site design strategies.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded electrical, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-7: The proposed Project has the potential to require or result in the construction of new electrical, or telecommunications facilities, the construction of which could cause significant environmental effects. (Less than Significant)

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The potential environmental effects associated with construction and operation of the proposed Project, including the installation of the proposed electrical improvements in the roadway rights-of-way to serve the proposed development, are analyzed throughout this EIR under each environmental topical area. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a **less than significant** impact.

OTHER CEQA-REQUIRED TOPICS 4.0

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) to evaluate a project's effects in relationship to broader changes occurring, or that are foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents a discussion of CEQA-mandated analysis for cumulative impacts, significant irreversible effects, and significant and unavoidable impacts associated with the proposed Project.

4.1 CUMULATIVE SETTING AND IMPACT ANALYSIS

INTRODUCTION

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the proposed Project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

> *…the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

1) Either:

    (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

    (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

CUMULATIVE SETTING

The cumulative setting uses growth projections listed in the City of Clovis Municipal Services Review (2019), and State of California Department of Finance population forecast statistics. Table 4.0-1 shows growth projections.

TABLE 4.0-1: GROWTH PROJECTIONS

CALENDAR YEAR	*ESTIMATED POPULATION (CLOVIS)*	*ESTIMATED POPULATION (FRESNO COUNTY)*	*ESTIMATED POPULATION (CALIFORNIA)*
2025	136,350	1,053,955	40,808,001
2030	145,050	1,096,638	41,860,549
2035	153,490	1,1235,837	42,718,403
2040	161,580	1,170,525	43,353,414

SOURCES: FRESNO LAFCO – CITY OF CLOVIS MUNICIPAL SERVICE REVIEW AND SPHERE OF INFLUENCE UPDATE (2019), STATE OF CALIFORNIA DEPARTMENT OF FINANCE – POPULATION FORECAST PROJECTIONS (2020).

CUMULATIVE EFFECTS OF THE PROJECT

Cumulative settings are identified under each cumulative impact analysis. Cumulative settings vary because the area that the impact may affect is different. For example, noise impacts generally only impact the local surrounding area because noise travels a relatively short distance, while air quality impacts affect the whole air basin as wind currents control air flow and are not generally affected by natural or manmade barriers which would affect noise. Cumulative Project impacts are addressed and summarized below.

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. State CEQA Guidelines 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant projects taking place over a period of time (State CEQA Guidelines 15355[b]). Cumulative impact analysis may be less detailed than the analysis of the project's individual effects (State CEQA Guidelines 15130[b]).

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. This EIR uses the projection approach for the cumulative analysis and considers the development anticipated to occur upon buildout of the various General Plans in the area.

Project Assumptions

The proposed Project's contribution to environmental impacts under cumulative conditions is based on full buildout of the Project site. See Chapter 2.0, Project Description, for a complete description of the proposed Project.

Cumulative Impacts

Some cumulative impacts for issue areas are not quantifiable and are therefore discussed in general terms as they pertain to development patterns in the surrounding region. Exceptions to this are traffic, utilities, noise and air quality (the latter two of which are associated with traffic volumes), which may be quantified by estimating future traffic patterns, pollutant emitters, etc. and determining the combined effects that may result. In consideration of the cumulative scenario described above, the proposed Project may result in the following cumulative impacts.

AESTHETICS AND VISUAL RESOURCES

The cumulative setting for aesthetics is the City of Clovis and surrounding areas of Fresno County.

Impact 4.1: Cumulative Degradation of the Existing Visual Character of the Region (Less than Significant and less than Cumulatively Considerable)

As described in Section 3.1, Aesthetics and Visual Resources, development of the proposed Project would involve the annexation of 77 acres (Development Area) into the City of Clovis to develop up to 605 single family detached units, open space totaling approximately 5.54 acres including, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements.

In order to reduce the visual impacts of the development, development within the Project site is required to be consistent with the General Plan and the Clovis Zoning Ordinance, which includes design standards. The design standards will ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design requirements will produce a project that will be internally cohesive, while maintaining an aesthetic feel similar to that of the surrounding uses.

The loss of the visual appearance of the agricultural land on the site will change the visual character of the Project site in perpetuity, which some people are expected to view as a loss of a visually attractive amenity. Compliance with the requirements within the General Plan and Zoning Code would reduce visual impacts to the greatest extent feasible; and the change of agricultural land to a landscaped subdivision is not necessarily a degrading of visual character. The General Plan EIR finds that new development would have a less than significant impact on aesthetics.

Under cumulative conditions, buildout of the General Plan for Clovis and the surrounding jurisdictions could result in changes to the visual character and quality of the City of Clovis through development of undeveloped areas and/or changes to the character of existing communities. Development of the proposed Project, in addition to other future projects in the area, would change the existing visual and scenic qualities of the City. However, the City of Clovis has adopted specific landscape and design standards to enhance the visual appearance of the Project site and adjacent areas. As such, this is a **less than significant** cumulative impact. As such, impacts relative to degradation of visual character would be a **less than cumulatively considerable contribution** and no mitigation is required.

Impact 4.2: Cumulative Damage to Scenic Resources within a State Scenic Highway (Less than Significant and Less than Cumulatively Considerable)

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no “eligible” highway segments in the Project vicinity that may be included in the State Scenic Highway system. As such, this is a **less than significant** cumulative impact. As such, impacts relative to scenic resources would be a **less than cumulatively considerable contribution** and no mitigation is required.

Impact 4.3: Cumulative Impact on Light and Glare (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. While implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare, the impacts would not be eliminated entirely, and the overall level of light and glare in the Project site would increase in general as urban development occurs.

Overall, the proposed Project would introduce new sources of daytime and nighttime lighting within the Project site that do not currently exist. However, it is noted there are no specific features within the proposed Project that would create unusual light and glare. Light sources from the proposed Project can have an adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, light sources can create light spillover impacts on surrounding land uses in the absence of a lighting plan that includes photometrics of the lighting. Any new lighting associated with development of the proposed Project would be pedestrian-scale lighting and the fixtures would be consistent with the style and technical specifications approved by the City, including compliance with the City's light and glare regulations under Section 9.22.050 of the Clovis Development Code, which requires that light be shielded so that light does not spill onto adjacent properties. The City's existing requirements require a lighting plan to be submitted to the City for review and approval for the improvement plans, as well as for the building plans. All proposed outdoor lighting is required to meet applicable City standards regulating outdoor lighting, including 9.22.050 Exterior light and glare of the City's Development code, in order to minimize any impacts resulting from outdoor lighting on adjacent properties. Implementation of the existing City standards would reduce potential impacts associated with nighttime lighting and light spillage onto adjacent properties to a less than significant level.

Future projects within Clovis and Fresno County would be subject to the light and glare standards established by the individual jurisdictions. These regulations are designed to minimize potential light and glare impacts of new development. Implementation of these regulations would ensure that future projects minimize their potential cumulative light and glare impacts resulting in a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to nighttime lighting and daytime glare would be a **less than cumulatively considerable contribution**.

AGRICULTURAL RESOURCES

The cumulative setting for agriculture and forest resources is all of Fresno County. According to the Department of Conservation, the total acreage of crop land in the county is approximately 1,355,142 acres. The gross value of agricultural production in Fresno County for 2021 was $8,085,567,000 which represents an increase of $117,167,000 or 1.47% above the previous year's revised total of $7,968,400,000.

Impact 4.4: Cumulative Impact on Agricultural Resources *(Less than Significant and Less than Cumulatively Considerable)*

The Project site is not under a Williamson Act Contract. However, as described in Section 3.2, development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map and as shown on Figure 3.2-1, to nonagricultural use. After looking at site-specific characteristics more closely for the Project site, it is noteworthy that the Department of Conservation's designations do not accurately and fully consider site specific characteristics such as the existence of a hardpan within the upper horizon of the soil profile, the project size, surrounding urban uses, lack of agricultural protection zones in the zone of influence, lack of water resources, and ongoing economic feasibility of agricultural operations due to other factors. To reconcile this inaccuracy and analyze the site-specific characteristics more fully, the Clovis General Plan calls for the use of the Land Evaluation and Site Assessment (LESA) to evaluate the significance of the agricultural conversion. It is noted that the LESA model was developed by the Department of Conservation, which is the same agency that published the 2020 Important Farmland's Map.

The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project is documented on the LESA scoring sheets in Appendix B. The proposed Project has a final LESA score of 50.50, which is considered to be a significant impact only if the Land Evaluation and Site Assessment sub scores are each greater than or equal to 20 points. The proposed Project has a sub score of 32.50 for the Land Evaluation and a sub score of 18.0 for the Site Assessment, which means the conversion of the land on the Project site is not considered significant according to the California Department of Conservation's established thresholds.

After evaluating the site-specific soil characteristics, project size, surrounding uses, agricultural protection zones, water resources availability, and ongoing economic feasibility of agricultural operations utilizing the LESA Model, it was determined that the conversion of the land on the Project site is not a significant impact. Therefore, implementation of the proposed Project would have a **less than significant** impact relative to this topic and no mitigation is required. As such, impacts to agricultural resources would be a **less than cumulatively considerable contribution**.

AIR QUALITY

The cumulative setting for air quality impacts is the San Joaquin Valley Air Basin (SJVAB), which consists of eight counties, stretching from Kern County in the south to San Joaquin County in the north. The SJVAB is bounded by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south.

Impact 4.5: Cumulative Impact on the Region's Air Quality (Less than Significant and Less than Cumulatively Considerable)

Under buildout conditions in Fresno County, the SJVAB would continue to experience increases in criteria pollutants and efforts to improve air quality throughout the basin would be hindered. As described in Section 3.3, Fresno County has a State designation Attainment or Unclassified for all criteria pollutants except for ozone, PM_{10} and $PM_{2.5}$. Fresno County has a national designation of either Unclassified or Attainment for all criteria pollutants except for Ozone and $PM_{2.5}$. Table 3.3-2 in Section 3.3 presents the state and national attainment status for Fresno County.

As discussed under Impact 3.3-1 in Section 3.3, the SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. The SJVAPCD has established operations related emissions thresholds of significance as follows: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), 27 tons per year of sulfur oxides (SO_x), 15 tons per year PM_{10}, and 15 tons per year $PM_{2.5}$.

As shown in Table 3.3-6, operational emissions would not exceed the SJVACPD thresholds of significance for criteria pollutants. Additionally, as shown in Table 3.3-7, construction emissions would not exceed the SJVACPD thresholds of significance for criteria pollutants. As such, development of the proposed Project would have a **less than significant** and **less than cumulatively considerable contribution**.

BIOLOGICAL RESOURCES

The cumulative setting for biological resources includes the Project site and the greater Fresno County region. Development associated with implementation of the local General Plan(s) would contribute to the ongoing loss of natural and agricultural lands in Fresno County, including the Project site. Cumulative development would result in the conversion of existing habitat to urban uses. The local General Plan(s), in addition to regional, State and federal regulations, includes policies and measures that mitigate impacts to biological resources associated with General Plan buildout.

Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special Status Species (Less than Significant and Less than Cumulatively Considerable)

Under cumulative conditions, buildout of the General Plan(s) within Fresno County will result in impacts to biological resources in the cumulative area through new and existing development. The General Plan(s) includes policies that are designed to minimize impacts to the extent feasible.

As described in Section 3.4, Biological Resources, construction in the Project site has the potential to result in impacts to special-status species in the region. Although there has been no documented sighting within the immediate area in, or near the Project site, the Project site provides potential habitat for several species, including those discussed in Section 3.4.

Mitigation Measure 3.4-1 requires measures to avoid or minimize impacts on other protected bird species that may occur on the site. In addition, Mitigation Measure 3.4-2 requires that, prior to grading, the Project applicant is required to conduct a survey of the area to be graded for bat roosts, and if present, the Project applicant shall implement the following measures to avoid or minimize impacts on special-status bats.

Implementation of Mitigation Measure 3.4-1 and Mitigation Measure 3.4-2 in Section 3.4 would reduce potentially cumulative impacts to a **less than significant** level. As such, impacts to biological resources would be a **less than cumulatively considerable contribution**.

CULTURAL AND TRIBAL RESOURCES

The geography of cultural resources impact can be defined by region, by political subdivision or by the geography of the cultural resources present in an area, where sufficient inventory data is available to define it. The cumulative setting for cultural resources includes all of the Fresno County. There are extensive cultural sites located in the region.

Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural and Tribal Resources (Less than Significant and Less than Cumulatively Considerable)

Cumulative development anticipated in the City of Clovis, including growth projected by adopted future projects, may result in the discovery and removal of cultural resources, including archaeological, paleontological, historical, and Native American resources and human remains. As discussed in Section 3.5, Cultural and Tribal Resources, no historic period resources were previously recorded in the Development Area.

Any previously unknown cultural resources which may be discovered during development of the proposed Project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of the mitigation measures provided in Section 3.5, the proposed Project is not anticipated to considerably contribute to a significant reduction in cultural resources in the region.

All future projects in the regional vicinity would be subject to their respective General Plans (e.g. City of Clovis, and Fresno County), each of which have policies and measures that are designed to ensure protection of undiscovered cultural resources. In addition, all discretionary projects in these jurisdictions would require environmental review per regulations established in CEQA.

development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to cultural resources would result in a **less than cumulatively considerable contribution**.

GEOLOGY AND SOILS

Impacts related to geology and soils are not inherently cumulative. Geology and soils concerns are related to risks, hazards or development constraints that are largely site-specific. However, seismic hazards are regional, and management of seismic hazards is vested with the local planning and building authority. For these reasons, the potential for cumulative geology and soils impacts are considered in the context of the City of Clovis and vicinity.

Impact 4.8: Cumulative Impact on Geologic and Soils Resources (Less than Significant and Less than Cumulatively Considerable)

As discussed in Section 3.6 Geology and Soils, development of the proposed Project has limited potential for liquefaction, liquefaction induced settlement, and lateral spreading. However, mitigation measures provided in Section 3.6 ensure this impact will be less than significant. While the City is not within an area known for its seismic activity, there will always be a potential for groundshaking caused by seismic activity anywhere in California, including the Project site. Seismic activity could come from a known active fault s in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Additionally, the City of Clovis has incorporated numerous policies relative to seismicity to ensure the health and safety of all people. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level.

Geologic and soils impacts tend to be site-specific and Project-specific. With the mitigation measures presented in Section 3.6, development of the proposed Project would not result in increased risks or hazards related to geologic conditions in the cumulative setting area, nor would it result in any off-site or indirect impacts. Development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to geologic and soil resources would result in a l**ess than cumulatively considerable contribution**.

GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

The cumulative setting for greenhouse gas emissions and climate change impacts for this analysis is Fresno County, which is the boundary for the California Air Resources Board's regional greenhouse gas emissions reduction targets.

Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions (Less than Significant and Less than Cumulatively Considerable)

Greenhouse gas emissions from a single Project will not cause global climate change; however, greenhouse gas emission from multiple projects throughout a region or state could result in a cumulative impact with respect to global climate change.

In California, there has been extensive legislation passed with the goal of reducing greenhouse gas emissions. The legislative goals are as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

As presented in the table, short-term construction emissions of GHGs are estimated at a maximum of approximately 776.8 MT CO_2e per year. As shown in the following table, the annual mitigated GHG emissions associated with the proposed Project would be approximately 5,071 MT CO_2e. Consistent with the population estimate provided by LSA in the Transportation Impact Analysis for the Project, the proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[1] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in the 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[2], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

Therefore, development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to greenhouse gas emissions would result in a l**ess than cumulatively considerable contribution**.

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[1] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[2] The amortization period used for this calculation is 30 years.

Impact 4.10: Cumulative Impact on the Inefficient, Wasteful, or Unnecessary Use of Energy Resources (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the threshold as described by the *CEQA Guidelines*. Therefore, development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to energy resources would result in a l**ess than cumulatively considerable contribution**.

HAZARDS AND HAZARDOUS MATERIALS

The cumulative context for the analysis of cumulative hazards and human health impacts Fresno County, including all cumulative growth therein, as represented by full implementation of each respective General Plan (i.e., Clovis and Fresno County). As discussed in Section 3.8 Hazards and Hazardous Materials, development of the proposed Project would not result in any significant impacts related to this environmental topic with the implementation of the mitigation measures provided in Section 3.8.

Impact 4.11: Cumulative Impact Related to Hazards and Hazardous Materials (Less than Significant and Less than Cumulatively Considerable)

The proposed Project, in conjunction with cumulative development in the region, would include areas designated for a variety of uses as defined by the applicable General Plan. Cumulative development would include continued operation of, or development of, new facilities as allowed under each land use designation. New development would inevitably increase the use of hazardous materials within the region, resulting in potential health and safety effects related to hazardous materials use. For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers). Hazard-related impacts tend to be site-specific and Project-specific. The Project site is not associated with any existing hazardous materials spills; however, there are numerous areas throughout the County where hazardous conditions are present.

Development of the proposed Project would not result in significant increased risks of hazards in the cumulative setting area, nor would it result in any significant off-site or indirect impacts. Mitigation measures have been included to reduce the risk of on-site hazards associated with the use of on-site hazardous materials. Development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to hazards and hazardous materials would result in a **less than cumulatively considerable contribution**.

HYDROLOGY AND WATER QUALITY

Potential cumulative issues associated with surface waters can be addressed on a watershed basis, or in the case of groundwater, in the context of a groundwater basin. Because water resources are highly interconnected, the cumulative setting is based on Fresno County, which is located in the Tulare Lake Hydrological Region, which covers about 16,800 square miles and includes all of Kings and Tulare counties and most of Fresno and Kern counties. Cumulative development in this region, including the proposed Project, would impact the water quality and hydrological features of the Tulare Lake Hydrologic Region. Clovis is underlain by the Kings Groundwater Subbasin. The Kings Subbasin is bounded on the north by the San Joaquin River, on the west by the Delta-Mendota and Westside Subbasins, the south by the Kings River South Fork and the Empire West Side Irrigation District, and on the east by the Sierra Nevada foothills. Any matter that may affect water quality draining from the Project site will eventually end up in the Delta or within the groundwater basin.

Impact 4.12: Cumulative Increases in Peak Stormwater Runoff from the Project site (Less than Significant and Less than Cumulatively Considerable)

Development of the proposed Project would increase the amount of impervious surfaces in the Project site, which could increase peak stormwater runoff rates and volumes on and downstream on the Project site. However, the proposed Project includes an extensive system of on-site stormwater collection facilities to accommodate the increased stormwater flows that would originate in the Project site.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control

Board Requirements (SWRCB), City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of the FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a **less than significant** impact relative to this topic. As such, impacts related to stormwater runoff would result in a **less than cumulatively considerable contribution**.

Impact 4.13: Cumulative Impacts Related to Degradation of Water Quality (Less than Significant and Less than Cumulatively Considerable)

The San Joaquin River is specifically listed by the Central Valley Regional Water Quality Control Board (CVRWQCB) as an impaired water body due to mercury under the Clean Water Act. Mercury is a sediment-based pollutant that can be released into the water column during various in-water construction activities (e.g., construction of the storm drain outfall) that may disturb the sediment and cause turbidity. As a result, such activities may increase the likelihood of mercury exposure to the public and wildlife that utilize the San Joaquin River.

In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the RWQCB as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB.

The ongoing operational phase of the proposed Project (all phases) requires discharge of stormwater into the on-site detention basins, which would ultimately flow into the FMFCD system. The discharge of stormwater must be treated through BMPs prior to its discharge. The standards and regulations contained above would ensure that BMPs are implemented to reduce the amount of pollution in stormwater discharged from the Project site into the FMFCD system. Storm water drainage is managed through the implementation of BMPs to the extent they are technologically achievable to prevent and reduce pollutants. The City requires reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. The management of water quality through BMPs is intended to ensure that water quality does not degrade to levels that would violate water quality standards.

The use of BMPs is intended to treat runoff close to the source during the construction and long-term operational phase of the Project to reduce stormwater quality impacts. The required erosion control measures are existing regulatory requirements. Development of proposed Project would have a **less than significant** impact relative to this topic. As such, impacts related to water quality would result in a **less than cumulatively considerable contribution**.

Impact 4.14: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement, significantly reduce infiltration capacity and increase surface water runoff.

The infiltration rate of the soils on the Project site ranges from low to high. As indicated in the Geotechnical Report (Krazan & Associates, 2019), cemented silty sand and silty sand with trace clay, locally referred to as "hardpan," were encountered in several of the borings at the Project site. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

The Project site is located in the Kings Groundwater Subbasin. As previously stated, the Kings Subbasin is recharged by water from sources including streams, percolation of rainfall and irrigation water, inflow from other groundwater basins, and intentional recharge at numerous facilities. Intentional recharge is conducted in recharge ponds and on some farm fields with compensation to landowners. The hardpan encountered on the Project site generally does not allow for a high infiltration rate. While the proposed Project would result in an increase in the amount of impervious surfaces within the Project site when compared to existing conditions, it is not anticipated that the proposed development would interfere with groundwater recharge, as much of the groundwater recharge in the basin occurs in the sand and gravels along the San Joaquin River from the Sierra Nevada snowmelt flowing downstream.

Water Supply, including any new demand on groundwater, is fully discussed in Section 3.14 Utilities and Services Systems. The Kings sub basin groundwater sustainability plan GSP has been accepted and approved to be in compliance by the Department of Water Resources. The proposed Project does not conflict with this GSP.

For the reasons mentioned above, the proposed Project would not cause the substantial depletion of groundwater supplies, interfere substantially with groundwater recharge, or conflict with the GSP. As such, development of the proposed Project would have a **less than significant** impact relative to this topic. As such, impacts related to groundwater supply or recharge would result in a **less than cumulatively considerable contribution**.

Impact 4.15: Cumulative Impacts Related to Flooding (Less than Significant and Less than Cumulatively Considerable)

As shown on Figure 3.9-2, the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) map according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, development of the proposed Project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

LAND USE, POPULATION, AND HOUSING

The cumulative setting for land use and population impacts is the City of Clovis.

Impact 4.16: Cumulative Impact on Communities and Local Land Uses (Less than Significant and Less than Cumulatively Considerable)

Cumulative land use impacts, such as the potential for conflicts with adjacent land uses and consistency with adopted plans and regulations, are typically site- and Project-specific. As shown in Table 3.10-3, the Project is consistent with the City's existing General Plan policies and would not conflict with policies adopted to avoid or mitigate an environmental effect. When land uses are not consistent with a General Plan, there are two courses of action: 1) the uses are not allowed due to the inconsistency, or 2) the land uses are changed through an amendment to the General Plan to create consistency. The proposed Project will require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium High Density (MH) for the Development Area to accommodate the proposed development density. The proposed General Plan land use designations for the Project site is shown on Figure 2.0-8 of Chapter 2.0: Project Description.

Approval of the General Plan amendment would ensure that the proposed Project would be substantially consistent with the Clovis General Plan land use requirements.

Approval of the General Plan amendment would ensure that the proposed Project would be substantially consistent with the Clovis General Plan land use requirements and would have a **less than significant** and **less than cumulatively considerable** impact relative to the Clovis General Plan.

The Clovis Zoning Code implements the General Plan. The Project site is currently within the jurisdiction of Fresno County. The Fresno LAFCo will require the Project site to be pre-zoned by the City of Clovis in conjunction with the proposed annexation. The pre-zoning request is for the R-1-PRD zoning designations over these lots.

- Single-Family Planned Residential Development Zoning (R-1-PRD). This designation identifies areas appropriate for single-family small lot uses, including attached and detached single-family structures on small lots. The allowable density range is 4.1 to 15.0 units per acre, with the level of density determined by compliance with performance standards. The R-1-PRD district required a planned development permit. The R-1-PRD district is consistent with the Medium and Medium-High Density Residential land use designation of the General Plan.

The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-9.

The pre-zoning would go into effect upon annexation into the City of Clovis. These proposed zone changes would ensure that zoning will be consistent with the proposed General Plan designations within the Project site (Development Area). The zoning ordinance establishes permitted uses, development densities and intensities, and development standards through the R-1-PRD zone district and planned development permit process to ensure that public health, safety, and general welfare are protected, consistent with the purpose of the Zoning Code. All existing City development standards and zoning requirements for the proposed zoning are applicable to any activities on the Project site. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code and will have a **less than significant** and **less than cumulatively considerable** impact relative to the Clovis General Plan.

In addition, the Fresno LAFCo policies discussed in Chapter 3.10: Land Use and Population are intended to ensure orderly reorganization to local jurisdictional boundaries, including annexations. Ultimately, LAFCo will determine whether the proposed annexation would first require an update to the *Clovis Municipal Service Review* in order to approve the annexation. This LAFCo policy was not specifically adopted to avoid or mitigate an environmental effect, rather it is intended to ensure orderly and logical reorganization to local jurisdiction boundaries, including annexations. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts. As such, development of the proposed Project will have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.17: Cumulative Impacts on Population and Housing (Less than Significant and Less than Cumulatively Considerable)

As described in Section 3.10, the Development Area primarily contains farmland. Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use. Development of the Project would add up to 605 residential units. Therefore, because no housing is located in the Development Area, the proposed Project would not displace substantial numbers of people or existing housing.

Using the most recent Department of Finance (2022) estimate for the average number of persons residing in a dwelling unit in the City of Clovis of 2.81, the addition of up to 605 housing units could increase the population of the City by an estimated 1,700 persons.

The proposed Project will require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium High Density (MH) for the Development Area to accommodate the proposed development density.

- **Medium High Density (MH).** This designation identifies areas appropriate small lot single family detached homes, townhouses, duplexes, and apartments. The allowable density range is 7.1 to 15.0 units per acre.

While the proposed Project will result in growth, it is not anticipated to significantly induce growth. development of the proposed Project will have a **less than significant** impact relative to this topic. As such, impacts related to population and housing would result in a **less than cumulatively considerable contribution**.

NOISE

The cumulative context for noise impacts associated with the proposed Project consists of the existing and future noise sources that could affect the Project or surrounding uses. Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context.

Impact 4.18: Cumulative Exposure of Existing and Future Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development (Less than Significant with Mitigation and Less than Cumulatively Considerable)

NOISE IMPACTS TO ON-SITE RECEPTORS DUE TO PROJECT GENERATED TRAFFIC

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows, which would not be shielded by the 6- foot sound walls.

OPERATIONAL NOISE INCREASES

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

EXTERIOR TRAFFIC NOISE AT PROPOSED USES

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan. Thus, this is considered a potentially significant impact.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls as required by Mitigation Measure 3.11-3. Furthermore, as required by Mitigation Measure 3.11-4, any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls. Implementation of Mitigation Measure 3.11-3 and Mitigation Measure 3.11-4 would ensure that these potential impacts are reduced to a **less than significant** level.

INTERIOR NOISE IMPACTS AT PROPOSED RESIDENTIAL USES

Modern construction typically provides a 25-dB exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB L_{dn}, or less, will typically comply with the City of Clovis 45 dB L_{dn} interior noise level standard. Additional noise reduction measures, such as acoustically-rated windows, are generally required for exterior noise levels exceeding 70 dB L_{dn}.

As mentioned before, the Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. Based upon a

25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a **less than significant** impact.

CONSTRUCTION NOISE

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., Fowler Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise. Therefore, with implementation of the following mitigation measure will ensure that these potential impacts are reduced to a **less than significant** level.

CONCLUSION

With implementation of Mitigation Measure 3.11-1 to 3.11-4, development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to construction noise would result a **less than cumulatively considerable contribution**.

MITIGATION MEASURE(S)

Implement ***Mitigation Measures 3.11-1 through 3.11-4.***

PUBLIC SERVICES AND RECREATION

Cumulative setting would include all areas covered in the service areas of the Clovis Fire Department (CFD), Clovis Police Department (CPD), the City of Clovis Parks and Recreation Division, the Clovis Unified School District (CUSD), and any other relevant public services.

Impact 4.19: Cumulative Impact on Public Services and Recreation (Less than Significant and Less than Cumulatively Considerable)

Development of the proposed Project would contribute toward an increased demand for public services and facilities within the City of Clovis. It has been determined that the impacts to the CFD, CPD, City of Clovis Parks and Recreation Division, and CUSD, would be less-than-significant. The proposed Project would be subject to all fees that are paid toward the enhancement of public services within the City. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would assist in maintaining existing fire, police, schools, and park services. development of the proposed Project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to public services would result in a **less than cumulatively considerable contribution**.

TRANSPORTATION AND CIRCULATION

Cumulative Conditions analyses for year 2028 and 2046 were performed to identify potential impacts of the Project under Cumulative AM and PM peak hour conditions. The project trip distribution was developed using select zone model runs obtained from the Fresno COG ABM.

Impact 4.20: Under Cumulative conditions, Project development would result in VMT increases that are greater than 87 percent of Baseline conditions (Cumulatively Considerable and Significant and Unavoidable)

Table 3.13-12 in Section 3.13 presents the existing (2019) Regional and Project VMT per Capita. As shown in Table 3.13-2, the Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT. The Project design features can help offset some of the VMT impacts of the Project.

Because the development would generate vehicle travel exceeding 15 percent below the established city-wide average under Existing and Cumulative Conditions, even with implementation of Project Design measures that provide mitigating effects, development of the proposed Project would have a **cumulatively considerable contribution** and **a significant and unavoidable** impact.

Impact 4.21: Under Cumulative conditions, the proposed Project would not conflict with a program, plan, policy or ordinance addressing the circulation system, including transit, bicycle, and pedestrian facilities, or increase hazards due to a design feature, incompatible uses, or inadequate emergency access (Less than Significant and Less than Cumulatively Considerable)

The City of Clovis ATP (2022) and City of Clovis General Plan (2014) were reviewed to determine if the proposed Project results in any inconsistencies with adopted transportation related policies.

With recommended improvements described in those chapters, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, development of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, development of the proposed Project would be **less than significant** relative to this topic. The Project would result in a **less than cumulatively considerable contribution** to this topic.

UTILITIES

The cumulative setting includes all areas covered in the service areas of the City's wastewater system, water system, stormwater system, and the solid waste collection and disposal services.

Impact 4.22 Cumulative Impact on Wastewater Utilities (Less than Significant and Less than Cumulatively Considerable)

The proposed Project would increase the amount of wastewater requiring treatment. According to the City's 2017 Wastewater Master Plan Update, single-family residential uses are estimated to generate 55 gallons per capita per day or 175 gallons per day per equivalent dwelling unit (edu). The Project site includes 605 single-family residential units. Using this rate, the proposed Projects would generate approximately 105,875 gallons per day of wastewater. Occupancy of the proposed Project would be prohibited without sewer allocation. An issuance of sewer allocation from the City's available capacity would ensure that there would be a final determination by the wastewater treatment and/or collection provider that there is adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments. Additionally, any planned expansion to the RWTF with a subsequent allocation of capacity to the proposed Project would ensure that there would not be a determination by the wastewater treatment and/or collection provider that there is inadequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments.

The Fresno-Clovis Regional Wastewater Treatment Facility is currently in compliance with the WDR requirements of Order No. 5-2013-0080 NPDES NO. CA00883500. The projected flows of the proposed Project are not expected to exceed the treatment capacity available for treatment. Full buildout of the proposed Project would slightly increase the existing treatment demand at the RWRF. As described above, the City must also periodically review and update their Utility Master Plans, including the Wastewater Master Plan, and as growth continues to occur within the City, the City will identify necessary system upgrades and capacity enhancements to meet growth, prior to the approval of new development. These pre-existing proactive efforts ensure the City would be able to reliably treat the wastewater as the community expands its population up to and through the next plant expansion, including with development of the proposed Project.

The City General Plan designates the Development Area as Rural Residential and therefore anticipated potential development. Given that projected wastewater generation volumes associated with the buildout of the Development Area would not exceed the projected wastewater generation volumes described in the Wastewater Master Plan and the Urban Water Management Plan, a described under Impact 3.14-1. Development of the proposed Project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's existing infrastructure requirements. New wastewater collection and conveyance infrastructure needed for the proposed Project will require trenching/excavation of earth, and placement of pipe within the trenches at specific locations, elevations, and gradients. The applicant will refine the wastewater collection/conveyance infrastructure design through the development of improvements plans which undergo review by the Engineering Department to ensure consistency with the City's engineering standards. This improvement plan process will include full engineering design (i.e. location, depth, slope, etc.) of all conveyance infrastructure as well as a review of new sewer pump stations and new force mains if needed. Ultimately, the sanitary sewer collection system will be an underground collection system installed as per the City of Clovis standards and specifications.

Therefore, the installation of the wastewater collection and conveyance system infrastructure to serve the proposed Project would have a less than significant impact relative to this topic. The wastewater treatment plant would not require upgrades or improvements in order to serve the proposed Project. Therefore, development of the proposed Project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.23: Cumulative Impact on Water Utilities (Less than Significant and Less than Cumulatively Considerable)

The Project area will be annexed to the City and will require an extension of existing potable and non-potable systems. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project. The City's Water Reuse Facility produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

The proposed Project site will provide an adequate potable and non-potable water distribution systems in strict accordance with City Master Plans and standards. Furthermore, the construction of the new water facilities, which are associated with future buildout of the proposed Project, has the potential to cause environmental impacts. The potential for environmental impacts associated with the installation of the water system and all construction activities within the Development Area of the Project Site, are addressed throughout this EIR. In some cases, the direct and indirect impacts are potentially significant and warrant mitigation measures, while in other cases there are significant and unavoidable impacts. The future water infrastructure would fall within the range of environmental impacts disclosed in this EIR, and would be subject to relevant mitigation measures included in this EIR. The environmental impacts of constructing and operating the new water distribution infrastructure are discussed in Chapters 3.1 through 3.9, 3.14, and 4.0 of this Draft EIR. Therefore, development of the proposed Project would have a less than significant impact relative to this topic.

Projected Water Demand for the Proposed Project: Water would be delivered to the Project via the City's existing and planned distribution system. The Project will receive water supply from the City's water distribution system, which relies on both groundwater and surface water supplies. According to the Water Supply Assessment prepared for the proposed Project, the proposed Project has an associated Land Use-based Water Demand Factor (WDF of 3.3 AFY/acre associated with Medium High Density Residential (MHDR) based on the City's UWMP. The projected water demand for the proposed Project is shown in Table 4.0-2, below. The total projected annual potable water demand for the Project is projected to be 255.8 AFY.

TABLE 4.0-2: PROJECTED WATER DEMAND FOR BUILDOUT OF THE PROPOSED PROJECT

LAND USE	*UNIT FACTOR*	*ACREAGE*	*WATER DEMAND (AFY)*
Medium High Density Residential (MHDR)	3.3	77.5	255.8
Total	**--**	**77.5**	**255.8**

NOTES: BASED ON LAND USE-BASED WATER DEMAND FACTOR (WDF) OF 0.7 AFY/ACRE. AFY = ACRE-FEET PER YEAR.

SOURCE: TRACT 6205, NORTHWEST SPHERE OF INFLUENCE EXPANSION AREA. WATER SUPPLY ASSESSMENT (PROVOST & PRITCHARD CONSULTING GROUP, 2022).

As shown in table 4.0-2, the total proposed water demand amounts to approximately 1.6% of the excess supply for year 2030 the City has in a normal year as shown in Table ES-3 of the 2020 UWMP. This indicates an ability of the City to serve this project in the interim while additional supplies are acquired to accommodate full build-out of the GP.

Projected Water Supply for the Proposed Project: Water demands for the proposed Project will be served using the City's existing and future portfolio of water supplies. The inclusion of existing and planned future supplies is specifically allowed by the Water Code:

> *Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

The applicants for the proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable water supplies to the Project site.

Determination of Water Supply Sufficiency Based on the Requirements of SB 610: Water Code section 10910 states:

> *10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.*

Pursuant to Water Code section 10910(c)(4) and based on the technical analyses described in the UWMP, the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project as shown in table 4.0-2, in addition to existing and planned future uses.

A comparison of the City's projected potable and raw water supplies and demands is shown in Table 4.0-3, below, for Normal, Single Dry, and Multiple Dry Years. Demand within the City's service area is not expected to exceed the City's supplies in any Normal year between 2020 and 2040. From this analysis, the City's water demands are not expected to exceed water supplies in Single Dry Years or Multiple Dry Years.

TABLE 4.0-3: SUMMARY OF POTABLE AND RAW WATER DEMAND VERSUS SUPPLY DURING HYDROLOGIC NORMAL, SINGLE DRY, AND MULTIPLE DRY YEARS

Hydrologic Condition		*Supply and Demand Comparison, AFY*			
		2025	*2030*	*2035*	*2040*
Normal Year					
Available Potable and Raw Water Supply		50,739	58,937	65,034	74,650
Total Water Demand		39,737	42,824	46,422	52,598
Potential Surplus (Deficit)		11,002	16,113	18,612	22,052
Supply Shortfall, Percent of Demand		-	-	-	-
Single Dry Year					
Available Potable and Raw Water Supply		37,839	43,587	47,233	53,109
Total Water Demand		34,272	37,359	40,957	47,133
Potential Surplus (Deficit)		3,567	6,228	6,276	5,976
Supply Shortfall, Percent of Demand		-	-	-	-
Multiple Dry Year					
Multiple Dry Year 1	Available Potable and Raw Water Supply	46,784	54,607	60,330	68,999
	Total Water Demand	36,489	39,422	42,840	48,707
	Potential Surplus (Deficit)	10,294	15,185	17,489	20,292
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 2	Available Potable and Raw Water Supply	45,093	52,576	57,958	66,095
	Total Water Demand	34,183	36,962	40,200	45,758
	Potential Surplus (Deficit)	**10,910**	**15,614**	**17,758**	**20,337**
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 3	Available Potable and Raw Water Supply	41,895	48,310	52,625	59,717
	Total Water Demand	31,346	33,969	37,028	42,277
	Potential Surplus (Deficit)	10,550	14,341	15,597	17,440
	Supply Shortfall, Percent of Demand	-	-	-	-

Multiple Dry Year 4	Available Potable and Raw Water Supply	37,839	43,587	47,233	53,109
	Total Water Demand	28,005	30,474	33,353	38,293
	Potential Surplus (Deficit)	9,834	13,112	13,881	14,815
	Supply Shortfall, Percent of Demand	-	-	-	-
Multiple Dry Year 5	Available Potable and Raw Water Supply	49,743	57,992	64,141	73,716
	Total Water Demand	37,825	40,758	44,176	50,043
	Potential Surplus (Deficit)	11,918	17,235	19,965	23,674
	Supply Shortfall, Percent of Demand	-	-	-	-

SOURCE: PROVOST & PRITCHARD, 2021B.

CONCLUSION

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.24: Cumulative Impact on Stormwater Facilities (Less than Significant and Less than Cumulatively Considerable)

The proposed Project includes development of a new storm drainage system to serve the proposed uses as described above. The construction of the new on-site stormwater drainage facilities, which are associated with future buildout of the Development Area of the Project Site, has the potential to cause environmental impacts. The potential for environmental impacts associated with the installation of the stormwater system, and all construction activities within the Development Area, are addressed throughout this EIR. In some cases, the direct and indirect impacts are potentially significant and warrant mitigation measures, while in other cases there are significant and unavoidable impacts. The future storm drainage infrastructure would fall within the range of environmental impacts disclosed in this EIR, and would be subject to relevant mitigation measures included in this EIR. All mitigation measures presented throughout this EIR will be implemented to reduce impacts to the extent practicable. There will not be any significant impacts beyond what is disclosed in the other chapters of this document. In addition to the other mitigation measures presented throughout this document, the following mitigation measure is intended to ensure that the drainage system is designed and constructed to meet the City's performance standards. The plan will include an engineered storm drainage plan that demonstrates attainment of pre-Project runoff requirements prior to discharge and describes the treatment controls used to reach attainment consistent with the City's performance standards. With implementation of Mitigation Measure 3.14-1, as provided in Section 3.14: Utilities of this EIR, development of the proposed Project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.25: Cumulative Impact on Solid Waste Facilities (Less than Significant and Less than Cumulatively Considerable)

As previously described, permitted maximum disposal at the Clovis Landfill (SWIS Number 10-AA-0004) is 2,000 tons per day. The total permitted capacity of the landfill is 7.8 million cubic yards, of which, 7.74 million cubic yards remain. This landfill has an expected cease operation date in the year 2047. Additionally, the American Avenue Landfill has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 29,358,535 cubic yards, with an estimated closure date of August 31, 2031. As noted previously, the vast majority of landfill disposed from the City of Clovis went to Clovis Landfill.

The City already utilizes the American Avenue Disposal Site, Avenal Regional Landfill, and Fairmead Solid Waste Disposal Site; in 2019 Clovis disposed of 11,586 tons to the American site, 358 tons to the Avenal site and 1,956 tons to the Fairmead site. (Cal Recycle, 2022C, D, E).

The Avenal Regional Landfill has the furthest operation date; the landfill is expected to operate until March of 2056. Avenal has a remaining capacity of 28,900,000 cubic yards, and has a current maximum permitted throughput of 6,000 tons per day.

New residential land uses in the Development Area of the Project site would increase the amount of solid waste generated by residents. The increase in growth and development as a result of the development of the proposed Project could result in an increase of solid waste to transfer stations and landfills, and could contribute to an increased demand for solid waste services throughout the City. Solid waste generated by the proposed Project was estimated based on CalRecycle generation rate estimates by use. Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[3]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a **less than significant** impact. Thus, impacts related to solid waste facilities would be a **less than cumulatively considerable contribution**.

Impact 4.26: Cumulative Impact from Electrical, or Telecommunications Facilities (Less than Significant and Less than Cumulatively Considerable)

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project

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[3] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs/household/day. (CalRecycle, 2022A).

site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The potential environmental effects associated with construction and operation of the proposed Project, including the installation of the proposed electrical improvements in the roadway rights-of-way to serve the proposed development, are analyzed throughout this EIR under each environmental topical area. The proposed Project would not result in the relocation or construction of new or expanded electrical, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a **less than significant** impact. Thus, impacts related to solid waste facilities would be a **less than cumulatively considerable contribution**.

4.2 SIGNIFICANT IRREVERSIBLE EFFECTS

LEGAL CONSIDERATIONS

CEQA Section 15126.2(c) and Public Resources Code Sections 21100(b)(2) and 21100.1(a), require that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action, should it be implemented. Irreversible environmental effects are described as:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed Project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Consumption of Nonrenewable Resources

Consumption of nonrenewable resources refers to the loss of physical features within the natural environment, including the conversion of agricultural lands, loss of access to mining reserves, and nonrenewable energy use. The Project site has nonrenewable resources, including biological resources and agricultural resources.

As discussed in Section 3.4, Biological Resources, all impacts would be less than significant or less than significant with implementation of mitigation measures. As a result, the proposed Project will minimize the potential for impacts to the nonrenewable resources on the Project site, including biological resources and water resources, to the greatest extent feasible. More detailed and focused discussions of potential impacts to these nonrenewable resources are contained throughout this Draft EIR.

Nonrenewable agricultural resources such as agricultural land, farmland, and agricultural soils, would be converted during the construction and operation of the Project. The City's General Plan includes a variety of policies that seek to conserve and protect agricultural resources. These include policies that encourage the development of vacant lands within City boundaries prior to conversion of agricultural lands and ensure that urban development near existing agricultural lands will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations. Nevertheless, as discussed in Section 3.2, Agricultural Resources, impacts related to the conversion of Important Farmland were evaluated using the LESA Model and determined to be less than significant.

Irretrievable Commitments/Irreversible Physical Changes

Development of the proposed Project would result in irretrievable commitments by introducing development onto the site which is presently undeveloped. The conversion of agricultural lands to urban uses would result in an irretrievable loss of agricultural land, wildlife habitat, and open space.

A variety of resources, including land, energy, water, construction materials, and human resources would be irretrievably committed for development and infrastructure installation associated with development and operation of the proposed Project. Buildout of the Project would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing operation and life of the Project. The introduction of new residential and park uses to the Project site will result in an increase energy demand associated with building operations, vehicle travel, equipment operation, and other activities. Fossil fuels are the principal source of energy and the Project will increase consumption of available supplies, including gasoline and diesel fuel. These energy resource demands relate to initial construction, operation, maintenance and the transport of people and goods to and from the Project site that would occur with development of the proposed Project.

Additionally, development will physically change the environment in terms of aesthetics, air emission, noise, traffic, open space, and natural resources. These physical changes are irreversible after development occurs.

MANDATORY FINDINGS OF SIGNIFICANCE

CEQA Guidelines Section 15065 states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects that are individually limited, but cumulatively considerable. As defined in CEQA Guidelines Section 15065(a)(3), cumulatively considerable means “that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” Cumulative impacts are addressed previously in Section 4.1 for each of the environmental topics.

CEQA Guidelines Section 15065(a)(1) states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to (1) substantially reduce the habitat of a fish or wildlife species; (2) cause a fish or wildlife population to drop below self-sustaining levels; or (3) substantially reduce the number or restrict the range of an endangered, rare, or threatened species. These impacts are discussed below.

Additionally, as required by CEQA Guidelines Section 15065(a)(4), a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. These impacts are discussed below.

Substantial Adverse Effects on Fish, Wildlife, and Plant Species

Section 3.4 (Biological Resources) of this Draft EIR fully addresses any impacts that might relate to the reduction of the fish or wildlife habitat, the reduction of fish or wildlife populations, and the reduction or restriction of the range of special-status species as a result of Project development. As described throughout the analysis in this Draft EIR, the proposed Project would not result in any significant impacts that would substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal to the environment. As described in greater detail in Section 3.4 (Biological Resources), any potentially significant impacts related to plant and animal species would be reduced to a less than significant level through implementation of goals, policies and implementation measures provided in the City’s General Plan as well as through adherence to state and federal regulations. Therefore, this is considered a **less than significant** impact.

4.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated, but not reduced to a level of insignificance. The following significant and unavoidable impacts of the proposed Project are discussed in Sections 3.1, 3.2, and 3.13, and previously in this chapter (cumulative-level). Refer to those discussions for further details and analysis of the significant and unavoidable impact identified below:

- Impact 3.13-1: Project development would not result in VMT increases that are greater than 87 percent of Baseline conditions;

- Impact 4.20: Under Cumulative conditions, Project development would result in VMT increases that are greater than 87 percent of Baseline conditions.

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5.1 CEQA REQUIREMENTS

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined, but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

PROJECT OBJECTIVES

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.

The quantifiable objectives include the development of up to 605 single-family residential units. The quantifiable objectives include the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities, and landscaping to serve the residential uses.

The goals of the proposed development are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice* to modestly increase urban density.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City Requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

ALTERNATIVES NOT SELECTED FOR FURTHER ANALYSIS

A Notice of Preparation (NOP) was circulated to the public to solicit recommendations for a reasonable range of alternatives to the proposed Project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the proposed Project. No specific alternatives were recommended by commenting agencies or the general public during the NOP public review process.

The City of Clovis considered alternative locations early in the public scoping process. The City's key considerations in identifying an alternative location were as follows:

- Is there an alternative location where significant effects of the Project would be avoided or substantially lessened?
- Is there a site available within the City's Sphere of Influence with the appropriate size and characteristics such that it would meet the basic Project objectives?

The City's consideration of alternative locations for the Project included a review of previous land use planning and environmental documents in Clovis, including the General Plan. The search included a review of land in Clovis that is located within the Sphere of Influence, suitable for development, available for acquisition, and not already approved or pending development. It was found that there are numerous approved projects and proposed projects that are currently under review in Clovis. These approved and proposed projects are not available for acquisition by the Project applicant and are not considered a feasible alternative for the Project applicant. The City has found that there are no feasible alternative locations that exist within the City's Sphere of Influence with the appropriate size and characteristics that would meet the basic Project objectives and avoid or substantially lessen a significant effect. For these reasons, the City of Clovis determined that there are no feasible alternative locations.

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

Four alternatives to the proposed Project were developed based on input from City staff. The alternatives that are anticipated to be analyzed in the EIR include the following four alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Mixed Use Alternative:** Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium-high density residential use, 10 acres would be developed with 195 apartments under the high density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.
- **Reduced Density Alternative:** Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.

- **Reduced Sphere of Influence Alternative:** Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives.

INCREASED DENSITY MIXED USE ALTERNATIVE

Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 80 percent of the Development Area (62 acres) would be developed with 605 residential units (9.75 du/ac). This would still fall under the Medium-High Density (MH) 7.1–15.0 du/ac land use category. The remaining 15 acres of the Development Area would be developed with a mix of commercial and higher density residential. The mixed-use area would have 10 acres for High Density (H) 15.1–25.0 du/ac. The alternative assumes 195 apartments constructed at a density of 19.5 du/ac. There would also be 5 acres of Neighborhood Commercial (NC) (Max FAR 0.50). This area would be developed as a neighborhood-scale shopping facility. The FAR would allow for 108,000 square feet of commercial. It is anticipated that the commercial would include an anchor store such as a small supermarket with a wide range of ancillary uses including banks, restaurants, service businesses, and other related activities are generally found in these planned commercial centers.

REDUCED DENSITY ALTERNATIVE

Under this alternative, the proposed Project would have a reduced density in the Development Area that would fall under the Very Low Density (VL) 0.6–2.0 du/ac land use. The alternative assumes 150 residential units at approximately 2 du/ac. This use is described as large lot single-family residences and appurtenant structures within an identifiable residential neighborhood. This alternative would include neighborhood parks and all the infrastructure necessary to connect to City services.

REDUCED SPHERE OF INFLUENCE ALTERNATIVE

Under this alternative, the proposed Project would only expand the Sphere of Influence and annex the Developed Area and would exclude the 78-acre Sphere of Influence (SOI) expansion to the north and east of the Development Area. Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate that possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental issue areas analyzed in this EIR. Following the analysis of each alternative, Table 5.0-1 summarizes the comparative effects of each alternative.

NO PROJECT (NO BUILD) ALTERNATIVE

Aesthetics and Visual Resources

The No Project (No Build) Alternative would leave the Project site in its existing state and would not result in increases in daytime glare or nighttime lighting. The visual character of the Project site would not change under this alternative compared to existing conditions.

As described in Section 3.1, the visual character of the Project site would be altered as a result of Project implementation. Implementation of the City's design standards would ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding uses. The Clovis General Plan EIR concluded that adoption of the General plan, which contemplated urbanization of the lands within the General Plan study area, was a less than significant environmental impact.

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no "eligible" highway segments in the Project vicinity that may be included in the State Scenic Highway system.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. Implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare to a less than significant level.

Overall, the proposed Project would not substantially impact the visual character or quality of the Project site or its surroundings, damage scenic resources within a State Scenic Highway, or potentially significant new sources of light and glare. The No Project (No Build) Alternative would avoid these less than significant impacts altogether. As such, this impact would be reduced when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is vacant agricultural land. Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map to nonagricultural use. The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project shows that the conversion of the land on the Project site is not considered significant according to the California Department of Conservation's established thresholds.

The Project site is not under a Williamson Act Contract, and the proposed pre-zoning is consistent with the urban uses anticipated by the City under the adopted General Plan. There is no immediately adjacent agricultural land that poses a potential for conflict. Development of the proposed Project was found to have a less than significant impact relative to this topic.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on agricultural land. As such, this impact would be reduced when compared to the proposed Project.

Air Quality

To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions. Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

CalEEMod^{TM} (v.2020.4.0) was used to model operational emissions of the proposed Project. The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. It was found that operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a less than significant impact.

Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, the proposed Project would not have land uses that would generate a significant risk of public exposure to TACs.

Under the No Project (No Build) Alternative, the Project site would not be developed, and there would be no net change in emissions and no potential for a conflict with any adopted plans or policies related to air quality. As such, this impact would be reduced when compared to the proposed Project.

Biological Resources

The biological analysis showed that there were no special-status invertebrates, or their habitat, observed within the Project site during field surveys and none are expected to be affected by the proposed Project. The Project site also does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. It was determined during the field survey that the agricultural disturbance on the Project site precludes the existence of special-status plants, unless agricultural operations were to cease. The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. There are no sensitive natural communities within the Project site. The land uses within the Project site would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. The proposed Project is not subject to a Habitat Conservation Plan. The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements.

The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the Project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a less than significant level.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a less than significant impact.

Under the No Project (No Build) Alternative, the proposed Project would not be constructed, no habitat would be removed and no ground disturbing activities would occur. As such, this impact would be reduced when compared to the proposed Project.

Cultural and Tribal Resources

The Project site encompasses approximately 77-acre for physical development and 78 acres for non-development entitlements. The Project site is not located in an area known to have historical and archaeological resources, however, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation Mitigation Measure 3.5-1 would ensure that this impact is less than significant. Additionally, while no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities, which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to disturb human remains, including those interred outside of formal cemeteries to a less than significant level.

The City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response. While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources*, including human remains, would be* less than significant.

The No Project (No Build) Alternative would result in no ground disturbing activities related to the proposed Project and would not have the potential to disturb or destroy cultural, historic, archaeological, or tribal resources. While the proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation, the No Project (No Build) Alternative would result in less potential for impacts to cultural resources as the entire Project site would continue to be vacant agricultural land. As such, this impact would be reduced when compared to the proposed Project.

Geology and Soils

The Project site is subject to potential ground shaking caused by seismic activity. All construction will be designed in accordance with the latest seismic design standards of the California Building Code. These design standards and requirements are intended to minimize impacts to structures in seismically active areas of California. The Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. The soils on the Project site have a low shrink-swell potential. A final soils report will be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations.

Septic tanks or septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion area, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

The Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements.

The Project site is not expected to contain subsurface paleontological resources, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a less than significant level.

There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a less than significant impact relative to this topic.

Under the No Project (No Build) Alternative, the proposed Project would not be constructed, and no ground disturbing activities would occur. As such, this impact would be reduced when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are estimated at a maximum of approximately 776.8 MT CO_2e per year. The annual mitigated GHG emissions associated with operations of the proposed Project would be approximately 5,071 MT CO_2e.

The proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[1] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[2], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

GHG emissions associated the proposed Project are below the derived GHG threshold; therefore, the proposed Project would not affect statewide GHG reduction goals. The proposed Project would generate GHG emissions, directly and indirectly, that would not exceed the 2.62 MT CO2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Therefore, the proposed Project's greenhouse gas emissions would be considered to have a less than significant impact relative to this topic.

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category during Project operation is 1,231 CO_2e.

The proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

The proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles.

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the

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[1] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[2] The amortization period used for this calculation is 30 years.

use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a less than significant impact.

Under the No Project (No Build) Alternative, the proposed Project would not be constructed, and no construction or operational activities would occur. As such, this impact would be reduced when compared to the proposed Project.

Hazards and Hazardous Materials

Site Assessment: Based on the review of historical aerial photographs, a site reconnaissance and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) presented and discussed in Section 3.8 Hazards. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Overall, proposed Project would have a less than significant impact with regards to this environmental issue.

Construction Phase: Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA’s Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that these potential impacts are reduced to a less than significant level.

Operational Phase: The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas, including paints, cleaners and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department.

Airports: There are no documented public airports or public use airports within close proximity to the Project site.

Emergency Evacuation and Wildfire: In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency.

The Project site is not categorized as a "Very High" FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban. The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire.

Under the No Project (No Build) Alternative, no new land uses would be introduced to the Project site, and the potential for hazardous material release on the Project site would be eliminated. As such, this impact would be reduced when compared to the proposed Project.

Hydrology and Water Quality

Construction: In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a less than significant impact relative to this topic.

Operational: The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways, and residential structures. The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. BMPs will be implemented through the SWPPP program and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a less than significant impact relative to this topic.

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. The infiltration rate of the soils on the Project site ranges from low to high. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

Groundwater Extraction: Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

Stormwater Quality: Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Flooding: The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The Project site is subject to flood inundation as a result of dam failure. Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on hydrology and water quality. As such, this impact would be reduced when compared to the proposed Project.

Land Use, Population, and Housing

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have no impact with regard to the physical division of an established community. The proposed Project would not displace substantial numbers of people or existing housing.

The proposed Project would not conflict with the General Plan. The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts.

The proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a less than significant impact relative to this topic.

Under the No Project (No Build) Alternative, no new land uses would be introduced to the Project site and the potential for land use conflicts would be eliminated. As such, this impact would be reduced when compared to the proposed Project.

Noise

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB. The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows, which would not be shielded by the 6- foot sound walls.

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a less than significant impact.

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise.

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment, which is calculated to be below the vibration impact threshold.

The Project site is outside the Fresno Yosemite International Airport noise contours and there are no private airstrips, public airports, or public use airports within two miles of the Project site.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact from noise. As such, this impact would be reduced when compared to the proposed Project.

Public Services and Recreation

The proposed Project will create an increased demand for public services such as police protection, fire services, school services, and recreation compared to existing conditions. To the extent that the Project would have an incremental increase in demand on public services, the Project would be required to pay the impact fees to assure that the current level of service goals of the City are met. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered public service facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities.

The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site, and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a less than significant impact relative to this topic.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on public services. As such, this impact would be reduced when compared to the proposed Project.

Transportation and Circulation

The Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. The Project design features can help offset some of the VMT impacts of the Project, but will not reduce the impact to a less than significant level. Therefore, the Project will have a significant and unavoidable relative to this topic.

Results of the LOS analysis shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. It should be noted the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. The intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Recommended improvements for roadway segments for all analysis scenarios. It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City’s General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered less than significant.

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, a signal should be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be less than significant relative to this topic.

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on traffic. As such, this impact would be reduced when compared to the proposed Project.

Utilities

The installation of the wastewater collection and conveyance system, water supply systems, and stormwater infrastructure to serve the proposed Project would have a less than significant impact relative to this topic.

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a less than significant impact to water supplies.

The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[3]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a less than significant impact.

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a less than significant impact.

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[3] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on utilities. As such, this impact would be reduced when compared to the proposed Project.

INCREASED DENSITY MIXED USE ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be altered as a result of Project implementation. Implementation of the City's design standards would ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding uses. The Clovis General Plan EIR concluded that adoption of the General plan which contemplated urbanization of the lands within the General Plan study area, was a less than significant environmental impact.

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no "eligible" highway segments in the Project vicinity that may be included in the State Scenic Highway system.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. Implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare to a less than significant level.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in a different density and mix of land uses, but overall, it would not substantially impact the visual character or quality of the Project site or its surroundings, damage scenic resources within a State Scenic Highway, or potentially significant new sources of light and glare. As such, this impact would be largely equal when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is vacant agricultural land. Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map to nonagricultural use. The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed

Project's potential impact on agricultural resources. The LESA scoring for the proposed Project shows that the conversion of the land on the Project site is not considered significant according to the California Department of Conservation' established thresholds.

The Project site is not under a Williamson Act Contract, and the proposed pre-zoning is consistent with the urban uses anticipated by the City under the adopted General Plan. There is no immediately adjacent agricultural land that poses a potential for conflict. Development of the proposed Project was found to have a less than significant impact relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same land conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Air Quality

To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions. Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

CalEEMod^{TM} (v.2020.4.0) was used to model operational emissions of the proposed Project. The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. It was found that operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a less than significant impact.

Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, the proposed Project would not have land uses that would generate a significant risk of public exposure to TACs.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different emissions generated compared to the proposed Project. Emissions would be slightly greater. This impact would be slightly greater when compared to the proposed Project.

Biological Resources

The biological analysis showed that there were no special-status invertebrates, or their habitat, observed within the Project site during field surveys and none are expected to be affected by the proposed Project. The Project site also does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. It was determined during the field survey the that the agricultural disturbance on the project site precludes the existence of special-status plants unless agricultural operations were to cease. The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. There are no sensitive natural communities within the Project site. The land uses within the Project site would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. The proposed Project is not subject to a Habitat Conservation Plan. The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements.

The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site, or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a less than significant level.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same habitat conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Cultural and Tribal Resources

The Project site encompasses approximately 77-acre for physical development, and 78 acres for non-development entitlements. The Project site is not located in an area known to have historical and archaeological resources, however, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation Mitigation Measure 3.5-1 would ensure that this impact is less than significant. Additionally, while no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure 3.4-1 would ensure that the potential impact to disturb human remains, including those interred outside of formal cemeteries to a less than significant level.

The City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response. While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources*, including human remains, would be* less than significant.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same potential to disturb or destroy cultural, historic, archaeological, and tribal resources as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Geology and Soils

The Project site is subject to potential ground shaking caused by seismic activity. All construction will be designed in accordance with the latest seismic design standards of the California Building Code. These design standards and requirements are intended to minimize impacts to structures in seismically active areas of California. The Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. The soils on the Project site have a low shrink-swell potential. A final soils report will be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations.

Septic tanks or septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

The Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements.

The Project site is not expected to contain subsurface paleontological resources, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a less than significant level.

There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same potential for geologic hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are estimated at a maximum of approximately 776.8 MT CO_2e per year. The annual mitigated GHG emissions associated with operations of the proposed Project would be approximately 5,071 MT CO_2e.

The proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[4] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[5], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

GHG emissions associated the proposed Project are below the derived GHG threshold; therefore, the proposed Project would not affect statewide GHG reduction goals. The proposed Project would generate GHG emissions, directly and indirectly, that would not exceed the 2.62 MT CO2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Therefore, the proposed Project's greenhouse gas emissions would be considered to have a less than significant impact relative to this topic.

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category during Project operation is 1,231 CO_2e.

The proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

The proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles.

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for

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[4] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[5] The amortization period used for this calculation is 30 years.

its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This increased density would result in greater operational emissions, and slightly more construction emissions when compared to the proposed Project.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different emissions generated compared to the proposed Project. Emissions would be slightly greater. This impact would be slightly greater when compared to the proposed Project.

Hazards and Hazardous Materials

Site Assessment: Based on the review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) presented and discussed in Section 3.8 Hazards. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Overall, proposed Project would have a less than significant impact with regards to this environmental issue.

Construction Phase: Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that these potential impacts are reduced to a less than significant level.

Operational Phase: The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas, including paints, cleaners and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department.

Airports: There are no documented public airports or public use airports within close proximity to the Project site.

Emergency Evacuation and Wildfire: In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency.

The Project site is not categorized as a "Very High" FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban. The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same potential for hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Hydrology and Water Quality

Construction: In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a less than significant impact relative to this topic.

Operational: The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways and residential structures. The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. BMPs will be implemented through the SWPPP program, and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a less than significant impact relative to this topic.

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. The infiltration rate of the soils on the Project site ranges from low to high. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

Groundwater Extraction: Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

Stormwater Quality: Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Flooding: The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The Project site is subject to flood inundation as a result of dam failure. Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This alternative would result in the same potential for impacts to hydrology and water quality as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Land Use, Population, and Housing

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have no impact with regard to the physical division of an established community. The proposed Project would not displace substantial numbers of people or existing housing.

The proposed Project would not conflict with the General Plan. The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts.

The proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a less than significant impact relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would not result in a conflict with land use, zoning, or policies. The increased density of residential uses, however, would be less compatible with the neighbors to the north compared to the proposed Project. As such, this impact would be greater when compared to the proposed Project.

Noise

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB. The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a less than significant impact.

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise.

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment, which is calculated to be below the vibration impact threshold.

The Project site is outside the Fresno Yosemite International Airport noise contours and there are no private airstrips, public airports, or public use airports within two miles of the Project site.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different travel and use characteristics compared to the proposed Project. Noise generated by traffic would be slightly greater. Construction noise would largely be the same. As such, this impact would be slightly greater when compared to the proposed Project.

Public Services and Recreation

The proposed Project will create an increased demand for public services such as police protection, fire services, school services, and recreation compared to existing conditions. To the extent that the Project would have an incremental increase in demand on public services, the Project would be required to pay the impact fees to assure that the current level of service goals of the City are met. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered public service facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities.

The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different demands for public services compared to the proposed Project. Demand for services would be slightly greater. It is still anticipated that impact fees would be adequate to offset the financial impact on public service providers. Overall, this impact would be slightly greater when compared to the proposed Project.

Transportation and Circulation

The Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. The Project design features can help offset some of the VMT impacts of the Project, but will not reduce the impact to a less than significant level. Therefore, the Project will have a significant and unavoidable relative to this topic.

Results of the LOS analysis shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. It should be noted the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. The intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Recommended improvements for roadway segments for all analysis scenarios. It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered less than significant.

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, a signal should be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be less than significant relative to this topic.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different traffic generation, distribution, and VMT compared to the proposed Project. Traffic generation, distribution, and VMT would be slightly greater. It is still anticipated that installation of recommended improvements and payment of impact fees would be adequate to offset the level of services impacts, but VMT would be greater. Overall, this impact would be slightly greater when compared to the proposed Project.

Utilities

The installation of the wastewater collection and conveyance system, water supply systems, and stormwater infrastructure to serve the proposed Project would have a less than significant impact relative to this topic.

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a less than significant impact to water supplies.

The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[6]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within

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[6] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a less than significant impact.

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different demands for utility services compared to the proposed Project. Demand for utilities would be slightly greater. It is still anticipated all utility providers could serve this alternative; however, this impact would be slightly greater when compared to the proposed Project.

REDUCED DENSITY ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be altered as a result of Project implementation. Implementation of the City’s design standards would ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City’s design requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding uses. The Clovis General Plan EIR concluded that adoption of the General plan which contemplated urbanization of the lands within the General Plan study area, was a less than significant environmental impact.

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no “eligible” highway segments in the Project vicinity that may be included in the State Scenic Highway system.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. Implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare to a less than significant level.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in a different density and mix of land uses, but overall, it would not substantially impact the visual character or quality of the Project site or its surroundings, damage scenic resources within a State Scenic Highway, or potentially significant new sources of light and glare. As such, this impact would be largely equal when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is vacant agricultural land. Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map to nonagricultural use. The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project shows that the conversion of the land on the Project site is not considered significant according to the California Department of Conservation' established thresholds.

The Project site is not under a Williamson Act Contract, and the proposed pre-zoning is consistent with the urban uses anticipated by the City under the adopted General Plan. There is no immediately adjacent agricultural land that poses a potential for conflict. Development of the proposed Project was found to have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same land conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Air Quality

To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions. Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

CalEEMod^{TM} (v.2020.4.0) was used to model operational emissions of the proposed Project. The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. It was found that operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a less than significant impact.

Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, the proposed Project would not have land uses that would generate a significant risk of public exposure to TACs.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different emissions compared to the proposed Project. Emissions would be slightly less, as there would be fewer homes and residents. Overall, this impact would be slightly less when compared to the proposed Project.

Biological Resources

The biological analysis showed that there were no special-status invertebrates, or their habitat, observed within the Project site during field surveys and none are expected to be affected by the proposed Project. The Project site also does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. It was determined during the field survey the that the agricultural disturbance on the project site precludes the existence of special-status plants unless agricultural operations were to cease. The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. There are no sensitive natural communities within the Project site. The land uses within the Project site would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. The proposed Project is not subject to a Habitat Conservation Plan. The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements.

The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late

July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site, or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a less than significant level.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a less than significant impact.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same habitat conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Cultural and Tribal Resources

The Project site encompasses approximately 77-acre for physical development, and 78 acres for non-development entitlements. The Project site is not located in an area known to have historical and archaeological resources, however, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation Mitigation Measure 3.5-1 would ensure that this impact is less than significant. Additionally, while no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to disturb human remains, including those interred outside of formal cemeteries to a less than significant level.

The City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response. While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources*, including human remains, would be* less than significant.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same potential to disturb or destroy cultural, historic, archaeological, and tribal resources as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Geology and Soils

The Project site is subject to potential ground shaking caused by seismic activity. All construction will be designed in accordance with the latest seismic design standards of the California Building Code. These design standards and requirements are intended to minimize impacts to structures in seismically active areas of California. The Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. The soils on the Project site have a low shrink-swell potential. A final soils report will be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations.

Septic tanks or septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

The Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements.

The Project site is not expected to contain subsurface paleontological resources, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a less than significant level.

There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same potential for geologic hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are estimated at a maximum of approximately 776.8 MT CO_2e per year. The annual mitigated GHG emissions associated with operations of the proposed Project would be approximately 5,071 MT CO_2e.

The proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[7] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[8], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

GHG emissions associated the proposed Project are below the derived GHG threshold; therefore, the proposed Project would not affect statewide GHG reduction goals. The proposed Project would generate GHG emissions, directly and indirectly, that would not exceed the 2.62 MT CO2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Therefore, the proposed Project's greenhouse gas emissions would be considered to have a less than significant impact relative to this topic.

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category during Project operation is 1,231 CO_2e.

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[7] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[8] The amortization period used for this calculation is 30 years.

The proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

The proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles.

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This increased density would result in greater operational emissions, and slightly more construction emissions when compared to the proposed Project.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different emissions compared to the proposed Project. Emissions would be slightly less, as there were be fewer homes and residents. Overall, this impact would be slightly less when compared to the proposed Project.

Hazards and Hazardous Materials

Site Assessment: Based on the review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) presented and discussed in Section 3.8 Hazards. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Overall, proposed Project would have a less than significant impact with regards to this environmental issue.

Construction Phase: Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat, and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA’s Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that these potential impacts are reduced to a less than significant level.

Operational Phase: The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas including: paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department.

Airports: There are no documented public airports or public use airports within close proximity to the Project site.

Emergency Evacuation and Wildfire: In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency.

The Project site is not categorized as a "Very High" FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban. The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same potential for hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Hydrology and Water Quality

Construction: In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a less than significant impact relative to this topic.

Operational: The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways, and residential structures. The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. BMPs will be implemented through the SWPPP program, and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a less than significant impact relative to this topic.

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. The infiltration rate of the soils on the Project site ranges from low to high. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

Groundwater Extraction: Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

Stormwater Quality: Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Flooding: The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The Project site is subject to flood inundation as a result of dam failure. Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same potential for impacts to hydrology and water quality as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Land Use, Population, and Housing

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have no impact with regard to the physical division of an established community. The proposed Project would not displace substantial numbers of people or existing housing.

The proposed Project would not conflict with the General Plan. The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts.

The proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would not result in a conflict with land use, zoning, or policies. The reduced density of residential uses, however, would be more compatible with the neighbors to the north compared to the proposed Project. As such, this impact would be less when compared to the proposed Project.

Noise

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB. The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a less than significant impact.

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise.

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment, which is calculated to be below the vibration impact threshold.

The Project site is outside the Fresno Yosemite International Airport noise contours and there are no private airstrips, public airports, or public use airports within two miles of the Project site.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly lower travel and use characteristics compared to the proposed Project. Noise generated by traffic would be slightly lower. Construction noise would largely be the same. As such, this impact would be slightly less when compared to the proposed Project.

Public Services and Recreation

The proposed Project will create an increased demand for public services such as police protection, fire services, school services, and recreation compared to existing conditions. To the extent that the Project would have an incremental increase in demand on public services, the Project would be required to pay the impact fees to assure that the current level of service goals of the City are met. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered public service facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities.

The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different demands for public services compared to the proposed Project. Demand for services would be slightly less, as there were be fewer homes and residents. It is still anticipated that impact fees would be adequate to offset the financial impact on public service providers. Overall, this impact would be slightly less when compared to the proposed Project.

Transportation and Circulation

The Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. The Project design features can help offset some of the VMT impacts of the Project, but will not reduce the impact to a less than significant level. Therefore, the Project will have a significant and unavoidable relative to this topic.

Results of the LOS analysis shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. It should be noted the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. The intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Recommended improvements for roadway segments for all analysis scenarios. It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered less than significant.

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, a signal should be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be less than significant relative to this topic.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly less traffic generation, distribution, and VMT compared to the proposed Project. Traffic generation, distribution, and total VMT would be slightly less. It is still anticipated that installation of recommended improvements and payment of impact fees would be adequate to offset the level of services impacts. Total VMT would be less, but per capita VMT would be approximately the same. Overall, this impact would be slightly less when compared to the proposed Project.

Utilities

The installation of the wastewater collection and conveyance system, water supply systems, and stormwater infrastructure to serve the proposed Project would have a less than significant impact relative to this topic.

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a less than significant impact to water supplies.

The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[9]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a less than significant impact.

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a less than significant impact.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site, however, the mix of land uses and zoning would change. These differences would result in slightly different demands for utility services compared to the proposed Project. Demand for utility services would be slightly less, as there would be fewer homes and residents. Overall, this impact would be slightly less when compared to the proposed Project.

REDUCED SPHERE OF INFLUENCE ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be altered as a result of Project implementation. Implementation of the City's design standards would ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the

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[9] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

City's design requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding uses. The Clovis General Plan EIR concluded that adoption of the General plan which contemplated urbanization of the lands within the General Plan study area, was a less than significant environmental impact.

There are no designated State Scenic Highways in the vicinity of the Project site. No officially designated State scenic highways are located in the City of Clovis. The nearest eligible State scenic highway to the City is State Route 168, which is located in Fresno County northeast of the City of Clovis. The City of Clovis and the Project site are not visible from this roadway segment. Additionally, there are no "eligible" highway segments in the Project vicinity that may be included in the State Scenic Highway system.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. Implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare to a less than significant level.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has physically the same impacts. Overall, this alternative would not substantially impact the visual character or quality of the Project site or its surroundings, damage scenic resources within a State Scenic Highway, or potentially significant new sources of light and glare. As such, this impact would be largely equal when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is vacant agricultural land. Development of the proposed Project would result in the permanent conversion of approximately 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation on the June 2020 Important Farmlands Map to nonagricultural use. The California Land Evaluation and Site Assessment (LESA) Model was utilized to determine the proposed Project's potential impact on agricultural resources. The LESA scoring for the proposed Project shows that the conversion of the land on the Project site is not considered significant according to the California Department of Conservation' established thresholds.

The Project site is not under a Williamson Act Contract, and the proposed pre-zoning is consistent with the urban uses anticipated by the City under the adopted General Plan. There is no immediately adjacent agricultural land that poses a potential for conflict. Development of the proposed Project was found to have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. The elimination of the Non-Development Area from this alternative would have no physical benefits relative to this topic. This alternative would result in the same land conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Air Quality

To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions. Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."

CalEEMod^{TM} (v.2020.4.0) was used to model operational emissions of the proposed Project. The SJVAPCD has established their thresholds of significance by which the Project emissions are compared against to determine the level of significance. If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions to the extent feasible. It was found that operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

The proposed Project would comply with pre-existing requisite federal, State, SJVAPCD, and other local regulations and requirements, as well as implement the control measures provided by the SJVAPCD for construction-related PM_{10} emissions. Compliance with the existing rules and regulations would ensure that the Project's criteria pollutant emissions would be considered to have a less than significant impact.

Substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Residences would not be located within 500 feet of a freeway or high-traffic road, or be within any of the other CARB minimum separation recommendations on siting sensitive land uses. Regardless, the proposed Project would not have land uses that would generate a significant risk of public exposure to TACs.

These impacts would be similar with the Reduced Sphere of Influence Alternative and has physically the same impacts. This would result in equal operational emissions, and equal construction emissions when compared to the proposed Project.

Biological Resources

The biological analysis showed that there were no special-status invertebrates, or their habitat, observed within the Project site during field surveys and none are expected to be affected by the proposed Project. The Project site also does not contain suitable aquatic or upland habitat for special status reptiles or amphibians known to occur in the region. It was determined during the field survey the that the agricultural disturbance on the project site precludes the existence of special-status plants unless agricultural operations were to cease. The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the Federal or State Clean Water Acts. There are no sensitive natural communities within the Project site. The land uses within the Project site would not have any direct disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. The proposed Project is not subject to a Habitat Conservation Plan. The proposed Project requires the removal of the pecan orchard within the Development Area. Pecan trees are fruit trees and are, thus, exempt from the tree removal and replacement requirements.

The Project would result in the removal of an orchard, which is not high-quality nesting or foraging habitat for special-status birds. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land with low growing crops or grasslands represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. The CNDDB does not provide any records of special status birds on the Project site, or in the immediate vicinity. Nevertheless, birds are highly mobile and can be expected to fly over the Project site at times. They could use the site for foraging, although it is not high-quality habitat for foraging. The Project site does not contain high quality nesting habitat for special status birds given that it is an orchard.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the open undeveloped land on the Project site, which could serve as limited foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires preconstruction surveys for active nests of special-status birds and buffers around nests should they be identified during the surveys. Development of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special-status birds are reduced to a less than significant level.

Development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys and have not been documented on the Project site; therefore, they are not expected to be directly affected. Implementation of Mitigation Measure 3.4-2 requires surveys for active maternity roosts if removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31). If a special-status bat maternity roost is located, appropriate buffers around the roost sites would be required. Therefore, development of the proposed Project with Mitigation Measure 3.4.2, would ensure that potential impacts to special status bat species are reduced to a less than significant impact.

These impacts would be similar with the Reduced Density Alternative as this alternative is located on the same site. This alternative would result in the same habitat conversion as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Cultural and Tribal Resources

The Project site encompasses approximately 77-acre for physical development, and 78 acres for non-development entitlements. The Project site is not located in an area known to have historical and archaeological resources, however, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical and archaeological resources. Implementation Mitigation Measure 3.5-1 would ensure that this impact is less than significant. Additionally, while no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to disturb human remains, including those interred outside of formal cemeteries to a less than significant level.

The City of Clovis sent outreach letters to the twelve tribal representatives listed in the NAHC response. While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Development Area. The Proposed Project would be required to follow development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources*, including human remains, would be* less than significant.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. This alternative would result in the same potential to disturb or destroy cultural, historic, archaeological, and tribal resources as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Geology and Soils

The Project site is subject to potential ground shaking caused by seismic activity. All construction will be designed in accordance with the latest seismic design standards of the California Building Code. These design standards and requirements are intended to minimize impacts to structures in seismically active areas of California. The Project site has a low risk of seismic-related ground failure as a result of liquefication. Landslide potential on the Project site is also low to non-existent. The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. The soils on the Project site have a low shrink-swell potential. A final soils report will be performed at a design-level to ensure that the foundations, structures, roadway sections, sidewalks, and other improvements can accommodate the specific soils, including expansive soils, at those locations.

Septic tanks or septic systems are not proposed as part of the Development Area and will not be installed to serve the Development area. The residences within the Non-development Area are currently on septic systems. There are no new residences proposed in this area, and no new septic systems would be installed. This area would be part of the SOI expansion, but would not be part of the annexation. At some future date, if those residents decided to annex into the City, they would be required to connect to the City of Clovis wastewater collection and treatment system and destroy the existing septic systems.

The Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements.

The Project site is not expected to contain subsurface paleontological resources, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Implementation of Mitigation Measure 3.6-1 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a less than significant level.

There are no past or current commercial mining operations within the Project site. Development of the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. This alternative would result in the same potential for geologic hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Estimated maximum mitigated GHG emissions associated with construction of the proposed Project are estimated at a maximum of approximately 776.8 MT CO_2e per year. The annual mitigated GHG emissions associated with operations of the proposed Project would be approximately 5,071 MT CO_2e.

The proposed Project is estimated to generate approximately 2,097 residents during the Project's operational phase.[10] Dividing this number of estimated residents generated by the Project by the total annual operational GHG emissions at Project buildout yields approximately 2.42 MT CO_2e/SP/Year, which is below the 2.62 MT CO_2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Construction emissions, when amortized[11], would equal approximately emissions 25.9 MT CO_2e, which is equivalent to approximately 0.01 MT CO_2e/SP/Year. Therefore, the total annual GHG emissions at Project buildout would still yield approximately 2.43 MT CO_2e/SP/Year, after inclusion of the amortized construction emissions.

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[10] This estimate is based on the estimate provided by LSA in their Transportation Impact Analysis (LSA, 2023).

[11] The amortization period used for this calculation is 30 years.

GHG emissions associated the proposed Project are below the derived GHG threshold; therefore, the proposed Project would not affect statewide GHG reduction goals. The proposed Project would generate GHG emissions, directly and indirectly, that would not exceed the 2.62 MT CO2e/SP/year in 2030 threshold based on emissions for the land use-driven emission sectors in the CARB GHG Inventory. Therefore, the proposed Project's greenhouse gas emissions would be considered to have a less than significant impact relative to this topic.

Electricity used by the proposed Project would be used primarily to generate energy for the residential homes, landscape lighting, and street lighting. As shown in the following tables, "Energy" is one of the categories that was modeled for GHG emissions. The total unmitigated and mitigated GHG emissions generated from the "Energy" category during Project operation is 1,231 CO_2e.

The proposed Project would generate operational vehicle trips that would use a total of approximately 2,100 gallons of gasoline and 341 gallons of diesel per day, or 341,321 gallons of gasoline and 69,484 gallons of diesel per year.

The proposed Project would use a total of approximately 18,955 gallons of diesel fuel for off-road construction vehicles.

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the *CEQA Guidelines*. This is a less than significant impact.

These impacts would be similar with the Increased Density Mixed Use Alternative as this alternative is located on the same site. This increased density would result in greater operational emissions, and slightly more construction emissions when compared to the proposed Project.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Hazards and Hazardous Materials

Site Assessment: Based on the review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the Development Area. During the course of the Phase I ESA, no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) were identified in conjunction with the Development Area as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs) presented and discussed in Section 3.8 Hazards. The Project site is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Overall, proposed Project would have a less than significant impact with regards to this environmental issue.

Construction Phase: Further, construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat, and countless resources. Compliance with existing regulatory requirements of the Regional Water Quality Control Board would require the preparation of a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to, CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area;

equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the FCEHS.

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by FCEHS, the designated Certified Unified Program Agency for Fresno County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories).

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1 and 3.8-2 would ensure that these potential impacts are reduced to a less than significant level.

Operational Phase: The operational phase of the proposed Project will occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes the development of residential structures. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas, including paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by FCEHS and the Clovis Fire Department.

Airports: There are no documented public airports or public use airports within close proximity to the Project site.

Emergency Evacuation and Wildfire: In Fresno County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed Project does not include any actions that would impair or physically interfere with any of Fresno County's emergency plans or evacuation routes. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Any construction project that could involve road closures, traffic detours and congestion, shall be required to obtain traffic control plans approved by the City as the lead agency.

The Project site is not categorized as a "Very High" FHSZ by CalFire. The Project site is not located within an LRA and is categorized as Urban Unzoned or Non-Wildland/Non-Urban. The Project site is located in an area that is predominately single-family residential uses, which do not pose a significant risk of wildfire.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. This alternative would result in the same potential for hazards as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Hydrology and Water Quality

Construction: In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and the existing regulatory requirements. Further, the Project would be required to incorporate appropriate erosion and sediment control measures per Section 9.110.040 of the City's Municipal Code and adhere to the City's landscape standards designed to reduce runoff and control soil erosion. Compliance with the Construction General Permit and applicable City grading regulations would ensure that the proposed Project would have a less than significant impact relative to this topic.

Operational: The long-term operations of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in new impervious areas associated with roadways, driveways, and residential structures. The Project site will include construction of a new storm drainage system, which will conform to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to, the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. BMPs will be implemented through the SWPPP program, and compliance with existing standards and rules, including the implementation of BMPs, would ensure that the proposed Project would have a less than significant impact relative to this topic.

Infiltration/Natural Recharge: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. The infiltration rate of the soils on the Project site ranges from low to high. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

Groundwater Extraction: Since the 2015 UWMP, SGMA has become effective, and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area, and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases, and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP).

Stormwater Quality: Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Flooding: The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The Project site is subject to flood inundation as a result of dam failure. Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating conditions.

As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site. This alternative would result in the same potential for impacts to hydrology and water quality as the proposed Project. As such, this impact would be largely equal when compared to the proposed Project.

Land Use, Population, and Housing

The Project site is located directly north of the City of Clovis limit line and is adjacent primarily to undeveloped agricultural land, rural residential land, and low-density residential uses. The Project site would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the Project site. The Project would provide roadways and pedestrian pathways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned developments. The proposed Project would have no impact with regard to the physical division of an established community. The proposed Project would not displace substantial numbers of people or existing housing.

The proposed Project would not conflict with the General Plan. The pre-zoning would go into effect upon annexation into the City of Clovis. The proposed zone change would ensure that zoning will be consistent with the proposed General Plan designation within the Development Area. The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City’s Zoning ordinance. Approval of the pre-zoning will ensure that the proposed Project will be consistent with the Zoning Code. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts.

The proposed infrastructure improvements would be adequately sized to serve the proposed Project only. The proposed infrastructure would not be oversized to accommodate any growth beyond the Project site into areas that were not previously served. While the proposed Project will result in growth, it is not anticipated to significantly induce growth. Implementation of the proposed Project will have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Noise

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB. The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses, but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6- foot sound walls.

The proposed Project would include typical residential noise sources which would be compatible with the adjacent existing residential uses (a.k.a. neighborhood traffic, yard equipment, truck deliveries, garbage collected, etc.). Proposed neighborhood parks are located internal to the Project site and would not impact off-site residential uses.

Based upon a 25-dB exterior-to-interior noise level reduction, interior noise levels are predicted to be approximately 44 dB L_{dn}. Therefore, this is a less than significant impact.

During the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

Furthermore, noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise.

The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer or other earthmoving/grading equipment, which is calculated to be below the vibration impact threshold.

The Project site is outside the Fresno Yosemite International Airport noise contours and there are no private airstrips, public airports, or public use airports within two miles of the Project site.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Public Services and Recreation

The proposed Project will create an increased demand for public services such as police protection, fire services, school services, and recreation compared to existing conditions. To the extent that the Project would have an incremental increase in demand on public services, the Project would be required to pay the impact fees to assure that the current level of service goals of the City are met. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed periodically to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services.

The Project does not propose and would not create a need for new or physically altered public service facilities to maintain acceptable service ratios, response times, or other performance objectives. Therefore, the Project would not result in adverse physical impacts associated with such facilities.

The Project proposes to include open space totaling approximately 5.54 acres on-site, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, which would not provide the park land needed to meet the four acres per 1,000 people. However, Municipal Code Chapter 3.4, Park Acquisition and Development, states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. Thus, upon provision and dedication of the proposed parkland and/or payment of required fees in accordance with the Clovis Municipal Code Chapter 3.04, and other Municipal Code policies, the proposed Project will result in a less than significant impact.

As stated previously, the proposed Project will directly increase the number of persons in the area through the addition of 605 new residential units. The Project also provides open space on-site, totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and will pay park impact fees according to Municipal Code Chapters 3.04 and 3.10. It is not anticipated that the proposed Project would result in a significant increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration would occur because the Project includes new recreational facilities for residents within the Project site, and provides funding to existing park facilities through required fees.

The proposed Project would not significantly increase the use of an existing park, or other recreational facility. Therefore, it is not anticipated that any substantial physical deterioration of existing facilities would occur or be accelerated. As such, the proposed Project would have a less than significant impact relative to this topic.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Transportation and Circulation

The Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT by approximately up to 1.18 percent. The Project design features can help offset some of the VMT impacts of the Project, but will not reduce the impact to a less than significant level. Therefore, the Project will have a significant and unavoidable relative to this topic.

Results of the LOS analysis shows that all intersections and roadway segments are forecast to operate at a satisfactory LOS under Near-Term (2028) Plus Project conditions with the exception of 10 intersections and 3 roadway segments; And all intersections and roadway segments are forecast to operate at a satisfactory LOS under Cumulative (2046) Plus Project Conditions with the exception of 15 intersections and 10 roadway segments.

Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. It should be noted the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, both the ramp intersections are projected to have queuing deficiencies under future conditions (near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. The intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under near-term, and cumulative scenarios with implementation of this improvement. Further, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Recommended improvements for roadway segments for all analysis scenarios. It should be noted that the segment of Fowler Avenue, between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the Project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

With recommended improvements, all intersections would operate at LOS D or better with the addition of Project trips. Furthermore, in the absence of a fee program where the Project has an impact on the roadway network, the Project will pay its respective fair share for the proposed improvements. Therefore, implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. Because the proposed Project would not conflict with adopted programs, plans, policies, or ordinances that address the circulation system, including transit, bicycle, and pedestrian facilities; this impact is considered less than significant.

The preliminary site plan indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Furthermore, a sight distance analysis was conducted at the Project driveways. Based on the sight distance analysis, the proposed Project driveways achieve adequate sight distances and have clear sight triangles for drivers.

With consideration to pedestrian safety to nearby schools, a signal should be installed at the project access intersection under the with marked crosswalks and other safety improvements. As such, a safe walking route to the elementary school would be present for elementary school students from the Project.

All Project access intersections, internal intersections, and internal roadways are anticipated to be carefully designed to ensure they can accommodate emergency vehicles, subject to approval of the City of Clovis. All intersections and street sections would be reviewed by the City of Clovis and designed to comply with typical City standards.

Additionally, the proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, substantially increase hazards due to a geometric feature, or result in inadequate emergency access. Therefore, implementation of the proposed Project would be less than significant relative to this topic.
These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

Utilities

The installation of the wastewater collection and conveyance system, water supply systems, and stormwater infrastructure to serve the proposed Project would have a less than significant impact relative to this topic.

The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a less than significant impact to water supplies.

The majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment, and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a less than significant impact relative to this topic.

Per CalRecycle generation rate estimates, the Development Area is estimated to generate roughly 12 pounds per household per day[12]. It is estimated that the proposed 605 residential units would generate approximately 7,400 pounds per day of solid waste. The total solid waste generated by the proposed Project is estimated to be 3.4 tons per day. This equates to roughly 0.17 percent of the total allowable daily maximum disposal at the Clovis Landfill and would not cause an exceedance of the landfill's remaining capacity. Therefore, the City's projected increase in solid waste generation associated with future buildout of the proposed Project is expected to be within the permitted capacities of landfills utilized by the City. Based on the estimated closure dates of the Clovis Landfill in 2047 and the American Avenue Landfill in 2031, development under the proposed Project would not result in a significant impact on landfill capacity. This is a less than significant impact.

Electrical services are provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along Shepherd Avenue and from existing residential development surrounding the Project site. PG&E and AT&T operate and maintain transmission and distribution infrastructure in the Project area. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Although the proposed Project would increase demand for electricity, and telecommunications facilities, utility improvements would be installed in conjunction with planned street improvements. Although the Project would require construction of new electrical facilities within the site, these improvements would be limited to connections to existing facilities near the Project site. The proposed Project would not result in the relocation or construction of new or expanded electrical, and telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This is a less than significant impact.

These impacts would be similar with the Reduced Sphere of Influence Alternative as this alternative is located on the same site and has the same land uses and zoning. As such, this impact would be equal when compared to the proposed Project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project (No Build) Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed Project.

As Table 5.0-1 presents a comparison of the alternative Project impacts with those of the proposed Project. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No

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[12] Note: data based on CalRecycle estimated solid waste generation rates for single family residential uses.; 12.23 lbs./household/day. (CalRecycle, 2022A).

Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Density Alternative would be the environmentally superior alternative because all environmental issues would have reduced impacts compared to the proposed Project. It is noted that the Reduced Density Alternative does not fully meet all of the Project objectives.

TABLE 5.0-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*NO PROJECT (NO BUILD) ALTERNATIVE*	*INCREASED DENSITY MIXED USE ALTERNATIVE*	*REDUCED DENSITY ALTERNATIVE*	*REDUCED SPHERE OF INFLUENCE ALTERNATIVE*
Aesthetics and Visual Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Agricultural Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Air Quality	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Cultural and Tribal Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Geology and Soils	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Hydrology and Water Quality	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Land Use, Population, and Housing	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Noise	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Public Services and Recreation	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Transportation and Circulation	Less (Best)	Greater (4th Best)	Equal (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT
LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

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AGENDA ITEM NO. 6.

DRAFT ENVIRONMENTAL IMPACT REPORT

FOR THE

SHEPHERD NORTH PROJECT

Volume II - Appendices

JULY 2023

Prepared for:

City of Clovis | Planning Division
1033 Fifth Street
Clovis, CA 93612
Phone: 559.324.2340

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

ATTACHMENT 18

AGENDA ITEM NO. 6.

DRAFT ENVIRONMENTAL IMPACT REPORT

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AGENDA ITEM NO. 6.

Appendix A

Notice of Preparation and Comments

State of California - Department of Fish and Wildlife

2022 ENVIRONMENTAL DOCUMENT FILING FEE CASH RECEIPT

DFW 753.5a (REV. 01/01/22) Previously DFG 753.5a

RECEIPT NUMBER: E202210000107

STATE CLEARINGHOUSE NUMBER *(if applicable)*

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY **CITY OF CLOVIS**	LEAD AGENCY EMAIL	DATE **05/06/2022**
COUNTY/STATE AGENCY OF FILING **FRESNO COUNTY**		DOCUMENT NUMBER **E202210000107**

PROJECT TITLE

NOP- SHEPHERD NORTH PROJECT

PROJECT APPLICANT NAME **CITY OF CLOVIS**	PROJECT APPLICANT EMAIL		PHONE NUMBER **(559) 324-2383**
PROJECT APPLICANT ADDRESS **1033 FIFTH ST**	CITY **CLOVIS**	STATE **CA**	ZIP CODE **93612**

PROJECT APPLICANT *(Check appropriate box)*

☒ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

☐ Environmental Impact Report (EIR)	$3,539.25	$ 0.00
☐ Mitigated/Negative Declaration (MND)(ND)	$2,548.00	$ 0.00
☒ Certified Regulatory Program (CRP) document - payment due directly to CDFW	$1,203.25	$ 0.00

☐ Exempt from fee
  ☐ Notice of Exemption (attach)
  ☐ CDFW No Effect Determination (attach)

☐ Fee previously paid (attach previously issued cash receipt copy)

☐ Water Right Application or Petition Fee (State Water Resources Control Board only)	$850.00	$ 0.00
☐ County documentary handling fee	$50.00	$ 0.00
☒ Other **NOP**		$ 0.00

PAYMENT METHOD:

☐ Cash ☐ Credit ☐ Check ☐ Other

TOTAL RECEIVED $ **0.00**

SIGNATURE

X Jessica Munoz

AGENCY OF FILING PRINTED NAME AND TITLE

Jessica Munoz Deputy Clerk

ORIGINAL - PROJECT APPLICANT COPY - CDFW/ASB COPY - LEAD AGENCY COPY - COUNTY CLERK

E20221

FILED
MAY 06 2022
TIME 2:46pm
FRESNO COUNTY CLERK
By Jessica Munoz DEPUTY
Jessica Munoz

NOTICE OF PREPARATION

TO:	State Clearinghouse State Responsible Agencies State Trustee Agencies Other Public Agencies Interested Organizations	FROM:	George González, MPA | Senior Planner City of Clovis | Planning Division 1033 Fifth Street Clovis, CA 93612 559.324.2383 georgeg@cityofclovis.com

SUBJECT: Notice of Preparation – Shepherd North Project

Notice is hereby given that the City of Clovis is the lead agency for the preparation of a project-level Environmental Impact Report (EIR) for the proposed Shepherd North Project (proposed Project), in accordance with the California Environmental Quality Act (CEQA), Section 15050. The EIR will consider potential environmental effects of the proposed project to determine the level of significance of the environmental effect and will analyze these potential effects to the detail necessary to make a determination on the level of significance. The EIR will consider those environmental issues which are raised by responsible agencies, trustee agencies, and members of the public or related agencies during the Notice of Preparation (NOP) process.

We need to know the views of your agency or organization as to the scope and content of the environmental information germane to your agency's statutory responsibilities or of interest to your organization in connection with the proposed project. Specifically, we are requesting the following:

1. If you are a public agency, state whether your agency will be a responsible or trustee agency for the proposed project and list the permits or approvals from your agency that will be required for the project and its future actions;
2. Identify significant environmental effects and mitigation measures that you believe need to be explored in the EIR with supporting discussion of why you believe these effects may be significant;
3. Describe special studies and other information that you believe are necessary for the City to analyze the significant environmental effects, alternatives, and mitigation measures you have identified;
4. For public agencies that provide infrastructure and public services, identify any facilities that must be provided (both on- and off-site) to provide services to the proposed project;
5. Indicate whether a member(s) from your agency would like to attend a scoping workshop/meeting for public agencies to discuss the scope and content of the EIR's environmental information; and
6. Provide the name, title, and telephone number of the contact person from your agency or organization that we can contact regarding your comments.

Due to the time limits mandated by State law, your response must be sent and received by the City of Clovis by the following deadlines:

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- For responsible agencies, not later than 30 days after you receive this notice.
- For all other agencies and organizations, not later than 30 days following the publication of this Notice of Preparation. The 30-day review period begins Monday, May 9, 2022 and ends on Friday, June 10, 2022.

If we do not receive a response from your agency or organization, we will presume that your agency or organization has no response to make. A responsible agency, trustee agency, or other public agency may request a meeting with the City or its representatives in accordance with Section 15082(c) of the CEQA Guidelines. Please send your response to George González, MPA, Senior Planner at the City of Clovis | Planning Division, 1033 Fifth Street, Clovis, CA 93612. If you have any questions, please contact George González, MPA, Senior Planner at 559.324.2383 or via email at: georgeg@cityofclovis.com.

SCOPING MEETING: A scoping meeting will be held at the City of Clovis Council Chamber, located at 1033 Fifth Street, Clovis, CA 93612 on Wednesday, May 25, 2022 from 6:00 p.m. to 7:00 p.m. If you have any questions, please contact George González, MPA, Senior Planner, at georgeg@cityofclovis.com. If you prefer to attend virtually, you can either enter this link (https://link.edgepilot.com/s/5c99e641/wZoX-PvT8U2lIDc9YNoXwg?u=https://cityofclovis.webex.com/cityofclovis/j.php?MTID=m3e7b645cadafe20bd442b3cbd03f1477) into your web browser prior to the start of the meeting or dial in by phone (no video) at 1-844-992-4726 Access Code: 2492 626 9548.

PROJECT DESCRIPTION: The Project site is north of the City of Clovis limit line at the northeast corner of N. Sunnyside Avenue and E. Shepherd Avenue. The Project site is approximately 155 acres and includes the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area. The Development Area includes the parcels being annexed that will be entitled for subdivision and development of up to 605 residential units, parkland, and public and private infrastructure. The application includes a request for a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Map, Planned Development Permit, and Residential Site Plan Review. The Non-Development Area includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. A detailed Project Description is attached and can be reviewed at the City or by accessing the City's website at https://cityofclovis.com/planning-and-development/planning/ceqa/.

PROBABLE ENVIRONMENTAL EFFECTS AND SCOPE OF THE EIR: The City has reviewed the proposed Project application and has determined that an EIR should be prepared for the proposed Project because it may have a significant effect on the environment. All environmental topics identified in Appendix G of the State CEQA Guidelines require analysis within an EIR including: Aesthetics, Agricultural and Forest Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology/Soils, Greenhouse Gases/Climate Change, Hazards and Hazardous Materials, Hydrology/Water Quality, Land Use/Planning, Mineral Resources, Noise, Population/Housing, Public Services, Recreation, Transportation/Circulation, Tribal Resources, Utilities and Service Systems, Cumulative Impacts, and Growth Inducing Impacts. An Initial Study has not been prepared for the proposed Project. As noted above, each environmental topic identified in Appendix G of the State CEQA Guidelines requires analysis in an EIR.

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PROJECT LOCATION

The Project site is directly north of the City of Clovis limit line at the northeast corner of N. Sunnyside Avenue and E. Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by N. Fowler Avenue, on the south by E. Shepherd Avenue, and on the west by N. Sunnyside Avenue. Figures 1 and 2 show the Project's regional location and vicinity. The Project site is in the southwest ¼ of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 3 illustrates the Project location on the USGS Clovis, California, 7.5-minute series quadrangle map.

PROJECT SITE DEFINED

The Project site includes several distinct planning boundaries defined below. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – includes the whole of the Project site (approximately 155 acres), including the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
- Development Area - includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Map, Planned Development Permit, and Residential Site Plan Review.
- Non-Development Area - includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

PROJECT SETTING

EXISTING SITE CONDITIONS

The Project site is approximately 155 acres and includes 39 Assessor parcels (APNs). Figure 4 illustrates the APNs.

SITE TOPOGRAPHY

The Project site is relatively flat and is approximately 385 feet above mean sea level.

EXISTING SITE USES

The Development Area primarily contains farmland (orchard), and had three residential dwellings and a warehouse that was removed in approximately 2020. The majority of the Development Area is in active agricultural use (pecan orchards).

There are five agricultural water wells located in the Development Area, two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area and one located along the eastern boundary of the Development Area. There are four pole-mounted transformers in the Development Area. Two pole-mounted transformers

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are located in the central-eastern portion of the Development Area, and two are located along the eastern boundary of the Development Area in the southern portion. Along the eastern boundary of the Development Area are two large berms approximately 10 to 12 feet tall containing wood branches and debris from pruning the orchard.

The Non-Development Area contains existing single-family residences and agricultural fields. The Non-Development Area is located within the City of Clovis' Planning Area but is outside of the City's existing Sphere of Influence. Each SubArea is uniquely different and is described below:

Expansion SubArea North includes single-family residences that are accessed by N. Purdue Avenue and Lexington. N. Purdue Avenue and Lexington are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. N. Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 accessor parcels in SubArea North.

Expansion SubArea East is located between the pecan orchards and N. Fowler Avenue and consists of existing single-family residences and agricultural fields. There are 18 accessor parcels in SubArea East. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping.

Figure 5 shows aerial imagery of the existing site uses within the Project site.

EXISTING SURROUNDING USES

The Project site is surrounded by a variety of agricultural and residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards or other agricultural activities. Uses to the south of the Project site include a mix of residential uses, including rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site are single-family residential uses, agricultural uses (orchard) and a power sub-station.

EXISTING GENERAL PLAN LAND USE DESIGNATIONS AND ZONING

The following section outlines the City and County General Plan land use designations and zoning for the Project site. It should be noted that the Project site is currently outside of the jurisdiction of the City of Clovis, and therefore does not have a City of Clovis zoning.

City of Clovis

The City of Clovis General Plan was adopted on August 25, 2014. Figure 6 depicts the land use designations for the Project site and the surrounding areas under the adopted City of Clovis General Plan. The Project site is designated as Rural Residential (RR) under the City of Clovis General Plan.

The General Plan contains standards to guide development for this land use, as noted below:

Rural Residential (RR): Very low density residential uses and small scale agricultural operations. Rural residential uses may be dispersed uniformly across the land or be sited so to leave more acreage for

orchards, pastures, or other agricultural or open space activities. The allowable maximum density for this land use designation is one dwelling unit per two acres.

Fresno County

Figure 7 identifies the Fresno County land use designations and zoning for the Project site and the surrounding area. The Development Area is designated as Low Density Residential by the County's General Plan Land Use Map and is zoned AL-20 (Limited Agricultural) by the County. The Non-Development Area is designated as Rural Residential by the County's General Plan Land Use Map and is zoned RR (Rural Residential) by the County.

PROJECT GOALS AND OBJECTIVES

Consistent with CEQA Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the proposed Project shall be discussed.

PROJECT OBJECTIVES

The principal objective of the proposed Project is the expansion of the City's SOI to include the Project site, and the annexation, approval and subsequent development of the Development Area.

The quantifiable objectives include the development of 605 single family residential units. The quantifiable objectives include the development of open space totaling 4.32 acres, including 1.49 acres of private park and recreational uses. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping to serve the residential uses.

The goals of the proposed development are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand.
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

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PROJECT ENTITLEMENTS

GENERAL PLAN AMENDMENT

The proposed Project would require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Low Density (L) and Medium High Density (MH) for the Development Area to accommodate the proposed development density.

- **Low Density (L)**. This designation identifies areas appropriate for conventional single-family detached houses. The allowable density range is 2.1 to 4.0 units per acre.
- **Medium High Density (MH).** This designation identifies areas appropriate small lot single family detached homes, townhouses, duplexes, and apartments. The allowable density range is 7.1 to 15.0 units per acre.

The proposed General Plan land use designations for the Project site is shown on Figure 8.

PRE-ZONING

As previously stated, the Project site is currently outside of the Clovis city limits, and therefore does not have zoning. The proposed Project includes a request for pre-zoning of the Development Area consistent with the proposed General Plan Land Uses.

Development Area: The pre-zoning request is for R-1 and R-1-PRD zoning designations over these lots.

- **R-1 Single-Family Residential Low Density Zoning**. This designation identifies areas appropriate for conventional single-family uses. The allowable density range is 2.1 to 4.0 units per acre, with not more than one dwelling unit per parcel. The R-1 district is consistent with the Low and Medium Density Residential land use designations of the General Plan.
- **R-1-PRD Single-Family Planned Residential Development Zoning.** This designation identifies areas appropriate for single-family small lot uses, including attached and detached single-family structures on small lots. The allowable density range is 4.1 to 15.0 units per acre, with the level of density determined by compliance with performance standards. The R-1-PRD district required a planned development permit. The R-1-PRD district is consistent with the Medium and Medium-High Density Residential land use designation of the General Plan.

The proposed zoning for the Project site is shown on Figure 9.

TENTATIVE SUBDIVISION MAP

The proposed Project includes a Tentative Map for the Development Area of the Project site that would ultimately be developed in phases. The Tentative Map covers approximately 77 acres within three Assessor parcels (APNs). This includes APNs 557-021-20, -19, and -21.

The Tentative Map would result in the subdivision of a total of approximately 77 acres into 605 single family residential units, with an additional 58 out lots for roads, utilities, greenspace, landscaping, and pedestrian paths. The Project objectives also include the installation of new public roadways that will

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provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping. Figure 10a, 10b, and 10c illustrate the proposed site plans for the Development Area.

PLANNED DEVELOPMENT PERMIT

The proposed Project includes a Planned Development Permit (PDP) for the Development Area of the Project, which will incorporate a program of enhanced amenities (e.g., additional open space, park improvements and/or trail development). The PDP may allow for modifications to the applicable development standards, such as lot coverage, setbacks and building heights.

ANNEXATION

The proposed Project includes an annexation of three APNs totaling approximately 77 acres. This includes the Development Area.

RESIDENTIAL SITE PLAN REVIEW

The proposed Project includes a Residential Site Plan Review (RSPR) for the Development Area as a condition of a subdivision map implementing provisions of zoning.

SPHERE OF INFLUENCE EXPANSION

The proposed Project includes an amendment of the City's Sphere of Influence (SOI) to include the entirety the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno Local Agency Formation Commission (LAFCo).

DEVELOPMENT PROJECT CHARACTERISTICS

The proposed Project is primarily a residential development anticipated to provide up to 605 residential units. The Development Project would provide approximately 1.49 acres of private greenspace. Other uses to support and compliment the proposed residential development include public utility infrastructure, public and private roadways, curb/gutters/sidewalks, pedestrian facilities, private parking, street lighting, and street signage.

Development of housing will depend on market conditions and demand. The plan for infrastructure allows for development to occur in phases to respond to the market conditions and demand.

RESIDENTIAL DEVELOPMENT

The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Development Area will accommodate up to 605 residential units. Specifically, the northern portion of the Development Area would include the development of up to 107 single-family residences with lot sizes ranging from approximately 7,500 square feet to 19,300 square feet. The southern portion of the Development Area would be developed with smaller lot single-family residences, with lot sizes ranging

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from approximately 1,980 to 3,800 square feet, and with larger corner lots that are approximately 4,200 to 7,300 square feet. Figure 10a, 10b and 10c illustrate the Project site plans.

GREENSPACE

The proposed Project includes 1.49 acres of private greenspace including a private pool and park area. There are three separate greenspaces proposed, one located in the northern portion of the Development Area, one in the southwestern portion and one in the southeastern portion.

CIRCULATION

The proposed Project includes a hierarchy of roadways to accommodate the capacity needs of the existing street network as well as provide additional vehicular access to the Development Area. N. Sunnyside Avenue and E. Shepherd Avenue are the main arterial roadways providing access to the Development Area.

The neighborhoods within the Development Area will include a network of public and private residential streets to provide an efficient flow of traffic through the area. Additionally, sidewalks will be included per the City standards.

UTILITIES AND PLANNED INFRASTRUCTURE IMPROVEMENTS

The construction of on-site infrastructure improvements would be required to accommodate development of the Development Area, as described below.

Water System

The Project site would be served by a new potable and non-potable water distribution system. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project. The City's Water Reuse Facility produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

Wastewater System

The Project site would be served by a new wastewater collection system installed within proposed public utilities easements. The proposed wastewater conveyance facilities would connect to the existing sewer mains as part of the City of Clovis collection and treatment system. Wastewater treatment would be provided at the existing Fresno-Clovis Regional Wastewater Treatment Plant in the City of Fresno. By agreement with the City of Fresno, the City of Clovis is entitled to a maximum capacity of 9.3 million gallons per day (mgd). The Fresno-Clovis Regional Wastewater Treatment Plant is owed and operated by the City of Fresno and has a maximum capacity of 80 mgd. If required, the City has the capability to acquire additional capacity at the Wastewater Treatment Plant. Wastewater treatment would also be provided by the City's Water Reuse Facility. The plant serves the new growth areas of the City in the southeast,

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northwest, and ultimately the northeast urban centers. The plant is designed to accommodate future expansion and will ultimately treat 8.4 mgd.

Storm Drainage

The Project site would include construction of a new storm drainage system, which will confirm to the City's standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations. This includes, but not limited to the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. Stormwater throughout the City is collected in FMFCD's basins.

Regulated Public Utilities

Electrical and gas, provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along E. Shepherd Avenue and from existing residential development surrounding the Project site. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Utility improvements would be installed in conjunction with planned street improvements.

ALTERNATIVES

Three alternatives to the proposed Project were developed based on input from City staff. The alternatives that are anticipated to be analyzed in the EIR include the following three alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Alternative:** Under this alternative, the proposed Project would be developed with the same number of units as described in the Project Description, but the density of the residential uses would be increased, reducing the overall footprint of the developed areas and preserving the remaining Development Area for agricultural production.
- **Reduced Sphere of Influence Alternative:** Under this alternative, the proposed Project would exclude the 78-acre SOI Expansion north and east of the Development Area.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives.

INCREASED DENSITY ALTERNATIVE

Under this alternative, the proposed Project would be developed with the same components as described in the Project Description, but density of the residential uses would be increased. Under the Increased Density Alternative, the same number of residential units as the proposed project (607 units) would be constructed within the Development Area. The residential areas would be reduced at increased densities

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of approximately 9.8 dwelling units per acre (du/ac) to allow for the preservation of approximately 15 acres agricultural lands. The residential density under the Increased Density Alternative would fall within the allowed density for the City's General Plan designation of Medium High Density Residential (7.1 to 15 du/ac). Under the proposed Project, the residential density would be 5.2 units per gross acre.

REDUCED SPHERE OF INFLUENCE ALTERNATIVE

Under this alternative, the proposed Project would only expand the Sphere of Influence and annex the Developed Area, and would exclude the 78-acre Sphere of Influence (SOI) expansion to the north and east of the Development Area.

USES OF THE EIR AND REQUIRED AGENCY APPROVALS

This EIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed Project.

CITY OF CLOVIS

The City of Clovis will be the Lead Agency for the proposed Project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Actions that would be required from the City include, but are not limited to the following:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of City of Clovis General Plan Amendment (Land Use Element);
- Approval of City of Clovis Zoning Pre-zoning;
- Approval of Residential Site Plan Review;
- Approval of Vesting Tentative Maps;
- Approval of Planned Development Permit;
- Approval of SOI Expansion and Authorization to submit SOI Amendment request to Fresno LAFCo;
- Approval of Annexation of the Development Area and Inhabited Area and Authorization to submit Annexation request to Fresno LAFCo;
- Approval of future Final Maps;
- Approval of future Planned Development Permit;
- Approval of future Grading Plans;
- City review, approval, of construction and utility plans; and
- Approval of future Building Permits.

OTHER GOVERNMENTAL AGENCY APPROVALS

The following agencies may be required to issue permits or approve certain aspects of the proposed Project. Other governmental agencies that may require approval include, but are not limited to, the following:

- Fresno Local Agency Formation Commission (LAFCo) – SOI Amendment, Annexation, and Detachment from Fresno County Fire Protection District and the Kings River Conservation District;

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- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits; and
- Fresno Metropolitan Flood Control District – review of stormwater facilities.

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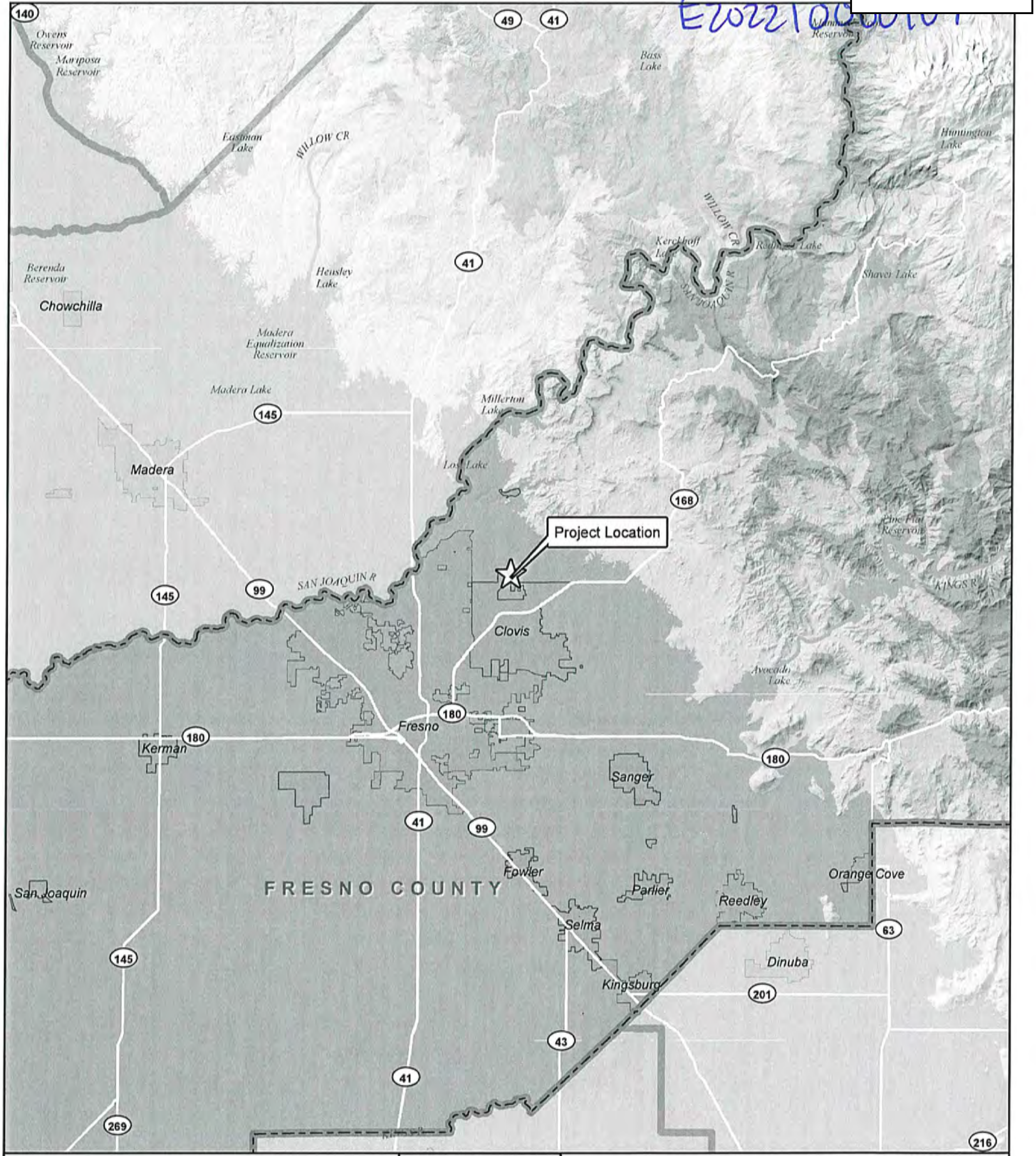
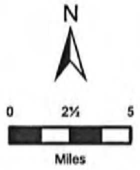


LEGEND

▨	Incorporated Area
▭	Fresno County
▭	California Counties



Sources: Fresno County GIS; Map date: April 22, 2022

Shepherd North Project

Figure 1: Regional Location

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A Land Use Planning, Design, and Environmental Firm

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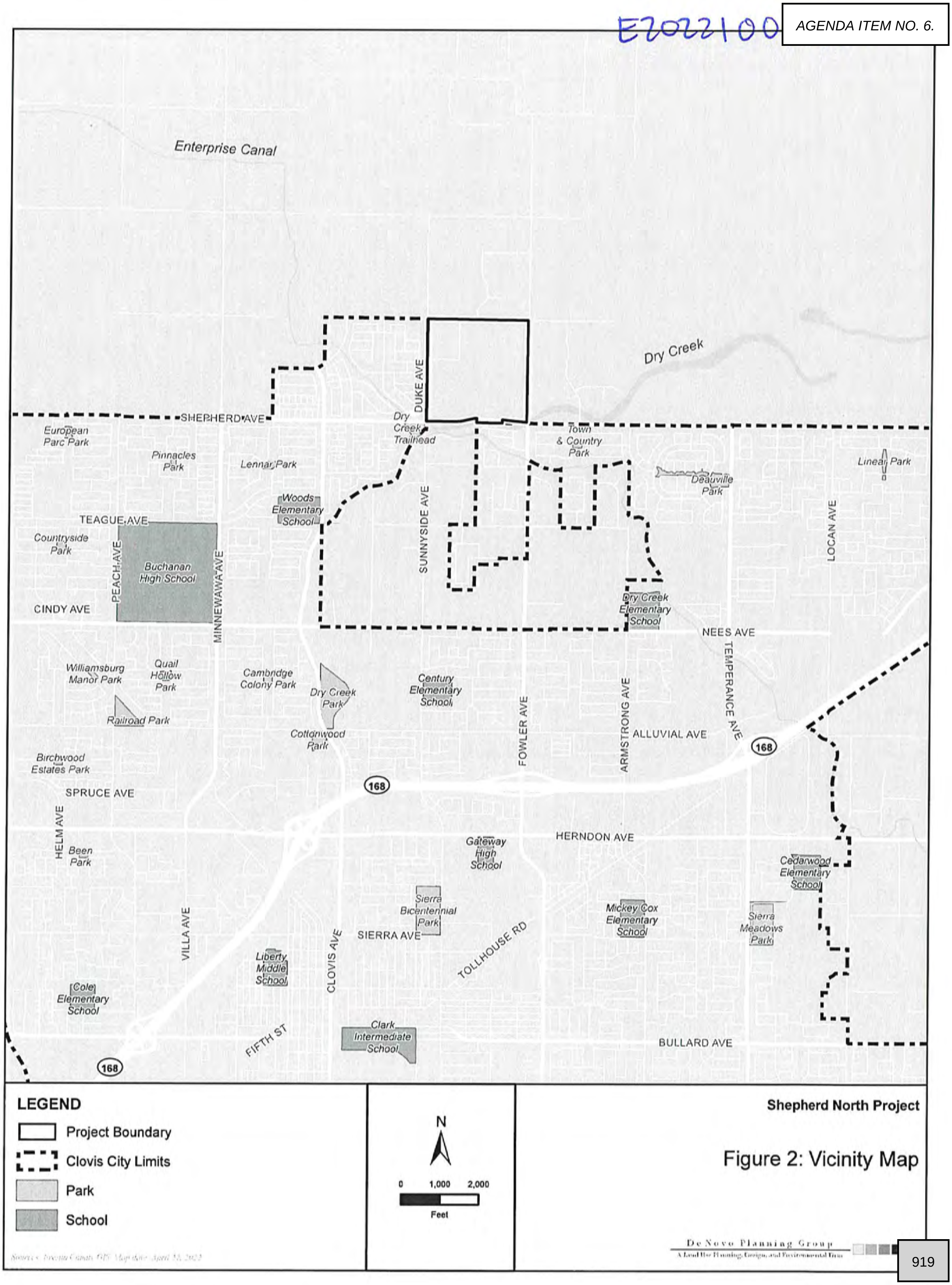

LEGEND

- ▭ Project Boundary
- ⬚ Clovis City Limits
- ▨ Park
- ▨ School

Sources: Fresno County GIS; Map date: April 13, 2022

Shepherd North Project

Figure 2: Vicinity Map

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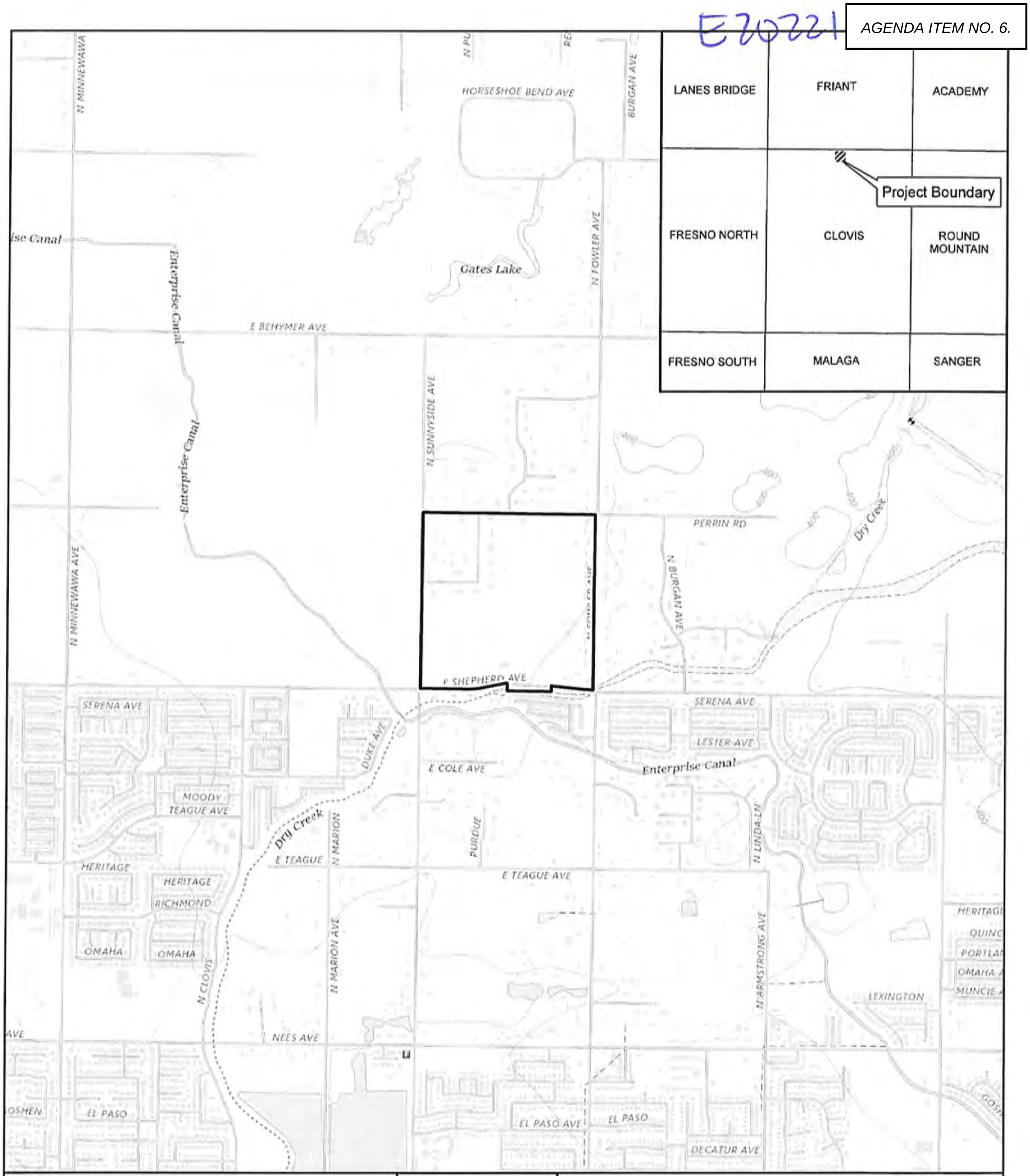
AGENDA ITEM NO. 6.



LEGEND

▭ Project Boundary

N

0 400 800

Feet

Shepherd North Project

Figure 3. USGS Topographic Map

Clovis Quadrangle

Sources: Fresno County GIS; ArcGIS Online USGS Topographic Map Service.
Map date: April 7, 2021

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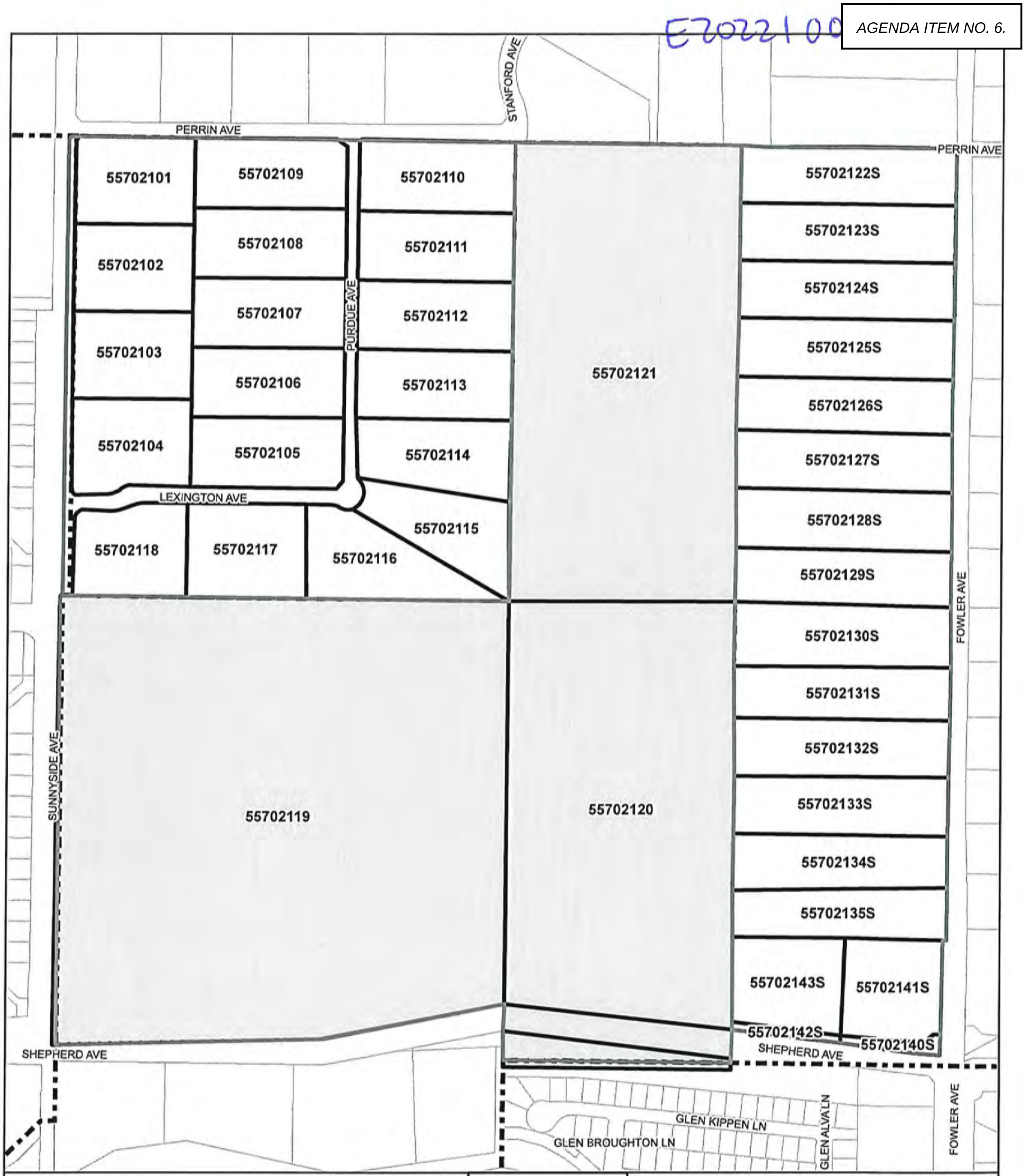

Shepherd North Project

Figure 4. Accessor Parcel Map

Source: Fresno County GIS Map Data: April 26, 2012

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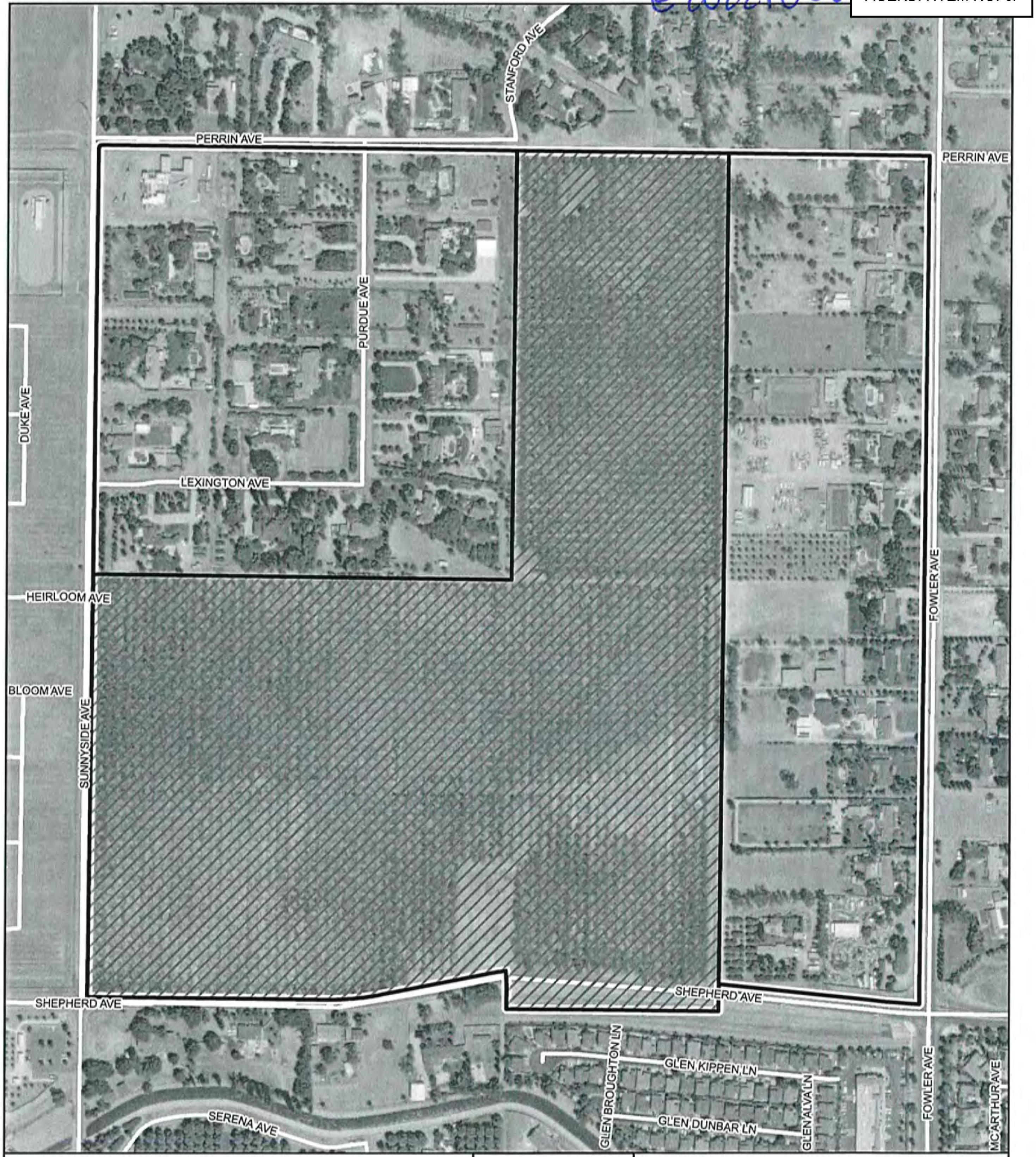

LEGEND

☐ Project Boundary

▨ Developement Area

☐ Non-Development Area

Shepherd North Project

Figure 5. Aerial of Project Site

Sources: Fresno County GIS; ArcGIS Online World Imagery Map Service (04 05 2022).
Map date: April 7, 2022.

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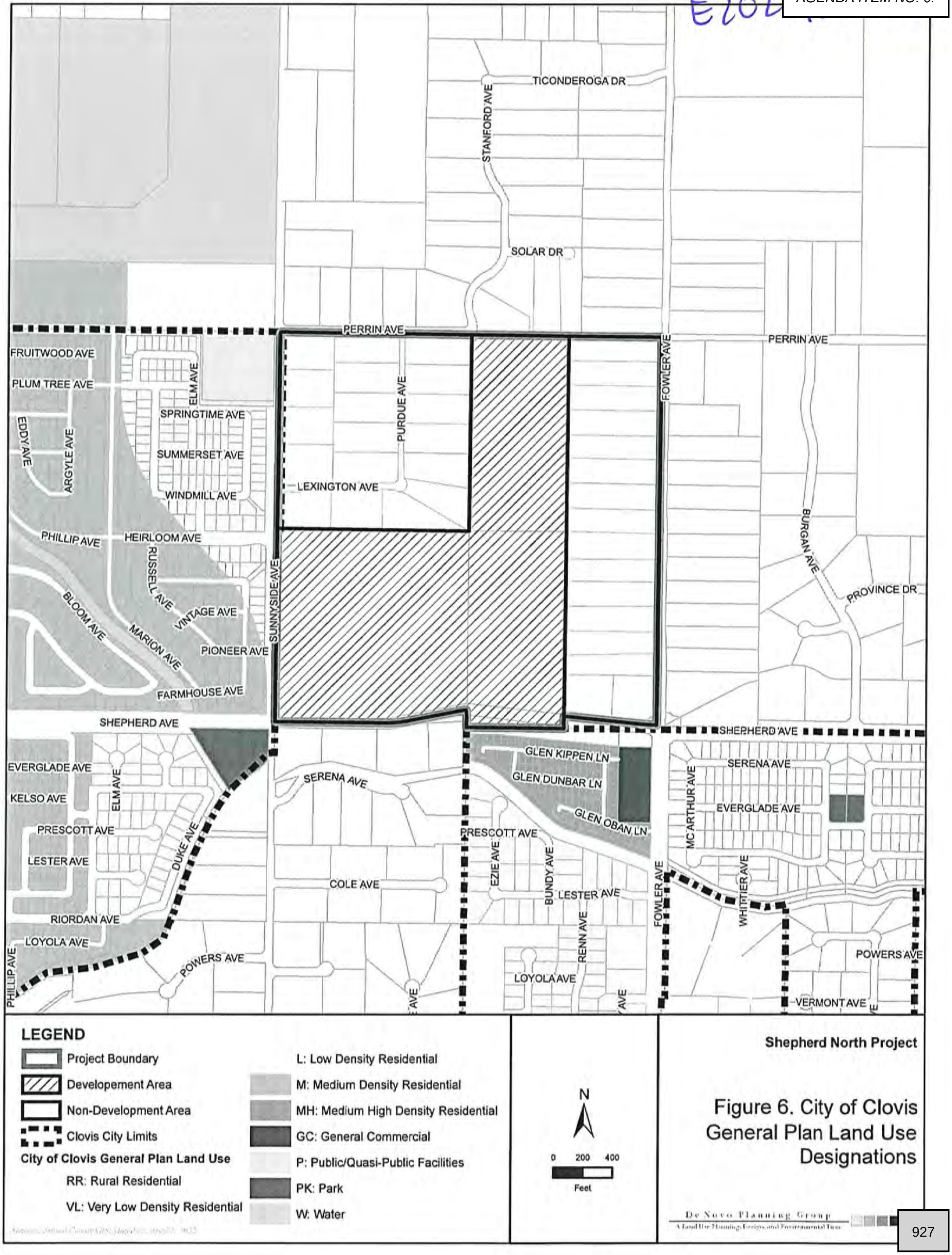

Shepherd North Project

Figure 6. City of Clovis General Plan Land Use Designations

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A Land Use Planning, Design, and Environmental Firm

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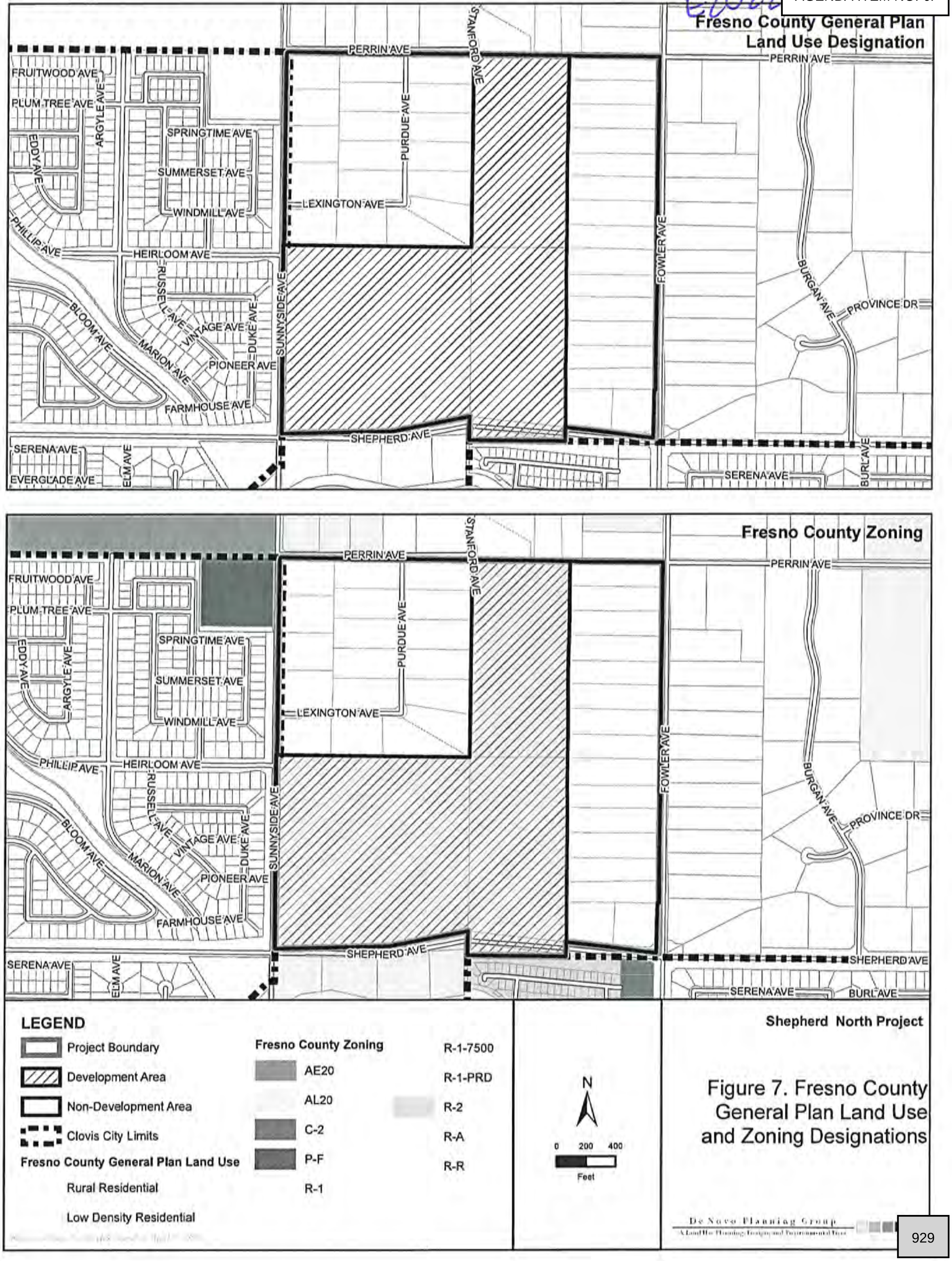

Figure 7. Fresno County General Plan Land Use and Zoning Designations

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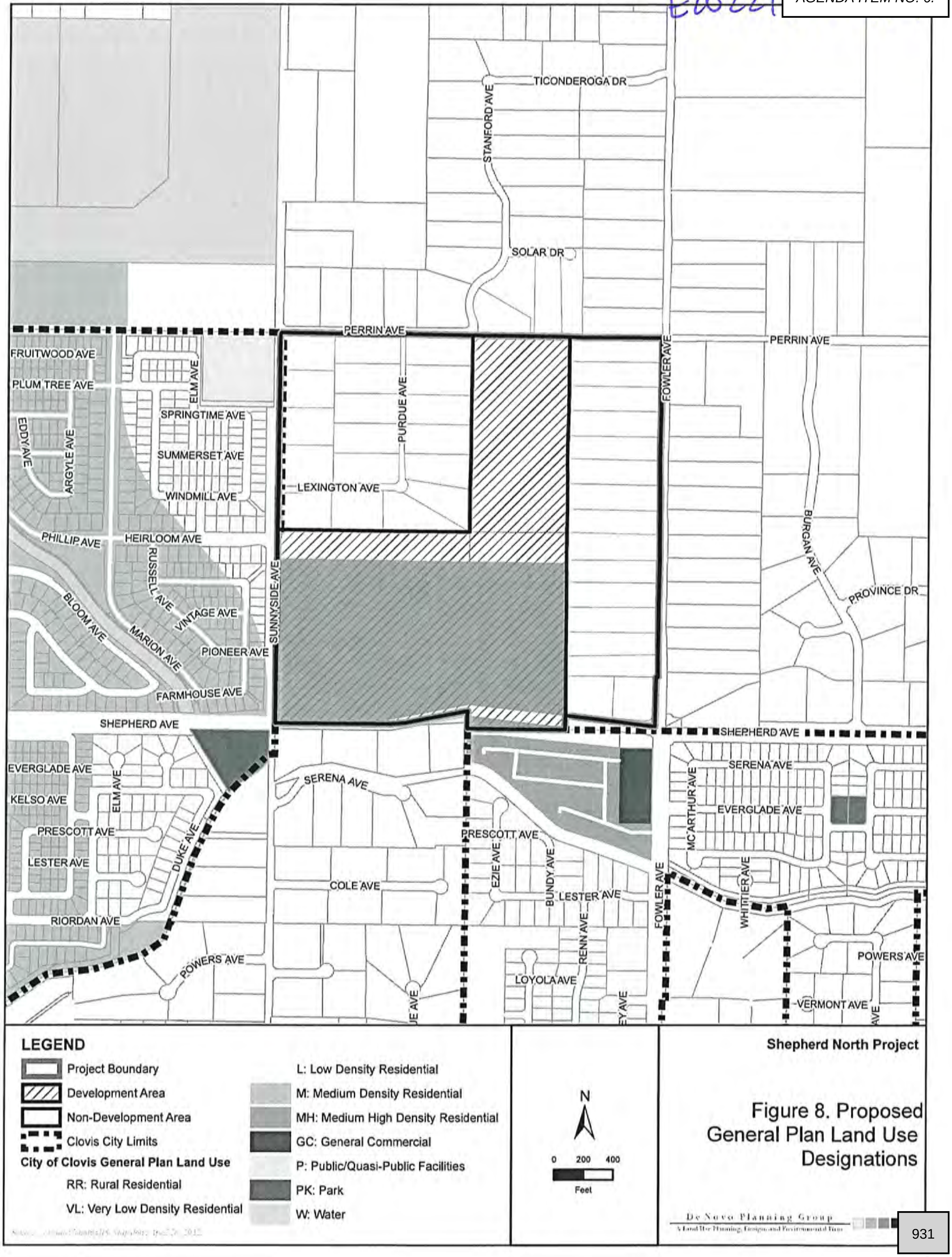

Shepherd North Project

Figure 8. Proposed General Plan Land Use Designations

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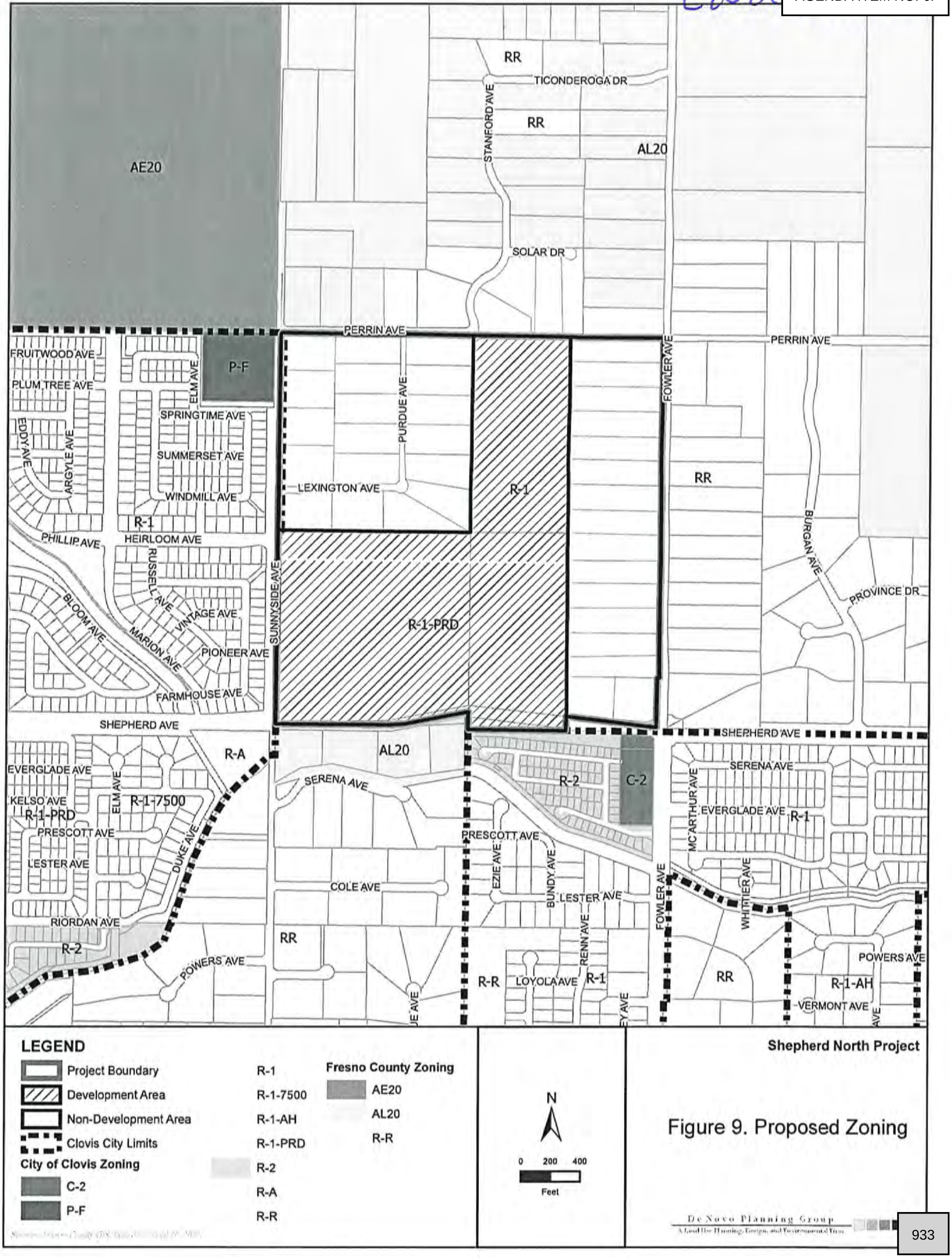

Figure 9. Proposed Zoning

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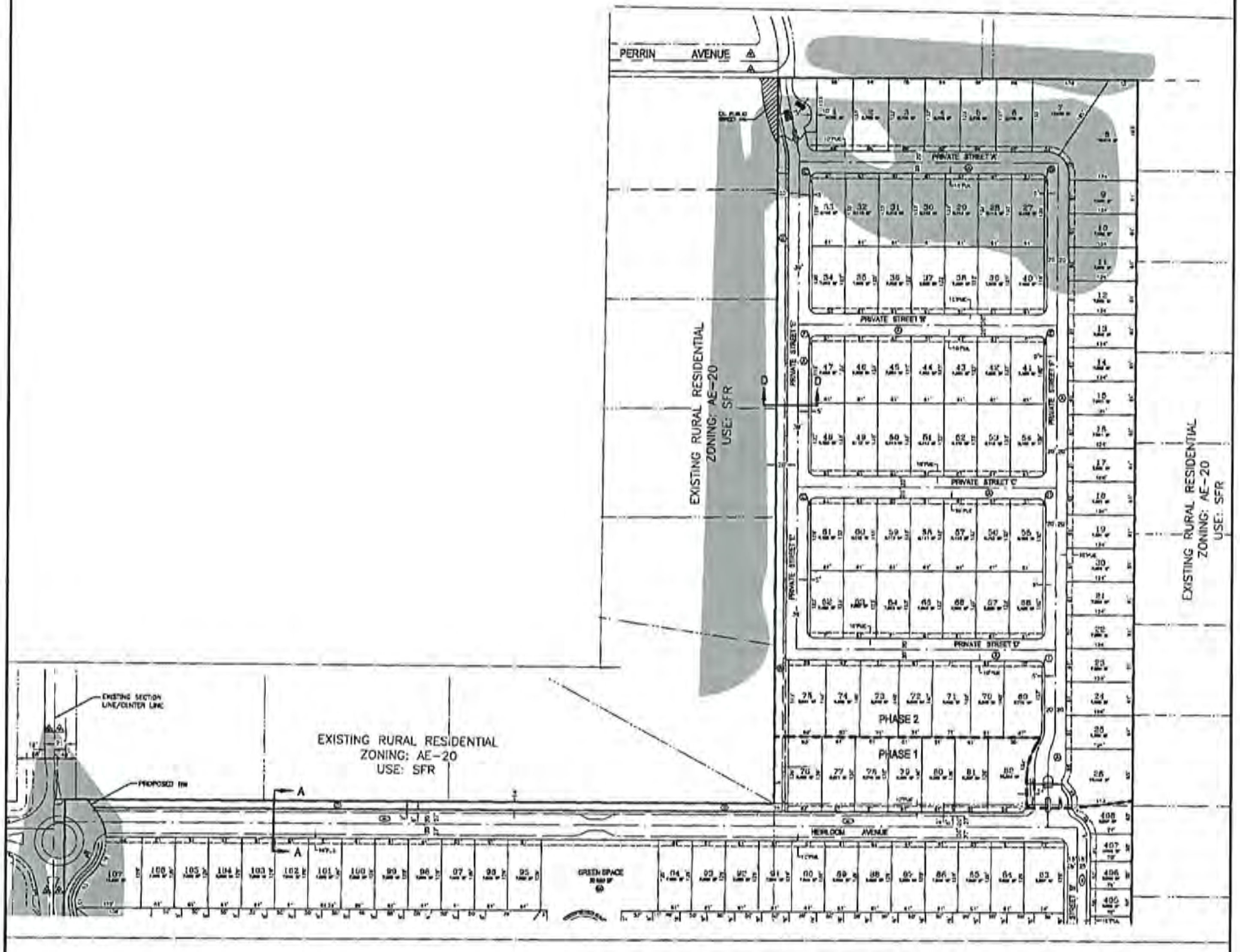

Shepherd North Project

Figure 10a. Tentative Subdivision Map North

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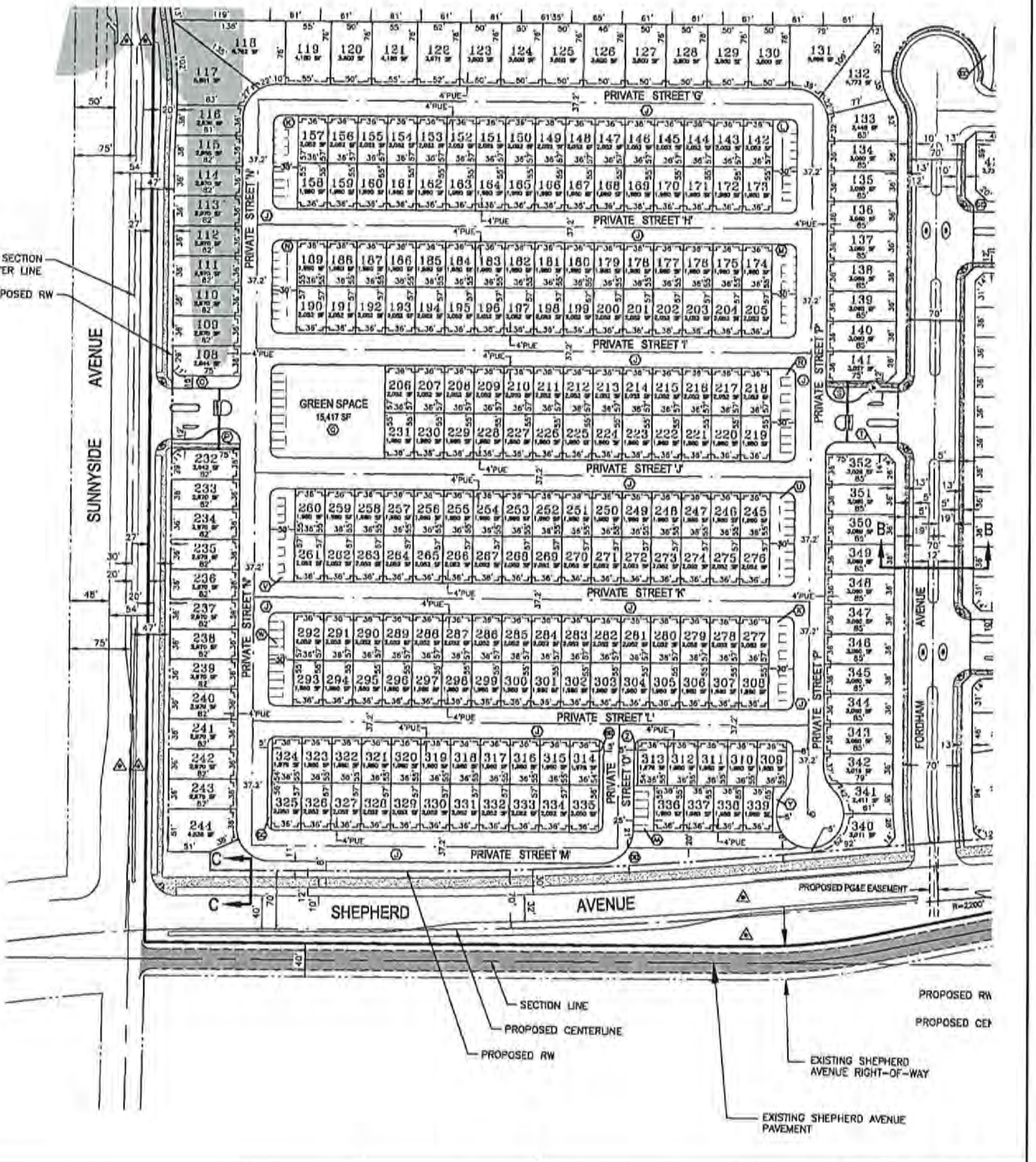

Shepherd North Project

Figure 10b. Tentative Subdivision Map Southwest

N

0 50 100

Feet

De Novo Planning Group

A Land Use Planning, Design and Environmental Firm

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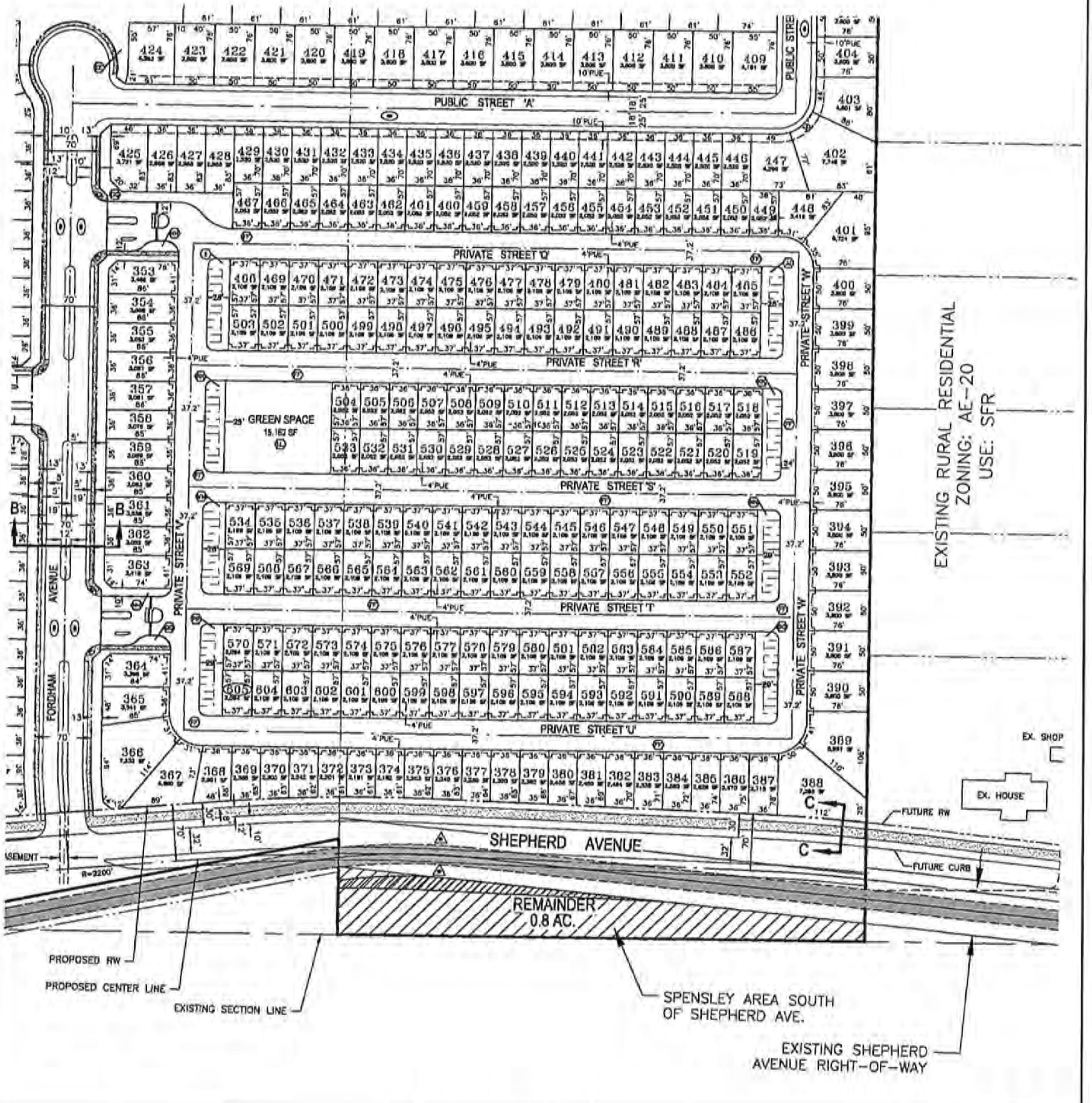

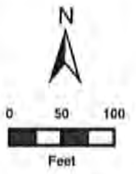

Shepherd North Project

Figure 10c. Tentative Subdivision Map Southeast

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STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

May 10, 2022

George González
City of Clovis
1033 Fifth Street
Clovis, CA 93611

Re: 2022050180, Shepherd North Project, Fresno County

Dear Mr. González:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when following occurs:

- **a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- **b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- **a.** Avoidance and preservation of the resources in place, including, but not limited to:
  - **i.** Planning and construction to avoid the resources and protect the cultural and natural context.
  - **ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- **b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
  - **i.** Protecting the cultural character and integrity of the resource.
  - **ii.** Protecting the traditional use of the resource.
  - **iii.** Protecting the confidentiality of the resource.
- **c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- **d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
- **e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
- **f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- **a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
- **b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
- **c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    - **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    - **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    - **a.** If part or all of the APE has been previously surveyed for cultural resources.
    - **b.** If any known cultural resources have already been recorded on or adjacent to the APE.
    - **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
    - **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    - **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    - **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Cameron.Vela@nahc.ca.gov.

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

cc: State Clearinghouse

of California
e American Heritage Commission
Harbor Blvd., Ste. 100
Sacramento, CA 95691

9361281398 C037

Department of Toxic Substances Control

Meredith Williams, Ph.D., Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Jared Blumenfeld
Secretary for
Environmental Protection

Gavin Newsom
Governor

SENT VIA ELECTRONIC MAIL

May 18, 2022

Mr. George González
City of Clovis
1033 Fifth Street
Clovis, CA 93611
GeorgeG@cityofclovis.com

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE SHEPHERD NORTH PROJECT – DATED MAY 2022 (STATE CLEARINGHOUSE NUMBER: 2022050180)

Dear Mr. González:

The Department of Toxic Substances Control (DTSC) received a Notice of Preparation of an Environmental Impact Report (EIR) for the Shepherd North Project (Project). The Lead Agency is receiving this notice from DTSC because the Project includes one or more of the following: groundbreaking activities, work in close proximity to a roadway, work in close proximity to mining or suspected mining or former mining activities, presence of site buildings that may require demolition or modifications, importation of backfill soil, and/or work on or in close proximity to an agricultural or former agricultural site.

DTSC recommends that the following issues be evaluated in the Hazards and Hazardous Materials section of the EIR:

1. The EIR should acknowledge the potential for historic or future activities on or near the project site to result in the release of hazardous wastes/substances on the project site. In instances in which releases have occurred or may occur, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The EIR should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight.

2. Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in aerially deposited lead (ADL) being deposited in and along roadways throughout the state. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. Due to the potential for ADL-contaminated soil, DTSC recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the project described in the EIR.

3. If any sites within the project area or sites located within the vicinity of the project have been used or are suspected of having been used for mining activities, proper investigation for mine waste should be discussed in the EIR. DTSC recommends that any project sites with current and/or former mining operations onsite or in the project site area should be evaluated for mine waste according to DTSC's 1998 Abandoned Mine Land Mines Preliminary Assessment Handbook.

4. If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 *Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers*.

5. If any projects initiated as part of the proposed project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to *DTSC's 2001 Information Advisory Clean Imported Fill Material*.

6. If any sites included as part of the proposed project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the EIR. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 *Interim Guidance for Sampling Agricultural Properties (Third Revision)*.

DTSC appreciates the opportunity to comment on the EIR. Should you need any assistance with an environmental investigation, please visit DTSC's Site Mitigation and Restoration Program page to apply for lead agency oversight. Additional information regarding voluntary agreements with DTSC can be found at DTSC's Brownfield website.

If you have any questions, please contact me at (916) 255-3710 or via email at Gavin.McCreary@dtsc.ca.gov.

Sincerely,

Gavin McCreary

Gavin McCreary
Project Manager
Site Evaluation and Remediation Unit
Site Mitigation and Restoration Program
Department of Toxic Substances Control

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Mr. Dave Kereazis
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

Dear Mr. Gonzalez,

My name is Robert Shuman and I live on the north side of the Shepherd North Project on the corner of Perrin and Stanford at 9502 N. Stanford. My wife and I have lived here for 12 years. My mother in law who also lives on the property has been here for 36 years. In my time we have never had any well issues until last summer. I am very concerned that we will lose our well because the Pecans are not being irrigated any longer. The flood irrigation is in my opinion a big part of replenishing our well. It is unfortunate that you guys pulled us out of the SOI. If we lose our well it is because of the expansion of Clovis into the County. I also have other concerns listed below and it should be noted when you begin doing your EIR. I can't stop development, but if I lose my well then I can only blame it on this project along with the Heritage development. I think the residents north of this project should be included in the annexation. I know there are several homeowners along Stanford up to Ticonderoga that have dry wells currently. Please consider this as these homes have been here for many years and it is affecting their way of life. Below I have listed the other concerns and hopefully you will consider them when you go forward with the project.

WATER

Groundwater

The California Supreme Court, in Katz v. Walkinshaw (1903), established the doctrine of correlative groundwater rights, under which every landowner overlying a groundwater basin has the right to extract and use groundwater correlative with the rights of other overlying landowners. This created, in economic terms, a competitive groundwater market where opportunity costs, the fact that water pumped today will result in a lower water table for all future periods, are ignored. A disincentive has been created to conserve or recharge groundwater because the benefits of these investments cannot be fully captured by those who finance them.

Surface Water

No riparian or appropriative rights to surface water exist for the project or adjacent properties. The existing agricultural land has no appropriative surface water rights that can be converted to municipal uses. The SWRCB should be petitioned before diverting surface water to the project to prevent injury to other rights holders.

The project is located in a flat low-lying, flood plain along with many unnamed ephemeral drainages that support a seasonal wetland/flood control structure along behymer and the sunnyside alignment. The headwaters of these ephemeral drainages were severed and diverted to the San Joaquin River as the result of the Little Dry Creek Diversional channel. While the obvious flood control benefits are realized, it has resulted in less natural groundwater recharge in the area. The project site has been artificially elevated and must be evaluated from an pre-agricultural basis.

Public Trust Doc

The Public Trust Doctrine imposes responsibilities on state and local agencies to protect trust resources associated with California's waters and other equally important natural resources. A water right is an estate in real property, including a correlative right to groundwater extraction, must be protected. Property owners who rely on groundwater must rely on certainty to make investments and be economically productive. Continued erosion of groundwater availability will undoubtedly impact investment in surrounding real property and create economic hardship. Small pumpers who rely on groundwater for domestic uses will be disproportionately affected by this project and cumulative effects of similar developments.

Therefore, if the City intends to approve this development appropriate mitigation measures must be incorporated into the project in perpetuity due to the irreversible damage to the water resources.

1. Consider Low-Impact Development (LID) measures that capture and infiltrate stormwater on-site. In addition, LID captures nusinse flows from over irrigation which provides “in-lieu” recharge benefits
2. Consider pumping quotas on City wells equivalent to marginal opportunity cost or minimum groundwater table levels established at a date no later than project approval
3. Make municipal water connections available for surrounding properties

TRAFFIC/NOISE

This level of density will cause significant traffic issues through your rural neighborhood. (ie people will go around shepard/sunnyside and take the back way home, street improvements will be required)>>>>development must improve roads internal to neighborhood and fowler ave to behymer

ENDANGERED SPECIES

The project site must be evaluated from a “fallow field” based upon current conditions. This site is no longer actively farmed and therefore not a mature orchard. Since being effectively fallowed, the vegetation characteristics of the trees have changed–they are now significantly thinned and are suitable for foraging by the swainson hawk and other raptors.

Furthermore, active, well-documented swainson hawk nests are within a 1/4-mile radius of the proposed project.

No developed utility plan for this area, such high costs for a small area don't make sense
No logical expansion of city services, this is very opportunistic and developer driven. This has significant growth inducing impacts for a relatively small development, these cumulative impacts must be studied and mitigated appropriately.

Prior to completion of environmental review, the developer demolished potentially significant historical resources relating to the former owner, agriculture in the area and farm labor.

Sincerely,

Robert Shuman
9502 N. Stanford Ave.
Clovis, Ca. 93619
559-970-8306

smcmurtry@denovoplanning.com

From: George Gonzalez <georgeg@ci.clovis.ca.us>
Sent: Thursday, May 26, 2022 5:29 PM
To: smcmurtry@denovoplanning.com
Cc: George Gonzalez; David Merchen
Subject: FW: [External] Spensley EIR NOP

Hi Steve,

Please see additional comments below from Mr. Jared Callister. Thank you.

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

-----Original Message-----
From: Jared Callister <callister@flclaw.net>
Sent: Wednesday, May 25, 2022 6:07 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Spensley EIR NOP

George, I'm having trouble logging onto the meeting, so please add this to the public comment on the Spensley property.

With respect to the scope of the EIR, it's my request that the ER make special provision and consideration for the water issues of the Quail run neighborhood just north of the Spensley property.

Jared Callister.

Sent from my mobile.

smcmurtry@denovoplanning.com

From:	Paul Armendariz <PaulA@ci.clovis.ca.us>
Sent:	Monday, June 6, 2022 3:34 PM
To:	Leon Penney; Nicholas Torstensen
Cc:	George Gonzalez; Rob Rush; Mike Harrison
Subject:	RE: [External] City of Clovis, Shepard North, NOP, Water Supply Permit Needed?

I'll respond to DDW to let them know a new water system is not being created and an amended water supply permit is not needed. This proposed area will be annexed to the City and will require an extension of our existing potable and non-potable systems, not "new" as stated in the NOP.

Paul

From: Leon Penney <leonp@ci.clovis.ca.us>
Sent: Monday, June 6, 2022 11:54 AM
To: Paul Armendariz <PaulA@ci.clovis.ca.us>; Nicholas Torstensen <nicholast@ci.clovis.ca.us>
Cc: George Gonzalez <georgeg@ci.clovis.ca.us>; Rob Rush <RobR@ci.clovis.ca.us>
Subject: FW: [External] City of Clovis, Shepard North, NOP, Water Supply Permit Needed?

FYI

Leon Penney
City of Clovis
Water Production Manager
559-324-3038

From: Schmitz, Lori@Waterboards [mailto:Lori.Schmitz@waterboards.ca.gov]
Sent: Monday, June 6, 2022 11:50 AM
To: Leon Penney <leonp@ci.clovis.ca.us>
Cc: McFarland, Eli T.@Waterboards <Eli.McFarland@Waterboards.ca.gov>
Subject: [External] City of Clovis, Shepard North, NOP, Water Supply Permit Needed?

Leon,

I help out the Division of Drinking Water with CEQA for water supply permits. I was reviewing the CEQAnet database and noticed your City has a Notice of Preparation out for a 155 acre development north of your City's limit. The development includes 605 residential units, parkland, and public and private infrastructure.

The Notice of Preparation mentioned the Project site would be served by a new potable and non-potable water distribution system. The posting indicated the proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards.

The Notice of Preparation can be found here:
https://link.edgepilot.com/s/7aa04f38/lS1CzKpxREyY1McvlPUuaw?u=https://ceqanet.opr.ca.gov/2022050180

Since the NOP referred to a new potable water distribution system and the location is outside
area, I just wanted to confirm this Project would not require an amended water supply permit by your water system or create a new water system.

Thanks for your help with this!

Lori Schmitz

Lori Schmitz
State Water Resources Control Board
Division of Financial Assistance
Special Project Review Unit
Lori.Schmitz@waterboards.ca.gov

California
Department of Conservation
Division of Land Resource Protection

Gavin Newsom, Governor
David Shaba

MAY 26, 2022

VIA EMAIL: GEORGEG@CITYOFCLOVIS.COM
George Gonzalez, MPA, Senior Planner
City of Clovis, Planning Division
1033 Fifth Street
Clovis, CA 93612

Dear Mr. Gonzalez:

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE SHEPHERD NORTH PROJECT, SCH# 2022050180

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Notice of Preparation of an Environmental Impact Report for the Shepherd North Project (Project). The Division monitors farmland conversion on a statewide basis, provides technical assistance regarding the Williamson Act, and administers various agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's potential impacts on agricultural land and resources.

Project Description

The Project site is north of the City of Clovis limit line at the northeast corner of N. Sunnyside Avenue and E. Shepherd Avenue. The Project site is approximately 155 acres and includes the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area. The Development Area includes the parcels being annexed that will be entitled for subdivision and development of up to 605 residential units, parkland, and public and private infrastructure. The application includes a request for a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Map, Planned Development Permit, and Residential Site Plan Review. The Non-Development Area includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development.

Department Comments

The conversion of agricultural land represents a permanent reduction and significant impact to California's agricultural land resources. CEQA requires that all feasible and reasonable mitigation be reviewed and applied to projects. Under CEQA, a lead agency should not approve a project if there are feasible alternatives or feasible mitigation measures available that would lessen the significant effects of the project.

All mitigation measures that are potentially feasible should be included in the project's environmental review. A measure brought to the attention of the lead agency should not be left out unless it is infeasible based on its elements.

Consistent with CEQA Guidelines, the Department recommends the County consider agricultural conservation easements, among other measures, as potential mitigation. (See Cal. Code Regs., tit. 14, § 15370 [mitigation includes "compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements."])

Mitigation through agricultural easements can take at least two forms: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands should not be limited strictly to lands within the project's surrounding area.

A helpful source for regional and statewide agricultural mitigation banks is the California Council of Land Trusts. They provide helpful insight into farmland mitigation policies and implementation strategies, including a guidebook with model policies and a model local ordinance. The guidebook can be found at:

California Council of Land Trusts

Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered. Indeed, the recent judicial opinion in King and Gardiner Farms, LLC v. County of Kern (2020) 45 Cal.App.5th 814 ("KG Farms") holds that agricultural conservation easements on a 1 to 1 ratio are not alone sufficient to adequately mitigate a project's conversion of agricultural land. KG Farms does not stand for the proposition that agricultural conservation easements are irrelevant as mitigation. Rather, the holding suggests that to the extent they are considered, they may need to be applied at a greater than 1 to 1 ratio, or combined with other forms of mitigation (such as restoration of some land not currently used as farmland).

Conclusion

The Department recommends further discussion of the following issues:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.

- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.
- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Proposed mitigation measures for all impacted agricultural lands within the proposed project area.
- Projects compatibility with lands within an agricultural preserve and/or enrolled in a Williamson Act contract.

Thank you for giving us the opportunity to comment on the Notice of Preparation of an Environmental Impact Report for the Shepherd North Project. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Associate Environmental Planner via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber

Monique Wilber

Conservation Program Support Supervisor

County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

June 2, 2022

George Gonzalez, Senior Planner
Planning Division
City of Clovis
1033 Fifth Street
Clovis, CA 93612

SUBJECT: Notice of Preparation – Shepherd North Project

Dear George Gonzalez:

The County of Fresno appreciates the opportunity to review and comment on the subject project being reviewed by the City of Clovis. Staff's understanding is that the proposed project is proposing a development area including annexed parcels that will be entitled for subdivision and development of up to 605 residential units, parkland, and public and private infrastructure. The application includes a request for a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Map, Planned Development Permit, and Residential Site Plan Review. The Non-Development Area includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development.

I am providing the following excerpts of comments provided by our County of Fresno divisions, particularly as it relates to the proposed Shepherd North Project.

Environmental Health:

Recommended Conditions of Approval:

1. If future applicants propose to use and/or store hazardous materials and/or hazardous wastes, they shall meet the requirements set forth in the California Health and Safety Code (HSC), Division 20, Chapter 6.95, and the California Code of Regulations (CCR), Title 22, Division 4.5. Any business that handles a hazardous material or hazardous waste may be required to submit a Hazardous Materials Business Plan pursuant to the California Health and Safety Code (HSC), Division 20, Chapter 6.95, Section 25507 (http://cers.calepa.ca.gov/). Contact the Fresno County Hazmat Compliance Program at (559) 600-3271 for more information.

2. If any underground petroleum storage tank(s) are discovered during construction activities, the applicant/property owner shall apply for and secure an Underground Storage Tank Removal Permit from the Fresno County Department of Public Health, Environmental Health Division. Contact the Fresno County Hazmat Compliance Program at (559) 600-3271 for more information.

3. As a measure to protect groundwater, all water wells (not intended for use) and septic systems within the property shall be properly destroyed by an appropriately licensed contractor. Contact the Fresno County Department of Public Health, Water Surveillance Program at (559) 600-3357 for more information.

4. Appropriate measures should be incorporated into the construction phase of future projects to minimize potentially significant short-term localized noise impacts to noise sensitive receivers caused by the operation of construction equipment. Construction specifications for projects should require that all construction equipment is maintained according to the manufacturers' specifications, and that noise generating construction equipment is equipped with mufflers. In addition, consideration should be given to limiting noise-generating construction activities to daytime hours.

5. Future projects have the potential to expose nearby residents to elevated noise levels. Consideration should be given to conformance with the applicable standards of the Noise Element of the City of Fresno General Plan. Consideration should be given to noise sensitive receivers within the City's Zoning Map.

If you have any further questions regarding this matter, please contact Kevin Tsuda at KTsuda@FresnoCountyCA.gov (559) 600-3271.

<u>Design Division:</u>

1. Due to the projected traffic, a traffic impact study (TIS) should be required to determine the impact to County's roadways. The TIS should also evaluate the roadway condition and geometry for adequacy to accommodate the increased traffic. Please include the County of Fresno on any future TIS routings.

If you have any further questions regarding transportation or design matters, please contact Gloria Hensley at GHensley@FresnoCountyCA.gov or (559) 600-4265.

If you have any questions regarding the information described in this letter, please contact me at MParker@FresnoCountyCA.gov or (559) 600-9669.

Sincerely,

Marissa Parker, Planner
Development Services and Capital Projects Division

DR:mp:cwm
G:\4360Devs&Pln\PROJSEC\PROJDOCS\Environmental\OAR\City of Clovis\Clovis - DEIR for Shepherd North Project\RESPONSE LETTER OAR - DEIR for Shepherd North Project.docx

2907 S. Maple Avenue
Fresno, California 93725-2208
Telephone: (559) 233-7161
Fax: (559) 233-8227

CONVEYANCE. COMMITMENT. CUSTOMER SERVICE.

June 7, 2022

Mr. George Gonzalez
City of Clovis
Department of Planning and Development Services
1033 Fifth Street
Clovis, CA 93612

RE: Notice of Preparation of a Draft EIR for the Shepherd North Project, Clovis, CA
N/E Shepherd and Sunnyside avenues

Dear Mr. Gonzalez:

The Fresno Irrigation District (FID) has reviewed the Notice of Preparation of a Draft EIR for the proposed Shepherd North Project led by the City of Clovis, APNs: 557-021-19, 20, & 21. The project site is approximately 155-acres and includes an approximate 77-acre Development Area and an approximate 78-acre Non-Development Area. The development area includes parcels that will be annexed and will be entitled for subdivision and development of up to 605 residential units, parkland, and private infrastructure. FID has the following comments:

1. FID does not own, operate, or maintain any facilities located on the subject properties, as shown on the attached FID exhibit map.

2. The proposed development appears to be within the City of Clovis but lies outside FID's boundary line. The parcels are not entitled to water from the Kings River.

3. FID is concerned that the proposed development may negatively impact local groundwater supplies including those areas adjacent to or neighboring the proposed development area. The area was historically agricultural and rural residential. Under current circumstances the project area is experiencing a modest but continuing groundwater overdraft. Should the proposed development result in a significant increase in dependence on groundwater, this deficit will increase. FID recommends the City of Clovis require the proposed development balance anticipated groundwater use with sufficient recharge of imported surface water in order to preclude increasing the area's existing groundwater overdraft problem.

4. California enacted landmark legislation in 2014 known as the Sustainable Groundwater Management Act (SGMA). The act requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally-based management plans. FID and the City of Clovis are members of the North Kings Groundwater Sustainability Agency which will manage the groundwater basin within the FID service area. This area is completely reliant on groundwater pumping and SGMA will impact all users of groundwater and those who rely on it. The City of Clovis should consider the impacts of the development on the City's ability to comply with requirements of SGMA.

5. It is unclear if the source of water for this development is solely groundwater or a mixture of treated surface water from FID's Enterprise Canal. If treated surface water will be used, the City must acquire additional water from a water purveyor, such as FID for that purpose, so as to not reduce water supplies to or create water supply deficits in other areas of the City. Water supply issues must be resolved before any further "hardening" of the water supply demand is allowed to take place.

6. The City of Clovis and FID have been working to address water supplies issues for development outside of the FID service area. We encourage the City to continue towards finding solutions to minimize the impacts of changes in land uses and to mitigate any existing adverse water supply impacts within the development areas.

7. For informational purpose, FID's Enterprise No. 109 runs northwesterly and crosses Fowler Avenue approximately 1,200 feet southeast of the subject property, Sunnyside Avenue approximately 480 feet south of the subject property, and Shepherd Avenue approximately 580 feet west of the subject property, as shown on the attached FID exhibit map. Should this project include any street and/or utility improvements along Sunnyside Avenue, Shepherd Avenue, or in the vicinity of this facility, FID requires it review and approve all plans.

8. For informational purposes, Fresno Metropolitan Flood Control District's Big Dry Creek No. 150 runs southwesterly and traverse the proposed development, FID recommends reaching out to FMFCD for further comments.

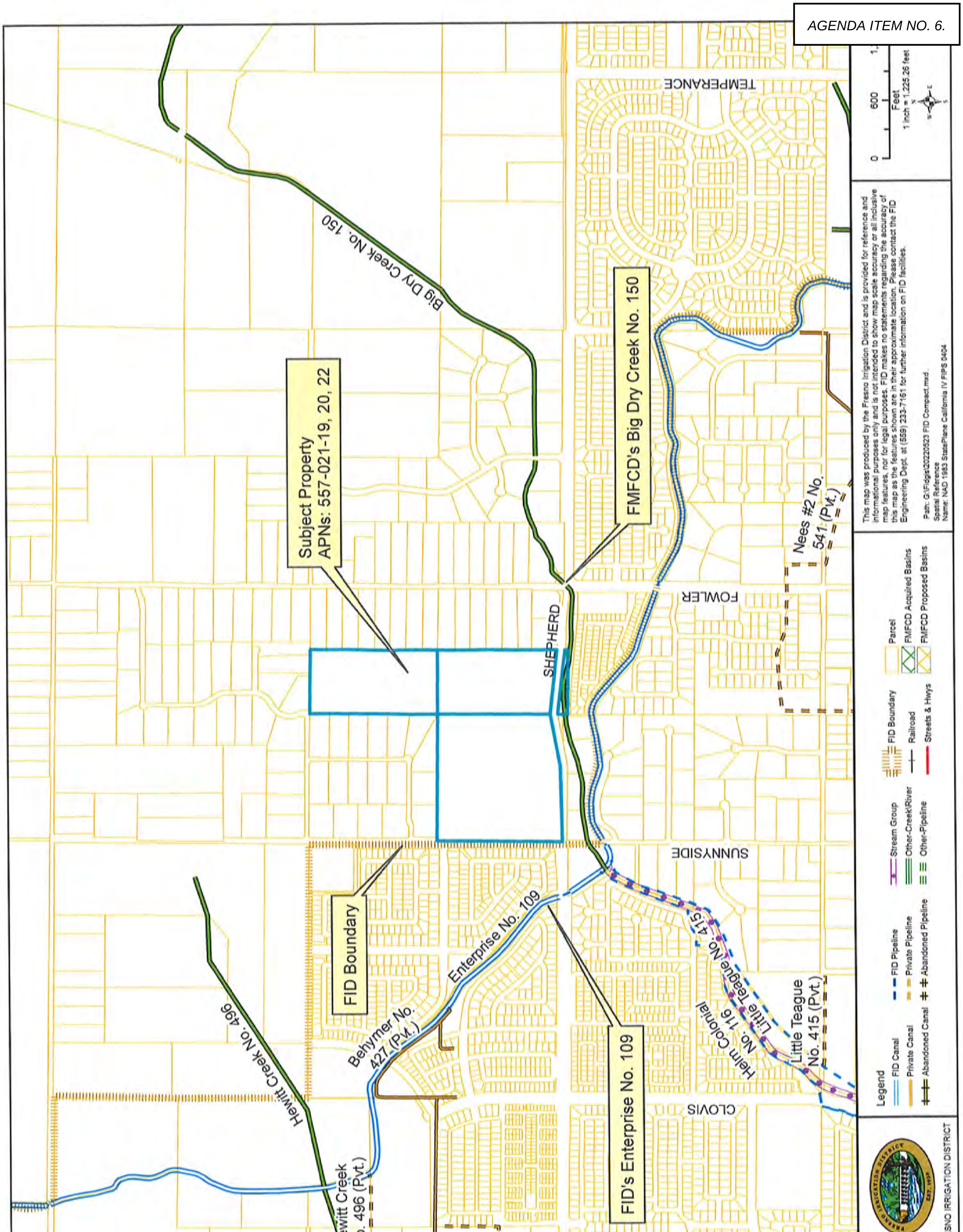
Thank you for submitting the proposed project for our review. We appreciate the opportunity to review and comment on the subject documents for this project. If you have any questions, please feel free to contact Chris Lundeen at (559) 233-7161 extension 7410 or clundeen@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment

G:\Agencies\Clovis\EIR\Shepherd North Project\Shepherd North Project EIR_NOP FID Comment.doc



This map was produced by the Fresno Irrigation District and is provided for reference and informational purposes only and is not intended to show map scale accuracy or all inclusive map features, nor for legal purposes. FID makes no statements regarding the accuracy of this map as the features shown are in their approximate location. Please contact the FID Engineering Dept. at (559) 233-7161 for further information on FID facilities.

Path: G:\Fidgis\20220523 FID Compact.mxd

Spatial Reference
Name: NAD 1983 StatePlane California IV FIPS 0404

NOTICE OF PREPARATION

TO: State Clearinghouse
State Responsible Agencies
State Trustee Agencies
Other Public Agencies

Interested Organizations

FROM: George González, MPA | Senior Planner
City of Clovis | Planning Division
1033 Fifth Street
Clovis, CA 93612
559.324.2383
georgeg@cityofclovis.com

SUBJECT: Notice of Preparation – Shepherd North Project

Notice is hereby given that the City of Clovis is the lead agency for the preparation of a project-level Environmental Impact Report (EIR) for the proposed Shepherd North Project (proposed Project), in accordance with the California Environmental Quality Act (CEQA), Section 15050. The EIR will consider potential environmental effects of the proposed project to determine the level of significance of the environmental effect and will analyze these potential effects to the detail necessary to make a determination on the level of significance. The EIR will consider those environmental issues which are raised by responsible agencies, trustee agencies, and members of the public or related agencies during the Notice of Preparation (NOP) process.

We need to know the views of your agency or organization as to the scope and content of the environmental information germane to your agency's statutory responsibilities or of interest to your organization in connection with the proposed project. Specifically, we are requesting the following:

1. If you are a public agency, state whether your agency will be a responsible or trustee agency for the proposed project and list the permits or approvals from your agency that will be required for the project and its future actions;
2. Identify significant environmental effects and mitigation measures that you believe need to be explored in the EIR with supporting discussion of why you believe these effects may be significant;
3. Describe special studies and other information that you believe are necessary for the City to analyze the significant environmental effects, alternatives, and mitigation measures you have identified;
4. For public agencies that provide infrastructure and public services, identify any facilities that must be provided (both on- and off-site) to provide services to the proposed project;
5. Indicate whether a member(s) from your agency would like to attend a scoping workshop/meeting for public agencies to discuss the scope and content of the EIR's environmental information; and
6. Provide the name, title, and telephone number of the contact person from your agency or organization that we can contact regarding your comments.

Due to the time limits mandated by State law, your response must be sent and received by the City of Clovis by the following deadlines:

PROJECT LOCATION

The Project site is directly north of the City of Clovis limit line at the northeast corner of N. Sunnyside Avenue and E. Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by N. Fowler Avenue, on the south by E. Shepherd Avenue, and on the west by N. Sunnyside Avenue. Figures 1 and 2 show the Project's regional location and vicinity. The Project site is in the southwest ¼ of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 3 illustrates the Project location on the USGS Clovis, California, 7.5-minute series quadrangle map.

PROJECT SITE DEFINED

The Project site includes several distinct planning boundaries defined below. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – includes the whole of the Project site (approximately 155 acres), including the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
- Development Area - includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence Expansion, General Plan Amendment, Pre-zone, Annexation, Tentative Map, Planned Development Permit, and Residential Site Plan Review.
- Non-Development Area - includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

PROJECT SETTING

EXISTING SITE CONDITIONS

The Project site is approximately 155 acres and includes 39 Assessor parcels (APNs). Figure 4 illustrates the APNs.

SITE TOPOGRAPHY

The Project site is relatively flat and is approximately 385 feet above mean sea level.

EXISTING SITE USES

The Development Area primarily contains farmland (orchard), and had three residential dwellings and a warehouse that was removed in approximately 2020. The majority of the Development Area is in active agricultural use (pecan orchards).

There are five agricultural water wells located in the Development Area, two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area and one located along the eastern boundary of the Development Area. There are four pole-mounted transformers in the Development Area. Two pole-mounted transformers

orchards, pastures, or other agricultural or open space activities. The allowable maximum density for this land use designation is one dwelling unit per two acres.

Fresno County

Figure 7 identifies the Fresno County land use designations and zoning for the Project site and the surrounding area. The Development Area is designated as Low Density Residential by the County's General Plan Land Use Map and is zoned AL-20 (Limited Agricultural) by the County. The Non-Development Area is designated as Rural Residential by the County's General Plan Land Use Map and is zoned RR (Rural Residential) by the County.

PROJECT GOALS AND OBJECTIVES

Consistent with CEQA Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the proposed Project shall be discussed.

PROJECT OBJECTIVES

The principal objective of the proposed Project is the expansion of the City's SOI to include the Project site, and the annexation, approval and subsequent development of the Development Area.

The quantifiable objectives include the development of 605 single family residential units. The quantifiable objectives include the development of open space totaling 4.32 acres, including 1.49 acres of private park and recreational uses. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping to serve the residential uses.

The goals of the proposed development are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand.
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping. Figure 10a, 10b, and 10c illustrate the proposed site plans for the Development Area.

PLANNED DEVELOPMENT PERMIT

The proposed Project includes a Planned Development Permit (PDP) for the Development Area of the Project, which will incorporate a program of enhanced amenities (e.g., additional open space, park improvements and/or trail development). The PDP may allow for modifications to the applicable development standards, such as lot coverage, setbacks and building heights.

ANNEXATION

The proposed Project includes an annexation of three APNs totaling approximately 77 acres. This includes the Development Area.

RESIDENTIAL SITE PLAN REVIEW

The proposed Project includes a Residential Site Plan Review (RSPR) for the Development Area as a condition of a subdivision map implementing provisions of zoning.

SPHERE OF INFLUENCE EXPANSION

The proposed Project includes an amendment of the City's Sphere of Influence (SOI) to include the entirety the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno Local Agency Formation Commission (LAFCo).

DEVELOPMENT PROJECT CHARACTERISTICS

The proposed Project is primarily a residential development anticipated to provide up to 605 residential units. The Development Project would provide approximately 1.49 acres of private greenspace. Other uses to support and compliment the proposed residential development include public utility infrastructure, public and private roadways, curb/gutters/sidewalks, pedestrian facilities, private parking, street lighting, and street signage.

Development of housing will depend on market conditions and demand. The plan for infrastructure allows for development to occur in phases to respond to the market conditions and demand.

RESIDENTIAL DEVELOPMENT

The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Development Area will accommodate up to 605 residential units. Specifically, the northern portion of the Development Area would include the development of up to 107 single-family residences with lot sizes ranging from approximately 7,500 square feet to 19,300 square feet. The southern portion of the Development Area would be developed with smaller lot single-family residences, with lot sizes ranging northwest, and ultimately the northeast urban centers. The plant is designed to accommodate future expansion and will ultimately treat 8.4 mgd.

Storm Drainage

The Project site would include construction of a new storm drainage system, which will confirm to the City's standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations. This includes, but not limited to the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. Stormwater throughout the City is collected in FMFCD's basins.

Regulated Public Utilities

Electrical and gas, provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along E. Shepherd Avenue and from existing residential development surrounding the Project site. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Utility improvements would be installed in conjunction with planned street improvements.

ALTERNATIVES

Three alternatives to the proposed Project were developed based on input from City staff. The alternatives that are anticipated to be analyzed in the EIR include the following three alternatives in addition to the proposed Project.

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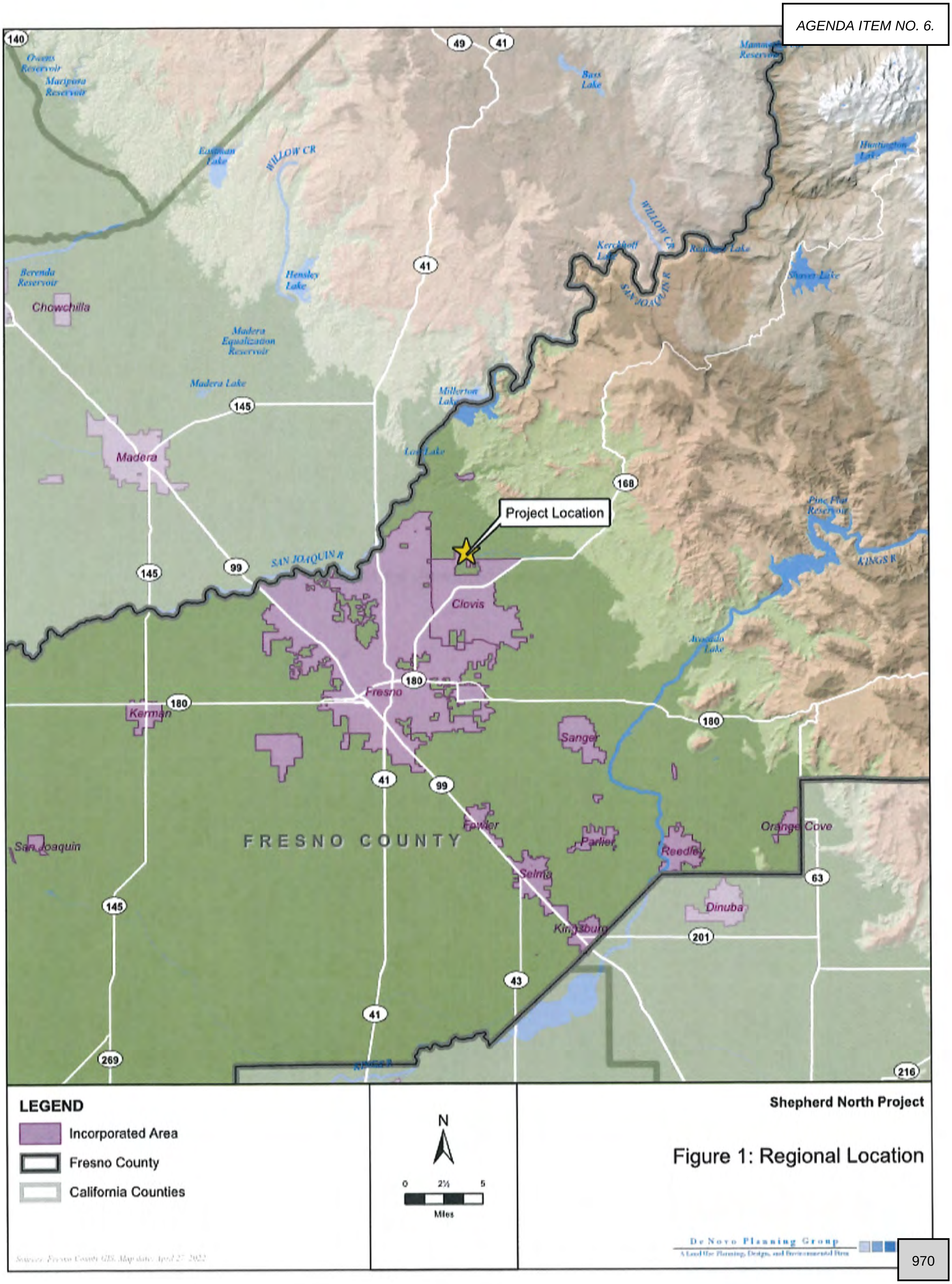
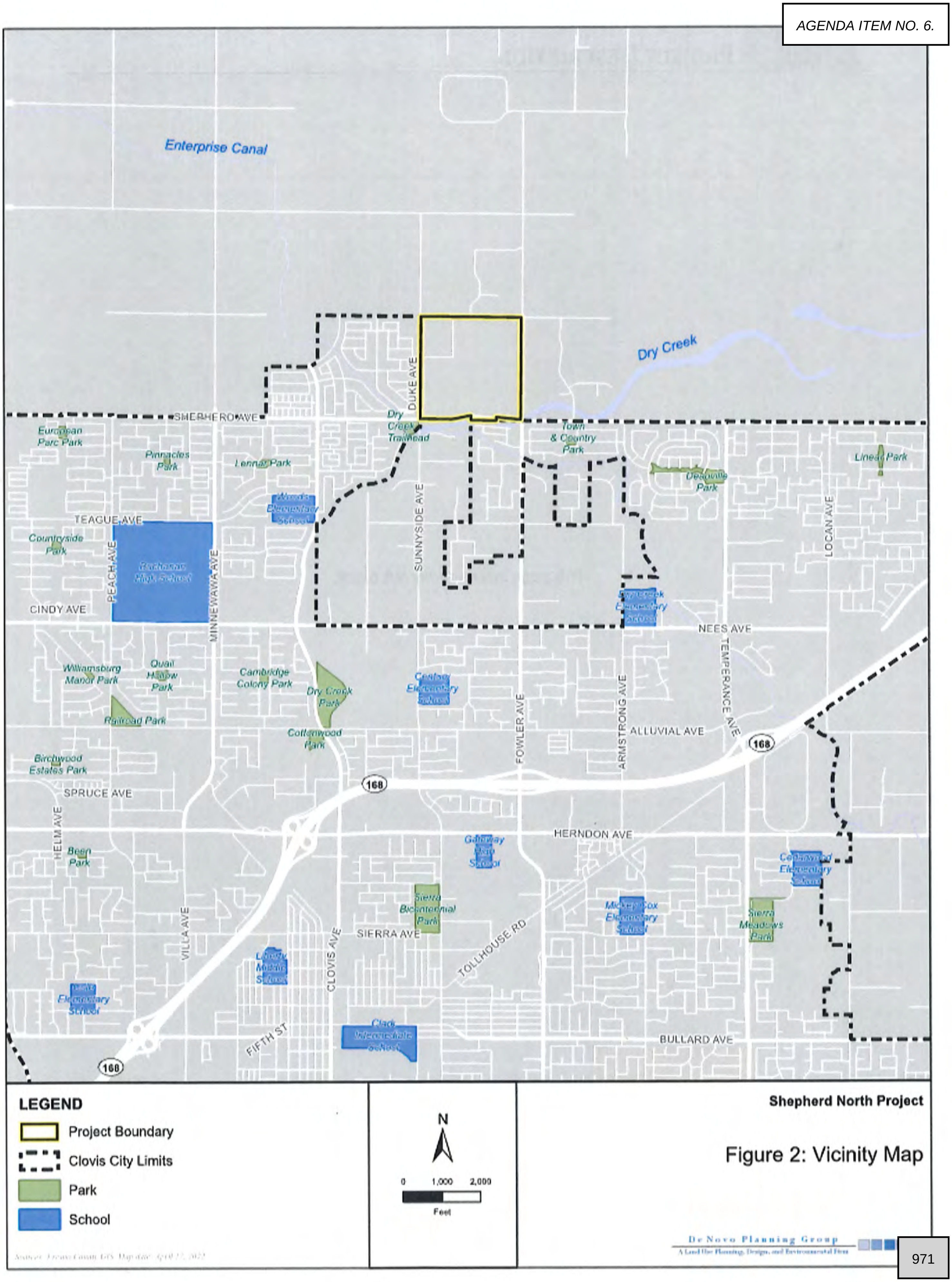
- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits; and
- Fresno Metropolitan Flood Control District – review of stormwater facilities.



Shepherd North Project

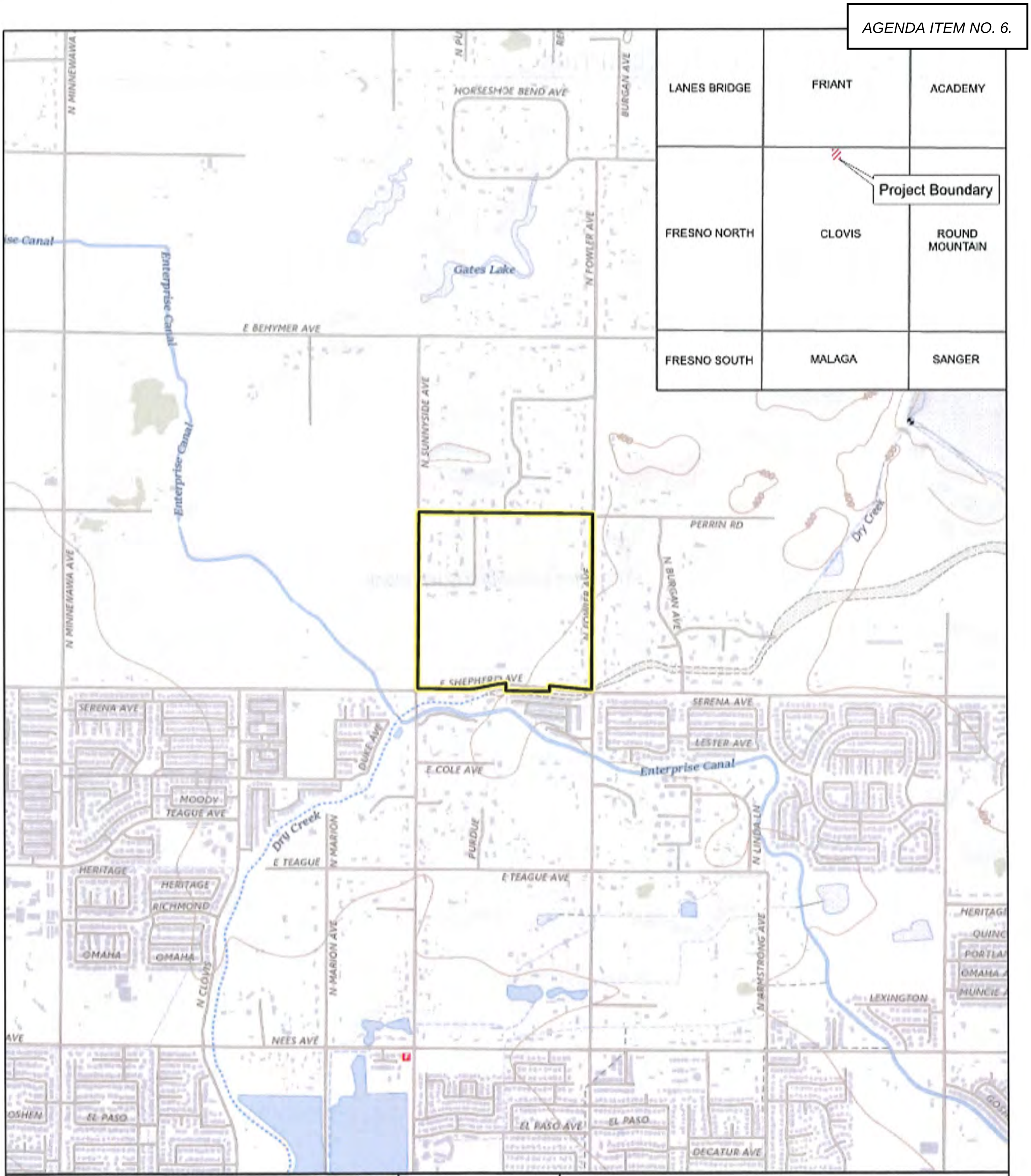
Figure 1: Regional Location

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm



Shepherd North Project

Figure 2: Vicinity Map



LEGEND

▭ Project Boundary

N

0 400 800

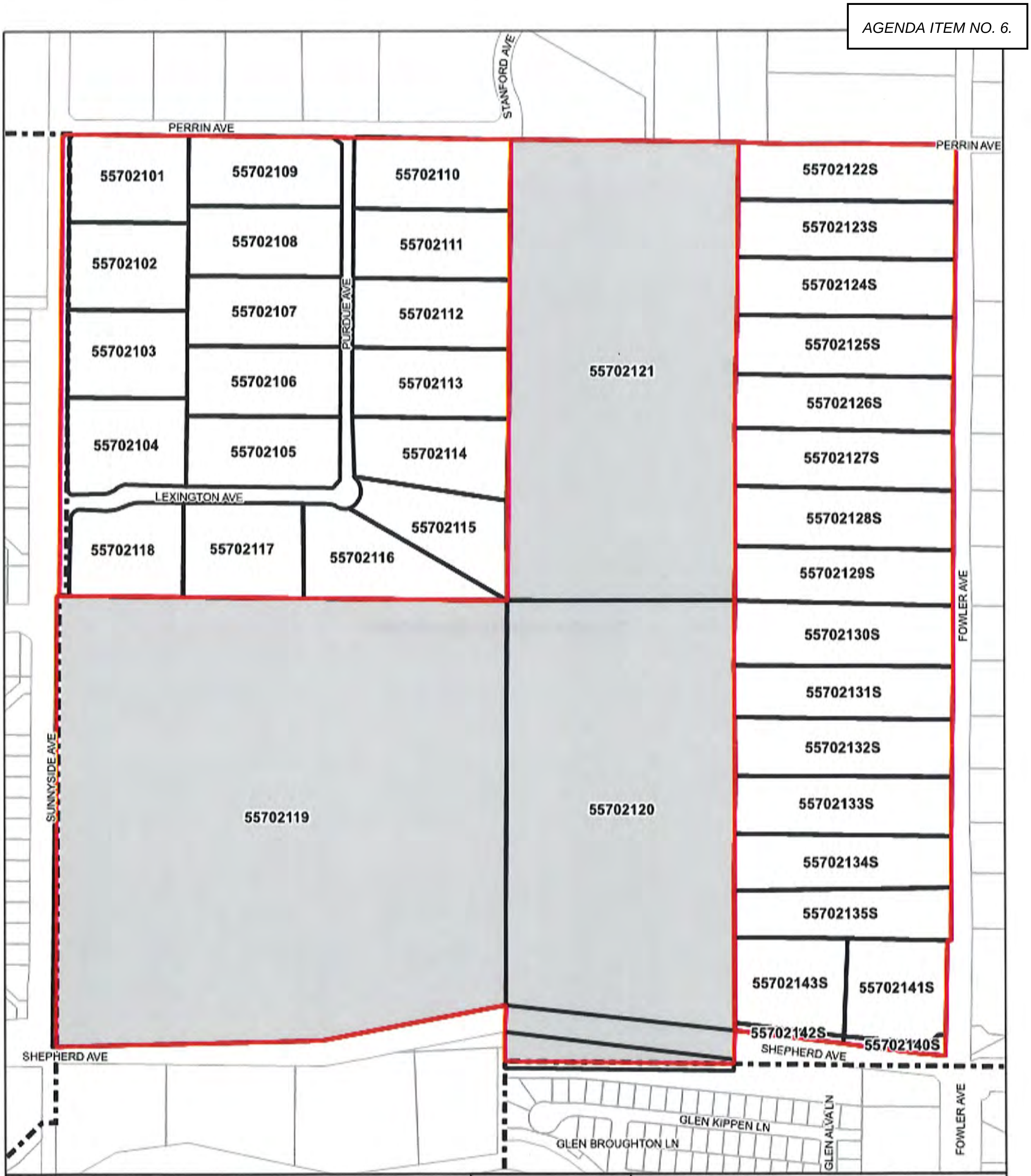
Feet

Shepherd North Project

Figure 3. USGS Topographic Map
Clovis Quadrangle

Sources: Fresno County GIS, ArcGIS Online USGS Topographic Map Service
Map date: April 7, 2022

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm



LEGEND

▭ Project Parcel

▭ Fresno County Parcel

⬚ Clovis City Limits

▨ Development Area

▭ Non-Development Area

N

0 100 200

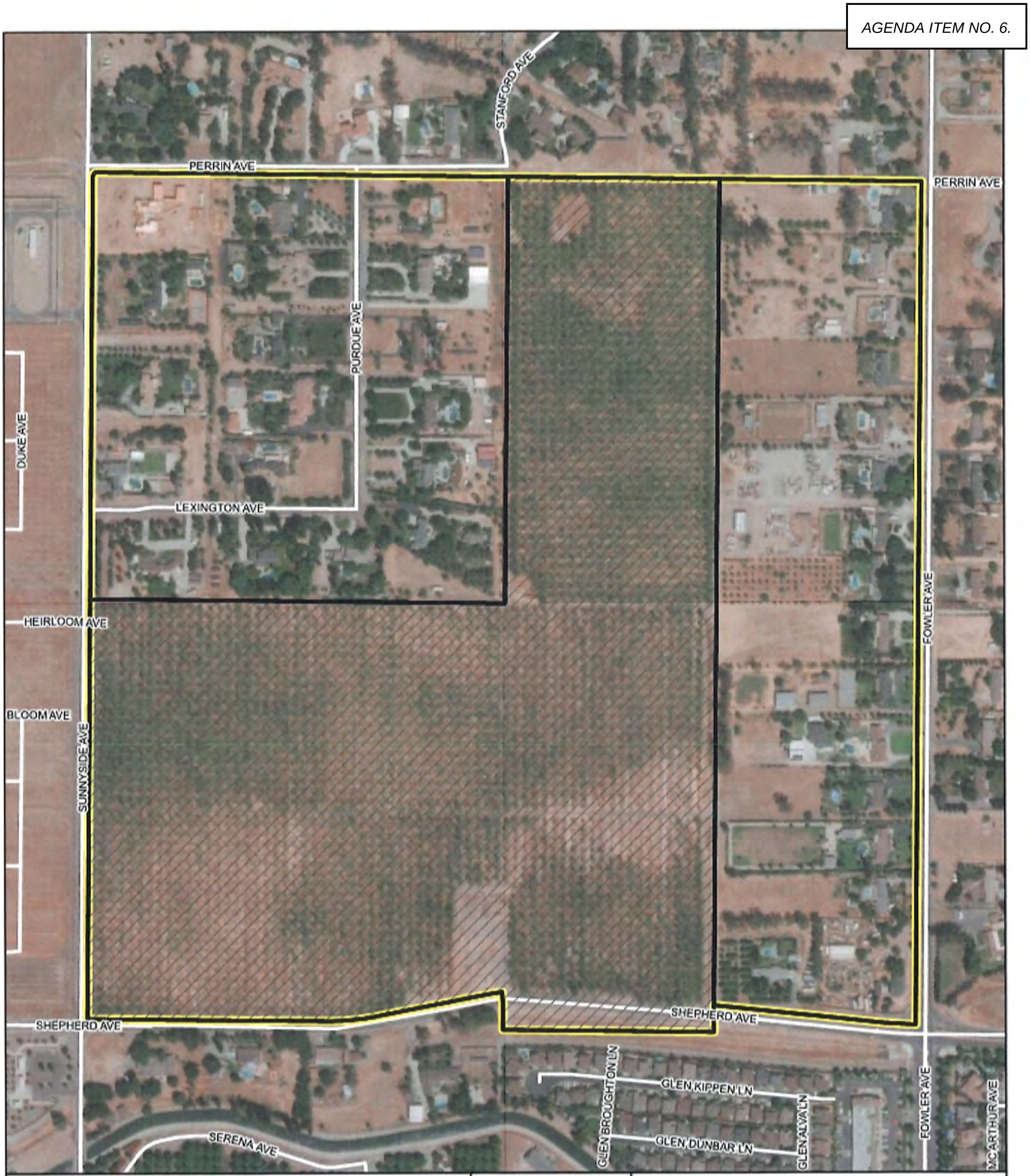
Feet

Shepherd North Project

Figure 4. Accessor Parcel Map

Sources: Fresno County GIS Map date: April 20, 2022

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm



LEGEND

- □ Project Boundary
- ▨ Developement Area
- □ Non-Development Area

N

0 100 200

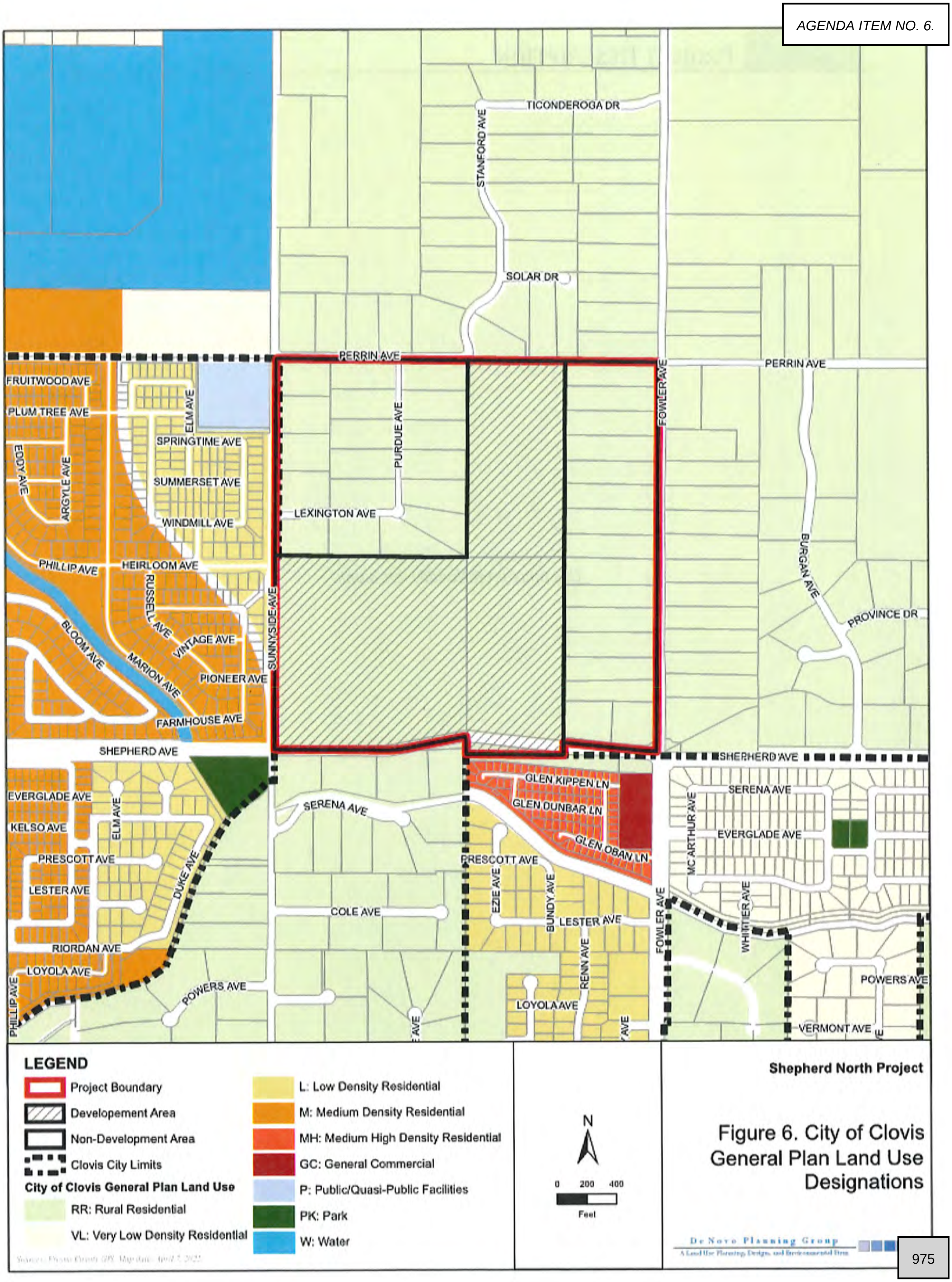
Feet

Shepherd North Project

Figure 5. Aerial of Project Site

Sources: Fresno County GIS; ArcGIS Online World Imagery Map Service (01/06/2022)
Map date: April 7, 2022

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

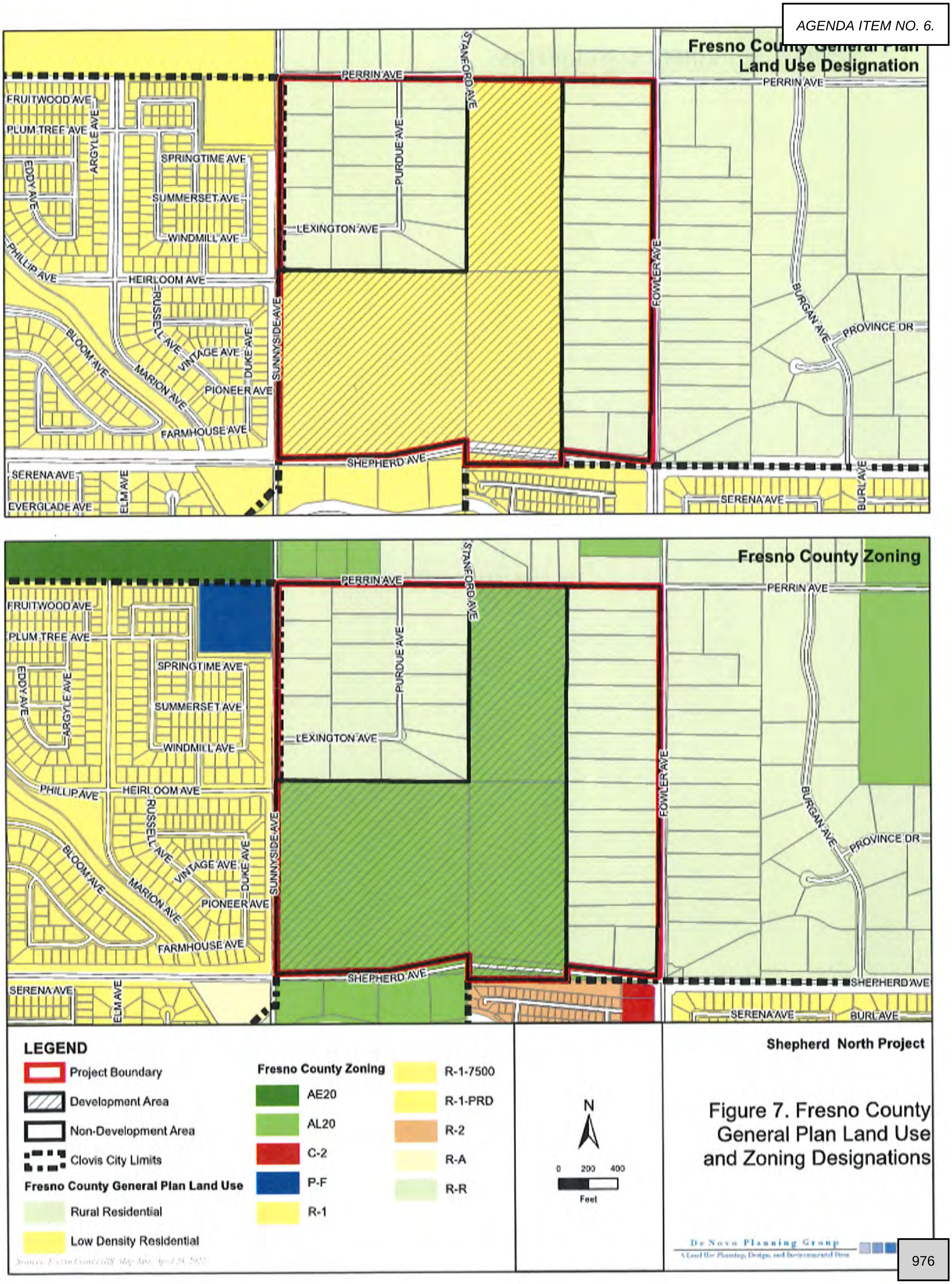


Sources: Fresno County GIS. Map date: April 7, 2022

Shepherd North Project

Figure 6. City of Clovis General Plan Land Use Designations

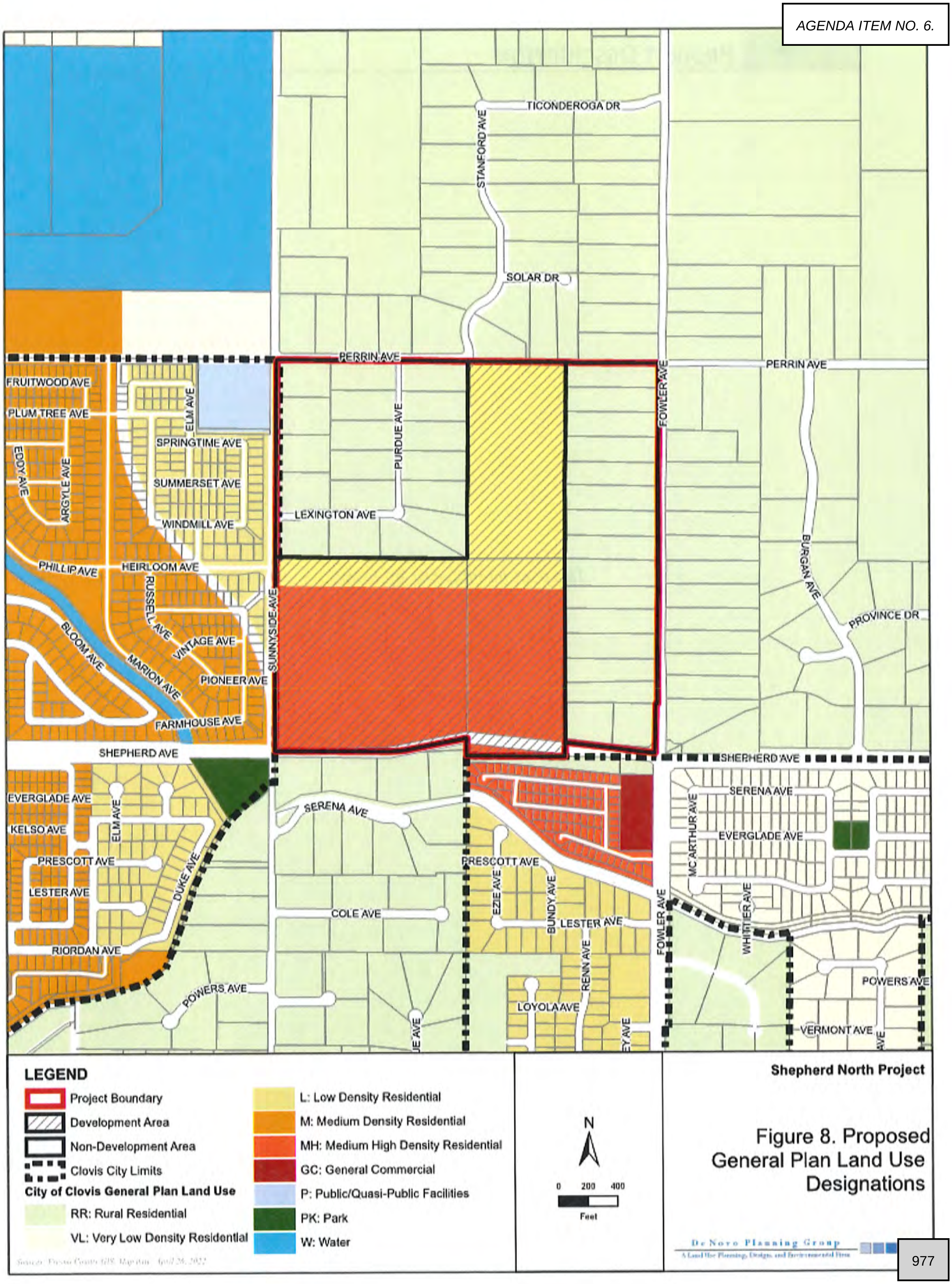
De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm



Source: Fresno County GIS Map Site, April 28, 2022

Shepherd North Project

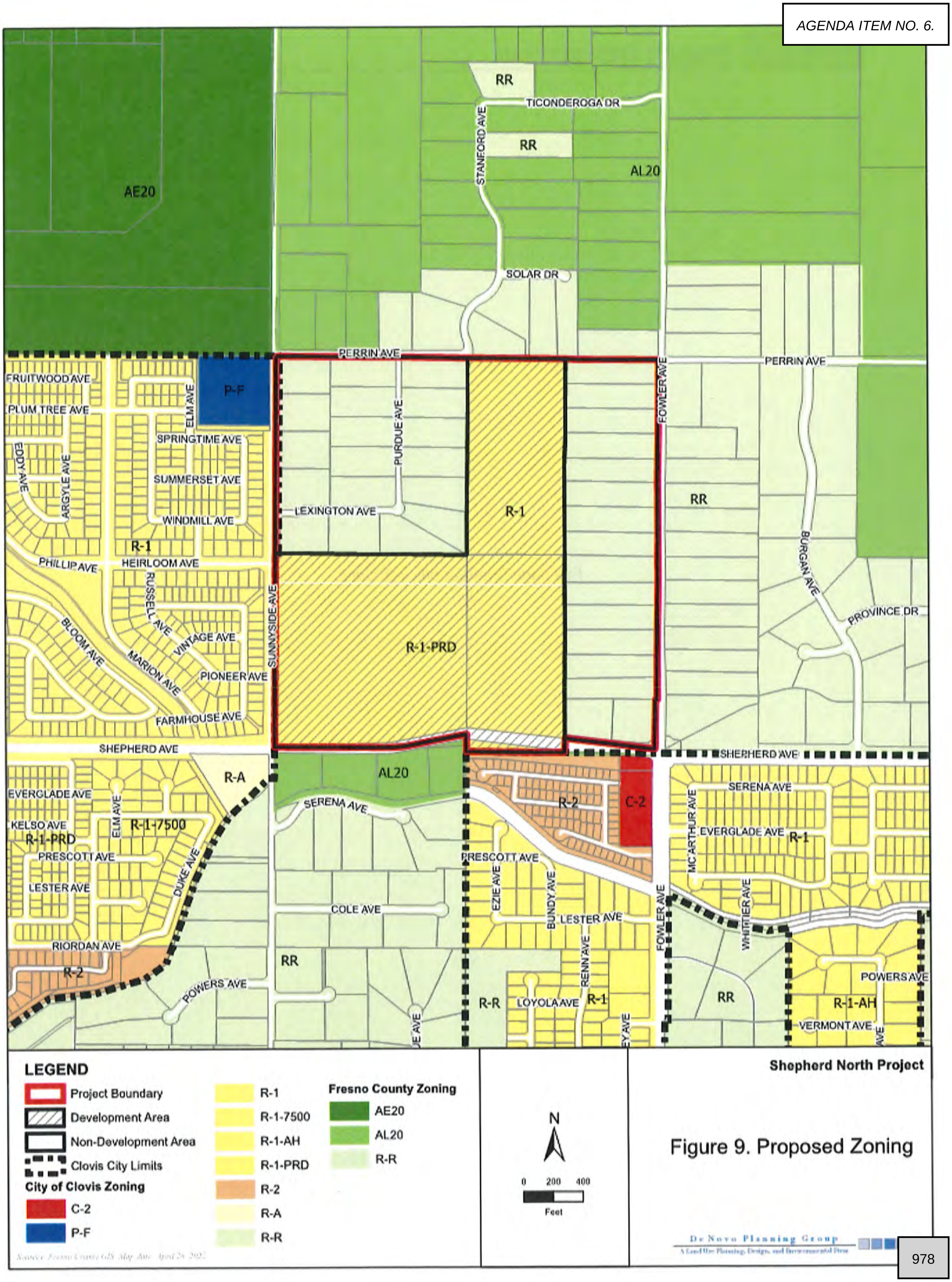
Figure 7. Fresno County General Plan Land Use and Zoning Designations



Source: Fresno County GIS Mapping April 26, 2022

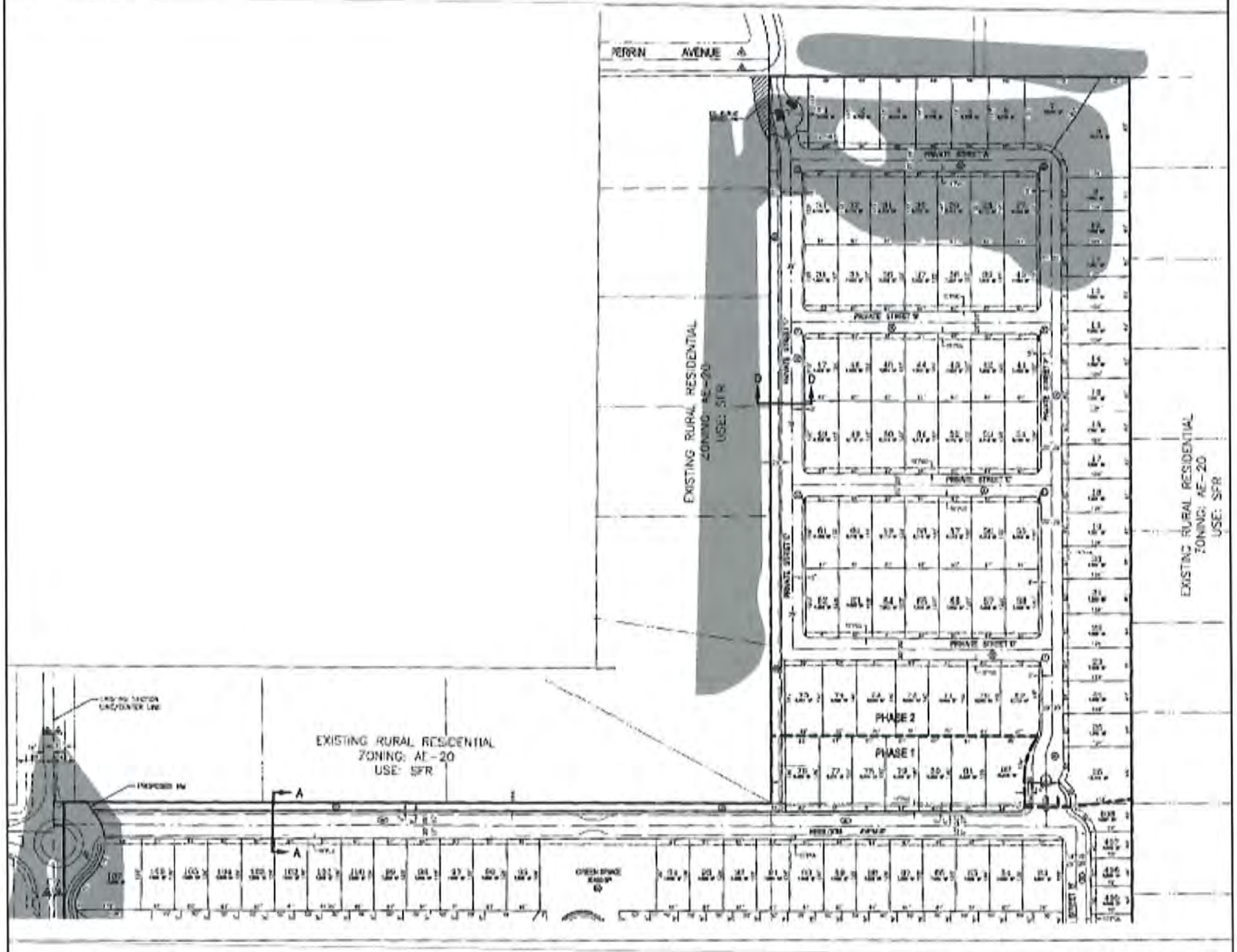
Shepherd North Project

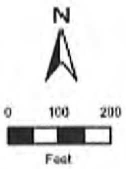
Figure 8. Proposed General Plan Land Use Designations



Shepherd North Project

Figure 9. Proposed Zoning





Shepherd North Project

Figure 10a. Tentative Subdivision Map North

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Source: [illegible]

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Fresno Metropolitan Flood Control District
Capturing Stormwater since 1956

File 170.908
310. "BY1"
550.30 "BY1"

June 10, 2022

Mr. George Gonzalez, MPA, Senior Planner
City of Clovis, Planning Division
1033 Fifth Street
Clovis, CA 93612

Dear Mr. Gonzalez,

Fresno Metropolitan Flood Control District Comments for
Notice of Preparation of an Environmental Impact Report for
Shepherd North Project
Drainage Area "BY1"

General Comments

This letter is in response to the City's request for comments regarding the Notice of Preparation of an Environmental Impact Report for the Shepherd North Project planning area boundaries "Project Area" and "Development Area". The Fresno Metropolitan Flood Control District (FMFCD) bears responsibility for storm water management within the Fresno-Clovis metropolitan area, including the area of the "Project Area". Within the metropolitan area, storm runoff produced by land development is to be controlled through a system of pipelines and storm drainage retention basins. The community has developed and adopted a Storm Drainage and Flood Control Master Plan. Each property contributes its pro-rata share to the cost of the public drainage system. All properties are required to participate in the community system for everyone. It is this form of participation in the cost and/or construction of the drainage system that will mitigate the impact of development.

The subject "Project Area" shall pay drainage fees pursuant to the Drainage Fee Ordinance prior to approval of any final maps and/or issuance of building permits at the rates in effect at the time of such approval. Please contact FMFCD for a final fee obligation prior to issuance of any construction permits. Should land use densities of existing areas be increased, the property would be subject to a reassessment of drainage fees based on the proposed increased land uses and may include the requirement of additional drainage fees to be paid to offset the increased land use. Each proposed development will be reviewed and assessed upon submittal to FMFCD. Any drainage fees previously paid on a property would be given a credit against any new fee responsibility.

k:\letters\environmental impact report letters\nop eir shepherd north project(by)(dw).docx

Lot coverage must be provided to the District prior to submittal of improvement plans. The final drainage fee will be calculated commensurate with the lot coverage provided by the developer. If the lot coverage indicates a density higher than Master Planned, mitigation may be required. The lot coverage calculated by the District includes the front yard walkway, sidewalk walkway and the rear yard patio equaling an additional 6% of impervious area in addition to the City's typical lot coverage calculation.

The grading of any proposed development within the "Project Area", including public street areas, shall be consistent with the FMFCD Master Plan. Additionally, grading shall not have an adverse impact to major storm conveyance, and to the passage of storm water to the adjacent roadways and existing storm drainage pipelines and inlets. The "Project Area" shall provide the appropriate surface flowage easements or covenants for any portion of the development area that cannot convey storm water to the public right-of-way without crossing private property.

If there are to be storm water discharges from private facilities to the FMFCD's storm drainage system, they shall consist only of storm water runoff and shall be free of solids and debris. Landscape and/or area drains are not allowed to connect directly to FMFCD's facilities.

FMFCD will need to review and approve the final improvement plans for all development (i.e. grading, street improvement and storm drain facilities) within the boundaries of the "Project Area" to insure consistency with the approved Storm Drainage Master Plan.

The Master Plan system has been designed such that during a two-year event flow will not exceed the height of the 6-inch curb. Should wedge curb (4.5 inches height) be used the same criteria shall apply whereby flow remains below the top of curb. Any extensions or pipe size increases due to meeting the requirement listed above shall be at the developer's expense.

A minimum fifteen-foot (15') wide storm drain easement will be required whenever storm drain facilities are located on private property. No encroachments into the easement will be permitted including, but not limited to, foundations, roof overhangs, swimming pools, and trees.

Specific Comments to the Shepherd North Project

The "Development Area" is currently located within FMFCD's adopted Rural Master Plan Drainage Area "BY1", as shown on Exhibit No. 1. The adopted Rural Master Plan drainage system is designed to serve the existing land uses of open space, range/pasture and rural residential housing densities ranging from 0 to 0.7 dwelling unit/acre (du/ac). The existing planned drainage facilities do not have capacity to serve the proposed higher urban density residential land use. The

"Development Area" shall be required to mitigate the impacts of the increased runoff from the proposed higher density residential land use to the adopted rural planned rate. The "Development Area" may either make improvements to the existing pipeline system to provide additional capacity (see Optional Non-Master Plan facilities, not Eligible for Credit, as shown on Exhibit No. 1) or may use some type of onsite permanent peak reducing facility in order to match the adopted Rural Master Plan flow rates and eliminate any adverse impacts on the downstream drainage system. Implementation of the mitigation measures may be deferred until the time of development. However, FMFCD requests that the grading Engineer contact the District as early as possible to review the proposed site grading for verification and acceptance of mitigation design prior to preparing a grading plan.

The construction of the Optional Master Plan Facilities and Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, will provide permanent drainage service to the portion of the "Development Area" located north of Heirloom Avenue. The construction of the Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, will provide permanent drainage service to the portion of the "Development Area" located south of Heirloom Avenue upon construction of facilities by Developer of Tracts 6292 and 6344. If these optional facilities are not constructed, the District recommends temporary facilities until permanent service is available.

The "Development Area" shall not block the historical drainage patterns of existing homes located within the parcels to the east and west side of the "Development Area". The "Development Area" shall verify to the satisfaction of the District that runoff from these areas has the ability to surface drain to adjacent streets or be collected into PER-3, as shown on Exhibit No. 1. Either a stub street, channel, or a combination of both shall be provided for those areas, as shown on Exhibit No. 1.

The "Development Area" must identify what streets will pass the major storm and provide calculations that show structures will have adequate flood protection. Based on historical drainage patterns some of the streets located within the "Development Area" may need to be resized or reconfigured (including but not limited to streets that include traffic calming curbs) to pass larger event storms. District approval is not extended to street configuration. A drainage report indicating the path of the major storm flow and calculations confirming there is adequate protection of finished floors will be necessary.

Perrin Tributaries PER-1 and PER-3 are natural stream courses traversing the "Project Area". These stream courses are shown on the Storm Drainage and Flood Control Master Plan (see Exhibit No. 1). Should the "Development Area" choose to modify or relocate these channels, the developer must contact all agencies having an interest in these channels and comply with their regulations regarding the channels. These agencies may include State of California Fish and

Wildlife, State of California Regional Water Quality Control Board (Section 401 of Clean Water Act), and the U.S. Army Corps of Engineers (USACE) (Section 404 of Clean Water Act). Furthermore, if a USACE Clean Water Act Section 404 permit application package is prepared, FMFCD requests an opportunity to review the application prior to submittal.

These channels must be protected and improved in their current location, or an accepted relocation plan must be provided. The protection and improvement of these channels is necessary to convey upland surface runoff through the "Development Area" without adversely affecting other property owners and to provide safe conveyance through the "Development Area". The plans to retain or relocate these channels must be addressed in a drainage report prepared by the developer's engineer and submitted and acceptable to FMFCD for the project and include a study of any affect to the hydraulic performance of the channel. Adequate easement width for Perrin Tributaries PER-1 and PER-3 shall be dedicated to FMFCD prior to approval of the Final Map. The easements shall be of sufficient width to accommodate the Master Plan flow rate and provide adequate maintenance access. Development within the easement is prohibited. FMFCD does not contemplate public access within the easement.

While FMFCD accepts the channel easements to assure their protection, the maintenance of these channels will remain with the property owner. The easement dedication documents will require reimbursement of costs should FMFCD need to intervene in order to perform maintenance and/or otherwise preserve the channels. FMFCD would prefer that the "Development Area" establish a homeowner's association to maintain the channels, but if that is not feasible, each parcel owner along the channels will be burdened with the maintenance of the channel within their property and fences will not be permitted across the channel. Some thought needs to be put into both private and public channel crossings. Preferably, channel crossings will be kept to a minimum and each crossing will require an encroachment agreement identifying the applicant as responsible for the long-term maintenance and potential removal of the encroachment.

As channel design and construction of Perrin Tributaries PER-1 and PER-3 will affect the lot pattern and configuration, FMFCD will review the work of the developer's engineer to determine easement limits at the time of dedication. The channel design must be completed prior to tentative map approval to ensure the easement areas are known and adequate space is allotted for each channel. It is in the developer's interest to identify the channel design as early as possible so that appropriate lot configurations are selected. The hydraulic study must reflect culverts where roads and driveways cross the channel. Easement areas must be adequate to convey the design flows.

The standard geometry parameters for Perrin Tributaries PER-1 and PER-3 are a minimum 4-foot wide bottom and maximum 2:1 side slope. The channels must be designed and constructed to accommodate the flow rate of 16 cubic feet per second for PER-1 and 10 cubic feet per second for PER-3 as identified in the Master Plan. The channel design must include hydraulic modeling using the HEC-RAS computer program. Channel design and hydraulic study must also consider the attenuation currently provided by the developer's property and not reduce the attenuation or otherwise increase conveyance to downstream properties.

FMFCD will accept the easement dedications for Perrin Tributaries PER-1 and PER-3 following completion of construction, including any mitigation obligations, and acceptance under required permits. Any proposed landscaping within the channel easement shall require (i) review and approval by FMFCD, and (ii) maintenance by the property owner.

A portion of the proposed development is in a Federal Emergency Management Agency (FEMA) Zone "AH" flood zone area requiring additional processing and consideration. The developer shall contact FEMA to obtain their requirements.

The City of Clovis, FMFCD, the County of Fresno, the City of Fresno, and the California State University, Fresno are currently covered as Co-Permittees for Municipal Separate Storm Sewer System (MS4) discharges through National Pollutant Discharge Elimination System (NPDES) General Order No. R5-2016-0040 and NPDES Permit No. CAS0085324 (Storm Water Permit) effective May 17, 2018. The previous Storm Water Permit adopted on May 31, 2013 required the adoption of the Stormwater Quality Management Program (SWQMP) that describes the Storm Water Permit implementation actions and Co-Permittee responsibilities. That SWQMP was approved by the Central Valley Regional Water Quality Control Board on April 17, 2015 and is effective until the adoption of a new SWQMP, which is anticipated within the next two years.

The Storm Water Permit requires that Co-Permittees update their CEQA process to incorporate procedures for considering potential stormwater quality impacts when preparing and reviewing CEQA documents. This requirement is found in Provision D.14 of the 2013 Storm Water Permit and in Section 7: Planning and Land Development Program – PLD 3 – Update CEQA Process. The District has created a guidance document that will meet this Storm Water Permit requirement entitled *Guidance for Addressing Stormwater Quality for CEQA Review*, which has been attached. It is recommended that the CEQA review for this project follow the guidance document.

Specific Comments to the Notice of Preparation - Shepherd North Project

These comments area specific to the Notice of Preparation - Shepherd North Project initiated May 9, 2022 (the individual pages are included, and the sentence has been referenced):

1. Page 7 (Utilities and Planned Infrastructure Improvement): Paragraph for Storm Drainage should also include confirming to FMFCD's standards and requirements.

2. Page 9 (Other Governmental Agency Approvals): FMFCD should be revised to include review and approval of stormwater facilities, grading, and street improvements.

3. FMFCD should considered a responsible agency for the "Project Area". Review and approval shall include storm drain facilities, grading, and street improvement plans.

Thank you for the opportunity to comment. Please keep our office informed on the development of these plans. If you should have any questions or comments, please contact FMFCD at (559) 456-3292.

Sincerely,

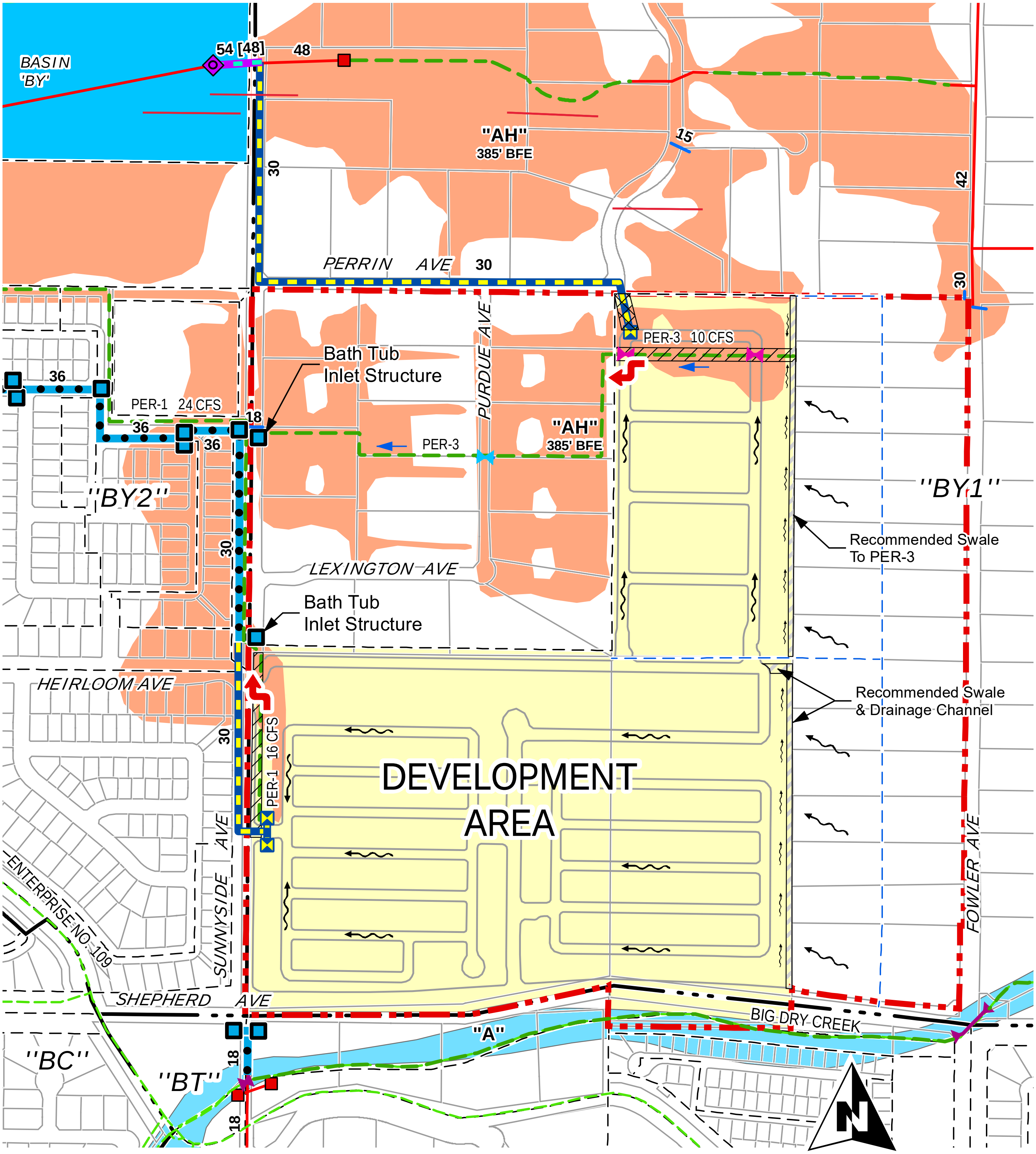
Denise Wade
Master Plan Special Projects Manager

DW/lrl

Attachments

NOTE: THIS MAP IS SCHEMATIC.
DISTANCES, AMO
FACILITIES, AND
BOUNDARIES ARE APPROXIMATE.

AGENDA ITEM NO. 6.



1 " = 500 '

SHEPHERD NORTH PROJECT

DRAINAGE AREA "BY1"

EXHIBIT NO. 1
Page 1 of 2

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

Prepared by: danielg
Date: 5/27/2022
Path: K:\Autocad\DWGS\0EXHIBIT\MISC\Shepherd North Project NOP_Page 1 of 2.mxd

NOTE: THIS MAP IS SCHEMATIC.
DISTANCES, AMO
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BOUNDARIES ARE APPROXIMATE.

AGENDA ITEM NO. 6.

LEGEND

◆	Optional Master Plan Facilities (Creditable Facilities To Be Constructed By Development Area) - Pipeline (Size Shown) & Outfall
54 [48]	Optional Pipe Size To Be Constructed [Creditable Pipe Size]
☒	Optional Non-Master Plan Facilities To Be Constructed By Development Area (Not Eligible For Fee Credit)
■	Facilities To Be Constructed By Developer Of Tracts 6292 & 6344
□	Existing Master Plan Facilities
🟥	Future Master Plan Facilities
– – – –	Existing Stream Course (Master Plan Channel With Maximum Flow Rate)
------	Existing FID Facilities
- - - - -	Inlet Boundary
- - - - -	Rural Drainage Boundary
— - - - —	Drainage Area Boundary
▨	Channel Easement To Be Dedicated To District By Developer
▩	Minimum 15' Wide Storm Drain Easement To Be Dedicated To District By Developer (If Optional Facilities Are Constructed)
🟧	FEMA Flood Zone "AH"
🟦	FEMA Flood Zone "A"
⊳—⊲	Existing Culvert To Be Improved
⊳—⊲	Proposed Culvert To Be Constructed By Developer
←	Direction Of Drainage
↲	Major Storm Breakover
⬚	Project Area Boundary

EXHIBIT NO. 1
Page 2 of 2

SHEPHERD NORTH PROJECT
DRAINAGE AREA "BY1"

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

Prepared by: danielg
Date: 6/9/2022
Path: K:\Autocad\DWGS\0EXHIBIT\MISC\Shepherd North Project NOP_Page 2 of 2.mxd

and FMFCD's

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- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits; and
- Fresno Metropolitan Flood Control District – review of stormwater facilities.

grading, and street improvements.

and approval

Fresno Metropolitan Flood Control District

Guidance for Addressing Stormwater Quality for CEQA Review

Stormwater Checklist for CEQA Review

a. Potential impact of project construction on stormwater runoff.

Stormwater runoff from construction activities can have a significant impact on water quality. To build on sites with over one acre of disturbed land, property owners must obtain coverage under the California Construction General Permit for Discharges of Stormwater (CGP). The CGP is issued by the State Water Resources Control Board (SWRCB). The CGP requires sites that do not qualify for an erosivity waiver to create a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is a site-specific plan that is designed to control the discharge of pollutants from the construction site to local storm drains and waterways.

b. Potential impact of project post-construction activity on stormwater runoff.

FMFCD operates the Regional Stormwater Mitigation System, which consists of facilities to handle stormwater runoff and non-stormwater discharges in the FMFCD service area. However, river discharging drainage areas and drainage areas without basin service are subject to FMFCD Policy: Providing for Compliance with Post-Development and Industrial Storm Water Pollution Control Requirements (Policy).

Development and redevelopment projects can result in discharge of pollutants to receiving waters. Pollutants of concern for a project site depend on the following factors:

- Project location;
- Land use and activities that have occurred on the project site in the past;
- Land use and activities that are likely to occur in the future; and
- Receiving water impairments.

As land use activities and site design practices evolve, particularly with increased incorporation of stormwater quality BMPs, characteristic stormwater runoff concentrations and pollutants of concern from various land use types are also likely to change.

Typical Pollutants of Concern and Sources for Post-Development Areas

Pollutant	Potential Sources
Sediment (total suspended solids and turbidity), trash and debris (gross solids and floatables)	Streets, landscaped areas, driveways, roads, construction activities, atmospheric deposition, soil erosion (channels and slopes)

Pesticides and herbicides	Residential lawns and gardens, roadsides, utility right-of-ways, commercial and industrial landscaped areas, soil wash-off
Organic materials/oxygen demanding substances	Residential laws and gardens, commercial landscaping, animal waste
Metals	Automobiles, bridges, atmospheric deposition, industrial areas, soil erosion, metal surfaces, combustion processes
Oil and grease, organics associated with petroleum	Roads, driveways, parking lots, vehicle maintenance areas, gas stations, illicit dumping to storm drains, automobile emissions, and fats, oils, and grease from restaurants
Bacteria and viruses	Lawns, roads, leaking sanitary sewer lines, sanitary sewer cross-connections, animal waste (domestic and wild), septic systems, homeless encampments, sediments/biofilms in storm drain system
Nutrients	Landscape fertilizers, atmospheric deposition, automobile exhaust, soil erosion, animal waste, detergents

Source: Adapted from USEPA, 1999 (Preliminary Data Summary of Urban Storm Water BMPs)

FMFCD’s Post-Development Standards Technical Manual provides guidance for implementing stormwater quality Best Management Practices (BMPs) for drainage areas subject to the Policy, with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges. The Post-Development Standards Technical Manual addresses the following objectives and goals:

- Minimize impervious surfaces and directly connect impervious surfaces in areas of new development and redevelopment, and where feasible, to maximize on-site infiltration of stormwater runoff;
- Implement pollution prevention methods supplemented by pollutant source controls and treatment, and where practical, use strategies that control the sources of pollutants or constituents (i.e., where water initially meets the ground) to minimize the transport of runoff and pollutants offsite and into MS4s;
- Preserve, and where possible create or restore, areas that provide important water quality benefits, such as riparian corridors, wetlands, or buffer zones
- Limit disturbances of natural water bodies and natural drainage systems by development, including roads, highways, and bridges;
- Identify and avoid development in areas that are particularly susceptible to erosion and sediment loss or establish guidance that protects areas from erosion and sediment loss;
- Implement source and structural controls as necessary and appropriate to protect downstream receiving water quality from increased pollutant loadings and flows (hydromodification concepts) from new development and significant redevelopment;

- Control the post-development peak stormwater runoff discharge rates and velocities to maintain or reduce pre-development downstream erosion and to protect downstream habitat; and
- Consider integration of Low Impact Development (LID) principles into project design.

The Post-Development Standards Technical Manual describes the stormwater management requirements for Priority Projects, which are identified as meeting one or more of the following and discharge to the San Joaquin River or do not have basin service:

- Home subdivisions of 10 housing units or more;
- Commercial developments greater than 100,000 square feet;
- Automotive repair shops;
- Restaurants;
- Parking lots 5,000 square feet or greater with 25 or more parking spaces and potentially exposed to urban runoff;
- Streets and roads;
- Retail gasoline outlets (RGOs); and
- Significant redevelopment projects, which are developments that result in creation or addition of at least 5,000 square feet of impervious surface on an already developed site. Significant redevelopment includes, but is not limited to, expansion of a building footprint or addition or replacement of a structure, structural developing including an increase in gross floor area and/or exterior construction or remodeling, replacement of impervious surface that is not part of a routine maintenance activity, and land disturbing activities related with structural or impervious surfaces. Where significant redevelopment results in an increase of less than 50 percent of the impervious surfaces of a previously existing development and the existing development was not subject to Post-Construction Standards, only the proposed alteration must meet the requirements of the Post-Development Standards Technical Manual.

All Priority Projects must mitigate the Stormwater Quality Design Volume (SWQDV) or Stormwater Quality Design Flow (SWQDF) through LID- or treatment-based stormwater quality BMPs or a combination thereof.

For new development or significant redevelopment projects for restaurants with less than 5,000 square feet, the project applicant must meet all the requirements of the Post-Development Standards Technical Manual except for mitigating the SWQDV or SWQDF and implementing stormwater quality BMPs.

The Post-Development Standards Technical Manual can be found on FMFCD's website here:

http://www.fresnofloodcontrol.org/wp-content/uploads/2014/11/Post-Development-Standards-Technical-Manual.pdf

c. Potential for discharge of stormwater from areas from material storage, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas.

Development projects may create potential impacts to stormwater from non-stormwater discharge from areas with material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work area.

Some materials, such as those containing heavy metals or toxic compounds, are of more concern than other materials. Toxic and hazardous materials must be prevented from coming in contact with stormwater runoff. Non-toxic or non-hazardous materials, such as debris and sediment, can also have significant impacts on receiving waters. Contact between non-toxic or non-hazardous materials and stormwater runoff should be limited, and such materials prevented from being discharged with stormwater runoff. To help mitigate these potential impacts, BMPs should be included to prevent discharges from leaving the property.

Refer to FMFCD Post-Development Standards Technical Manual for more information or go to http://water.epa.gov/polwaste/nps/urban.cfm.

d. Potential for discharge of stormwater to impact the beneficial uses of the receiving waters or areas that provide water quality benefits.

Identify receiving waters and describe activities that may impact the beneficial uses of the receiving waters or that project water quality benefits. Project that can impact beneficial uses or receiving waters may be mitigated by implementation of the FMFCD Post-Development Standards Technical Manual.

e. Potential for the discharge of stormwater to cause significant harm on the biological integrity of the water ways and water bodies.

Conservation of natural areas, soils, and vegetation helps to retain numerous functions of pre-development hydrology, including rainfall interception, infiltration, and evapotranspiration. Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Sensitive areas, such as streams and their buffers, floodplains, wetlands, steep slopes, and highly-permeable soils, should be protected and/or restored. Slopes can be a major source of sediment and should be properly protected and stabilized. Locating development in less sensitive areas of a project site and conserving naturally vegetated areas can minimize environmental impacts from stormwater runoff.

The evaluation of a project's effect on sensitive natural communities should encompass aquatic and wetland habitats. Consider "aquatic and wetland habitat" as examples of sensitive habitat.

f. Potential for significant changes in the flow velocity or volume of stormwater runoff that can cause environmental harm.

The evaluation of a project's effect on drainage patterns should refer to the FMFCD's Storm Drainage and Flood Control Master Plan and have their project reviewed by FMFCD to assess the significance of altering existing drainage patterns and to develop any mitigation measures in addition to our stormwater mitigation system. The evaluation should also consider any potential for streambed or bank erosion downstream from the project.

g. Potential for significant increases in erosion of the project site or surrounding areas.

The evaluation of a project's effect on drainage patterns should refer to the FMFCD's Storm Drainage and Flood Control Master Plan and have their project reviewed by FMFCD to assess the significance of altering existing drainage patterns and to develop any mitigation measures in addition to our stormwater mitigation system. The evaluation should also consider any potential for streambed or bank erosion downstream from the project.

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM

California Department of Transportation

DISTRICT 6 OFFICE
1352 WEST OLIVE AVENUE | P.O. BOX 12616 | FRESNO, CA 93778-2616
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June 10, 2022

FRE-168-R7.805
Notice of Preparation of an EIR
Shepherd North Project
https://ld-igr-gts.dot.ca.gov/district/6/report/26417

SENT VIA EMAIL

George Gonzalez, Senior Planner
Planning and Development Services Department
City of Clovis
1033 Fifth Street
Clovis, CA 93612

Dear Mr. Gonzalez:

Thank you for the opportunity to review the Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Shepherd North Project. The project proposes to develop approximately 155 acres of land for the construction of 605 single-family residential units and parkland that is currently outside the City of Clovis' city limits. Approximately 2 miles north of the State Route (SR) 168 and Fowler Avenue interchange, the project is located on the northwest quadrant of Shepherd and Fowler Avenue with the project being bounded on the north by Perrin Road, on the east by Fowler Avenue, on the south by Shepherd Avenue, and on the west by Sunnyside Avenue.

Additional subsequent actions and approvals from the City include a General Plan Amendment, Residential Site Plan Review, Vesting Tentative Maps, and other permits and annexation requests.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. To ensure a safe and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation networks

Caltrans provides the following comments consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. Caltrans requests that prior to initiating the Transportation section of the Draft EIR, Caltrans be provided an opportunity to provide comments on the scope of work. If a kick-off meeting for the development of the Draft EIR is planned to be held by the City, Caltrans requests to be included in this meeting

2. Given the proposed number of single-family housing units and proximity to State Route facilities, the proposed project could have potential impacts on state highway facilities. Caltrans recommends that a transportation impact study (TIS) including a Vehicle miles traveled (VMT) analysis be conducted and the scope of the study should include interchanges of SR 168 at Herndon Avenue and Fowler Avenue, and the SR 168/Shepherd Avenue intersection.

3. Caltrans requests that the Draft EIR be submitted for review once completed and circulated by the City.

4. Caltrans recommends the project proponents consider working with the City to convert a portion of the planned residential units to affordable housing units.

5. It is recommended that the City consider a multimodal transportation system (such as bicycle and pedestrian facilities as well as public transportation) to provide connectivity of modes between the residential uses and commercial/retail uses to reduce VMT impacts from the project.

6. Caltrans recommends the City consider creating a VMT Mitigation Impact Fee to help reduce potential impacts on the State Highway System.

7. Alternative transportation policies should be applied to the development. An assessment of multimodal facilities should be conducted to develop an integrated multimodal transportation system to serve and help alleviate traffic congestion resulting from the project and related development in the area of the City. The assessment should include the following:

    a. Pedestrian walkways should not only be limited to the project's internal connectivity but be connected to existing walkways and transit facilities outside the project area.

    b. The project should consider coordinating connections to local and regional bicycle pathways to encourage the use of bicycles for commuter and recreational purposes.

    c. If transit is not available within 1/4-mile of the project area, transit should be extended to provide services to high activity centers of the project.

8. As part of the statewide effort to reduce greenhouse gas emissions, Caltrans recommends the project proponent consider the installation of public Level 2 Electric Vehicle (EV) and DC Fast Charging EV charging stations.

9. Active Transportation Plans and Smart Growth efforts support the state's 2050 Climate goals. Caltrans supports reducing VMT and GHG emissions in ways that increase the likelihood people will use and benefit from a multimodal transportation network.

If you have any other questions, please call or email Christopher Xiong at (559) 908-7064 or Christopher.Xiong@dot.ca.gov.

Sincerely,

DAVID PADILLA, Branch Chief
Transportation Planning – North

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

June 10, 2022

George Gonzalez
City of Clovis
Planning Division
1033 Fifth Street
Clovis, CA, 93612

Project: Notice of Preparation-Shepherd North Project

District CEQA Reference No: 20220614

Dear Mr. Gonzalez:

The San Joaquin Valley Air Pollution Control District (District) has reviewed the Notice of Preparation (NOP) from the City of Clovis for the Shepherd North Project. Per the NOP, the project consists of the development of up to 605 residential units, parkland, and public and private infrastructure (Project). The Project site is bounded to the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue, in Clovis, CA.

The District offers the following comments regarding the Project:

1) <u>Project Related Emissions</u>

At the federal level under the National Ambient Air Quality Standards (NAAQS), the District is designated as extreme nonattainment for the 8-hour ozone standards and serious nonattainment for the particulate matter less than 2.5 microns in size (PM2.5) standards. At the state level under California Ambient Air Quality Standards (CAAQS), the District is designated as nonattainment for the 8-hour ozone, PM10, PM2.5 standards.

The District's initial review of the Project concludes that emissions resulting from construction and/or operation of the Project may exceed any of the following significance thresholds as identified in the District's Guidance for Assessing and Mitigating Air Quality Impacts: https://www.valleyair.org/transportation/GAMAQI.pdf. The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions.

Samir Sheikh
Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

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1a) Construction Emissions

The District recommends, to reduce impacts from construction-related diesel exhaust emissions, the Project should utilize the cleanest available off-road construction equipment, including the latest tier equipment.

1b) Operational Emissions

Operational (ongoing) air emissions from mobile sources and stationary sources should be analyzed separately. For reference, the District's significance thresholds are identified in the District's Guidance for Assessing and Mitigating Air Quality Impacts: https://www.valleyair.org/transportation/GAMAQI.pdf.

Recommended Mitigation Measure: At a minimum, project related impacts on air quality should be reduced to levels of significance through incorporation of design elements such as the use of cleaner Heavy Heavy-Duty (HHD) trucks and vehicles, measures that reduce Vehicle Miles Traveled (VMTs), and measures that increase energy efficiency. More information on transportation mitigation measures can be found at: http://www.valleyair.org/transportation/Mitigation-Measures.pdf.

1c) Recommended Model for Quantifying Air Emissions

Project-related criteria pollutant emissions from construction and operational sources should be identified and quantified. Emissions analysis should be performed using the California Emission Estimator Model (CalEEMod), which uses the most recent CARB-approved version of relevant emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

2) Health Risk Screening/Assessment

The City should evaluate the risk associated with the Project for sensitive receptors (residences, businesses, hospitals, day-care facilities, health care facilities, etc.) in the area and mitigate any potentially significant risk to help limit exposure of sensitive receptors to emissions.

To determine potential health impacts on surrounding receptors (residences, businesses, hospitals, day-care facilities, health care facilities, etc.) a Prioritization and/or a Health Risk Assessment (HRA) should be performed for the Project. These health risk determinations should quantify and characterize potential Toxic Air Contaminants (TACs) identified by the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) that pose a present or potential hazard to human health.

Health risk analyses should include all potential air emissions from the project, which include emissions from construction of the project, including multi-year construction, as well as ongoing operational activities of the project. Note, two common sources of TACs can be attributed to diesel exhaust emitted from heavy-duty off-road earth moving equipment during construction, and from ongoing operation of heavy-duty on-road trucks.

Prioritization (Screening Health Risk Assessment):
A "Prioritization" is the recommended method for a conservative screening-level health risk assessment. The Prioritization should be performed using the California Air Pollution Control Officers Association's (CAPCOA) methodology.

The District recommends that a more refined analysis, in the form of an HRA, be performed for any project resulting in a Prioritization score of 10 or greater. This is because the prioritization results are a conservative health risk representation, while the detailed HRA provides a more accurate health risk evaluation.

To assist land use agencies and project proponents with Prioritization analyses, the District has created a prioritization calculator based on the aforementioned CAPCOA guidelines, which can be found here:
http://www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION-CALCULATOR.xls

Health Risk Assessment:
Prior to performing an HRA, it is strongly recommended that land use agencies/ project proponents develop and submit for District review a health risk modeling protocol that outlines the sources and methodologies that will be used to perform the HRA. This step will ensure all components are addressed when performing the HRA.

A development project would be considered to have a potentially significant health risk if the HRA demonstrates that the project-related health impacts would exceed the District's significance threshold of 20 in a million for carcinogenic risk, or 1.0 for either the Acute or Chronic Hazard Indices.

A project with a significant health risk would trigger all feasible mitigation measures. The District strongly recommends that development projects that result in a significant health risk not be approved by the land use agency.

The District is available to review HRA protocols and analyses. For HRA submittals please provide the following information electronically to the District for review:

- HRA (AERMOD) modeling files
- HARP2 files

- Summary of emissions source locations, emissions rates, and emission factor calculations and methodologies.

For assistance, please contact the District's Technical Services Department by:

- E-Mailing inquiries to: hramodeler@valleyair.org
- Calling (559) 230-5900

Recommended Measure: Development projects resulting in TAC emissions should be located an adequate distance from residential areas and other sensitive receptors in accordance to CARB's Air Quality and Land Use Handbook: A Community Health Perspective located at https://ww3.arb.ca.gov/ch/handbook.pdf.

3) Ambient Air Quality Analysis

An Ambient Air Quality Analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a project will cause or contribute to a violation of State or National Ambient Air Quality Standards. The District recommends an AAQA be performed for the Project if emissions exceed 100 pounds per day of any pollutant.

An acceptable analysis would include emissions from both project-specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

Specific information for assessing significance, including screening tools and modeling guidance, is available online at the District's website: www.valleyair.org/ceqa.

4) Voluntary Emission Reduction Agreement

Criterial pollutant emissions may result in emissions exceeding the District's significance thresholds, potentially resulting in a significant impact on air quality. When a project is expected to have a significant impact, the District recommends the EIR also include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA) for this Project.

A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects, with the District serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate project specific emissions by providing funds for the District's incentives programs. The funds are disbursed by the District in the form of grants for projects that achieve emission reductions. Thus, project-related impacts on air quality can be mitigated. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors.

In implementing a VERA, the District verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation measure demonstrating that project-related emissions have been mitigated. To assist the Lead Agency and project proponent in ensuring that the environmental document is compliant with CEQA, the District recommends the environmental document includes an assessment of the feasibility of implementing a VERA.

5) Vegetative Barriers and Urban Greening

The District suggests the City consider the feasibility of incorporating vegetative barriers and urban greening as a measure to further reduce air pollution exposure on sensitive receptors (e.g., residential units).

While various emission control techniques and programs exist to reduce air quality emissions from mobile and stationary sources, vegetative barriers have been shown to be an additional measure to potentially reduce a population’s exposure to air pollution through the interception of airborne particles and the update of gaseous pollutants. Examples of vegetative barriers include, but are not limited to the following: trees, bushes, shrubs, or a mix of these. Generally, a higher and thicker vegetative barrier with full coverage will result in greater reductions in downwind pollutant concentrations. In the same manner, urban greening is also a way to help improve air quality and public health in addition to enhancing the overall beautification of a community with drought tolerant, low-maintenance greenery.

6) Clean Lawn and Garden Equipment in the Community

Since the Project consists of residential development, gas-powered residential lawn and garden equipment have the potential to result in an increase of NOx and PM2.5 emissions. Utilizing electric lawn care equipment can provide residents with immediate economic, environmental, and health benefits. The District recommends the Project proponent consider the District’s Clean Green Yard Machines (CGYM) program which provides incentive funding for replacement of existing gas powered lawn and garden equipment. More information on the District CGYM program and funding can be found at: http://www.valleyair.org/grants/cgym.htm
and http://valleyair.org/grants/cgym-commercial.htm.

7) District Rules and Regulations

The District issues permits for many types of air pollution sources, and regulates some activities that do not require permits. A project subject to District rules and regulations would reduce its impacts on air quality through compliance with the District's regulatory framework. In general, a regulation is a collection of individual rules, each of which deals with a specific topic. As an example, Regulation II (Permits) includes District Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Rule 2520 (Federally Mandated Operating Permits), and several other rules pertaining to District permitting requirements and processes.

The list of rules below is neither exhaustive nor exclusive. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm. To identify other District rules or regulations that apply to future projects, or to obtain information about District permit requirements, the project proponents are strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (559) 230-5888.

7a) District Rules 2010 and 2201 - Air Quality Permitting for Stationary Sources

Stationary Source emissions include any building, structure, facility, or installation which emits or may emit any affected pollutant directly or as a fugitive emission. District Rule 2010 (Permits Required) requires operators of emission sources to obtain an Authority to Construct (ATC) and Permit to Operate (PTO) from the District. District Rule 2201 (New and Modified Stationary Source Review) requires that new and modified stationary sources of emissions mitigate their emissions using Best Available Control Technology (BACT).

This Project may be subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and may require District permits. Prior to construction, the Project proponent should submit to the District an application for an ATC. For further information or assistance, the project proponent may contact the District's SBA Office at (559) 230-5888.

7b) District Rule 9510 - Indirect Source Review

The purpose of District Rule 9510 is to reduce the growth in both NOx and PM emissions associated with development and transportation projects from mobile and area sources; specifically, the emissions associated with the construction and subsequent operation of development projects. The Rule requires developers to mitigate their NOx and PM emissions by incorporating clean air design elements into their projects. Should the proposed development project clean air design elements be insufficient to meet the required emission reductions, developers must pay a fee that ultimately funds incentive projects to achieve off-site emissions reductions.

The Project is subject to District Rule 9510 when it receives a project-level discretionary approval from a public agency and will equal or exceed 50 units of residential.

When subject to the rule, an Air Impact Assessment (AIA) application is required no later than applying for project-level approval from a public agency. In this case, if not already done, please inform the project proponent to immediately submit an AIA application to the District to comply with District Rule 9510.

An AIA application is required and the District recommends that demonstration of compliance with District Rule 9510, before issuance of the first building permit, be made a condition of Project approval.
Information about how to comply with District Rule 9510 can be found online at: http://www.valleyair.org/ISR/ISRHome.htm.

The AIA application form can be found online at:
http://www.valleyair.org/ISR/ISRFormsAndApplications.htm.

District staff is available to provide assistance and can be reached by phone at (559) 230-5900 or by email at ISR@valleyair.org.

7c) District Rule 4002 (National Emissions Standards for Hazardous Air Pollutants)

In the event an existing building will be renovated, partially demolished or removed, the Project may be subject to District Rule 4002. This rule requires a thorough inspection for asbestos to be conducted before any regulated facility is demolished or renovated. Information on how to comply with District Rule 4002 can be found online at:
http://www.valleyair.org/busind/comply/asbestosbultn.htm.

7d) District Regulation VIII (Fugitive PM10 Prohibitions)

The project proponent may be required to submit a Construction Notification Form or submit and receive approval of a Dust Control Plan prior to commencing any earthmoving activities as described in Regulation VIII, specifically Rule 8021 – *Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities.*

Should the project result in at least 1-acre in size, the project proponent shall provide written notification to the District at least 48 hours prior to the project proponents intent to commence any earthmoving activities pursuant to District Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities). Also, should the project result in the disturbance of 5-acres or more, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials, the project proponent shall submit to the District a Dust Control Plan pursuant to District Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities). For additional information regarding the written notification or Dust Control Plan requirements, please contact District Compliance staff at (559) 230-5950.

The application for both the Construction Notification and Dust Control Plan can be found online at:
https://www.valleyair.org/busind/comply/PM10/forms/DCP-Form.docx

Information about District Regulation VIII can be found online at:
http://www.valleyair.org/busind/comply/pm10/compliance_pm10.htm

7e) District Rule 4901 - Wood Burning Fireplaces and Heaters

The purpose of this rule is to limit emissions of carbon monoxide and particulate matter from wood burning fireplaces, wood burning heaters, and outdoor wood burning devices. This rule establishes limitations on the installation of new wood burning fireplaces and wood burning heaters. Specifically, at elevations below 3,000 feet in areas with natural gas service, no person shall install a wood burning fireplace, low mass fireplace, masonry heater, or wood burning heater.

Information about District Rule 4901 can be found online at:
http://valleyair.org/rule4901/

7f) Other District Rules and Regulations

The Project may also be subject to the following District rules: Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).

8) District Comment Letter

The District recommends that a copy of the District's comments be provided to the Project proponent.

If you have any questions or require further information, please contact Matt Crow by e-mail at Matt.Crow@valleyair.org or by phone at (559) 230-5931.

Sincerely,

Brian Clements
Director of Permit Services

For: Mark Montelongo
Program Manager

Appendix B

LESA Model

Land Evaluation Worksheet

Land Capability

A	B	C	D	E	F	G	H
Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
ArA	10.85	13.8%	2s	80	11.1	93	12.9
Gf	23.05	29.4%	2w	80	23.5	30	8.8
Gg	3.36	4.3%	2s	80	3.4	56	2.4
Re	20.39	26.0%	2s	80	20.8	48	12.5
Rh	0.81	1.0%	8	0	0.0	25	0.3
SeA	11.54	14.7%	3s	60	8.8	31	4.6
VaA	8.42	10.7%	1	100	10.7	95	10.2
Totals	78.42	(Must Sum to 1.0)	***LCC Total Score***		78.4	***Storie Index Total Score***	51.6

Site Assessment Worksheet 1.

Project

	I	J	K
	LCC Class I - II	LCC Class III	LCC Class IV - VIII
	10.85		
	23.05		
	3.36		
	20.39		
			0.81
		11.54	
	8.42		
Total Acres	66.07	11.54	0.81
Project Size Scores	90	10	0
Highest Project Size Score		90	

Site Assessment Worksheet 2. - Water Resources Availability

A	B	C	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1	Groundwater irrigation	100%	30	30
2				
3				
4				
5				
6				
		(Must Sum to 1.0)	***Total Water Resource Score***	30

Note: Water Resource Availability Scoring Option 11, irrigation is not feasible in drought years, requires well, which went dry in 2022 causing orchard tree mortality. Physical restrictions from shallow hardpan, high economic operating costs of wells.

Site Assessment Worksheet 3.

Zone of Influence					Surrounding Agricultural Land Score (From Table)	Surrounding Protected Resource Land Score (From Table)
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)		
521.13	135.45	0.5	26.0%	0.1%	0	0

LESA Worksheet *(cont.)*

NOTES

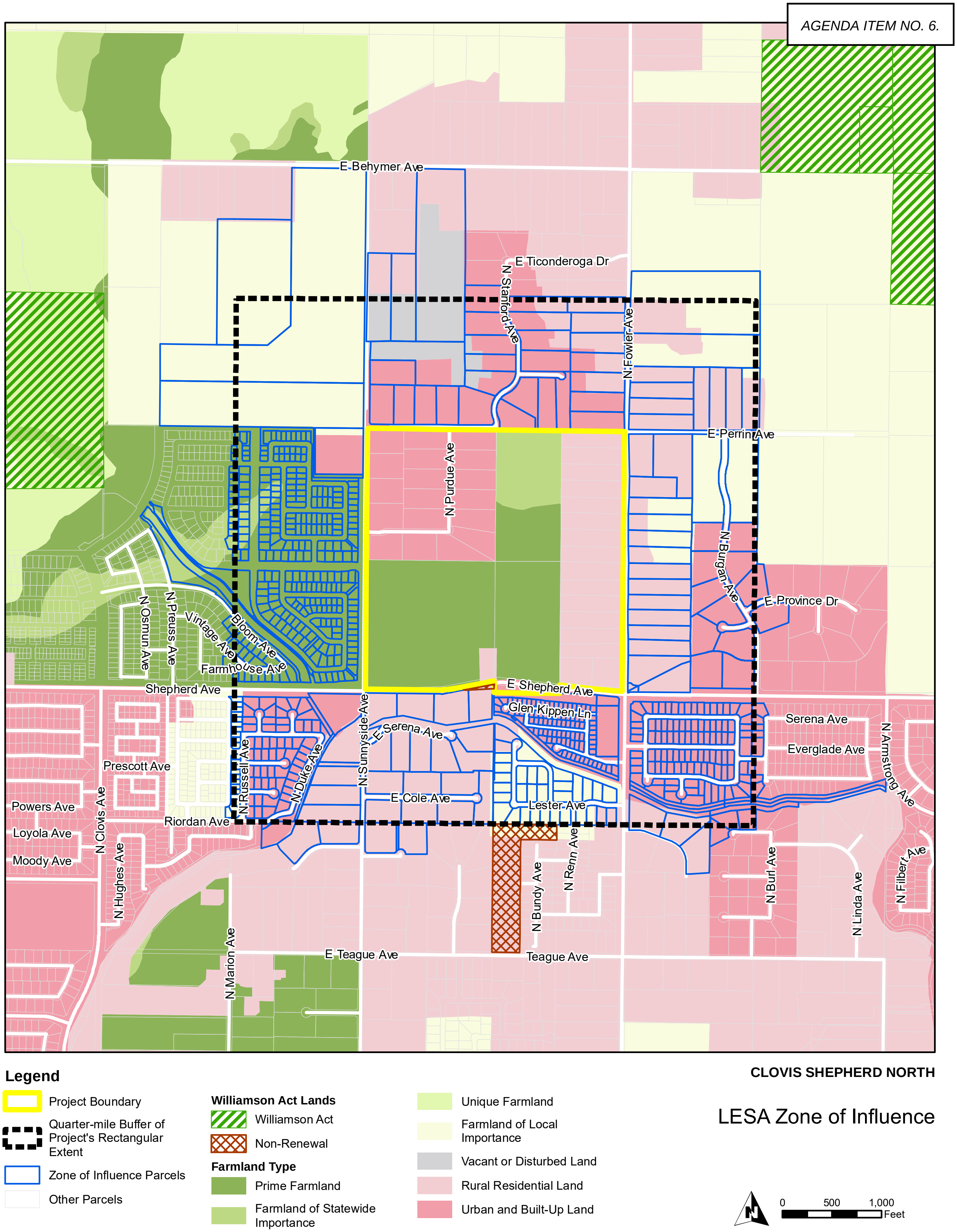
Final LESA Score Sheet

Calculation of the Final LESA Score:

(1) Multiply each factor score by the factor weight to determine the weighted score and enter in Weighted Factor Scores column.
(2) Sum the weighted factor scores for the LE factors to determine the total LE score for the project.
(3) Sum the weighted factor scores for the SA factors to determine the total SA score for the project.
(4) Sum the total LE and SA scores to determine the Final LESA Score for the project.

	Factor Scores	**Factor Weight**	**Weighted Factor Scores**
LE Factors			
Land Capability Classification	*<1> 78.4*	0.25	19.60
Storie Index	*<2> 51.6*	0.25	12.90
LE Subtotal		***0.50***	**32.50**
SA Factors			
Project Size	*<3> 90*	0.15	13.50
Water Resource Availability	*<4> 30*	0.15	4.50
Surrounding Agricultural	*<5> 0*	0.15	0.00
Protected Resource	*<6> 0*	0.05	0.00
SA Subtotal		***0.50***	**18.00**
		Final LESA Score	**50.50**

AGENDA ITEM NO. 6.



CLOVIS SHEPHERD NORTH

LESA Zone of Influence

Sources: Fresno County GIS; California Department of Conservation, Farmland Mapping and Monitoring Program, Fresno 2018. Fresno County Williamson Act Lands 2015. Map date: February 16, 2023.

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

FID_ZOI_Fu	APN	AC	ACTIVE_D	ROLL	GIS_Ac	FID_fresno	upd_year	county_nam	polygon_ac	Shape_Leng	Shape_Area	polygc	CONVERTED	FARM_TYPE
0	55604013ST	CY	1/1/1900	1900	20.73751468530	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
0	55604013ST	CY	1/1/1900	1900	0.43252707602	4148	2018.00000000000	fre	19.17002163980	1198.48693088000	77578.32518280000	R		Rural Residential Land
1	55604022ST	CY	1/1/1900	1900	48.27401699780	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
1	55604022ST	CY	1/1/1900	1900	0.40983339453	4148	2018.00000000000	fre	19.17002163980	1198.48693088000	77578.32518280000	R		Rural Residential Land
2	55604023S	CY	1/1/1900	1900	21.21056809320	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
2	55604023S	CY	1/1/1900	1900	0.32290793269	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
3	55605015SU	CL			4.41861883794	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
3	55605015SU	CL			0.78967215836	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
3	55605015SU	CL			0.00386997076	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
4	55605019ST	CL			0.14118379902	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
4	55605019ST	CL			0.02178530465	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
4	55605019ST	CL			0.38439979170	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
5	55605041	CL			0.09618725980	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
6	55605041	CL			0.09368237608	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
7	5560504101	CL			0.22937129353	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
8	5560504102	CL			0.21637487751	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
9	5560504103	CL			0.19109407570	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
10	5560504104	CL			0.20028150345	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
11	5560504105	CL			0.18175855029	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
12	5560504106	CL			0.18226521662	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
13	5560504107	CL			0.18927047689	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
14	5560504108	CL			0.18926122142	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
15	5560504109	CL			0.17677302325	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
16	5560504110	CL			0.17677453413	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
17	5560504111	CL			0.17677397446	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
18	5560504112	CL			0.17677330126	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
19	5560504113	CL			0.17677431199	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
20	5560504114	CL			0.17677269693	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
21	5560504115	CL			0.17732817766	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
22	5560504116	CL			0.18487822172	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
23	5560504117	CL			0.20486523908	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
24	5560504118	CL			0.22639401425	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
25	5560504119	CL			0.22687923609	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
26	5560504120	CL			0.22688615051	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
27	5560504121	CL			0.19651194706	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
28	5560504122	CL			0.19652275430	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
29	5560504123	CL			0.19665682703	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
30	5560504124	CL			0.18909678518	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
31	5560504125	CL			0.18910107254	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
32	5560504126	CL			0.18910774320	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
33	5560504127	CL			0.18926077938	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
34	5560504128	CL			0.17677149656	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
35	5560504129	CL			0.20959909444	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
36	5560504130	CL			0.19650750524	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
37	5560504131	CL			0.19651396090	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
38	5560504132	CL			0.19651648481	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
38	5560504132	CL			0.00000281841	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
39	5560504133	CL			0.16265534833	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
39	5560504133	CL			0.03386832086	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
40	5560504134	CL			0.06234786721	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
40	5560504134	CL			0.13418102525	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
41	5560504135	CL			0.00014126228	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
41	5560504135	CL			0.19639243127	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
42	5560504136	CL			0.01848242700	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
42	5560504136	CL			0.17805664872	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
43	5560504137	CL			0.14884539230	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
43	5560504137	CL			0.04769646957	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
44	5560504138	CL			0.19916900030	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
45	5560504139	CL			0.20959422118	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
46	5560504140	CL			0.20195764457	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
47	5560504141	CL			0.19191862584	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
48	5560504142	CL			0.18939331053	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
49	5560504143	CL			0.18939447170	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
50	5560504144	CL			0.14618133688	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
50	5560504144	CL			0.04321332053	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
51	5560504145	CL			0.00003478698	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
51	5560504145	CL			0.18935893662	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
52	5560504146	CL			0.18939272191	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
53	5560504147	CL			0.18939448971	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
54	5560504148	CL			0.18939417626	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
55	5560504149	CL			0.00273739816	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
55	5560504149	CL			0.18665737801	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
56	5560504150	CL			0.07929933084	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
56	5560504150	CL			0.12272100996	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
57	5560504151	CL			0.19782253660	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
57	5560504151	CL			0.00014233339	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
58	5560504152	CL			0.15231031431	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
58	5560504152	CL			0.05856617189	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
59	5560504171	CL			0.36002266059	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
60	5560504172	CL			0.14474955201	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
61	5560504173	CL			0.14462877347	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
62	5560504174	CL			0.14462987454	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
63	5560504175	CL			0.14462882634	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
64	5560504176	CL			0.04691618207	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
64	5560504176	CL			0.09771299887	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
65	5560504177	CL			0.14448746769	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland

65	5560504177	CL	0.00014172982	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
66	5560504178	CL	0.14692452805	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
67	5560504179	CL	0.14692452240	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
68	5560504180	CL	0.14692413044	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
69	5560504181	CL	0.14692519927	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
70	5560504182	CL	0.14820840160	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
71	5560504183	CL	0.09368411981	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
72	5560504184	CL	0.08608849894	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
73	5560504185	CL	0.08608849430	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
74	5560504186	CL	0.18945964223	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
75	5560504187	CL	0.10179037443	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
76	55605042	CL	0.09722088084	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
77	55605042	CL	0.08930393201	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
78	55605042	CL	0.08930431585	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
79	55605042	CL	0.22305569355	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
80	55605042	CL	0.11529944838	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
81	55605042	CL	0.11478458519	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
82	55605042	CL	0.11478434586	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
83	55605042	CL	0.11478444794	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
84	55605042	CL	0.11478495249	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
85	55605042	CL	0.11478444599	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
86	55605042	CL	0.11478457591	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
87	55605042	CL	0.11859219432	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
88	55605042	CL	0.09817466484	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
89	55605042	CL	0.09469717003	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
90	55605042	CL	0.09469729926	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
91	55605042	CL	0.09469786408	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
92	55605042	CL	0.09469729953	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
93	55605042	CL	0.09368540208	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
94	55605042	CL	0.09368509715	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
95	55605042	CL	0.09469690465	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
96	55605042	CL	0.09469766560	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
97	55605042	CL	0.09469688322	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
98	55605042	CL	0.09469717003	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
99	55605042	CL	0.09817248254	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
100	55605042	CL	0.13672030935	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
101	55605042	CL	0.13314199023	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
102	55605042	CL	0.13314287319	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
103	55605042	CL	0.13314351438	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
104	55605042	CL	0.13314373206	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
105	55605042	CL	0.13314427686	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
106	55605042	CL	0.13315035749	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
107	55605042	CL	0.13315057018	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
108	55605042	CL	0.13315122079	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
109	55605042	CL	0.13315204081	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
110	55605042	CL	0.13315269135	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
111	55605042	CL	0.13673153577	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
112	55605042	CL	0.14782759450	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
113	55605042	CL	0.13739129664	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
114	55605042	CL	0.05627220095	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
114	55605042	CL	0.08111509829	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
115	55605042	CL	0.13738524551	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
116	55605042	CL	0.01772439072	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
116	55605042	CL	0.11965728632	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
117	55605042	CL	0.08683965072	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
117	55605042	CL	0.05053889955	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
118	55605042	CL	0.13597369704	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
118	55605042	CL	0.00140027230	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
119	55605042	CL	0.13737128595	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
120	55605042	CL	0.13736812639	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
121	55605042	CL	0.13736490276	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
122	55605042	CL	0.13736258098	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
123	55605042	CL	0.22575414365	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
124	55605042	CL	0.28350188547	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
125	55605042	CL	0.19627706925	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
126	55605042	CL	0.14259149220	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
127	55605042	CL	0.14258779059	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
128	55605042	CL	0.15092263048	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
129	55605042	CL	0.18363863368	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
130	55605042	CL	0.18464435641	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
131	55605042	CL	0.18931297455	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
132	55605042	CL	0.21778181172	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
133	55605042	CL	0.23638853907	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
134	55605042	CL	0.14123061397	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
135	55605042	CL	0.14094378835	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
136	55605042	CL	0.14065643727	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
137	55605042	CL	0.14036945481	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
138	55605042	CL	0.14008242005	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
139	55605042	CL	0.13979536475	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
140	55605042	CL	0.13950678702	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
141	55605042	CL	0.13922035005	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
142	55605042	CL	0.14443998684	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
143	55605042	CL	0.14031110007	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
144	55605042	CL	0.13636446481	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
145	55605042	CL	0.12644713373	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
146	55605042	CL	0.12644685000	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
147	55605042	CL	0.12525117669	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland

148	55605042	CL	0.12167104119	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
149	55605042	CL	0.12167177952	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
150	55605042	CL	0.12525128595	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
151	55605042	CL	0.12644600823	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
152	55605042	CL	0.12644714921	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
153	55605042	CL	0.13636424752	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
154	55605042	CL	0.14031111972	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
155	55605042	CL	0.12524638086	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
156	55605042	CL	0.12568375005	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
157	55605042	CL	0.12568387666	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
158	55605042	CL	0.12544855270	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
159	55605042	CL	0.13857415164	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
160	55605042	CL	0.13101429630	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
161	55605042	CL	0.13101470717	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
162	55605042	CL	0.13101491831	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
163	55605042	CL	0.13101468798	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
164	55605042	CL	0.13101531918	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
165	55605042	CL	0.13857358231	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
166	55605042	CL	0.12525067012	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
167	55605042	CL	0.12568952272	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
168	55605042	CL	0.12568957129	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
169	55605042	CL	0.12525227487	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
170	55605042	CL	0.13857365735	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
171	55605042	CL	0.13101571219	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
172	55605042	CL	0.13101468794	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
173	55605042	CL	0.13101531479	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
174	55605042	CL	0.13101549527	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
175	55605042	CL	0.13101549527	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
176	55605042	CL	0.13857412678	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
177	55605042XA	CL	0.05649936254	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
177	55605042XA	CL	0.01587981920	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
177	55605042XA	CL	1.07327659468	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
178	55605042XB	CL	0.25733870490	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
179	55605042XC	CL	0.10312910560	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
180	5560504301	CL	0.14786234232	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
181	5560504302	CL	0.15055071532	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
182	5560504303	CL	0.14169325758	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
183	5560504304	CL	0.14133443047	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
184	5560504305	CL	0.14176543003	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
185	5560504306	CL	0.18094634332	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
186	5560504307	CL	0.18356157353	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
187	5560504308	CL	0.14783349993	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
188	5560504309	CL	0.14754646631	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
189	5560504310	CL	0.14725863601	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
190	5560504311	CL	0.14697224119	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
191	5560504312	CL	0.14668422921	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
192	5560504313	CL	0.14639743334	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
193	5560504314	CL	0.14610982719	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
194	5560504315	CL	0.14582279885	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
195	5560504316	CL	0.14553599980	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
196	5560504317	CL	0.14524799570	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
197	5560504318	CL	0.14496097492	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
198	5560504319	CL	0.21165273475	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
199	5560504320	CL	0.23770824071	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
200	5560504321	CL	0.11478168221	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
201	5560504322	CL	0.11478111043	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
202	5560504323	CL	0.11478092673	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
203	5560504324	CL	0.11478130563	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
204	5560504325	CL	0.11478130563	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
205	5560504326	CL	0.11478092681	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
206	5560504327	CL	0.11478092673	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
207	5560504328	CL	0.11478148930	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
208	5560504329	CL	0.11478168218	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
209	5560504330	CL	0.11478130337	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
210	5560504331	CL	0.15137636801	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
211	5560504332	CL	0.14358044931	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
212	5560504333	CL	0.12521733892	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
213	5560504334	CL	0.10048460918	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
214	5560504335	CL	0.09297641059	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
215	5560504336	CL	0.09297606655	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
216	5560504337	CL	0.09297636125	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
217	5560504338	CL	0.09297637603	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
218	5560504339	CL	0.09297591896	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
219	5560504340	CL	0.09368598363	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
220	5560504341	CL	0.09368617944	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
221	5560504342	CL	0.08608886971	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
222	5560504343	CL	0.08608867019	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
223	5560504344	CL	0.08608893548	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
224	5560504345	CL	0.08608892070	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
225	5560504346	CL	0.09968019973	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
226	5560504347	CL	0.10764729993	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
227	5560504348	CL	0.11734693944	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
228	5560504349	CL	0.08608824238	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
229	5560504350	CL	0.08608824237	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
230	5560504351	CL	0.16774679745	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
231	5560504352	CL	0.10146981135	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
232	5560504353	CL	0.10342077809	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland

233	5560504354	CL			0.10342056000	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
234	5560504355	CL			0.10631127527	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
235	5560504356	CL			0.14003820506	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
236	5560504357	CL			0.13902682511	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
237	5560504358	CL			0.16313581534	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
238	5560504359	CL			0.15029629638	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
239	5560504360	CL			0.18199989733	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
240	5560504361	CL			0.19014720283	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
241	5560504362	CL			0.19512710121	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
242	5560504363	CL			0.14710937971	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
243	5560504364	CL			0.14735398719	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
244	5560504365	CL			0.14759924353	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
245	5560504366	CL			0.14784397733	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
246	5560504367	CL			0.17368375551	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
247	5560504368	CL			0.17729328263	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
248	5560504369	CL			0.15921302599	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
249	5560504370	CL			0.19755683000	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
250	5560504371	CL			0.18557926294	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
251	5560504372	CL			0.16620706332	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
252	5560504373	CL			0.18927700303	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
253	5560504374	CL			0.17906402797	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
254	5560504375	CL			0.22984167772	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
255	5560504376	CL			0.24810482967	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
256	5560504377	CL			0.17625418473	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
257	5560504378	CL			0.19974461244	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
258	5560504379	CL			0.18454949612	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
259	5560504380	CL			0.18866754743	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
260	5560504381	CL			0.18899380581	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
261	5560504382	CL			0.18675425049	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
262	5560504383	CL			0.18747394353	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
263	5560504384	CL			0.25641316072	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
264	55605043A	CL			0.12283313164	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
265	55605043B	CL			0.27097157874	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
266	55605043C	CL			0.14502340297	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
267	55605043D	CL			0.08783924837	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
268	55605043E	CL			0.25763803778	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
269	556050XB	CL			0.11909700154	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
270	556050XD	CL			0.15376546256	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
271	556050XE	CL			0.08495171279	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
272	556050XF	CL			2.16187782144	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
272	556050XF	CL			0.43638350053	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
273	55607023S	CL			0.14914625633	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
274	55607024S	CL			0.18335025228	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
275	55607025S	CL			0.18059415557	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
276	55607026S	CL			0.15910135813	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
277	55607027S	CL			0.15840097212	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
278	55607028S	CL			0.15840247473	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
279	55607029S	CL			0.18654054884	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
280	55607030S	CL			0.24065899076	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
281	55607031S	CL			0.34636575908	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
282	55607038S	CL			0.26574030668	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
283	55607047S	CL			0.18921903882	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
284	55607048S	CL			0.19032486223	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
285	55607049S	CL			0.17805512810	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
286	55607050S	CL			0.17987978847	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
287	55607051S	CL			0.27177843975	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
288	55607052S	CL			0.33086944087	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
289	55607053S	CL			0.17933585107	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
290	55607054S	CL			0.17932464595	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
291	55607055S	CL			0.18463255486	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
292	55607056S	CL			0.17421785782	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
293	55607057S	CL			0.19003107486	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
294	55607058S	CL			0.20474043424	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
295	55607059S	CL			0.19574756107	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
296	55607069ST	CL			2.87997226079	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
296	55607069ST	CL			1.49234758551	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
297	556070XE	CL			0.15195513179	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
298	556070XI	CL			1.72573365670	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
298	556070XI	CL			1.47825558539	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
299	55701104	CY	1/1/1900	1900	0.01586276255	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
299	55701104	CY	1/1/1900	1900	2.25202389566	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R		Rural Residential Land
299	55701104	CY	1/1/1900	1900	2.65173169996	10051	2018.00000000000	fre	25.33158851420	1895.06537036000	102513.30165800000	V		Vacant or Disturbed Land
300	55701105S	CY	1/1/1900	1900	2.31311346372	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R		Rural Residential Land
300	55701105S	CY	1/1/1900	1900	2.76814754440	10051	2018.00000000000	fre	25.33158851420	1895.06537036000	102513.30165800000	V		Vacant or Disturbed Land
301	55701106	CY	1/1/1900	1900	0.25704883380	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
301	55701106	CY	1/1/1900	1900	6.34566868104	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R		Rural Residential Land
301	55701106	CY	1/1/1900	1900	13.10070945480	10051	2018.00000000000	fre	25.33158851420	1895.06537036000	102513.30165800000	V		Vacant or Disturbed Land
302	55701109	CY	1/1/1900	1900	2.23910251783	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
303	55701110	CY	1/1/1900	1900	1.89040517130	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
304	55701111	CY	1/1/1900	1900	2.01061415495	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
305	55701114	CY	1/1/1900	1900	2.48093949008	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
305	55701114	CY	1/1/1900	1900	0.02555953854	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R		Rural Residential Land
306	55701115	CY	1/1/1900	1900	2.32344178813	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
306	55701115	CY	1/1/1900	1900	0.14932993996	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R		Rural Residential Land
307	55701116	CY	1/1/1900	1900	0.71783872716	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land
307	55701116	CY	1/1/1900	1900	1.78746750243	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R		Rural Residential Land
308	55701117	CY	1/1/1900	1900	1.10169825261	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D		Urban and Built Up Land

308	55701117	CY	1/1/1900	1900	1.37626092199	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
309	55701118	CY	1/1/1900	1900	0.23047663875	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
309	55701118	CY	1/1/1900	1900	2.33844277915	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
310	55701119	CY	1/1/1900	1900	2.51999029052	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
311	55701120	CY	1/1/1900	1900	1.40687564555	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
311	55701120	CY	1/1/1900	1900	1.18262238822	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
312	55701121	CY	1/1/1900	1900	1.64301241369	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
312	55701121	CY	1/1/1900	1900	0.74483858365	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
313	55701122	CY	1/1/1900	1900	2.42011323799	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
314	55701124	CY	1/1/1900	1900	1.32988583898	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
314	55701124	CY	1/1/1900	1900	0.70048758909	10051	2018.00000000000	fre	25.33158851420	1895.06537036000	102513.30165800000	V	Vacant or Disturbed Land
315	55701125	CY	1/1/1900	1900	1.88486809724	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
315	55701125	CY	1/1/1900	1900	0.35739916375	10051	2018.00000000000	fre	25.33158851420	1895.06537036000	102513.30165800000	V	Vacant or Disturbed Land
316	55701126	CY	1/1/1900	1900	2.24632076798	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
317	55701127	CY	1/1/1900	1900	2.40852424972	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
318	55701129	CY	1/1/1900	1900	0.98286962426	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
318	55701129	CY	1/1/1900	1900	1.16871832953	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
319	55701130	CY	1/1/1900	1900	2.10911826937	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
320	55701150	CY	1/1/1900	1900	2.02219553048	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
321	55701151	CY	1/1/1900	1900	2.77557019003	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
321	55701151	CY	1/1/1900	1900	0.00424000529	10051	2018.00000000000	fre	25.33158851420	1895.06537036000	102513.30165800000	V	Vacant or Disturbed Land
322	55701152	CY	1/1/1900	1900	1.43823198141	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
322	55701152	CY	1/1/1900	1900	0.76747341669	10051	2018.00000000000	fre	25.33158851420	1895.06537036000	102513.30165800000	V	Vacant or Disturbed Land
323	55701154	CY	1/1/1900	1900	1.95539248258	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
324	55701159	CY	1/1/1900	1900	2.21796772713	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
325	55701161	CY	1/1/1900	1900	2.23757376764	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
326	55701162	CY	1/1/1900	1900	1.82690624255	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
326	55701162	CY	1/1/1900	1900	0.00081638185	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
327	55701169	CY	########	2011	2.25725401063	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
327	55701169	CY	########	2011	4.80942187660	10051	2018.00000000000	fre	25.33158851420	1895.06537036000	102513.30165800000	V	Vacant or Disturbed Land
328	55701170	CY	########	2011	2.61192787800	598	2018.00000000000	fre	105.26722516300	4386.22165770000	426001.34617800000	D	Urban and Built Up Land
329	55701204	CY	1/1/1900	1900	7.59597854688	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
329	55701204	CY	1/1/1900	1900	2.47418691589	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
330	55701205	CY	1/1/1900	1900	0.00835154493	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
330	55701205	CY	1/1/1900	1900	2.31481117239	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
331	55701206	CY	1/1/1900	1900	2.37977245503	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
332	55701207	CY	1/1/1900	1900	2.37482544377	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
333	55701208S	CY	1/1/1900	1900	2.38830631746	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
334	55701209	CY	1/1/1900	1900	0.00444430903	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
334	55701209	CY	1/1/1900	1900	2.33045204490	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
335	55701210	CY	1/1/1900	1900	0.00306956551	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
335	55701210	CY	1/1/1900	1900	2.38618825254	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
336	55701211	CY	1/1/1900	1900	2.38401192485	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
337	55701212	CY	1/1/1900	1900	0.42010854319	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
337	55701212	CY	1/1/1900	1900	2.13462817370	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
338	55701218	CY	########	2000	14.38064488210	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
338	55701218	CY	########	2000	4.63247662021	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
339	55702201	CY	1/1/1900	1900	2.40668994765	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
340	55702202	CY	1/1/1900	1900	0.03576302571	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
340	55702202	CY	1/1/1900	1900	4.64432753514	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
341	55702203	CY	1/1/1900	1900	0.06054426338	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
341	55702203	CY	1/1/1900	1900	2.26126646108	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
342	55702204	CY	1/1/1900	1900	1.69613915970	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
342	55702204	CY	1/1/1900	1900	0.73695004597	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
343	55702205	CY	1/1/1900	1900	1.70936663412	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
343	55702205	CY	1/1/1900	1900	0.73331534364	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
344	55702206	CY	1/1/1900	1900	1.64935041936	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
344	55702206	CY	1/1/1900	1900	0.71903806206	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
345	55702207	CY	1/1/1900	1900	1.49224049413	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
345	55702207	CY	1/1/1900	1900	0.92477013333	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
346	55702213	CY	1/1/1900	1900	0.03249964318	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
346	55702213	CY	1/1/1900	1900	2.23535630475	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
347	55702214	CY	1/1/1900	1900	2.32955397771	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
348	55702215	CY	1/1/1900	1900	2.21243537383	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
349	55702216	CY	1/1/1900	1900	2.26645260622	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
350	55702217	CY	1/1/1900	1900	2.14160326446	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
351	55702218	CY	1/1/1900	1900	2.27876328357	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
352	55702221	CY	########	2014	0.09134782173	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
353	55702222	CY	########	2014	2.38990109423	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
354	55702223	CY	9/3/2014	2014	0.09951891623	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
355	55702224	CY	9/3/2014	2014	2.74653685369	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
356	55704101S	CY	########	1995	5.96030418249	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
356	55704101S	CY	########	1995	0.02730993021	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
357	55704102	CY	########	1995	1.74300895682	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D	Urban and Built Up Land
357	55704102	CY	########	1995	0.24209083542	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
358	55704201S	CY	########	1995	0.00678338407	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D	Urban and Built Up Land
358	55704201S	CY	########	1995	6.00134490721	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
359	55704202	CY	########	1995	1.85834912341	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D	Urban and Built Up Land
359	55704202	CY	########	1995	0.13187357371	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
360	55705101	CY	########	1995	1.87185299902	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D	Urban and Built Up Land
360	55705101	CY	########	1995	0.06164939067	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L	Farmland of Local Importance
360	55705101	CY	########	1995	0.10227065051	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
361	55705102	CY	########	1995	1.92621611753	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D	Urban and Built Up Land
361	55705102	CY	########	1995	0.12239041570	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land
362	55705103	CY	########	1995	2.04328168648	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D	Urban and Built Up Land
363	55705104	CY	########	1995	1.99825662986	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D	Urban and Built Up Land
363	55705104	CY	########	1995	0.15134157098	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R	Rural Residential Land

364	55705105	CY	########	1995	2.26980094029	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
365	55705106	CY	########	1995	2.53363144480	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
365	55705106	CY	########	1995	0.10056594200	4173	2018.00000000000	fre	1141.82508598000	24651.65467820000	4620802.18199000000	R		Rural Residential Land
366	55705107	CY	########	1995	2.29586884394	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
367	55705206	CY	########	1995	1.99385312503	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
368	55705217	CY	########	1995	2.07742582142	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
369	55705218	CY	########	1995	1.89187644137	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
369	55705218	CY	########	1995	0.05830355926	1748	2018.00000000000	fre	884.62678646600	16864.93763870000	3579957.59188000000	L		Farmland of Local Importance
370	55901101S	CY	1/1/1900	1900	2.02863278597	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
371	55901102S	CY	1/1/1900	1900	2.14237115594	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
372	55901103S	CY	1/1/1900	1900	2.56679414396	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
373	55901104	CY	1/1/1900	1900	0.00442334289	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
374	55901126S	CY	1/1/1900	1900	1.92391196500	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
375	55901127S	CY	1/1/1900	1900	1.90988925096	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
376	55901128S	CY	1/1/1900	1900	1.92928968893	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
377	55901129S	CY	1/1/1900	1900	0.36697828716	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
377	55901129S	CY	1/1/1900	1900	1.60428099818	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
378	55901130S	CY	1/1/1900	1900	2.00006080886	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
379	55901131S	CY	1/1/1900	1900	1.99457583666	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
380	55901132S	CY	1/1/1900	1900	1.99578805844	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
381	55901135	CY	1/1/1900	1900	2.22475627258	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
382	55901136	CY	1/1/1900	1900	0.12524442632	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
383	55901137	CY	1/1/1900	1900	1.99623389256	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
384	55901140S	CY	1/1/1900	1900	1.94247450607	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
385	55901141S	CY	1/1/1900	1900	1.95076367381	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
386	55901142S	CY	1/1/1900	1900	0.00274021083	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L		Farmland of Local Importance
386	55901142S	CY	1/1/1900	1900	1.99335448081	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
387	55901143S	CY	1/1/1900	1900	0.13307968670	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
387	55901143S	CY	1/1/1900	1900	1.86099869382	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
388	55901145S	CY	1/1/1900	1900	2.05717305407	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
389	55901146S	CY	1/1/1900	1900	0.24479144419	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
390	55901148S	CY	1/1/1900	1900	1.93703714203	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
391	55901164	CL			2.64244389374	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
392	55901165S	CY	1/2/1900	1900	1.69920499360	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
393	55901248	CY			0.16490565892	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
393	55901248	CY			2.24235444371	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
394	55901249	CY			0.01583317369	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
394	55901249	CY			2.28323827243	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
395	55901250	CY			0.03099733888	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
395	55901250	CY			2.42127802881	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
396	55919068	CL			0.25237532796	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
397	55919069	CL			0.17876284219	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
398	55919070	CL			0.19549545868	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
399	55919071T	CL			0.52706247473	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
400	55919074	CL			0.39371206061	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
401	55920001	CL			0.21758808530	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
402	55920002	CL			0.34646743496	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
403	55920033T	CL			1.15455725987	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
403	55920033T	CL			0.00697068178	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
404	55920034	CL			0.86170474832	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
404	55920034	CL			0.31029582760	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
405	55921007	CL			0.23135947761	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
406	55921008	CL			0.17873987061	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
407	55921009	CL			0.19547249396	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
408	55921010	CL			0.23132491752	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
409	55921011	CL			0.20662462520	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
410	55921012	CL			0.19970865722	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
411	55921013	CL			0.18594338259	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
412	55921014	CL			0.17507358897	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
413	55921015	CL			0.17493171530	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
414	55921016	CL			0.17493219071	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
415	55921017	CL			0.17493140507	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
416	55921018	CL			0.17493089486	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
417	55921019	CL			0.20288111083	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
418	55921020	CL			0.19393089840	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
419	55921021	CL			0.16802969782	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
420	55921022	CL			0.16805731996	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
421	55921023	CL			0.16802982548	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
422	55921024	CL			0.16805784609	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
423	55921025T	CL			0.52700615591	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
424	55921026	CL			0.21231216130	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
425	55921027	CL			0.21232641485	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
426	55921028	CL			0.20086940923	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
427	55921029	CL			0.18077406147	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
428	55921030	CL			0.18079655114	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
429	55921031	CL			0.25248258619	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
430	55921032	CL			0.32711993747	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
431	55921033	CL			0.25454469469	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
432	55921034	CL			0.16805583266	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
433	55921035	CL			0.19605891477	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
434	55921036	CL			0.16804166668	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
435	55921037	CL			0.19605962898	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
436	55921038	CL			0.16805566913	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
437	55921039	CL			0.19605909919	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
438	55921040	CL			0.16804212334	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
439	55921041	CL			0.19561550550	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
440	55921042	CL			0.16737405126	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land

441	55921043	CL	0.19605105226	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
442	55921044	CL	0.16804202321	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
443	55921045	CL	0.16804231063	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
444	55921046	CL	0.16804184851	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
445	55921047	CL	0.16805542546	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
446	55921048	CL	0.16804184847	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
447	55921049	CL	0.16804231063	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
448	55921050	CL	0.20879742406	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
449	55921051	CL	0.21658070516	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
450	55921052	CL	0.17492915570	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
451	55921053	CL	0.17492846622	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
452	55921054	CL	0.17492798528	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
453	55921055	CL	0.17494358512	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
454	55921056	CL	0.17491511140	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
455	55921057	CL	0.17494421613	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
456	55921058	CL	0.20407208989	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
457	55921059	CL	0.17408881083	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
458	55921060	CL	0.17314568992	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
459	55921061	CL	0.20328197920	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
460	55921062	CL	0.17423639418	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
461	55921063	CL	0.17423878841	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
462	55921064	CL	0.17423635967	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
463	55921065	CL	0.17424069208	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
464	55921066	CL	0.17423937140	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
465	55921067	CL	0.17425579759	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
466	55921068	CL	0.21657633539	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
467	55921069	CL	0.19407066496	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
468	55921070	CL	0.16610122311	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
469	55921071	CL	0.16624412644	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
470	55921072	CL	0.22966637953	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
471	55921073	CL	0.39955760348	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
472	55921074	CL	0.19371513733	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
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474	55922002	CL	0.34425017471	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
475	55922003	CL	0.29441243862	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
476	55922004	CL	0.21170697661	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
477	55922005	CL	0.22194944913	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
478	55922006	CL	0.26508573537	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
479	55922007	CL	0.23457298116	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
480	55922008	CL	0.22004665712	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
481	55922009T	CL	0.21580715103	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
482	55922010	CL	0.21563342204	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
483	55922011	CL	0.25738402449	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
484	55922012	CL	0.24220308599	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
485	55922013	CL	0.18133440258	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
486	55922014	CL	0.20253270522	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
487	55922015	CL	0.19607035959	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
488	55922016	CL	0.16805469480	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
489	55922017	CL	0.20164604869	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
490	55922018	CL	0.20164306866	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
491	55922019	CL	0.16805553124	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
492	55922020	CL	0.16805614086	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
493	55922021	CL	0.20789192988	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
494	55922022	CL	0.21227035252	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
495	55922023	CL	0.33467674875	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
496	55922024	CL	0.40299659455	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
497	55922025	CL	0.18160167155	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
498	55922026	CL	0.21686076453	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
499	55922027	CL	0.19640304957	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
500	55922028	CL	0.33749646977	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
501	55922029	CL	0.48140212130	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
502	55922030	CL	0.22906081500	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
503	55922031	CL	0.28890303315	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
504	55922032	CL	0.21631320363	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
505	55922033	CL	0.35996062810	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
506	55922036T	CL	0.81427818227	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
507	55922037	CL	0.73283170958	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
508	55922039	CL	0.23013454035	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
509	55922042	CL	0.29702064566	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
510	55929001	CL	2.92000699370	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
511	55929002T	CL	1.13509216233	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
511	55929002T	CL	0.02301378094	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R	Rural Residential Land
512	55929101	CL	0.07536626290	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
513	55929102	CL	0.07719512294	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
514	55929103	CL	0.07903927912	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
515	55929104	CL	0.08084674482	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
516	55929105	CL	0.08869169552	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
517	55929106	CL	0.11692238613	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
518	55929107	CL	0.08034756127	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
519	55929108	CL	0.07975964045	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
520	55929109	CL	0.07198523607	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
521	55929110	CL	0.08093177713	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
522	55929111	CL	0.09285465838	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
523	55929112	CL	0.08893140189	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
524	55929113	CL	0.10086196878	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
525	55929114	CL	0.12291002640	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land
526	55929115	CL	0.09709934344	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D	Urban and Built Up Land

527	55929116	CL	0.08975882793	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
528	55929117	CL	0.08712721543	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
529	55929118	CL	0.07391034134	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
530	55929119	CL	0.07392767964	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
531	55929120	CL	0.07391850244	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
532	55929121	CL	0.07392181426	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
533	55929122	CL	0.07393720056	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
534	55929123	CL	0.07391537680	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
535	55929124	CL	0.07392149504	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
536	55929125	CL	0.08890638615	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
537	55929126	CL	0.05697573808	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
538	55929127	CL	0.14103899502	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
539	55929201	CL	0.08012787015	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
540	55929202	CL	0.07391577192	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
541	55929203	CL	0.07390286967	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
542	55929204	CL	0.07391013004	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
543	55929205	CL	0.07389797434	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
544	55929206	CL	0.07390122237	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
545	55929207	CL	0.07388923957	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
546	55929208	CL	0.07388191558	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
547	55929209	CL	0.07388033365	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
548	55929210	CL	0.07387874405	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
549	55929211	CL	0.07387179628	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
550	55929212	CL	0.08017661526	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
551	55929213	CL	0.07967402440	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
552	55929214	CL	0.07391369827	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
553	55929215	CL	0.07391465507	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
554	55929216	CL	0.07393580980	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
555	55929217	CL	0.07391274500	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
556	55929218	CL	0.07392524546	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
557	55929219	CL	0.07391744633	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
558	55929220	CL	0.07391771403	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
559	55929221	CL	0.07392840740	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
560	55929222	CL	0.07391810137	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
561	55929223	CL	0.07391706838	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
562	55929224	CL	0.07990040703	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
563	55929301	CL	0.07966359488	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
564	55929302	CL	0.07401529531	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
565	55929303	CL	0.09739843449	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
566	55929304	CL	0.11373102584	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
567	55929305	CL	0.12605521276	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
568	55929306	CL	0.11579871455	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
569	55929307	CL	0.07720657909	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
570	55929308	CL	0.07779862403	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
571	55929309	CL	0.07721112187	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
572	55929310	CL	0.07718990059	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
573	55929311	CL	0.07397198911	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
574	55929312	CL	0.07398793325	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
575	55929313	CL	0.07396775901	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
576	55929314	CL	0.07397073132	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
577	55929315	CL	0.07397187554	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
578	55929316	CL	0.07395504569	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
579	55929317	CL	0.07396157919	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
580	55929318	CL	0.07396038819	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
581	55929319	CL	0.07394682966	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
582	55929320	CL	0.07394792383	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
583	55929321	CL	0.07394822132	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
584	55929322	CL	0.07394493622	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
585	55929323	CL	0.07393160333	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
586	55929324	CL	0.07394058250	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
587	55929325	CL	0.10038922029	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
588	55929326	CL	0.12460550399	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
589	55929327	CL	1.78121316835	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
589	55929327	CL	0.00013889713	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
590	55929328	CL	0.02295550295	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
591	55929329	CL	0.50308801303	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
592	55929401	CL	0.08759766103	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
593	55929402	CL	0.07934081155	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
594	55929403	CL	0.07933269377	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
595	55929404	CL	0.07934118973	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
596	55929405	CL	0.07934641057	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
597	55929406	CL	0.07933868239	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
598	55929407	CL	0.07933822086	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
599	55929408	CL	0.08641734118	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
600	55930101	CL	0.16104521692	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
601	55930102	CL	0.10584255459	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
602	55930103	CL	0.08451977760	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
603	55930104	CL	0.07466743939	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
604	55930105	CL	0.07398056430	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
605	55930106	CL	0.07329798737	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
606	55930107	CL	0.07356644458	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
607	55934007	CL	0.80145702193	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
608	55934008	CL	0.84494469017	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
609	55934009	CL	0.82793297618	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
610	55934015T	CL	1.01746394536	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
610	55934015T	CL	0.00066837449	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
611	55940001S	CL	0.41178491844	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance

612	55940002S	CL			0.41782977241	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
613	55940008S	CL			0.74598774360	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
613	55940008S	CL			0.00837851450	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
614	55940009S	CL			0.53973636984	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
615	55940010S	CL			0.45684572988	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
616	55940011S	CL			0.49983508463	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
617	55940012S	CL			0.62954071333	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
618	55940013S	CL			0.51475424482	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
619	55940014S	CL			0.42717320216	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
620	55940015S	CL			0.52982181316	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
621	55940016S	CL			0.45686758614	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
622	55940017S	CL			0.41781093554	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
623	55940018S	CL			0.45686607108	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
624	55940019S	CL			0.43148593914	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
625	55940020S	CL			0.41782232163	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
626	55940021S	CL			0.45687205045	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
627	55940023S	CL			0.40141300047	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
628	55940024S	CL			0.39475279745	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
629	55940025S	CL			0.39469072102	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
630	55940026S	CL			0.05114173036	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
630	55940026S	CL			0.41068012491	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
631	55940027S	CL			0.00926181889	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
631	55940027S	CL			0.66728513132	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
632	55941011S	CL			0.43920291130	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
633	55941012S	CL			0.40175129670	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
634	55941013S	CL			0.40174649704	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
635	55941014S	CL			0.40174857467	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
636	55941015S	CL			0.40174826734	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
637	55941016S	CL			0.46679942741	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
638	55941017S	CL			0.78893645714	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
639	55941018S	CL			0.40189725634	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
640	55941019S	CL			0.42487670770	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
641	55941020S	CL			0.34389586869	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
641	55941020S	CL			0.10787273958	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
642	55941021S	CL			0.44927342547	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L	Converted to Rural Residential	Farmland of Local Importance
643	56003111T	CL			3.13677209182	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
643	56003111T	CL			0.12021437847	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
644	56003112	CY	1/1/1900	1900	0.06026604486	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
644	56003112	CY	1/1/1900	1900	2.73263510200	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
645	56003114	CY	1/1/1900	1900	2.45792835761	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
646	56003115	CY	1/1/1900	1900	2.46233881926	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
647	56003118	CY	1/1/1900	1900	0.39746754577	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
648	56003119	CY	1/1/1900	1900	2.06927693831	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
649	56004023	CY	1/1/1900	1900	2.00651628612	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
650	56004024	CY	1/1/1900	1900	2.46576449688	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
651	56036001	CL			0.24632833899	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
651	56036001	CL			0.00696337666	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
652	56036002	CL			0.22758808594	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
652	56036002	CL			0.00473368522	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
653	56036003	CL			0.28837672534	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
653	56036003	CL			0.00472896217	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
654	56036004	CL			0.40984990691	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
654	56036004	CL			0.00014194998	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
655	56036005	CL			0.41053443952	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
656	56036006	CL			0.28150925438	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
657	56036007	CL			0.22986503032	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
658	56036008	CL			0.24852394244	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
659	56036009	CL			0.24198681656	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
660	56036010	CL			0.22442287376	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
661	56036011	CL			0.24193322099	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
662	56036012	CL			0.36534039722	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
663	56036013	CL			0.28000069887	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
664	56036014	CL			0.40087329181	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
665	56036015	CL			0.39341143243	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
666	56036016	CL			0.25503097756	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
667	56036017	CL			0.23815214623	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
668	56036018	CL			0.24645997852	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
669	56036019	CL			0.33140536069	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
670	56036020	CL			0.20086510184	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
671	56036021	CL			0.26314128029	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
672	56036022	CL			0.20064686349	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
673	56036023	CL			0.20063495557	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
674	56036024	CL			0.20501403724	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
675	56036025	CL			0.20936570372	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
676	56036026	CL			0.20935397444	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
677	56036027	CL			0.22067295334	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
678	56036028T	CL			0.15233410473	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
678	56036028T	CL			0.17801138999	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
679	56036029T	CL			0.00387209044	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
679	56036029T	CL			0.12480869879	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
680	56036030T	CL			0.39284856633	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
680	56036030T	CL			0.01764081904	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
681	56037001	CL			0.21018050951	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
682	56037002	CL			0.20659761397	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
683	56037003	CL			0.20662617837	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
684	56037004	CL			0.21020691134	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land
685	56037005	CL			0.22607463067	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	##################	D		Urban and Built Up Land

686	56037006	CL			0.33619362159	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
687	56037007	CL			0.34673305664	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
688	56037008	CL			0.19283838845	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
689	56037009	CL			0.19283687752	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
690	56037010	CL			0.19284939921	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
691	56037011	CL			0.20414425949	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
692	56037012	CL			0.21791255824	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
693	56037013	CL			0.20110218090	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
694	56037014	CL			0.20110372468	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
695	56037015	CL			0.18654985839	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
696	56037016	CL			0.27713309783	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
697	56037017	CL			0.37281707860	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
698	56037018	CL			0.22039698213	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
699	56037019	CL			0.23167796426	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
700	56037020	CL			0.23300308789	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
701	56037021	CL			0.22121991981	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
702	56037022	CL			0.31442714901	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
703	56037023	CL			0.31451423679	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
704	56037024	CL			0.20661776372	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
705	56037025	CL			0.20661368984	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
706	56037026	CL			0.21487696035	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
707	56037027	CL			0.21558546187	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
708	56037028	CL			0.22036021532	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
709	56037029	CL			0.20089015115	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
710	56037030	CL			0.20087538824	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
711	56037031T	CL			0.58527884374	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
711	56037031T	CL			0.21274610826	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
712	56037032T	CL			0.03174372669	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
712	56037032T	CL			0.37686917083	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
713	56044012T	CL			0.07867916036	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
714	56044013	CL			1.25544526089	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
714	56044013	CL			0.13324503183	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
715	56052001S	CL			0.00009378332	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
715	56052001S	CL			0.14707394793	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
716	56052002S	CL			0.12970973525	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
717	56052003S	CL			0.12970978190	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
718	56052004S	CL			0.12970974105	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
719	56052005S	CL			0.12971062933	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
720	56052006S	CL			0.12970921643	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
721	56052007S	CL			0.13038500988	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
722	56052008S	CL			0.11938710158	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
723	56052009S	CL			0.11995435669	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
724	56052010S	CL			0.12464342386	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
725	56053001S	CL			0.11349726099	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
726	56053002S	CL			0.10903957288	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
727	56053003S	CL			0.10903939721	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
728	56053004S	CL			0.10903993776	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
729	56053005S	CL			0.10903940256	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
730	56053006S	CL			0.10904029822	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
731	56053007S	CL			0.10903958282	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
732	56053008S	CL			0.10903939541	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
733	56053009S	CL			0.10903956390	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
734	56053010S	CL			0.13916289197	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
735	56053011S	CL			0.23214109620	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
736	56053012S	CL			0.16828173075	1727	2018.00000000000	fre	21.18646476430	1299.02092648000	85738.58099080000	L		Farmland of Local Importance
2	55604023S	CY	1/1/1900	1900	0.00095572491	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
3	55605015SU	CL			0.00095572491	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
2	55604023S	CY	1/1/1900	1900	0.00002555539	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
4	55605019ST	CL			0.00002555539	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
2	55604023S	CY	1/1/1900	1900	0.00001862958	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
177	55605042XA	CL			0.00001862958	1738	2018.00000000000	fre	142.15648443800	3657.11220260000	575286.88197600000	L		Farmland of Local Importance
2	55604023S	CY	1/1/1900	1900	0.00077038075	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
177	55605042XA	CL			0.00077038075	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
4	55605019ST	CL			0.00033250513	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
177	55605042XA	CL			0.00033250513	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
10	5560504104	CL			0.00000743426	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
237	5560504358	CL			0.00000743426	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
24	5560504118	CL			0.00040169873	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
132	55605042	CL			0.00040169873	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
24	5560504118	CL			0.00000129060	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
179	55605042XC	CL			0.00000129060	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
25	5560504119	CL			0.00031197053	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
131	55605042	CL			0.00031197053	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
25	5560504119	CL			0.00008572440	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
132	55605042	CL			0.00008572440	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
26	5560504120	CL			0.00000307678	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
129	55605042	CL			0.00000307678	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
26	5560504120	CL			0.00034246527	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
130	55605042	CL			0.00034246527	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
26	5560504120	CL			0.00004505195	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
131	55605042	CL			0.00004505195	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
27	5560504121	CL			0.00033272636	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
129	55605042	CL			0.00033272636	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
28	5560504122	CL			0.00005225161	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
127	55605042	CL			0.00005225161	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
28	5560504122	CL			0.00026953220	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
128	55605042	CL			0.00026953220	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland

29	5560504123	CL			0.00012045241	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
126	55605042	CL			0.00012045241	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
29	5560504123	CL			0.00019718601	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
127	55605042	CL			0.00019718601	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
30	5560504124	CL			0.00017486592	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
125	55605042	CL			0.00017486592	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
30	5560504124	CL			0.00012605177	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
126	55605042	CL			0.00012605177	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
31	5560504125	CL			0.00005384284	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
124	55605042	CL			0.00005384284	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
31	5560504125	CL			0.00024207925	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
125	55605042	CL			0.00024207925	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
32	5560504126	CL			0.00029063279	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
124	55605042	CL			0.00029063279	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
33	5560504127	CL			0.00013709231	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
124	55605042	CL			0.00013709231	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
35	5560504129	CL			0.00024554048	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
123	55605042	CL			0.00024554048	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
35	5560504129	CL			0.00027207099	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
124	55605042	CL			0.00027207099	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
36	5560504130	CL			0.00048011693	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
123	55605042	CL			0.00048011693	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
37	5560504131	CL			0.00037456405	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
122	55605042	CL			0.00037456405	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
37	5560504131	CL			0.00010079925	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
123	55605042	CL			0.00010079925	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
38	5560504132	CL			0.00008833931	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
120	55605042	CL			0.00008833931	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
38	5560504132	CL			0.00037628272	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
121	55605042	CL			0.00037628272	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
38	5560504132	CL			0.00000525473	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
122	55605042	CL			0.00000525473	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
39	5560504133	CL			0.00018035551	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
119	55605042	CL			0.00018035551	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
39	5560504133	CL			0.00028471976	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
120	55605042	CL			0.00028471976	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
40	5560504134	CL			0.00027062974	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
118	55605042	CL			0.00027062974	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
40	5560504134	CL			0.00018992337	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
119	55605042	CL			0.00018992337	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
41	5560504135	CL			0.00035859516	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
117	55605042	CL			0.00035859516	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
41	5560504135	CL			0.00002378753	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
118	55605042	CL			0.00002378753	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
41	5560504135	CL			0.00007280445	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
118	55605042	CL			0.00007280445	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
42	5560504136	CL			0.00008459602	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
115	55605042	CL			0.00008459602	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
42	5560504136	CL			0.00036019652	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
116	55605042	CL			0.00036019652	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
42	5560504136	CL			0.00000502934	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
117	55605042	CL			0.00000502934	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
43	5560504137	CL			0.00009362965	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
114	55605042	CL			0.00009362965	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
43	5560504137	CL			0.00007903517	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
114	55605042	CL			0.00007903517	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
43	5560504137	CL			0.00027263259	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
115	55605042	CL			0.00027263259	6513	2018.00000000000	fre	25.77735851150	2741.65128253000	104317.26883400000	S	converted to Urban and Built Up Land	Farmland of Statewide Importance
44	5560504138	CL			0.00026467136	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
113	55605042	CL			0.00026467136	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
44	5560504138	CL			0.00018175702	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
114	55605042	CL			0.00018175702	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
45	5560504139	CL			0.00037651382	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
112	55605042	CL			0.00037651382	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
45	5560504139	CL			0.00008650621	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
113	55605042	CL			0.00008650621	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
179	55605042XC	CL			0.00027746062	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
270	556050XD	CL			0.00027746062	3409	2018.00000000000	fre	865.36761368500	20796.39924870000	3502018.48483000000	P	converted to Urban and Built Up Land	Prime Farmland
361	55705102	CY	########	1995	0.00050245467	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
362	55705103	CY	########	1995	0.00050245467	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
377	55901129S	CY	1/1/1900	1900	0.00028251723	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L		Farmland of Local Importance
638	55941017S	CL			0.00028251723	1725	2018.00000000000	fre	21.75170223080	1376.33387224000	88026.01586220000	L		Farmland of Local Importance
394	55901249	CY			0.00212417407	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
607	55934007	CL			0.00212417407	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
394	55901249	CY			0.00141883542	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
607	55934007	CL			0.00141883542	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
394	55901249	CY			0.00191462555	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
608	55934008	CL			0.00191462555	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
395	55901250	CY			0.01854972635	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
607	55934007	CL			0.01854972635	605	2018.00000000000	fre	84238.16895890000	444376.90570300000	###################	D		Urban and Built Up Land
395	55901250	CY			0.00361809995	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
607	55934007	CL			0.00361809995	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
644	56003112	CY	1/1/1900	1900	0.00692561712	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
679	56036029T	CL			0.00692561712	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
644	56003112	CY	1/1/1900	1900	0.00302385811	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
712	56037032T	CL			0.00302385811	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land
646	56003115	CY	1/1/1900	1900	0.00463453520	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R		Rural Residential Land

712	56037032T	CL			0.00463453520	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R	Rural Residential Land
647	56003118	CY	1/1/1900	1900	0.00368766047	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R	Rural Residential Land
712	56037032T	CL			0.00368766047	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R	Rural Residential Land
648	56003119	CY	1/1/1900	1900	0.00027496852	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R	Rural Residential Land
712	56037032T	CL			0.00027496852	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R	Rural Residential Land
650	56004024	CY	1/1/1900	1900	0.00000243860	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R	Rural Residential Land
714	56044013	CL			0.00000243860	4139	2018.00000000000	fre	660.86523644200	22314.44508200000	2674426.72617000000	R	Rural Residential Land

Great Big Land, LP
7550 N. Palm Ave #102
Fresno, CA 93711
559/224-7550

May 11, 2023

Mr. George Gonzalez
Senior Planner
City of Clovis
1033 Fifth Street
Clovis, CA 63612

Re: Tract 6205 – Agricultural Land Evaluation

Dear Mr. Gonzalez:

I have been for several years responsible for managing the former Cal-Pecan orchard located at the northeast corner of Sunnyside and Shepherd Avenues, near Clovis, CA, on behalf of the current owner, Great Big Land, LP and I have been asked to provide a status of the agricultural viability of this property. Essentially, this property has proven to no longer be economically viable for continued irrigated agricultural production.

First and foremost, continued commercial agricultural production is not economically viable on this property because it is located entirely north and east of the Enterprise Canal and therefore *outside* of the nearby Fresno Irrigation District boundary. It is therefore not eligible to receive deliveries of surface water from any irrigation district. This is an entirely different situation from the many other properties located in the nearby Heritage Grove Community Plan area in the City of Clovis that are located on the west side of the Enterprise Canal and continue to receive deliveries of surface water to support agricultural production. Recent SIGMA regulatory changes that now severely limit groundwater pumping has constrained the ability of any agricultural properties located outside of an irrigation district to support intensive agricultural uses that require regular and timely irrigation; further, groundwater pumping on this property had already proven to be unpredictable and unreliable in recent years as available water from the aquifer under the property had been highly variable and provided an unreliable supply. In fact, as we made every effort to continue irrigating the trees to at least keep them alive last summer, the wells on the property went entirely dry and caused the pumps to burn out. The existing pecan trees suffered tremendous damage without available irrigation water and it resulted in large-scale tree mortality.

Second, as a result of implementation of recent SIGMA regulatory changes, virtually all agricultural lending banks and institutions have recently changed their lending requirements to now demand availability of two sources of water (groundwater and surface water) as a condition for continued lending. Unfortunately, this property cannot meet the new lending requirement because it is located outside of an irrigation district, so this property is no longer eligible to obtain agricultural loans to support commercial agricultural operations.

Third, this property has proven to be not economically viable because the soil types and soil substructure varies greatly on the properties and much is not conducive to produce high agricultural yields. Specifically, cemented silty sand, clayey sand, and silty sand with clay, locally referred to as "hardpan" is encountered below 2 feet across much of the property. This cementation retards the free percolation of surface water into the soil stratum below the hardpan, frequently resulting in a temporary perched water table condition at or near the ground surface. This extensive hardpan layer that results in a temporary perched water table condition at or near the ground surface is prohibitive to economically viable agricultural yields.

Fourth, proximity of the properties to existing urban development has unfortunately added great further negativity and stress to the economic viability of agricultural production at this property. The nearby urban interface has greatly increased vandalism, theft and harassment costs in recent years. This vandalism, theft and harassment became particularly troublesome last summer when neighbors would routinely shut-off irrigation pumps during the night and the valves in the orchard rows that are necessary to regulate pressure to operate the system were stolen. Equipment vandalism and theft occurred regularly and continued agricultural operations are now virtually impossible.

For these reasons, this property is simply no longer viable for commercial agricultural production.

Thank you.

Jeffrey B. Harris
Ranch Manager and Chief Operating Officer

Appendix C

Air Quality, GHG, and Energy

APPENDIX C

APPENDIX C.1

CalEEMod Modeling Results

AGENDA ITEM NO. 6.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Clovis Shepherd North

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	4.32	Acre	5.54	188,179.20	0
Single Family Housing	605.00	Dwelling Unit	71.96	1,089,000.00	1730

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2028
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Operational year is projected to be year 2028, consistent with the Transportation Impact Analysis prepared by LSA.

Land Use - Project includes 605 single-family dwelling units. Development area includes 77.5 acres of development area. 4.32 acres are open space; the remaining acreage is single-family residential.

Construction Phase - No demolition phase. Building construction phase shortened from CalEEMod default, to reflect estimated op. year of 2028. Site Prep and Grading phases were unchanged; paving and arch. coating phases same length as default.

Grading - Site is relatively flat. Soil assumed to be balanced on-site.

Architectural Coating - SJVAPCD Rule 4601 identifies that residential interior and exterior coatings have a VOC content of no greater than 50 g/L.

Vehicle Trips - TIA (LSA, 2023) identifies 5,705 daily trips, equiv. to 9.43 trips/du/day. TIA also identifies 33,049 total VMT, which is equiv. to 54.62645 VMT/day/du. 54.62645 VMT/du/day divided by 9.43 trips/du/day equals 5.792989 VMT per trip (i.e. trip length).

Woodstoves - No hearths.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00

tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblConstructionPhase	NumDays	1,550.00	960.00
tblConstructionPhase	PhaseEndDate	4/5/2030	12/31/2027
tblConstructionPhase	PhaseEndDate	9/6/2030	6/2/2028
tblConstructionPhase	PhaseEndDate	2/7/2031	11/3/2028
tblConstructionPhase	PhaseStartDate	4/6/2030	1/1/2028
tblConstructionPhase	PhaseStartDate	9/7/2030	6/3/2028
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	332.75	0.00
tblFireplaces	NumberNoFireplace	272.25	0.00
tblLandUse	LotAcreage	4.32	5.54
tblLandUse	LotAcreage	196.43	71.96
tblVehicleTrips	HO_TL	7.50	5.79
tblVehicleTrips	HS_TL	7.30	5.79
tblVehicleTrips	HW_TL	10.80	5.79
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	9.54	9.43
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	8.55	9.43
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	9.44	9.43
tblWoodstoves	NumberCatalytic	71.96	0.00
tblWoodstoves	NumberNoncatalytic	71.96	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1999	2.0363	1.5584	3.4000e-003	1.0570	0.0879	1.1449	0.4482	0.0809	0.5290	0.0000	299.0214	299.0214	0.0944	2.3000e-004	301.4494
2024	0.3535	2.9870	3.3081	8.5000e-003	0.7758	0.1144	0.8902	0.2412	0.1065	0.3477	0.0000	762.4885	762.4885	0.1290	0.0288	774.2805
2025	0.2943	2.2364	3.0390	8.4200e-003	0.3929	0.0737	0.4667	0.1064	0.0694	0.1758	0.0000	762.6544	762.6544	0.0783	0.0410	776.8426
2026	0.2874	2.2271	2.9916	8.3000e-003	0.3929	0.0737	0.4666	0.1064	0.0693	0.1757	0.0000	751.4531	751.4531	0.0778	0.0400	765.3103
2027	0.2810	2.2183	2.9465	8.1800e-003	0.3929	0.0736	0.4665	0.1064	0.0692	0.1756	0.0000	740.0838	740.0838	0.0772	0.0389	753.6165
2028	3.4757	0.5398	0.9705	1.6600e-003	0.0325	0.0260	0.0585	8.6500e-003	0.0241	0.0328	0.0000	146.0631	146.0631	0.0369	5.4000e-004	147.1458
Maximum	**3.4757**	**2.9870**	**3.3081**	**8.5000e-003**	**1.0570**	**0.1144**	**1.1449**	**0.4482**	**0.1065**	**0.5290**	**0.0000**	**762.6544**	**762.6544**	**0.1290**	**0.0410**	**776.8426**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1999	2.0363	1.5584	3.4000e-003	1.0570	0.0879	1.1449	0.4482	0.0809	0.5290	0.0000	299.0211	299.0211	0.0944	2.3000e-004	301.4491
2024	0.3535	2.9870	3.3081	8.5000e-003	0.7758	0.1144	0.8902	0.2412	0.1065	0.3477	0.0000	762.4879	762.4879	0.1290	0.0288	774.2800
2025	0.2943	2.2364	3.0390	8.4200e-003	0.3929	0.0737	0.4667	0.1064	0.0694	0.1758	0.0000	762.6540	762.6540	0.0783	0.0410	776.8423
2026	0.2874	2.2271	2.9916	8.3000e-003	0.3929	0.0737	0.4666	0.1064	0.0693	0.1757	0.0000	751.4528	751.4528	0.0778	0.0400	765.3100
2027	0.2810	2.2183	2.9465	8.1800e-003	0.3929	0.0736	0.4665	0.1064	0.0692	0.1756	0.0000	740.0835	740.0835	0.0772	0.0389	753.6161
2028	3.4757	0.5398	0.9705	1.6600e-003	0.0325	0.0260	0.0585	8.6500e-003	0.0241	0.0328	0.0000	146.0630	146.0630	0.0369	5.4000e-004	147.1456
Maximum	**3.4757**	**2.9870**	**3.3081**	**8.5000e-003**	**1.0570**	**0.1144**	**1.1449**	**0.4482**	**0.1065**	**0.5290**	**0.0000**	**762.6540**	**762.6540**	**0.1290**	**0.0410**	**776.8423**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2023**	**9-30-2023**	1.0169	1.0169
2	**10-1-2023**	**12-31-2023**	1.2468	1.2468
3	**1-1-2024**	**3-31-2024**	1.1600	1.1600
4	**4-1-2024**	**6-30-2024**	0.8079	0.8079
5	**7-1-2024**	**9-30-2024**	0.6744	0.6744

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6	**10-1-2024**	**12-31-2024**	0.6827	0.6827
7	**1-1-2025**	**3-31-2025**	0.6286	0.6286
8	**4-1-2025**	**6-30-2025**	0.6274	0.6274
9	**7-1-2025**	**9-30-2025**	0.6343	0.6343
10	**10-1-2025**	**12-31-2025**	0.6425	0.6425
11	**1-1-2026**	**3-31-2026**	0.6244	0.6244
12	**4-1-2026**	**6-30-2026**	0.6232	0.6232
13	**7-1-2026**	**9-30-2026**	0.6301	0.6301
14	**10-1-2026**	**12-31-2026**	0.6383	0.6383
15	**1-1-2027**	**3-31-2027**	0.6205	0.6205
16	**4-1-2027**	**6-30-2027**	0.6193	0.6193
17	**7-1-2027**	**9-30-2027**	0.6261	0.6261
18	**10-1-2027**	**12-31-2027**	0.6343	0.6343
19	**1-1-2028**	**3-31-2028**	0.3104	0.3104
20	**4-1-2028**	**6-30-2028**	0.8497	0.8497
21	**7-1-2028**	**9-30-2028**	2.0856	2.0856
		Highest	2.0856	2.0856

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.4117	0.0517	4.4880	2.4000e-004		0.0249	0.0249		0.0249	0.0249	0.0000	7.3380	7.3380	7.0300e-003	0.0000	7.5137
Energy	0.0784	0.6701	0.2852	4.2800e-003		0.0542	0.0542		0.0542	0.0542	0.0000	1,222.4122	1,222.4122	0.0871	0.0230	1,231.4376
Mobile	1.9440	2.8348	16.0371	0.0364	4.0035	0.0296	4.0331	1.0709	0.0278	1.0986	0.0000	3,371.2452	3,371.2452	0.1953	0.1988	3,435.3737
Waste						0.0000	0.0000		0.0000	0.0000	126.4979	0.0000	126.4979	7.4758	0.0000	313.3931
Water						0.0000	0.0000		0.0000	0.0000	12.5056	29.4488	41.9544	1.2892	0.0309	83.3946
Total	**7.4341**	**3.5566**	**20.8102**	**0.0409**	**4.0035**	**0.1087**	**4.1122**	**1.0709**	**0.1069**	**1.1777**	**139.0035**	**4,630.4443**	**4,769.4477**	**9.0545**	**0.2527**	**5,071.1127**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.4117	0.0517	4.4880	2.4000e-004		0.0249	0.0249		0.0249	0.0249	0.0000	7.3380	7.3380	7.0300e-003	0.0000	7.5137
Energy	0.0784	0.6701	0.2852	4.2800e-003		0.0542	0.0542		0.0542	0.0542	0.0000	1,222.4122	1,222.4122	0.0871	0.0230	1,231.4376
Mobile	1.9440	2.8348	16.0371	0.0364	4.0035	0.0296	4.0331	1.0709	0.0278	1.0986	0.0000	3,371.2452	3,371.2452	0.1953	0.1988	3,435.3737
Waste						0.0000	0.0000		0.0000	0.0000	126.4979	0.0000	126.4979	7.4758	0.0000	313.3931
Water						0.0000	0.0000		0.0000	0.0000	12.5056	29.4488	41.9544	1.2892	0.0309	83.3946
Total	**7.4341**	**3.5566**	**20.8102**	**0.0409**	**4.0035**	**0.1087**	**4.1122**	**1.0709**	**0.1069**	**1.1777**	**139.0035**	**4,630.4443**	**4,769.4477**	**9.0545**	**0.2527**	**5,071.1127**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2023	9/22/2023	5	60	
2	Grading	Grading	9/23/2023	4/26/2024	5	155	
3	Building Construction	Building Construction	4/27/2024	12/31/2027	5	960	

4	Paving	Paving	1/1/2028	6/2/2028	5	110	
5	Architectural Coating	Architectural Coating	6/3/2028	11/3/2028	5	110	

Acres of Grading (Site Preparation Phase): 90

Acres of Grading (Grading Phase): 465

Acres of Paving: 0

Residential Indoor: 2,205,225; Residential Outdoor: 735,075; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

AGENDA ITEM NO. 6.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	297.00	96.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5897	0.0000	0.5897	0.3031	0.0000	0.3031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3521	100.3521	0.0325	0.0000	101.1635
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.5897**	**0.0380**	**0.6277**	**0.3031**	**0.0349**	**0.3380**	**0.0000**	**100.3521**	**100.3521**	**0.0325**	**0.0000**	**101.1635**

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.0800e-003	0.0127	4.0000e-005	4.3200e-003	2.0000e-005	4.3400e-003	1.1500e-003	2.0000e-005	1.1700e-003	0.0000	3.3951	3.3951	1.0000e-004	1.0000e-004	3.4270
Total	**1.6700e-003**	**1.0800e-003**	**0.0127**	**4.0000e-005**	**4.3200e-003**	**2.0000e-005**	**4.3400e-003**	**1.1500e-003**	**2.0000e-005**	**1.1700e-003**	**0.0000**	**3.3951**	**3.3951**	**1.0000e-004**	**1.0000e-004**	**3.4270**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5897	0.0000	0.5897	0.3031	0.0000	0.3031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0798	0.8257	0.5473	1.1400e-003		0.0380	0.0380		0.0349	0.0349	0.0000	100.3520	100.3520	0.0325	0.0000	101.1634
Total	**0.0798**	**0.8257**	**0.5473**	**1.1400e-003**	**0.5897**	**0.0380**	**0.6277**	**0.3031**	**0.0349**	**0.3380**	**0.0000**	**100.3520**	**100.3520**	**0.0325**	**0.0000**	**101.1634**

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.0800e-003	0.0127	4.0000e-005	4.3200e-003	2.0000e-005	4.3400e-003	1.1500e-003	2.0000e-005	1.1700e-003	0.0000	3.3951	3.3951	1.0000e-004	1.0000e-004	3.4270
Total	**1.6700e-003**	**1.0800e-003**	**0.0127**	**4.0000e-005**	**4.3200e-003**	**2.0000e-005**	**4.3400e-003**	**1.1500e-003**	**2.0000e-005**	**1.1700e-003**	**0.0000**	**3.3951**	**3.3951**	**1.0000e-004**	**1.0000e-004**	**3.4270**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4573	0.0000	0.4573	0.1425	0.0000	0.1425	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1163	1.2081	0.9818	2.1700e-003		0.0499	0.0499		0.0459	0.0459	0.0000	190.8732	190.8732	0.0617	0.0000	192.4165
Total	**0.1163**	**1.2081**	**0.9818**	**2.1700e-003**	**0.4573**	**0.0499**	**0.5072**	**0.1425**	**0.0459**	**0.1884**	**0.0000**	**190.8732**	**190.8732**	**0.0617**	**0.0000**	**192.4165**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1700e-003	1.4000e-003	0.0165	5.0000e-005	5.6000e-003	3.0000e-005	5.6200e-003	1.4900e-003	2.0000e-005	1.5100e-003	0.0000	4.4010	4.4010	1.3000e-004	1.3000e-004	4.4424
Total	**2.1700e-003**	**1.4000e-003**	**0.0165**	**5.0000e-005**	**5.6000e-003**	**3.0000e-005**	**5.6200e-003**	**1.4900e-003**	**2.0000e-005**	**1.5100e-003**	**0.0000**	**4.4010**	**4.4010**	**1.3000e-004**	**1.3000e-004**	**4.4424**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4573	0.0000	0.4573	0.1425	0.0000	0.1425	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1163	1.2080	0.9818	2.1700e-003		0.0499	0.0499		0.0459	0.0459	0.0000	190.8730	190.8730	0.0617	0.0000	192.4163
Total	**0.1163**	**1.2080**	**0.9818**	**2.1700e-003**	**0.4573**	**0.0499**	**0.5072**	**0.1425**	**0.0459**	**0.1884**	**0.0000**	**190.8730**	**190.8730**	**0.0617**	**0.0000**	**192.4163**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1700e-003	1.4000e-003	0.0165	5.0000e-005	5.6000e-003	3.0000e-005	5.6200e-003	1.4900e-003	2.0000e-005	1.5100e-003	0.0000	4.4010	4.4010	1.3000e-004	1.3000e-004	4.4424
Total	**2.1700e-003**	**1.4000e-003**	**0.0165**	**5.0000e-005**	**5.6000e-003**	**3.0000e-005**	**5.6200e-003**	**1.4900e-003**	**2.0000e-005**	**1.5100e-003**	**0.0000**	**4.4010**	**4.4010**	**1.3000e-004**	**1.3000e-004**	**4.4424**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5025	0.0000	0.5025	0.1673	0.0000	0.1673	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1368	1.3760	1.1782	2.6400e-003		0.0568	0.0568		0.0522	0.0522	0.0000	231.7080	231.7080	0.0749	0.0000	233.5815
Total	**0.1368**	**1.3760**	**1.1782**	**2.6400e-003**	**0.5025**	**0.0568**	**0.5593**	**0.1673**	**0.0522**	**0.2195**	**0.0000**	**231.7080**	**231.7080**	**0.0749**	**0.0000**	**233.5815**

3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4300e-003	1.5000e-003	0.0185	6.0000e-005	6.8000e-003	3.0000e-005	6.8300e-003	1.8100e-003	3.0000e-005	1.8300e-003	0.0000	5.1682	5.1682	1.5000e-004	1.4000e-004	5.2145
Total	**2.4300e-003**	**1.5000e-003**	**0.0185**	**6.0000e-005**	**6.8000e-003**	**3.0000e-005**	**6.8300e-003**	**1.8100e-003**	**3.0000e-005**	**1.8300e-003**	**0.0000**	**5.1682**	**5.1682**	**1.5000e-004**	**1.4000e-004**	**5.2145**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5025	0.0000	0.5025	0.1673	0.0000	0.1673	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1368	1.3760	1.1782	2.6400e-003		0.0568	0.0568		0.0522	0.0522	0.0000	231.7077	231.7077	0.0749	0.0000	233.5812
Total	**0.1368**	**1.3760**	**1.1782**	**2.6400e-003**	**0.5025**	**0.0568**	**0.5593**	**0.1673**	**0.0522**	**0.2195**	**0.0000**	**231.7077**	**231.7077**	**0.0749**	**0.0000**	**233.5812**

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4300e-003	1.5000e-003	0.0185	6.0000e-005	6.8000e-003	3.0000e-005	6.8300e-003	1.8100e-003	3.0000e-005	1.8300e-003	0.0000	5.1682	5.1682	1.5000e-004	1.4000e-004	5.2145
Total	**2.4300e-003**	**1.5000e-003**	**0.0185**	**6.0000e-005**	**6.8000e-003**	**3.0000e-005**	**6.8300e-003**	**1.8100e-003**	**3.0000e-005**	**1.8300e-003**	**0.0000**	**5.1682**	**5.1682**	**1.5000e-004**	**1.4000e-004**	**5.2145**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1302	1.1898	1.4308	2.3900e-003		0.0543	0.0543		0.0511	0.0511	0.0000	205.1865	205.1865	0.0485	0.0000	206.3995
Total	**0.1302**	**1.1898**	**1.4308**	**2.3900e-003**		**0.0543**	**0.0543**		**0.0511**	**0.0511**	**0.0000**	**205.1865**	**205.1865**	**0.0485**	**0.0000**	**206.3995**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8800e-003	0.3733	0.1092	1.6700e-003	0.0563	2.4100e-003	0.0587	0.0163	2.3100e-003	0.0186	0.0000	160.6113	160.6113	8.4000e-004	0.0242	167.8369
Worker	0.0752	0.0465	0.5714	1.7400e-003	0.2101	9.6000e-004	0.2111	0.0559	8.8000e-004	0.0567	0.0000	159.8145	159.8145	4.5200e-003	4.4300e-003	161.2481
Total	**0.0841**	**0.4197**	**0.6807**	**3.4100e-003**	**0.2665**	**3.3700e-003**	**0.2698**	**0.0721**	**3.1900e-003**	**0.0753**	**0.0000**	**320.4259**	**320.4259**	**5.3600e-003**	**0.0286**	**329.0851**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1302	1.1898	1.4308	2.3900e-003		0.0543	0.0543		0.0511	0.0511	0.0000	205.1862	205.1862	0.0485	0.0000	206.3992
Total	**0.1302**	**1.1898**	**1.4308**	**2.3900e-003**		**0.0543**	**0.0543**		**0.0511**	**0.0511**	**0.0000**	**205.1862**	**205.1862**	**0.0485**	**0.0000**	**206.3992**

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.8800e-003	0.3733	0.1092	1.6700e-003	0.0563	2.4100e-003	0.0587	0.0163	2.3100e-003	0.0186	0.0000	160.6113	160.6113	8.4000e-004	0.0242	167.8369
Worker	0.0752	0.0465	0.5714	1.7400e-003	0.2101	9.6000e-004	0.2111	0.0559	8.8000e-004	0.0567	0.0000	159.8145	159.8145	4.5200e-003	4.4300e-003	161.2481
Total	**0.0841**	**0.4197**	**0.6807**	**3.4100e-003**	**0.2665**	**3.3700e-003**	**0.2698**	**0.0721**	**3.1900e-003**	**0.0753**	**0.0000**	**320.4259**	**320.4259**	**5.3600e-003**	**0.0286**	**329.0851**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0128	0.5482	0.1578	2.4200e-003	0.0831	3.5500e-003	0.0866	0.0240	3.4000e-003	0.0274	0.0000	232.2810	232.2810	1.1700e-003	0.0350	242.7280
Worker	0.1031	0.0609	0.7821	2.4800e-003	0.3099	1.3500e-003	0.3112	0.0824	1.2400e-003	0.0836	0.0000	227.7184	227.7184	6.0200e-003	6.0800e-003	229.6812
Total	**0.1159**	**0.6091**	**0.9399**	**4.9000e-003**	**0.3929**	**4.9000e-003**	**0.3978**	**0.1064**	**4.6400e-003**	**0.1110**	**0.0000**	**459.9995**	**459.9995**	**7.1900e-003**	**0.0410**	**472.4091**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0128	0.5482	0.1578	2.4200e-003	0.0831	3.5500e-003	0.0866	0.0240	3.4000e-003	0.0274	0.0000	232.2810	232.2810	1.1700e-003	0.0350	242.7280
Worker	0.1031	0.0609	0.7821	2.4800e-003	0.3099	1.3500e-003	0.3112	0.0824	1.2400e-003	0.0836	0.0000	227.7184	227.7184	6.0200e-003	6.0800e-003	229.6812
Total	**0.1159**	**0.6091**	**0.9399**	**4.9000e-003**	**0.3929**	**4.9000e-003**	**0.3978**	**0.1064**	**4.6400e-003**	**0.1110**	**0.0000**	**459.9995**	**459.9995**	**7.1900e-003**	**0.0410**	**472.4091**

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.4 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0125	0.5450	0.1551	2.3700e-003	0.0831	3.5300e-003	0.0866	0.0240	3.3800e-003	0.0274	0.0000	227.7060	227.7060	1.1200e-003	0.0343	237.9435
Worker	0.0964	0.0549	0.7375	2.4100e-003	0.3099	1.2900e-003	0.3112	0.0824	1.1900e-003	0.0836	0.0000	221.0923	221.0923	5.4900e-003	5.7200e-003	222.9333
Total	**0.1089**	**0.5998**	**0.8925**	**4.7800e-003**	**0.3929**	**4.8200e-003**	**0.3978**	**0.1064**	**4.5700e-003**	**0.1109**	**0.0000**	**448.7983**	**448.7983**	**6.6100e-003**	**0.0400**	**460.8768**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.4 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0125	0.5450	0.1551	2.3700e-003	0.0831	3.5300e-003	0.0866	0.0240	3.3800e-003	0.0274	0.0000	227.7060	227.7060	1.1200e-003	0.0343	237.9435
Worker	0.0964	0.0549	0.7375	2.4100e-003	0.3099	1.2900e-003	0.3112	0.0824	1.1900e-003	0.0836	0.0000	221.0923	221.0923	5.4900e-003	5.7200e-003	222.9333
Total	**0.1089**	**0.5998**	**0.8925**	**4.7800e-003**	**0.3929**	**4.8200e-003**	**0.3978**	**0.1064**	**4.5700e-003**	**0.1109**	**0.0000**	**448.7983**	**448.7983**	**6.6100e-003**	**0.0400**	**460.8768**

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0123	0.5413	0.1529	2.3200e-003	0.0831	3.5100e-003	0.0866	0.0240	3.3600e-003	0.0274	0.0000	222.8693	222.8693	1.0600e-003	0.0335	232.8868
Worker	0.0903	0.0497	0.6945	2.3400e-003	0.3099	1.2200e-003	0.3111	0.0824	1.1200e-003	0.0835	0.0000	214.5596	214.5596	5.0100e-003	5.4100e-003	216.2962
Total	**0.1026**	**0.5910**	**0.8474**	**4.6600e-003**	**0.3929**	**4.7300e-003**	**0.3977**	**0.1064**	**4.4800e-003**	**0.1108**	**0.0000**	**437.4289**	**437.4289**	**6.0700e-003**	**0.0389**	**449.1830**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0123	0.5413	0.1529	2.3200e-003	0.0831	3.5100e-003	0.0866	0.0240	3.3600e-003	0.0274	0.0000	222.8693	222.8693	1.0600e-003	0.0335	232.8868
Worker	0.0903	0.0497	0.6945	2.3400e-003	0.3099	1.2200e-003	0.3111	0.0824	1.1200e-003	0.0835	0.0000	214.5596	214.5596	5.0100e-003	5.4100e-003	216.2962
Total	**0.1026**	**0.5910**	**0.8474**	**4.6600e-003**	**0.3929**	**4.7300e-003**	**0.3977**	**0.1064**	**4.4800e-003**	**0.1108**	**0.0000**	**437.4289**	**437.4289**	**6.0700e-003**	**0.0389**	**449.1830**

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0503	0.4720	0.8018	1.2500e-003		0.0230	0.0230		0.0212	0.0212	0.0000	110.1059	110.1059	0.0356	0.0000	110.9962
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0503**	**0.4720**	**0.8018**	**1.2500e-003**		**0.0230**	**0.0230**		**0.0212**	**0.0212**	**0.0000**	**110.1059**	**110.1059**	**0.0356**	**0.0000**	**110.9962**

3.5 Paving - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-003	9.7000e-004	0.0140	5.0000e-005	6.6000e-003	2.0000e-005	6.6200e-003	1.7500e-003	2.0000e-005	1.7800e-003	0.0000	4.4421	4.4421	1.0000e-004	1.1000e-004	4.4772
Total	**1.8000e-003**	**9.7000e-004**	**0.0140**	**5.0000e-005**	**6.6000e-003**	**2.0000e-005**	**6.6200e-003**	**1.7500e-003**	**2.0000e-005**	**1.7800e-003**	**0.0000**	**4.4421**	**4.4421**	**1.0000e-004**	**1.1000e-004**	**4.4772**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0503	0.4720	0.8018	1.2500e-003		0.0230	0.0230		0.0212	0.0212	0.0000	110.1058	110.1058	0.0356	0.0000	110.9960
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0503**	**0.4720**	**0.8018**	**1.2500e-003**		**0.0230**	**0.0230**		**0.0212**	**0.0212**	**0.0000**	**110.1058**	**110.1058**	**0.0356**	**0.0000**	**110.9960**

3.5 Paving - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-003	9.7000e-004	0.0140	5.0000e-005	6.6000e-003	2.0000e-005	6.6200e-003	1.7500e-003	2.0000e-005	1.7800e-003	0.0000	4.4421	4.4421	1.0000e-004	1.1000e-004	4.4772
Total	**1.8000e-003**	**9.7000e-004**	**0.0140**	**5.0000e-005**	**6.6000e-003**	**2.0000e-005**	**6.6200e-003**	**1.7500e-003**	**2.0000e-005**	**1.7800e-003**	**0.0000**	**4.4421**	**4.4421**	**1.0000e-004**	**1.1000e-004**	**4.4772**

3.6 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.4071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.4000e-003	0.0630	0.0995	1.6000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	14.0429	14.0429	7.7000e-004	0.0000	14.0621
Total	**3.4165**	**0.0630**	**0.0995**	**1.6000e-004**		**2.8300e-003**	**2.8300e-003**		**2.8300e-003**	**2.8300e-003**	**0.0000**	**14.0429**	**14.0429**	**7.7000e-004**	**0.0000**	**14.0621**

3.6 Architectural Coating - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0900e-003	3.8100e-003	0.0552	1.9000e-004	0.0259	1.0000e-004	0.0260	6.9000e-003	9.0000e-005	6.9800e-003	0.0000	17.4722	17.4722	3.8000e-004	4.3000e-004	17.6103
Total	**7.0900e-003**	**3.8100e-003**	**0.0552**	**1.9000e-004**	**0.0259**	**1.0000e-004**	**0.0260**	**6.9000e-003**	**9.0000e-005**	**6.9800e-003**	**0.0000**	**17.4722**	**17.4722**	**3.8000e-004**	**4.3000e-004**	**17.6103**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.4071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.4000e-003	0.0630	0.0995	1.6000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	14.0429	14.0429	7.7000e-004	0.0000	14.0620
Total	**3.4165**	**0.0630**	**0.0995**	**1.6000e-004**		**2.8300e-003**	**2.8300e-003**		**2.8300e-003**	**2.8300e-003**	**0.0000**	**14.0429**	**14.0429**	**7.7000e-004**	**0.0000**	**14.0620**

3.6 Architectural Coating - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0900e-003	3.8100e-003	0.0552	1.9000e-004	0.0259	1.0000e-004	0.0260	6.9000e-003	9.0000e-005	6.9800e-003	0.0000	17.4722	17.4722	3.8000e-004	4.3000e-004	17.6103
Total	**7.0900e-003**	**3.8100e-003**	**0.0552**	**1.9000e-004**	**0.0259**	**1.0000e-004**	**0.0260**	**6.9000e-003**	**9.0000e-005**	**6.9800e-003**	**0.0000**	**17.4722**	**17.4722**	**3.8000e-004**	**4.3000e-004**	**17.6103**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9440	2.8348	16.0371	0.0364	4.0035	0.0296	4.0331	1.0709	0.0278	1.0986	0.0000	3,371.2452	3,371.2452	0.1953	0.1988	3,435.3737
Unmitigated	1.9440	2.8348	16.0371	0.0364	4.0035	0.0296	4.0331	1.0709	0.0278	1.0986	0.0000	3,371.2452	3,371.2452	0.1953	0.1988	3,435.3737

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Single Family Housing	5,705.15	5,705.15	5705.15	10,682,991	10,682,991
Total	5,705.15	5,705.15	5,705.15	10,682,991	10,682,991

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Single Family Housing	5.79	5.79	5.79	48.40	15.90	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.535430	0.053975	0.175864	0.140525	0.022799	0.006183	0.014960	0.022785	0.000688	0.000282	0.022547	0.001379	0.002584
Single Family Housing	0.535430	0.053975	0.175864	0.140525	0.022799	0.006183	0.014960	0.022785	0.000688	0.000282	0.022547	0.001379	0.002584

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	446.3574	446.3574	0.0722	8.7500e-003	450.7711
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	446.3574	446.3574	0.0722	8.7500e-003	450.7711
NaturalGas Mitigated	0.0784	0.6701	0.2852	4.2800e-003		0.0542	0.0542		0.0542	0.0542	0.0000	776.0548	776.0548	0.0149	0.0142	780.6665
NaturalGas Unmitigated	0.0784	0.6701	0.2852	4.2800e-003		0.0542	0.0542		0.0542	0.0542	0.0000	776.0548	776.0548	0.0149	0.0142	780.6665

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.45427e +007	0.0784	0.6701	0.2852	4.2800e-003		0.0542	0.0542		0.0542	0.0542	0.0000	776.0548	776.0548	0.0149	0.0142	780.6665
Total		**0.0784**	**0.6701**	**0.2852**	**4.2800e-003**		**0.0542**	**0.0542**		**0.0542**	**0.0542**	**0.0000**	**776.0548**	**776.0548**	**0.0149**	**0.0142**	**780.6665**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.45427e +007	0.0784	0.6701	0.2852	4.2800e-003		0.0542	0.0542		0.0542	0.0542	0.0000	776.0548	776.0548	0.0149	0.0142	780.6665
Total		**0.0784**	**0.6701**	**0.2852**	**4.2800e-003**		**0.0542**	**0.0542**		**0.0542**	**0.0542**	**0.0000**	**776.0548**	**776.0548**	**0.0149**	**0.0142**	**780.6665**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	4.82425e +006	446.3574	0.0722	8.7500e-003	450.7711
Total		**446.3574**	**0.0722**	**8.7500e-003**	**450.7711**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	4.82425e +006	446.3574	0.0722	8.7500e-003	450.7711
Total		**446.3574**	**0.0722**	**8.7500e-003**	**450.7711**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.4117	0.0517	4.4880	2.4000e-004		0.0249	0.0249		0.0249	0.0249	0.0000	7.3380	7.3380	7.0300e-003	0.0000	7.5137
Unmitigated	5.4117	0.0517	4.4880	2.4000e-004		0.0249	0.0249		0.0249	0.0249	0.0000	7.3380	7.3380	7.0300e-003	0.0000	7.5137

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.2549					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1348	0.0517	4.4880	2.4000e-004		0.0249	0.0249		0.0249	0.0249	0.0000	7.3380	7.3380	7.0300e-003	0.0000	7.5137
Total	**5.4117**	**0.0517**	**4.4880**	**2.4000e-004**		**0.0249**	**0.0249**		**0.0249**	**0.0249**	**0.0000**	**7.3380**	**7.3380**	**7.0300e-003**	**0.0000**	**7.5137**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.2549					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1348	0.0517	4.4880	2.4000e-004		0.0249	0.0249		0.0249	0.0249	0.0000	7.3380	7.3380	7.0300e-003	0.0000	7.5137
Total	**5.4117**	**0.0517**	**4.4880**	**2.4000e-004**		**0.0249**	**0.0249**		**0.0249**	**0.0249**	**0.0000**	**7.3380**	**7.3380**	**7.0300e-003**	**0.0000**	**7.5137**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	41.9544	1.2892	0.0309	83.3946
Unmitigated	41.9544	1.2892	0.0309	83.3946

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.1472	1.6668	2.7000e-004	3.0000e-005	1.6833
Single Family Housing	39.4182 / 24.8506	40.2876	1.2889	0.0309	81.7112
Total		**41.9544**	**1.2892**	**0.0309**	**83.3946**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.1472	1.6668	2.7000e-004	3.0000e-005	1.6833
Single Family Housing	39.4182 / 24.8506	40.2876	1.2889	0.0309	81.7112
Total		**41.9544**	**1.2892**	**0.0309**	**83.3946**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	126.4979	7.4758	0.0000	313.3931
Unmitigated	126.4979	7.4758	0.0000	313.3931

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.37	0.0751	4.4400e-003	0.0000	0.1861
Single Family Housing	622.8	126.4228	7.4714	0.0000	313.2071
Total		**126.4979**	**7.4758**	**0.0000**	**313.3931**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.37	0.0751	4.4400e-003	0.0000	0.1861
Single Family Housing	622.8	126.4228	7.4714	0.0000	313.2071
Total		**126.4979**	**7.4758**	**0.0000**	**313.3931**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX C.2

Energy Consumption Estimates

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Fresno
Calendar Year: 2023, 2028
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	Trips	Fuel Consumption	**MPG**		
Fresno	2023	All Other Buses	Aggregate	Aggregate	Diesel	97.33107228	5335.205795	866.2465	0.61263544	**8.708614**		
Fresno	2023	LDA	Aggregate	Aggregate	Gasoline	314421.2385	12057531.62	1459129	415.8844778	**28.9925**		
Fresno	2023	LDA	Aggregate	Aggregate	Diesel	761.2682117	22675.00114	3207.267	0.51632231	**43.91637**		
Fresno	2023	LDT1	Aggregate	Aggregate	Gasoline	31473.612	1013826.307	135564.6	42.23037315	**24.00704**		
Fresno	2023	LDT1	Aggregate	Aggregate	Diesel	21.08494293	249.9674255	61.92644	0.009862018	**25.34648**		
Fresno	2023	LDT2	Aggregate	Aggregate	Gasoline	141913.3288	5488158.651	657945.6	236.0127343	**23.25365**		
Fresno	2023	LDT2	Aggregate	Aggregate	Diesel	349.573366	14594.70501	1660.845	0.436268757	**33.45347**		
Fresno	2023	LHD1	Aggregate	Aggregate	Gasoline	12566.31522	445086.6745	187219.4	47.83578625	**9.304471**		
Fresno	2023	LHD1	Aggregate	Aggregate	Diesel	11243.70377	407164.2471	141431.6	25.85688336	**15.74684**		
Fresno	2023	LHD2	Aggregate	Aggregate	Gasoline	2111.361872	72373.23862	31456.15	8.811076943	**8.213892**		
Fresno	2023	LHD2	Aggregate	Aggregate	Diesel	4095.907509	150992.8589	51521.36	11.5781819	**13.04115**		
Fresno	2023	MCY	Aggregate	Aggregate	Gasoline	15903.01283	86993.68262	31806.03	2.125895075	**40.92097**		
Fresno	2023	MDV	Aggregate	Aggregate	Gasoline	132252.2782	4629685.697	598810.4	245.507228	**18.85764**		
Fresno	2023	MDV	Aggregate	Aggregate	Diesel	1848.345695	71606.39703	8639.655	2.893296095	**24.74907**		
Fresno	2023	MH	Aggregate	Aggregate	Gasoline	1560.882105	13702.70094	156.1506	3.107379328	**4.409729**		
Fresno	2023	MH	Aggregate	Aggregate	Diesel	717.895033	6406.390801	71.7895	0.681090941	**9.406073**		
Fresno	2023	Motor Coach	Aggregate	Aggregate	Diesel	51.24387417	7300.970769	1177.584	1.333292201	**5.475897**		
Fresno	2023	OBUS	Aggregate	Aggregate	Gasoline	317.3490099	15754.24911	6349.519	3.354301579	**4.69673**		
Fresno	2023	PTO	Aggregate	Aggregate	Diesel	0	18373.23084	0	3.711730192	**4.950045**		
Fresno	2023	SBUS	Aggregate	Aggregate	Gasoline	315.5557087	18801.19459	1262.223	1.88547565	**9.971592**		
Fresno	2023	SBUS	Aggregate	Aggregate	Diesel	853.7116821	19428.11927	12361.75	2.344131524	**8.287982**		
Fresno	2023	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	14.64154254	980.5727418	336.4626	0.110853107	**8.845695**		
Fresno	2023	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	19.65233596	1345.31243	451.6107	0.151882308	**8.857598**		
Fresno	2023	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	61.92361662	3513.129711	1423.005	0.391104872	**8.982577**		
Fresno	2023	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	106.9316362	22050.69671	2457.289	2.304610344	**9.56808**	**MHD**	
Fresno	2023	T6 Instate Delivery C	Aggregate	Aggregate	Diesel	283.5936317	9633.687539	4046.881	1.180246507	**8.162437**		**8.430064**
Fresno	2023	T6 Instate Delivery C	Aggregate	Aggregate	Diesel	353.8382876	12231.97651	5049.272	1.494588319	**8.184178**		
Fresno	2023	T6 Instate Delivery C	Aggregate	Aggregate	Diesel	816.5437216	28056.85712	11652.08	3.411094367	**8.225178**		
Fresno	2023	T6 Instate Delivery C	Aggregate	Aggregate	Diesel	317.6965342	17510.15231	4533.53	2.078088976	**8.426084**		
Fresno	2023	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	566.3549635	23426.1468	6547.063	2.763330113	**8.477506**		
Fresno	2023	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	1380.421359	60867.1524	15957.67	7.134617193	**8.531243**		
Fresno	2023	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	1259.790831	53453.52516	14563.18	6.273596318	**8.520396**		
Fresno	2023	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	734.8135043	33590.65362	8494.444	3.861249416	**8.699426**		
Fresno	2023	T6 Instate Tractor Cl	Aggregate	Aggregate	Diesel	11.5832701	595.6273678	133.9026	0.066865686	**8.907818**		
Fresno	2023	T6 Instate Tractor Cl	Aggregate	Aggregate	Diesel	856.3748289	55160.30949	9899.693	6.040424429	**9.13186**		
Fresno	2023	T6 OOS Class 4	Aggregate	Aggregate	Diesel	8.560936264	568.3198405	196.7303	0.064203034	**8.851916**		
Fresno	2023	T6 OOS Class 5	Aggregate	Aggregate	Diesel	11.4419835	779.6326236	262.9368	0.087988975	**8.860572**		
Fresno	2023	T6 OOS Class 6	Aggregate	Aggregate	Diesel	36.17013681	2037.202351	831.1897	0.226579225	**8.991126**		
Fresno	2023	T6 OOS Class 7	Aggregate	Aggregate	Diesel	58.80932952	14812.99433	1351.438	1.539884458	**9.619549**		
Fresno	2023	T6 Public Class 4	Aggregate	Aggregate	Diesel	81.46433659	2701.636292	417.912	0.360826569	**7.487354**		
Fresno	2023	T6 Public Class 5	Aggregate	Aggregate	Diesel	106.3705417	3906.384942	545.6809	0.509150321	**7.672361**		
Fresno	2023	T6 Public Class 6	Aggregate	Aggregate	Diesel	135.3013448	4819.518666	694.0959	0.630073562	**7.649136**		
Fresno	2023	T6 Public Class 7	Aggregate	Aggregate	Diesel	286.3791818	13115.78538	1469.125	1.690148341	**7.760139**		
Fresno	2023	T6 Utility Class 5	Aggregate	Aggregate	Diesel	59.03280957	2404.92046	755.62	0.272768646	**8.816704**		
Fresno	2023	T6 Utility Class 6	Aggregate	Aggregate	Diesel	11.20991237	453.5625365	143.4869	0.051290416	**8.843027**		
Fresno	2023	T6 Utility Class 7	Aggregate	Aggregate	Diesel	12.77616871	631.662356	163.535	0.071094198	**8.884865**		
Fresno	2023	T6TS	Aggregate	Aggregate	Gasoline	973.6402881	53538.05258	19480.59	11.5372138	**4.640466**		
Fresno	2023	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	2664.649423	545019.4108	61233.64	90.26159125	**6.038221**	**HHD**	
Fresno	2023	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	2384.500818	645106.1794	54795.83	105.8750878	**6.093088**		**5.438606**
Fresno	2023	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	998.4606912	234355.616	22944.63	38.88906243	**6.02626**		
Fresno	2023	T7 Other Port Class	Aggregate	Aggregate	Diesel	51.28286363	9623.571941	838.9876	1.623451517	**5.927847**		
Fresno	2023	T7 POAK Class 8	Aggregate	Aggregate	Diesel	234.4726465	23583.04652	3835.972	4.04978574	**5.823283**		
Fresno	2023	T7 POLA Class 8	Aggregate	Aggregate	Diesel	262.1153394	34463.02381	4288.207	5.924154763	**5.817374**		
Fresno	2023	T7 Public Class 8	Aggregate	Aggregate	Diesel	543.7539696	23936.26546	2789.458	4.615663682	**5.185877**		
Fresno	2023	T7 Single Concrete/T	Aggregate	Aggregate	Diesel	229.2544311	16238.21099	2159.577	2.784270161	**5.832125**		
Fresno	2023	T7 Single Dump Clas	Aggregate	Aggregate	Diesel	269.1420224	16940.97021	2535.318	2.941088809	**5.760102**		
Fresno	2023	T7 Single Other Clas	Aggregate	Aggregate	Diesel	1044.798193	56520.05316	9841.999	9.631121806	**5.868481**		
Fresno	2023	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	357.3819412	23165.99604	1643.957	9.209921269	**2.515331**		
Fresno	2023	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	4807.650867	381211.6007	69855.17	62.8041076	**6.069851**		
Fresno	2023	T7 Utility Class 8	Aggregate	Aggregate	Diesel	41.06227272	1904.108718	525.5971	0.328966636	**5.788151**		
Fresno	2023	T7IS	Aggregate	Aggregate	Gasoline	2.180899548	85.06306056	43.63544	0.025059111	**3.394496**		
Fresno	2023	UBUS	Aggregate	Aggregate	Gasoline	89.29970289	4172.538609	357.1988	0.869264013	**4.800082**		
Fresno	2023	UBUS	Aggregate	Aggregate	Diesel	14.69276886	1488.803087	58.77108	0.160275168	**9.289044**		
Fresno	2028	All Other Buses	Aggregate	Aggregate	Diesel	105.1875984	5398.286356	936.1696	0.592513398	**9.110826**		
Fresno	2028	LDA	Aggregate	Aggregate	Gasoline	320548.7601	12220901.2	1485943	380.8185189	**32.09114**		
Fresno	2028	LDA	Aggregate	Aggregate	Diesel	500.4175236	14974.67859	2144.265	0.316474977	**47.3171**		
Fresno	2028	LDT1	Aggregate	Aggregate	Gasoline	27915.10475	914249.2484	120882.4	34.66553313	**26.37344**		
Fresno	2028	LDT1	Aggregate	Aggregate	Diesel	4.483478545	51.16920242	12.59641	0.001878334	**27.2418**		
Fresno	2028	LDT2	Aggregate	Aggregate	Gasoline	159671.2599	6150317.943	739979.4	234.6904294	**26.20609**		
Fresno	2028	LDT2	Aggregate	Aggregate	Diesel	478.7176694	19762.97324	2281.418	0.530981847	**37.21968**		
Fresno	2028	LHD1	Aggregate	Aggregate	Gasoline	11625.08082	418678.6827	173196.4	41.45012046	**10.10078**		
Fresno	2028	LHD1	Aggregate	Aggregate	Diesel	10064.12519	345467.0229	126594	21.64664788	**15.95938**		
Fresno	2028	LHD2	Aggregate	Aggregate	Gasoline	1811.901754	60201.82363	26994.64	6.899849673	**8.725092**		
Fresno	2028	LHD2	Aggregate	Aggregate	Diesel	3947.742649	137455.4894	49657.64	10.24180528	**13.42102**		
Fresno	2028	MCY	Aggregate	Aggregate	Gasoline	15663.49423	83793.53673	31326.99	1.996214088	**41.97623**		
Fresno	2028	MDV	Aggregate	Aggregate	Gasoline	124972.0171	4313098.809	562920.1	205.5747583	**20.98068**		
Fresno	2028	MDV	Aggregate	Aggregate	Diesel	1790.441128	62779.71101	8154.294	2.37624131	**26.41975**		
Fresno	2028	MH	Aggregate	Aggregate	Gasoline	1234.830218	11336.01044	123.5324	2.568058364	**4.414234**		
Fresno	2028	MH	Aggregate	Aggregate	Diesel	697.6156483	6071.042783	69.76156	0.64689844	**9.384847**		
Fresno	2028	Motor Coach	Aggregate	Aggregate	Diesel	61.5360995	7489.740568	1414.1	1.306910719	**5.730874**		
Fresno	2028	OBUS	Aggregate	Aggregate	Gasoline	251.9632826	11190.87896	5041.281	2.278288018	**4.911968**		
Fresno	2028	PTO	Aggregate	Aggregate	Diesel	0	18639.30717	0	3.538361503	**5.267779**		
Fresno	2028	SBUS	Aggregate	Aggregate	Gasoline	312.4242662	18511.87382	1249.697	1.838608085	**10.06842**		
Fresno	2028	SBUS	Aggregate	Aggregate	Diesel	840.966317	18525.00981	12177.19	2.199748597	**8.421421**	**MHD**	
Fresno	2028	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	15.2987112	1014.993949	351.5644	0.11041033	**9.192926**		**8.939233**
Fresno	2028	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	19.8996726	1398.861684	457.2945	0.152529788	**9.171072**		
Fresno	2028	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	72.9166192	3592.623891	1675.624	0.385787143	**9.312451**		
Fresno	2028	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	117.0523414	23346.60817	2689.863	2.284012115	**10.22175**		
Fresno	2028	T6 Instate Delivery C	Aggregate	Aggregate	Diesel	305.352458	10158.99439	4357.38	1.205989382	**8.423784**		
Fresno	2028	T6 Instate Delivery C	Aggregate	Aggregate	Diesel	387.9577806	12926.94018	5536.158	1.536605846	**8.412658**		
Fresno	2028	T6 Instate Delivery C	Aggregate	Aggregate	Diesel	887.9877091	29622.86096	12671.58	3.502046712	**8.458728**		
Fresno	2028	T6 Instate Delivery C	Aggregate	Aggregate	Diesel	367.9564166	18994.12484	5250.738	2.230601078	**8.51525**		
Fresno	2028	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	603.6852248	24608.20811	6978.601	2.822715356	**8.717921**		
Fresno	2028	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	1544.780993	64171.58774	17857.67	7.34550179	**8.736175**		
Fresno	2028	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	1365.162597	56272.59266	15781.28	6.430353408	**8.751089**		
Fresno	2028	T6 Instate Other Cla	Aggregate	Aggregate	Diesel	899.4344363	35715.34267	10397.46	4.044223639	**8.831199**		
Fresno	2028	T6 Instate Tractor Cl	Aggregate	Aggregate	Diesel	13.05712268	622.6495183	150.9403	0.068807888	**9.049101**		
Fresno	2028	T6 Instate Tractor Cl	Aggregate	Aggregate	Diesel	1051.776222	59488.98976	12158.53	6.305699156	**9.434162**		
Fresno	2028	T6 OOS Class 4	Aggregate	Aggregate	Diesel	9.458373797	628.5797632	217.3534	0.065977414	**9.527196**		
Fresno	2028	T6 OOS Class 5	Aggregate	Aggregate	Diesel	12.20993061	862.2984014	280.5842	0.090933159	**9.482772**		
Fresno	2028	T6 OOS Class 6	Aggregate	Aggregate	Diesel	45.56292993	2253.210394	1047.036	0.231961497	**9.713726**		
Fresno	2028	T6 OOS Class 7	Aggregate	Aggregate	Diesel	64.0245686	16383.64141	1471.285	1.572582255	**10.4183**		
Fresno	2028	T6 Public Class 4	Aggregate	Aggregate	Diesel	73.83621035	2604.590675	378.7798	0.331160629	**7.865037**		
Fresno	2028	T6 Public Class 5	Aggregate	Aggregate	Diesel	107.2578665	3841.759423	550.2329	0.485160295	**7.918536**		
Fresno	2028	T6 Public Class 6	Aggregate	Aggregate	Diesel	129.5004475	4719.867611	664.3373	0.594991073	**7.93267**		
Fresno	2028	T6 Public Class 7	Aggregate	Aggregate	Diesel	277.5106808	12745.60157	1423.63	1.562555852	**8.156893**		
Fresno	2028	T6 Utility Class 5	Aggregate	Aggregate	Diesel	57.74119217	2319.715338	739.0873	0.256683823	**9.037248**		
Fresno	2028	T6 Utility Class 6	Aggregate	Aggregate	Diesel	10.92136387	437.7703055	139.7935	0.048313757	**9.060987**		
Fresno	2028	T6 Utility Class 7	Aggregate	Aggregate	Diesel	12.16308656	603.9413566	155.6875	0.066082655	**9.139181**		
Fresno	2028	T6TS	Aggregate	Aggregate	Gasoline	835.1222172	47160.45506	16709.13	9.619661371	**4.902507**		
Fresno	2028	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	2833.965231	572811.9669	65124.52	87.9720637	**6.511294**	**HHD**	
Fresno	2028	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	2601.661223	710444.5489	59786.17	103.3970853	**6.871031**		**5.773599**
Fresno	2028	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	1121.113254	258091.885	25763.18	38.88778417	**6.636837**		
Fresno	2028	T7 Other Port Class	Aggregate	Aggregate	Diesel	53.83539691	11214.34533	880.7471	1.805767948	**6.210291**		
Fresno	2028	T7 POAK Class 8	Aggregate	Aggregate	Diesel	240.1799956	25147.52208	3929.345	4.169193164	**6.031748**		
Fresno	2028	T7 POLA Class 8	Aggregate	Aggregate	Diesel	305.8434617	41579.86667	5003.599	7.091106689	**5.863664**		
Fresno	2028	T7 Public Class 8	Aggregate	Aggregate	Diesel	543.7568181	23562.07322	2789.472	4.349186316	**5.417582**		
Fresno	2028	T7 Single Concrete/T	Aggregate	Aggregate	Diesel	228.1202482	15372.02393	2148.893	2.501215469	**6.145822**		
Fresno	2028	T7 Single Dump Clas	Aggregate	Aggregate	Diesel	301.6580859	16587.26908	2841.619	2.820898533	**5.880137**		
Fresno	2028	T7 Single Other Clas	Aggregate	Aggregate	Diesel	1324.464247	58915.39889	12476.45	9.788937483	**6.018569**		
Fresno	2028	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	311.4154408	20195.60708	1432.511	7.638832099	**2.643808**		
Fresno	2028	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	6119.184964	410127.93	88911.76	65.00224816	**6.309442**		
Fresno	2028	T7 Utility Class 8	Aggregate	Aggregate	Diesel	44.40630191	1904.155441	568.4007	0.32098132	**5.932294**		
Fresno	2028	T7IS	Aggregate	Aggregate	Gasoline	0.505891803	86.61401002	10.12188	0.019875317	**4.357868**		
Fresno	2028	UBUS	Aggregate	Aggregate	Gasoline	92.49170241	4337.315772	369.9668	0.899825012	**4.820177**		
Fresno	2028	UBUS	Aggregate	Aggregate	Diesel	21.43397539	2302.714757	85.7359	0.2531729	**9.095424**		

On-road Mobile (Operational) Energy Usage

Unmitigated:

Step 1:

Therefore:

Average Daily VMT:

29,268 Source: CalEEMod Output File (10,682,990.9 annual VMT divided by 365 days/year)

Step 2:

Given:

Fleet Mix (CalEEMod Output)

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
53.5430%	5.3975%	17.5864%	14.0525%	2.2799%	0.6183%	1.4960%	2.2785%	0.0688%	0.0282%	2.2547%	0.1379%	0.2584%

And:

Gasoline MPG Factors for each Vehicle Class - Year 2028 (EMFAC2021 Output)

LDA	LDT1	LDT2	MDV	MCY	MH	OBUS
32.0911421	26.37344	26.20609	20.98068287	41.97622752	4.414233958	4.911968

Diesel MPG Factors for each Vehicle Class - Year 2028 (EMFAC2021 Output)

LHD1	LHD2	MHD	HHD	UBUS	SBUS
15.9593774	13.42102	8.939233	5.773599046	9.095423562	8.421421355

Therefore:

Weighted Average MPG Factors

Gasoline: **29.1** Diesel: **10.6**

Step 3:

Therefore:

935 daily gallons of gasoline **190 daily gallons of diesel**

or

341,321 annual gallons of gasoline **69,484 annual gallons of diesel**

Off-road Mobile (Construction) Energy Usage

Note: For the sake of simplicity, and as a conservative estimation, it was assumed that all off-road vehicles use diesel fuel as an energy source.
Demolition (if applicable), Site preparation and grading off-road mobile vehicle on-site gallons of fuel are calculated below.

Given Factor:	**192.4**	**metric tons**	**CO2**	**(provided in CalEEMod Output File)**
Conversion Factor:	2204.6262	pounds	per metric ton	
Intermediate Result:	**424,206**	**pounds**	**CO2**	
Conversion Factor:	22.38	pounds	CO2 per 1 gallon of diesel fuel	Source: U.S. EIA, 2016
Final Result:	**18,955**	**gallons**	**diesel fuel**	http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11

Mitigated Onsite Scenario	Total CO2 (MT/yr) (provided in CalEEMod Output File)
Site Preparation - 2023	101.1635
Grading - 2023	192.42

On-road Mobile (Construction) Energy Usage - Site Preparation

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

18

Worker Trip Length (miles) (CalEEMod Output)

10.8

Therefore:

Average Worker Daily VMT:

194

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LDA	LDT1	LDT2
28.992502	24.00704	23.25365

Therefore:

Weighted Average Worker MPG Factor

26.3

Step 3: **Therefore:**

7.4 Worker daily gallons of gasoline

Step 4: 60 **# of Days (CalEEMod Output)**

Therefore:

Result: **443** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Grading

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

20

Worker Trip Length (miles) (CalEEMod Output)

10.8

Therefore:

Average Worker Daily VMT:

216

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LDA	LDT1	LDT2
28.992502	24.007041	23.253655

Therefore:

Weighted Average Worker MPG Factor

26.3

Step 3: **Therefore:**

8.2 **Worker daily gallons of gasoline**

Step 4: 155 **# of Days (CalEEMod Output)**

Therefore:

Result: **1,272** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Building Construction

Step 1:

Total Daily Worker Trips (CalEEMod Output)

297	5%	**15**

Total Daily Vendor Trips (CalEEMod Output)

96	5%	**5**

Note: Assumes 5% of Plan Area under construction at given point in time (on average) until buildout.

Worker Trip Length (miles) (CalEEMod Output)

10.8

Vendor Trip Length (miles) (CalEEMod Output)

7.3

Therefore:

Average Worker Daily VMT:

160

Average Vendor Daily VMT:

35

Step 2:

Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	**LDT1**	**LDT2**
0.5	0.25	0.25

Assumed Fleet Mix for Vendors

Fleet Mix for Workers (CalEEMod Output)

MHD	**HHD**
0%	100%

And:

MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

Gasoline:

LDA	**LDT1**	**LDT2**
28.9925022	24.00704	23.25365

Diesel:

MHD	**HHD**
8.430063824	5.438606

Therefore:

Weighted Average Worker (Gasoline) MPG Factor

26.3

Weighted Average Vendor (Diesel) MPG Factor

5.4

Step 3:

Therefore:

6 Worker daily gallons of gasoline

Therefore:

6 Vendor daily gallons of diesel

Step 4:

960 **# of Days (CalEEMod Output)**

Therefore:

5,852 Total gallons of gasoline

Therefore:

6,185 Total gallons of diesel

On-road Mobile (Construction) Energy Usage - Paving

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

15

Worker Trip Length (miles) (CalEEMod Output)

10.8

Therefore:

Average Worker Daily VMT:

162

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	**LDT1**	**LDT2**
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LDA	**LDT1**	**LDT2**
28.992502	24.007041	23.253655

Therefore:

Weighted Average Worker MPG Factor

26.3

Step 3: **Therefore:**

6.2 Worker daily gallons of gasoline

Step 4: 110 **# of Days (CalEEMod Output)**

Therefore:

Result: **677** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Architectural Coating

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

59	5%	3

Note: Assumes 5% of Plan Area under construction at given point in time (on average) until buildout.

Worker Trip Length (miles) (CalEEMod Output)

10.8

Therefore:

Average Worker Daily VMT:

32

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	**LDT1**	**LDT2**
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LDA	**LDT1**	**LDT2**
28.992502	24.007041	23.253655

Therefore:

Weighted Average Worker MPG Factor

26.3

Step 3: **Therefore:**

1.2 Worker daily gallons of gasoline

Step 4: 110 **# of Days (CalEEMod Output)**

Therefore:

Result: **133** **Total gallons of gasoline**

APPENDIX C.3

GHG Calculation Methodology

Greenhouse Gas Efficiency Metric Calculation Methodology – Shepherd North Project

The methodology used for assessing the proposed project's consistency with GHG targets established in AB 32 is the use of GHG efficiency metrics to assess the GHG efficiency of the project on a "service population (SP)" basis (the sum of the number of jobs and the number of residents provided by a project). These metrics represent the rate of emissions needed to achieve a fair share of the state's emissions mandate embodied in AB 32. The use of "fair share" in this instance indicates the GHG efficiency level that, if applied statewide, would meet the AB 32 emissions target and support efforts to reduce emissions beyond 2020.

GHG efficiency metrics for the project were developed based on emissions rates for the land use-driven emission sectors in the CARB's GHG inventory. The GHG efficiency metric is only based on sectors that would accommodate projected growth (as indicated by population and employment growth) while allowing for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020). The per service population efficiency target is based on the AB 32 GHG reduction target and GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

To develop the efficiency metric for 2020, land-use driven sectors in the CARB's 1990 GHG inventory were identified and separated to tailor the inventory to land use projects. This process removes emission sources that would not be applicable to the project area. For example, emissions associated with ships and commercial boats, aviation, rail, industrial sources, agriculture and forestry, and unspecified sectors were removed from the CARB's 1990 inventory in order to exclude non-land use sectors. The exceptions for the industrial sector are the landfill and domestic wastewater sub-sectors which were included in development of the GHG efficiency metric because emissions from these sectors are included in the project's emissions profile. Isolating the land use-driven sectors from the CARB's overall inventory ensures that the threshold is directly applicable to land use projects, whereby emission sectors included in the inventory used for developing the GHG efficiency metric can be mapped to a project's emissions data. For example, emissions associated with on-road transportation, electricity, natural gas, wastewater treatment, and solid waste are included in both the inventory used to develop the GHG efficiency metric and the project's operational emissions. The CARB's complete 1990 inventory and the adjusted land use-driven emissions inventory are shown on the following pages.

The land-use sector driven inventory for 1990 was divided by the population and employment projections for California in 2020. Detailed calculations showing derivation of the efficiency metrics are shown on the following pages. The efficiency metric allows the threshold to be applied evenly to all project types (residential, commercial/retail and mixed use) and uses an emissions inventory comprised only of sources from land-use related sectors. The efficiency approach allows lead agencies to assess whether any given project or plan would accommodate population and employment growth in a way that is consistent with the emissions limit established under AB 32. The resultant GHG efficiency metric would be (approximately) 4.84 MT CO_2e/SP/year for 2020 (as provided below).

The proposed project is anticipated to be built out in year 2028. The CARB has indicated that an average statewide GHG reduction of 5.2 percent per year would be necessary to achieve the 2030 target[1,2]. Therefore, a GHG efficiency goal in terms of metric tons per service population, similar to the one developed for 2020, were estimated for year 2030, allow evaluation of the project's GHG emissions in the post-2020 landscape. The equivalent goal for 2030 computes to approximately 2.62 MT CO_2e/ SP/year. This targets was estimated by applying a uniform reduction from the CARB's 1990 emissions inventory and dividing the resultant value by the projected population and employment in these future years.

These GHG efficiency metric were derived based on the reduction trajectory the state needs to maintain to achieve its 2030 and 2050 goals (an approximately 5.2 percent reduction per year) (CARB, 2016b). All calculations are based on the IPCC Second Assessment Report's Global Warming Potentials to allow consistent comparison between the ARB 1990 inventory and the California Emissions Estimator Model (CalEEMod; used to estimate project emissions).

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[1] California Air Resources Board. 2016. California Climate Strategy. January 29, 2016. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN210091_20160129T154626_California_Climate_Strategy_CARB_for_RETI_20_Plenary_Meeting_on.pdf

[2] California Air Resources Board. 2015. 2030 Target Scoping Plan Workshop Slides. (October 1, 2015). Available at: http://www.arb.ca.gov/cc/scopingplan/meetings/10_1_15slides/2015slides.pdf

California Greenhouse Gas Inventory for 1990 – by Sector and Activity (Land Use-driven sectors only)
Million metric tons of CO_2-equiavlent (CO_2e) – (based on IPCC Second Assessment Report's Global Warming Potentials) (CARB, 2007).

Year 1990

Transportation	
On Road	
Passenger Cars	63.77
Light Duty Trucks	44.75
Motorcycles	0.43
Heavy Duty Trucks	29.03
Freight	0.02
Electricity Generation In-State	
CHP: Commercial	***0.70***
Merchant Owned	***2.33***
Transmission and Distribution	***1.56***
Utility Owned	***29.92***
Electricity Generation In-State	
Specified Imports	***29.61***
Transmission and Distribution	***1.02***
Unspecified Imports	***30.96***
Commercial	
CHP: Commercial	***0.40***
Communication	***0.07***
Domestic Utilities	***0.34***
Education	***1.42***
Food Services	***1.89***
Healthcare	***1.32***
Hotels	***0.67***
Not Specified Commercial	***5.58***
Offices	***1.46***
Retail & Wholesale	***0.68***
Transportation Services	***0.03***
Residential	
Household Use	***29.66***
Industrial	
Landfills	***6.26***
Wastewater Treatment	
Domestic Wastewater	2.83
Total Emissions	**286.70**

Future Year Service Population Thresholds

	2020	2025	2030	2040	2050
Population	40,719,999	42,369,923	44,019,846	46,884,801	49,158,401
Employment	18,511,200	19,261,251	20,011,301*	21,313,702*	22,347,274*
Service Population	59,231,199	61,631,173	64,031,147	68,198,503	71,505,675
Emissions (Million Metric Tons)	286.70	219.25	167.67	98.06	57.35
MT/SP	**4.84**	**3.56**	**2.62**	**1.44**	**0.80**

Notes:

SP = service population.

*Assumes proportion of employed persons to the overall population remains equal to that as was applicable in 2020.

Post-2020 Emissions are based on an annual 5.2% reduction from 2020 (CARB, 2016).

Sources:

California Air Resources Board (CARB). 2007. Staff Report: California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit. Public Release Date: November 16, 2007. Available: https://www.arb.ca.gov/cc/inventory/1990level/1990level.htm

California Air Resources Board (CARB). 2015. 2030 Target Scoping Plan Workshop Slides. (October 1, 2015). Available: http://www.arb.ca.gov/cc/scopingplan/meetings/10_1_15slides/2015slides.pdf

California Air Resources Board (CARB). 2016. California Climate Strategy. January 29, 2016. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN210091_20160129T154626_California_Climate_Strategy_CARB_for_RETI_20_Plenary_Meeting_on.pdf

California Department of Finance, Demographics Research Unit (Total Estimated and Projected Population for California and Counties: July 1, 2010 to July 1, 2060 in 5-year Increments. Published February, 2017.

California Department of Finance Employment Development Department. Industry Employment Projections Labor Market Information Division 2010-2020. Published 5/23/2012.

Appendix D

Biological

BIOLOGICAL HABITAT ASSESSMENT

OF THE

TRACT 6205, SPENSLEY PROPERTY

N. SUNNYSIDE AT SHEPHERD AVENUE

CLOVIS, FRESNO COUNTY, CALIFORNIA

BIOLOGICAL HABITAT ASSESSMENT

OF THE

Tract 6205, Spensley Property

N. Sunnyside and Shepherd Avenue

Clovis, Fresno County, California

Prepared For:

Wilson Premier Homes, LLC.

Prepared By:

ARGONAUT
ECOLOGICAL
CONSULTING, INC.

2377 Gold Meadow Way, Suite 100
Gold River, CA 95670

April 30, 2018

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EXECUTIVE SUMMARY

Argonaut Ecological, Inc. conducted a biological review of Tract 6205 Spensley Property, Clovis, California. Tract 6205 is located at the northeast intersection of E. Shepherd Avenue and N. Sunnyside Avenue. The tract covers roughly 75 acres (See Figure 1). The Study Area has historically been in continuous agricultural production (orchard) for several decades. The findings indicate that the site does not support any wetland or aquatic habitat and the likelihood for the site to support protected species, other than nesting raptors and birds, is low because of the lack of habitat diversity.

1.1 INTRODUCTION

This report presents the findings of a field review and biological assessment conducted to assess the biological resources present and potential biological impacts of site development.

The results include a description of the habitat present and the likelihood for the site to support sensitive biological resources (waters, wetland, and special status species habitat) based on a literature review, database review and a field review. The results indicate that the site has been in continuous intensive agricultural production for many years and the site does not support habitat for any listed or protected species or waters/wetland habitats. One recommendations is included for protection of nesting migratory birds.

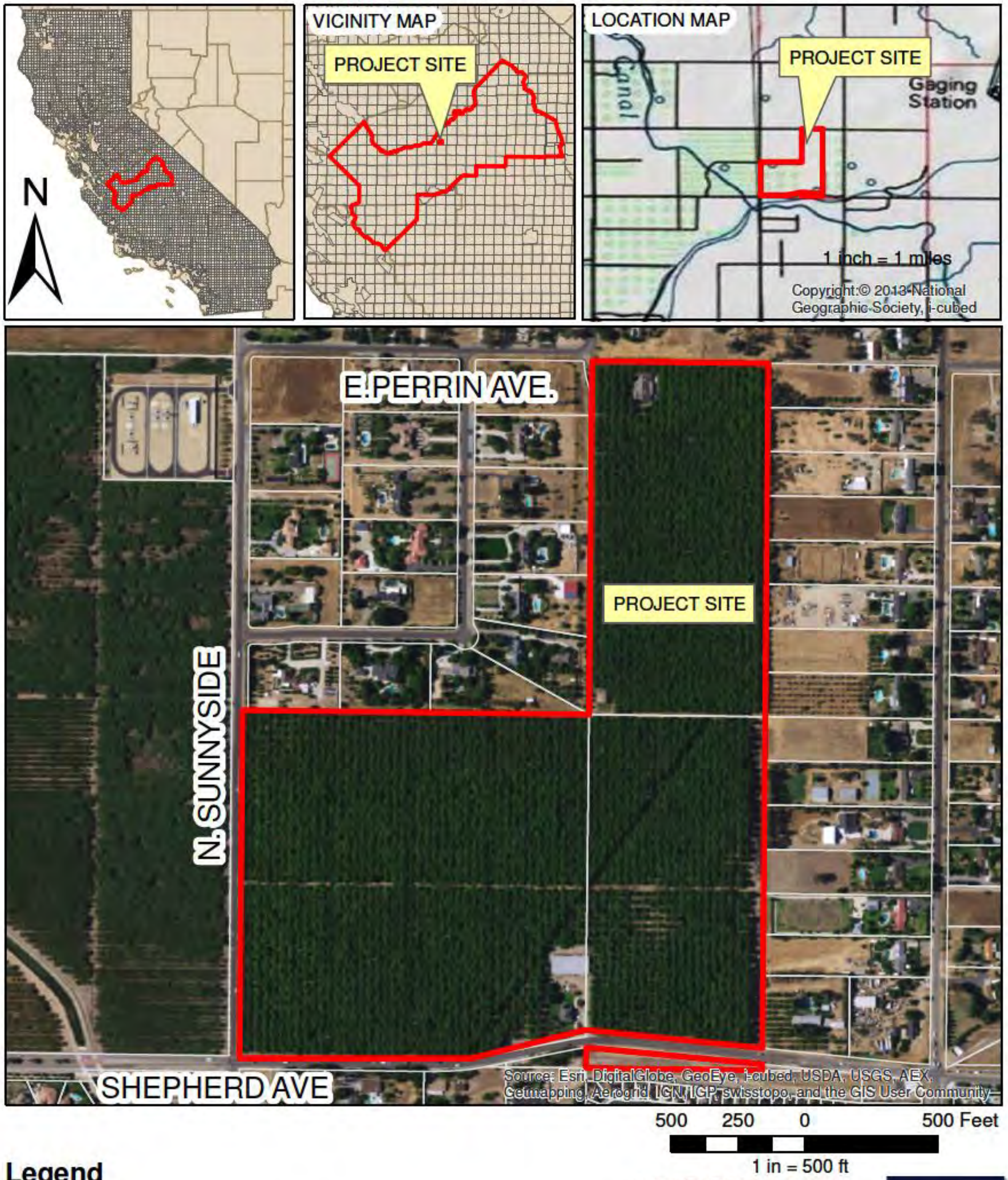
1.2 STUDY OBJECTIVES

This review identifies biological resources within the Study Area and describes the suitability of the Study Area to support species of special concern and other biological resources. This review does not, nor was it designed to include exhaustive surveys for special status plant and animal species. Instead the review included a field survey designed to determine the potential for the site to support habitat that may be used or occupied by special status plant and animals species. The study also is designed to determine the approximate extent of potential wetland habitat on the site. “Wetland habitat” includes those areas that may be considered both “Waters of the U.S., as defined by the U.S. Army Corps of Engineers, and/or wetlands as defined by the Army Corps and the State of California. As described in Section 1.2, wetlands are a subset of “Waters of the U.S.” under the Federal Clean Water Act.

This report can be used to assess the potential effects on biological resources if the current land use changes. The specific type of land use change would dictate the type of regulatory approvals or permits required. This review focused on the extent of the Waters of the U.S., including any wetlands that would potentially be subject to regulation under Section 404 of the Clean Water Act or by the State of California Wetland Policy (Resolution 2008-0026) which is designed to protect all waters of the State, including dredge and fill discharges. This study also focused on assessing and identify any potential impacts site development may have on species protected by the Federal Endangered Species Act or protected under the California Environmental Quality Act.

VICINITY AND LOCATION MAP

CLIENT NAME: Wilson Premier Homes Inc. PROJECT NAME:Spensley Tract No. 6205
PROJECT LOCATION: Section 21, T. 12S., R.21E., Mount Diablo Base and Meridian
City of Clovis, Fresno County California,



Copyright:© 2013 National Geographic Society, i-cubed

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

🟥 Approximate boundary (+/-75 AC)

ARGONAUT
ECOLOGICAL
CONSULTING, INC.

Date: 10/16/2017

1.3 REGULATORY JURISDICTION AND BACKGROUND

Regulatory jurisdiction over biological resources within the Study Area is shared by several agencies. The following is a brief description of the primary agencies and their respective jurisdiction.

Wetland Protection

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (Army Corps) and the U.S. Environmental Protection Agency regulates placement of fill into the Waters of the U.S under Section 404 of the Federal Clean Water Act and Section 10 of the Rivers and Harbor Act. The term “Waters of the U.S.” Include wetlands, special aquatic sites, and other non-wetland waters such as bays, rivers, and lakes. The jurisdictional limit of tidal Waters of the U.S. under Section 10 of the Rivers and Harbor Act is the Mean High Water line. However, Section 404 of the Federal Clean Water Act extends the jurisdictional limit to the High Tide line. The High Tide Line is the highest elevation of the tide in a normal year, excluding storm events. Wetlands adjacent to the Mean High Water line or High Tide Line are also under the USACE jurisdiction. For purposes of this document, the term “Waters of the U.S.” is legally defined under Section 404 of the Federal Clean Water Act. It includes seasonal drainages that have a defined channel and support wetland species, but lack positive indicators of wetland soils.

As previously stated Waters of the U.S. includes wetlands. The Army Corps defines wetland as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Environmental Laboratory 1987). Seasonally inundated areas that meet the criteria of all three wetland parameters as defined in the recently issued Wetland Delineation Manual for the Arid West (USACE 2006) are also considered jurisdictional wetlands. However, drainage ditches excavated on dry land that do not convey flows from historical streams and/or channels are usually considered non-jurisdictional as defined in Title 33 CFR Part 328.3 (a). A determination of whether any particular area is considered non-jurisdictional varies on a case-by-case basis.

Since 2001, the U.S. Supreme Court found in several court rulings that regulation of isolated intrastate waters by the Army Corps under the Migratory Bird Rule and other arguments is unconstitutional and impinges on state rights to regulate intrastate commerce. The decisions, which include both *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) and *Rapanos v. United States* (Rapanos) limited the scope of federal jurisdiction under the Federal Clean Water Act and excluded many California wetlands from federal regulation.

In May 2015 the U.S. Environmental Protection Agency and the U.S. Army finalized the “Clean Water Rule “with the intent of clarifying what constitutes a waters of the U.S., and presumably, acts to more precisely define and making permitting more predictable, thus less costly and easier. The rule was not intended to create any new permitting requirements for agriculture and maintains all previous exemptions and exclusions. The new Clean Water Rule went in effect at the end of August, 2015. On October 9, 2015 the Sixth U.S. Circuit Court of Appeals issued a nationwide stay of the rule pending further court action. Therefore, currently, application of the Clean Water Rule is not enforced and the current regulatory definition of waters of the U.S. remains.

Executive Order 11990

Executive Order 11990 (signed May 24, 1977) directs all federal agencies to refrain from assisting in or giving financial support to projects that encroach on publicly or privately owned wetlands. It further requires that federal agencies support a policy to minimize the destruction, loss, or degradation of wetlands. A project that encroaches on wetlands may not be undertaken unless the agency in question has determined that: (1) there are no practicable alternatives to such construction; (2) the project includes all practicable measures to minimize harm to wetlands that would be affected by the project; and (3) the resulting impact will be minor.

The Executive Order, the Order does not apply to issuance by Federal Agencies of permits, licenses, or allocation to private parties for activities involving wetland on non-Federal property. Executive Order 1190 is also not intended to be applied on a project by project basis. Section 1 of the order states the following: "*This Order does not apply to the issuance by Federal agencies of permits, licenses, or allocations to private parties for activities involving wetlands on non-Federal property.*"

California State Water Resources Control Board

Since 1993, California has had a Wetlands Conservation Policy (a.k.a., the Executive Order W-51 59-93). Commonly referred to as the *No Net Loss Policy* for wetlands, this order establishes for the State the mandate that it develops and adopts a policy framework and strategy to protect the State's wetland ecosystems.

The State Water Board's Policy is only proposed and no new regulatory authority has been granted to the State of California to regulate wetlands other than what currently exists. Bring a uniform regulatory approach between the State Water Resources Control Board, other agencies involved in aquatic resource protection and the federal Clean Water Act Section 404 program for dredge and fill discharges by establishing procedures and criteria for the application, review and approval of permits to discharge dredged or fill material to waters of the State.

Under the State's 401 Water Quality Certification and Wetland Program, the state provides certification for any proposed fill of waters of the U.S.. Although the State has not historically regulated fills of wetlands/waters of the state, they have boldly asseredt they have the regulatory authority to regulate fills of isolated wetlands/waters under the Porter-Cologne Water Quality Control Act.

Under California's Porter-Cologne Water Quality Control Act (Porter-Cologne), the regional boards regulate the "discharge of waste" to "waters of the state". All parties proposing to discharge waste that could affect waters of the state must file a report of waste discharge with the appropriate regional board. The regional board will then respond to the report of waste discharge by issuing waste discharge requirements (WDRs) in a public hearing, or by waiving WDRs (with conditions) for that proposed discharge.

Both of the terms "discharge of waste" and "waters of the state" are broadly defined in Porter-Cologne, such that discharges of waste include fill, any material resulting from human activity, or any other "discharge" that may directly or indirectly impact "waters of the state". While all "waters of the United States" that are within the borders of California are also "waters of the state", the converse is not true - "waters of the United States" is a subset of "waters of the state." While all "waters of the United States" that are within the borders of California are also "waters of the state", the converse is not true - "waters of the United States" is a subset of "waters of the state." However, a recent court case has provided clarity with respect to the limit to the Regional Boards jurisdiction. The California Superior Court in December 2017 (John D. Sweeney and Point Duck Club, LLC vs. San Francisco Bay Conservation and Development Commission and the San Francisco Regional Water Quality Control Board, FCS048136). In that case the court found that “the California Water Code (Porter-Cologne) §13304 does not give the State the authority (in this case the California Regional Water Quality Control Board) to regulate discharges into areas that are not “waters of the State” and found that “waters of the State” are not areas that are considered dry land (defined as an area that does not have perennial, ephemeral, or intermittent surface waters). The court ruling also made clear that vegetation removal from a waters is not “fill” or “discharge” that can be regulated by the State. At this time, it is unknown how this court ruling will, or will not, change how the Regional Boards proceed with respect to wetland regulation.

It is important to note that, while Section 404 permits and 401 certifications are required when the activity results in fill or discharge directly below the ordinary high water line of waters of the United States, any activity that results or may result in a discharge that directly or indirectly impacts waters of the state or the beneficial uses of those waters are subject to waste discharge requirements (WDRs). In practice, most regional boards rely on applications for 401 certification to determine whether WDRs need also be issued for a proposed project.

Listed Protected Species and Habitat Protection

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) implements the Migratory Bird Treaty Act (16 USC Section 703-711), Bald and Golden Eagle Protection Act (16 United States Code [USC] Section 668), and Federal Endangered Species Act (FESA; 16 USC § 153 *et seq.)*. Projects that would result in “take” of any federally-listed threatened or endangered species are required to obtain authorization from the USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project. The authorization process is used to determine if a project would jeopardize the continued existence of a listed species and what mitigation measures would be required to avoid jeopardizing the species.

“Take” under the federal definition means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. “Candidate species” do not have the full protection of FESA. However, the USFWS advises project applicants that it is prudent to address these species since they could be elevated to "listed status" prior to completion of projects with long planning or development schedules.

The **Migratory Bird Treaty Act (MBTA**) was first enacted in 1916 in order to implement the convention for protection of migratory birds between the United States and Great Britain (acting on behalf of Canada). The MBTA makes it illegal for anyone to take, possess, import, transport, purchase, barter or offer for sale or purchase any migratory birds, its nests or eggs unless a permit has been issued by the federal agency. The USFWS has statutory authority and responsibility for enforcing the MBTA. In accordance with the MBTA Reform Act (MBTARA) of 2004 all species native to the U.S. or its territories which occur as a result of natural biological or ecological processes (70 FR 12710, March 15, 2005) and does not include nonnative species whose occurrences in the US are solely the result of intentional or unintentional human introduction. The USFWS maintains a list of bird species protected under the MCTA and the MBTRA.

On December 22, 2017, the U.S. Department of the Interior, Office of the Solicitor issued a memorandum 37050 that clarified that under the Migratory Bird Treaty Act does not prohibit incidental "take" or "killing" of migratory birds as a result activities perform as part of an otherwise lawful activity.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW), formally known as the California Department of Fish and Game, is a Trustee Agency with responsibility under the CEQA for commenting on projects that could impact plant and wildlife resources. In addition, pursuant to the Fish and Game Code Section 1802, the CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species. The California Fish and Game Code also provide authority for the CDFW to regulate projects that could result in the "take" of any species listed by the State as threatened or endangered (Section 2081).

Perennial and intermittent streams also fall under the jurisdiction of CDFW pursuant to Sections 1601-1603 of the Fish and Game Code (Streambed Alteration Agreements). The CDFW's jurisdiction over work within the stream zone includes, but is not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake. Prior to issuing a 1601 or 1603 Streambed Alteration Agreement, the CDFW must demonstrate compliance with CEQA. In most cases, CDFW relies on the CEQA review performed by the local lead agency. However, in cases where no CEQA review was required for the project, CDFW would act as the lead agency under CEQA.

The CDFW also has authority for protection state-listed species issues Section 2081 Incidental Take Permit if a project has the potential to negatively affect state-protected plant or animal species or their habitats, either directly or indirectly. Protected species include those "listed" by the state as endangered or threatened. Besides listed species, there are other categories of species protection, including "fully protected" and California Species of Special Concern (CSC). Adverse impacts to species that have the "fully protected" designation are prohibited.

Under current California Fish & Game Code (FGC Section 3503) “it is unlawful to take, posses or needlessly destroy the nest or eggs of any bird…” Birds of prey (falcons, hawks, owls and eagles) get extra protection under the law (FGC Section 3503.5).

California Endangered Species Act

The California Endangered Species Act (CESA) provides protection for candidate plants and animal species as well as those listed as rare, threatened, or endangered by the California Department of Fish and Game (CDFG). This act prohibits the take of any such species unless authorized. Section 2081 authorizes the state to issue incidental take permits. The state definition of take applies only to acts that result in the death of or adverse impacts to protected species.

California Environmental Quality Act

The CEQA Guidelines require review of projects to determine their environmental effects and to identify mitigation for significant effects. The Guidelines state an effect may be significant if it affects rare and endangered species. Section 15380 of the Guidelines defines *rare* to include listed species, and allows agencies to consider rare species other than those designated as State or federal threatened or endangered, but that meet the standards for rare under the federal or State endangered species acts. On this basis, plants designated as rare by non-regulatory organizations (e.g., California Native Plant Society), species of special concern as defined by CDFW, candidate species as defined by USFWS and other designations may need to be considered in CEQA analyses.

City of Clovis

The Study Area falls within the City of Clovis, California. The City is responsible for all local land use decisions within its jurisdictional boundary.

SECTION 2 **METHODS**

The following section describes the methods used to assess the Study Area, which includes a combination of data review and evaluation, field studies, and aerial photograph interpretations.

2.1 DATA AND LITERATURE REVIEW

The approximately 75-acre Study Area is located within an historically developed with rural residential and agricultural that has been undergoing redevelopment into higher density residential within the City of Clovis, California. The following documents and/or sources were used in preparing this report.

- U.S. Department of Agricultural, Natural Resources Conservation Service, Soil Survey of Fresno Area (Soils mapper).
- Aerial photography (Google Earth®, Bing®, and historic aerials dating back to 1983).
- The California Department of Fish and Game, California Natural Diversity Database (CNDDB/RareFind - Recent version with updates).
- U.S. Fish and Wildlife Service National Wetland Inventory Map
- U.S. Fish and Wildlife Service Information for Planning and Conservation (IPaC)
- University of Texas, Austin, Perry-Castañeda Map Collection
- AcreValue® (accessed at www.acrevalue.com)
- Previous experience with biological studies, CEQA reviews, and wetland delineation work on lands adjacent to the Study Area.

2.2 AERIAL PHOTOGRAPHY AND WETLAND MAPPING

A series of aerial photographs of the Study Area were reviewed to assess changes in land use over time, dating back to 1998. Specifically, black and white and color aerial photographs ranging in resolution from 0.5 meters to 1.0 meter. We also reviewed wetland mapping and the aerials to determine if the Study Area recently supported wetlands.

2.3 FIELD RECONNAISSANCE

Prior to conducting a site review, we reviewed the California Natural Diversity Database/ Rarefind (CNDDB/Rarefind). The CNDDB includes records of reported observations for special status plant and animal species. A search radius that included up to nine USGS quadrangles was employed. The results of the CNDDB/RareFind were reviewed to identify which species would present the greatest likelihood of being present on the site based on the distance of the site from known records and the similarity in habitats between the Study Area and the habitats that the species required and/or preferred. Also prior to the field work, a high resolution aerial was reviewed to determine if there are any areas on the site that appear to support waters of the U.S., or other water features.

On October 23, 2017 a site review was conducted. The entire site was reviewed. There were no access issues. The primary objective of the field work was to identify any areas on the site, or immediately adjacent to the site, that potentially supports habitat for sensitive species or aquatic habitat. The orchard manager provided historical and current information on the farming operations.

The following section describes the physical (i.e., topography, drainage, and soils) and the biological resources present, or potentially present, within the Study Area. Section 3.1 describes the physical components (i.e., soils, hydrology, etc.) of the Study Area. The physical components strongly influence the types of plants and animals present. Section 3.2, is an overview of the resources and habitats present within the Study Area, including descriptions of the specific biological resources observed.

The information presented is not an exhaustive inventory of plants or animals present. Rather it is designed to provide sufficient information to identify what, if any, biological resources are present that may be considered unique, sensitive, or protected by current law and the potential impacts to those resources if the site is developed.

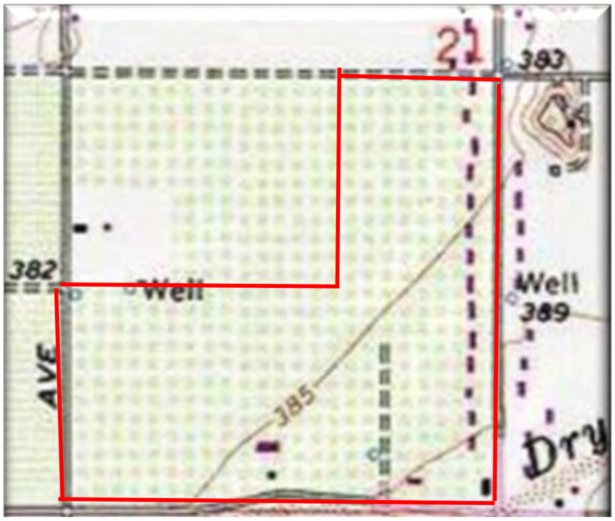
3.1 PHYSICAL RESOURCES AND ELEMENTS

Land Use and Habitat Types

Based on the aerials, the site has been developed as orchard/agricultural since before 1998. No significant changes have been made to the property since at least 1998. The two buildings that are within the three parcels that make up the Study Area have been there at least since 1998. The Study Area is surrounded by rural residential to the North, East, and South that has likewise undergone relative minor changes since at least 1998.

Site Topography

The property lies within the Central Valley. The Study Area is flat with very little change in elevation. Elevation is approximately 385 meters above sea level ranges from 385 meters above sea level to 390 meters above sea level. Dry Creek is located at the immediately south and east of the Study Area.

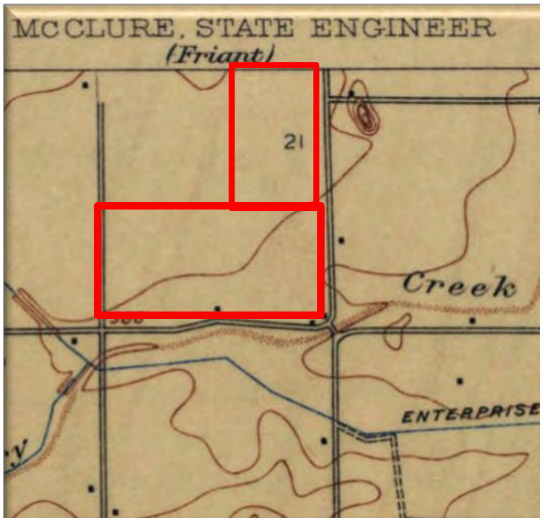


USGS Topographic Map

Drainage and Watershed and Wetlands

The study area has historically drained to the southwest. The site is fairly flat with little change in elevation. Historically there was a small lake that was located north of the Study Area and has since been filled. A topographic map from 1919 (right) shows the general vicinity of the Study Area, circled in red.

The project site historically drained to the west. A query of the National Wetland Inventory Map does not show any stream, creeks, or wetland on the Study Area. The National Wetland Inventory Map code is "PUBHx" which correlates to "palustrine, unconsolidated bottom, permanently flooded, excavated."



USGS Historical Topographic Map (1919)

**U.S. Fish and Wildlife Service
National Wetland Inventory Map**

Climate/Soils

Climate in the Study Area is typical of the central San Joaquin Valley with summers that are long, hot, and dry and winters that are cool and mild. Rainfall in the winter averages approximately 10.9 inches per year, falling mainly between November and April (Western Regional Climate Center, 2004).

The Natural Resources Conservation Service (NRCS) soil survey mapped six soils types within the Study Area. Four of the mapped soils are considered hydric soils. Hydric soil is readily formed under ponded condition and is a strong indicator of areas experiencing prolonged ponding (e.g., wetlands). The presence of mapped hydric soils may indicate that the soils could support wetlands; but, there is not a direct correlation. Wetlands can occur in areas where no hydric soil are mapped and may be absent in areas mapped as hydric soils. The following is a summary of the soil types present.

Table 1
NRCS Soils Within Tract 6205, Spensley Property

Map Unit Symbol	Map Unit Name	Hydric		Approximate Acres in Area of Interest	Percent of Area of Interest
		Yes	No		
ArA	Atwater sandy loam, 0 to 3 percent slopes		✓	11.7	15.3%
Gf	Grangeville fine sandy loam, 0 to 1 percent slopes	✓		21.8	28.6%
Gg	Grangeville fine sandy loam, saline alkali	✓		3.3	4.3%
Re	Ramona loam, hard substratum		✓	20.2	26.5%
SeA	San Joaquin loam, 0 to 3 percent slopes	✓		11.2	14.7%
VaA	Visalia sandy loam, 0 to 3 percent slopes	✓		8.1	10.6%
Totals for Area of Interest				**76.3**	**100%**

3.2 RESULTS OF SITE INVESTIGATION

Habitats and Waters of the U.S. and Waters of the State

The entire Study Area is made up of orchard habitat. There are two residential homes on the site along with one outbuilding. Based on a review of historical records, readily available wetland mapping databases, and a site review, our field investigation confirmed the accuracy of the U.S. Fish and Wildlife Service's Wetland Inventory Map. No wetlands, waters, or any aquatic habitat is present within the Study Area. There is a man-made conveyance channel (trapezoidal with no vegetation) located along the northern boundary, but outside the project limits.

The entire property was walked and driven. The orchards trees are mature and are roughly 20 feet in height. We observed a barn owl in flight within the orchard. As we walked another large raptor was seen flying from tree to tree. It appeared to be a red-tailed hawk. Surrounding the home sites there are landscaped areas and bare ground. It appears that a rodent control program is in place because no burrowing rodents were observed. The areas surrounding the orchard trees is bare ground.

Special Status Species

A search of the California Natural Diversity Database (CNDDB) was reviewed to determine which special status species could be present within the Study Area. There is no critical habitat for any listed species within or near the Study Area. Table 2 provides a summary of the species identified in the CNDDB and by the by the U.S. Fish and Wildlife Service that would have the highest likelihood of being present based on habitat requirements. Species that are dependent on the presence of seasonal water bodies, such as vernal pool or other seasonal wetlands, for breeding or completion of their life cycle are not included in the table present because no wetland, vernal pools, or seasonal wetland are present within the Study Area.

Although the database did not include all migratory birds/ and raptors, such species could use the site to forage for food or nest the trees.

The nearest records are for two species: Western pond turtle (*Actinemys marmorata*) and California tiger salamander (*Ambystoma californiense*). The Western pond turtle record is located to the southeast, south of Shepherd Avenue. The California tiger salamander (CTS) record is located to the northeast along Dry Creek. California tiger salamanders occupy different habitat depending on the state of their life cycle and breeding cycle. CTS requires seasonal ponds that retain water till at least May or June in order to successfully breed and young to mature. Once the aquatic larva have matured, they relocate to the dry upland habitat to aestivate during the hot dry summers. Once the winter rains return, the adults return to the seasonal ponds to breed. Typically they breed in seasonal wetlands, ponds (including some farm ponds) or in slow-moving portion of creeks. The upland habitat they use is typically grassland or ruderal habitat that has friable soils and supports a burrowing rodent (CTS use rodent burrows during aestivation). CTS have been reported to travel up to 1.3 miles between breeding habitat and upland habitat.

Tract 6205 does not support any aquatic habitat that could support Western pond turtle or California tiger salamander. The channel/ditch located immediately north of the Study Area remains dry unless except perhaps in response to groundwater pumping or some return flows from the orchard (personal conversation with the orchard manager, 2017). The ditch does not pond water but instead has a flashy hydrologic regime (days). Western pond turtle requires persistent ponded water which does not occur within the Study Area. The channel/ditch is also not suitable habitat for CTS because the lack of sufficient ponding. The orchard habitat within the Study Area is devoid of a underground rodent population. Because both suitable breeding habitat and upland habitat are absent, the site would not support CTS.

California Tiger Salamander

California tiger salamander (*Ambystoma californiense*) is both federally and state listed as endangered. CTS is endemic to California and the historical presence of it likely includes grassland habitats that are found throughout the state. The primary cause for decline in populations has been habitat loss and fragmentation due to urban and agricultural development, land conversion, and other human-caused factors. California tiger salamander occupy different habitats depending on the state of their life cycle and breeding cycle. CTS require seasonal ponds that retain water until at least May or June in order to successfully breed and the young to mature. Once the aquatic larvae have matured, they relocate to the dry upland habitat to aestivate (oversummer) during the hot dry summers, seeking shelter in underground burrows. Once the winter rains return and suitable ponding has occurred, the adults return to the seasonal ponds to breed. During years of low rainfall the males may migrate into the seasonal ponds but the females may remain in their upland habitat. There appears to be a strong association between grazed communities, burrowing mammals, and the presence of CTS (USDOI 2009). Adults will find burrows dug by California ground squirrels (*Otospermophilus beecheyi*) and pocket gophers (*Thomomys bottaeto*) to aestivate (Barry and Shaffer 1994, Trenham 2001).

Typically CTS breed in seasonal wetlands, ponds (including some farm ponds) or in slow moving portions of creeks. The upland habitat they use is typically grassland or ruderal habitat that has friable soils and supports a burrowing rodent. CTS have been reported to travel up to 1.3 miles between breeding habitat and upland habitat.

The nearest California tiger salamander (CTS) record (occurrence record # 613) is located south of the Study Area, just southwest of the intersection of Nees Avenue and N. Fowler Avenue. This record is from 1974 and the species was found in a vernal pool. Jennings considered this record extirpated (species no longer present), since the land has since been converted to dense residential.

A second CTS record was found in the CNDDB. This record (occurrence record # 888) is located to the northeast along Dry Creek (1.5 miles from the center of the Study Area, and 1.3 miles from the eastern edge of the Study Area). This record is from 2006 and CTS larva was found in a swale adjacent to the man-made Dry Creek channel just below the Big Dry Reservoir. The surrounding land has vernal pool and other seasonal wetlands.

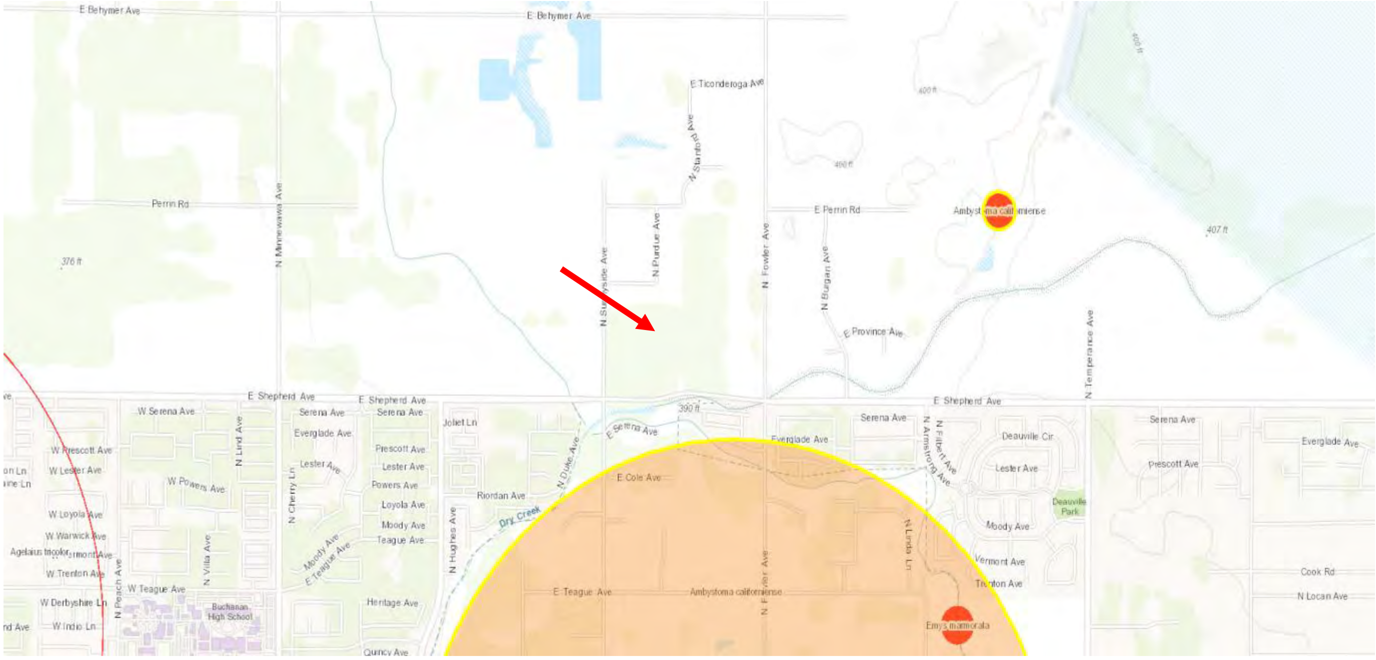
The Study Area may support some ground burrowing mammals; however because of the marginal quality of habitat, evidence of a rodent control program being implemented onsite, the residential developing surrounding the site, which likely presents a physical barrier to CTS migration, ,and distance from the closest CTS breeding habitat, it is highly unlikely this site provides suitable CTS aestivation habitat.

Table 2
Summary of Potential Special Status Species Impacts
Tract 6205 Spensley Property

Common Name	*Scientific Name*	*Status[1]*	*Effects[2]*	*Occurrence in the Study Area[3]*
Birds				
Barn owl	*Tyco alba*	None	ME	**Potentially Present.** Suitable nesting habitat is present. One owl observed in flight. Farm operator reported he has also observed barn owl(s) in past years on the site.
Burrowing owl	*Athene cunicularia*	SSC	ME	**Likely Absent.** No individuals in area of effect but possible habitat for burrows is present
Swainson's hawk	*Buteo swainsoni*	CT	ME	**Likely Absent** The orchard may provide some foraging habitat, but suitable nesting habitat is unlikely.
Tricolored blackbird	*Agelaius tricolor*	SC[4]	NE	**Absent.** Suitable habitat not present.
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	CE, FT	ME	**Likely Absent.** Suitable breeding habitat is not present
Mammals				
Fresno kangaroo rat	*Dipodomys nitratoides*	CE, FE	NE	**Absent**. No individuals in area of effect
San Joaquin kit fox	*Vulpes macrotis mutica*	CT, FE	NE	**Absent**. No individuals in area of effect. No suitable habitat present to support species. Unlikely visitor even for hunting because site is surrounded by dense urban areas.
Aquatic Species (or semi aquatic)				
Western pond turtle	*Emys marmorata*	None	NE	**Absent:** No habitat present to support the species**.**
California tiger salamander	*Ambystoma californiense*	FT/CT	NE	**Likely Absent:** No suitable breeding habitat and low quality upland habitat present.

1 Status= Listing of special status species, unless otherwise indicated
CE: California listed as Endangered
CT: California listed as Threatened
SSC: California Species of Special Concern
FE: Federally listed as Endangered
FT: Federally listed as Threatened

2 Effects = Effect determination
NE: No Effect
ME: May effect, not likely to adversely affect
3 Definition Of Occurrence Indicators
Present/Potentially Present: Species recorded in area and suitable habitat likely present
Absent/Likely Absent: Species not recorded in study area and/or
CNDDB = California Natural Diversity Database provided by CDFG



CNDDB Bio Mapping Showing Record of Known Species
(The arrow points to the Study Area)

Swainson's hawk

Swainson's hawk (*Buteo swainsoni*) is state threatened and is a migrant species that spends much of the spring, summer, and early fall in California's Central Valley. Their preferred nesting habitat consists of valley oaks, cottonwoods, and other tall trees adjacent to both agricultural fields and grasslands. They have been observed more frequently in recent years within the Central Valley. Due to the recent expansion of their population, it is possible that agricultural, grassland, and rural residential areas may support foraging and possibly nesting hawks.

Burrowing Owl

The burrowing owl is a species of concern in California. It is a small owl that typically lives in grassland habitats of the Central Valley region that also support California ground squirrels. The species will also sometimes overwinter or even nest within agricultural areas, using whatever is available (pipes, ground holes/burrows). The owl seeks shelter and breeds from February to July. Although the numbers of owls have declined in some parts of California over the past 20 years, their numbers have increased greatly in some agricultural areas. In Fresno County, the species mostly occurs on the valley floor.

The orchard and ruderal habitat within the Study Area may provide some suitable foraging and nesting habitat for the species. While no owls were observed on the site, the species can occupy a site at any time assuming there is a suitable burrow available.

Other Migratory Nesting Birds

There are several species of migratory and resident nesting birds that could potentially use the project site for nesting area. The USFWS lists 23 migratory bird species in the area however the project site does not support the habitat needed by every species for breeding or wintering. The following selected species are representative of the variety of species identified in the CNDDB and USFWS list.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) breeds in the Central Valley of California. It breeds in woodlands and orchards. The study Area provides suitable habitat for this species. There is no critical habitat in the Study Area.

3.3 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The Study Area has been developed as agricultural as an orchard since at least 1998. The site does not support any wetland habitat or waters of the U.S. The potential for the property to support any species of concern is extremely low because of the lack of habitat diversity. A nesting bird survey may be warranted given the trees on the site could support raptor nesting or other species status birds or migratory birds. Potential mitigation for any land conversion would require that tree removal occurring during the non-nesting period (Feb-Aug). If tree removal occurs during the nesting period, then a pre-construction survey should be performed to identify any occupied nest.

Appendix E

Cultural

CULTURAL RESOURCE OVERVIEW

FOR THE NORTH SHEPHERD PROJECT,

CITY OF CLOVIS, CALIFORNIA

Prepared by

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January 12, 2023
(Job #22-100)

INTRODUCTION

Project Description

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. Figures 1, 2 and 3 show the proposed Project's regional location and vicinity. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 2 illustrates the Project location on the USGS Clovis, California, 7.5-minute series quadrangle map.

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a General Plan Amendment, Pre-zone, Annexation, Tentative Map, Planned Development Permit, and Residential Site Review.
    - Non-Development Area - Includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The Project site is approximately 155 acres and includes 39 Assessor parcels (APNs), as depicted in Figures 4, 5, 6, 7, and 8. The Project site is relatively flat and is approximately 385 feet above mean sea level.

The Development Area primarily contains farmland (orchard). Three residential dwellings and a warehouse were removed in approximately 2020. The majority of the Development Area is in active agricultural use (pecan orchards).

Five agricultural water wells are located in the Development Area; two located along the east-west centerline of the area, one located in the southwestern corner of the area, one located in the northwestern corner of the area and one located along the eastern boundary of the Development Area. Four pole-mounted transformers are located in the Development Area; two are located in the central-eastern portion of the Development Area and two are located along the eastern boundary of the Development Area in the southern portion. Two 10-12-foot-tall berms containing wood branches and debris from orchard pruning are located along the eastern boundary of the Development Area.

The Non-Development Area is located within the City of Clovis' Planning Area but is outside of the City's existing Sphere of Influence and contains existing single-family residences and agricultural fields. Each SubArea is uniquely different and is described below:

> Expansion SubArea North: Includes single-family residences that are accessed by North Purdue Avenue and Lexington. North Purdue Avenue and Lexington are unimproved roadways with no pedestrian sidewalk, curb/gutter, or landscaping. North Sunnyside Avenue located to the west and Perrin Road to the north are also unimproved County roadways. There are 18 APNs in SubArea North.
>
> Expansion SubArea East: Includes single-family residences and agricultural fields located between the pecan orchards and North Fowler Avenue. North Fowler Avenue is a two-lane unimproved County roadway with no pedestrian sidewalk, curb/gutter, or landscaping. There are 18 APNs in SubArea East.

The Project site is surrounded by a variety of agricultural and residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards or other agricultural activities. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site are agricultural uses (orchard) and a power sub-station.

The City and County General Plan land use designations and zoning for the Project site. The Project site is currently outside of the jurisdiction of the City of Clovis, and therefore does not have a City of Clovis zoning designation, but the City of Clovis General Plan (adopted on August 25, 2014) designated the Project site as Rural Residential (RR). This designation allows very low-density residential uses and small-scale agricultural operations. Rural residential uses may be dispersed uniformly across the land or be sited so to leave more acreage for orchards, pastures, or other agricultural or open space activities. The allowable maximum density for this land use designation is one dwelling unit per two acres.

The Development Area is designated as Low Density Residential by the County's General Plan Land Use Map and is zoned AL-20 (Limited Agricultural) by the County. The Non-Development Area is designated as Rural Residential by the County's General Plan Land Use Map and is zoned RR (Rural Residential) by the County.

Project Goals and Objectives

Project

A clear statement of objectives and the underlying purpose of the proposed Project are discussed per CEQA Guidelines Section 151024(b).

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation, approval and subsequent development of the Development Area.

The quantifiable objectives include the development of 605 single family residential units. The quantifiable objectives include the development of open space totaling 4.32 acres, including 1.49 acres of private park and recreational uses. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping to serve the residential uses.

The goals of the proposed development are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand.
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

Project Entitlements

The proposed Project will require a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium Density (M) and Medium High Density (MH) for the Development Area to accommodate the proposed development density.

- **Medium Density (M)** This designation identifies area appropriate for detached and attached single family homes, patio homes, or zero lot line homes. The allowable density range is 4.1–7.0 units per acre.

- **Medium High Density (MH).** This designation identifies areas appropriate small lot single family detached homes, townhouses, duplexes, and apartments. The allowable density range is 7.1 to 15.0 units per acre.

The Project site is currently located outside of the Clovis city limits, and therefore does not have City-designated zoning. The proposed Project includes a request for Development Area pre-zoning (which is consistent with the proposed General Plan Land Uses):

Development Area: The pre-zoning request is for R-1-PRD zoning designations over these lots.

- **Single-Family Planned Residential Development Zoning (R-1-PRD).** This designation identifies areas appropriate for single-family small lot uses, including attached and detached single-family structures on small lots. The allowable density range is 4.1 to 15.0 units per acre, with the level of density determined by compliance with performance standards. The R-1-PRD district required a planned development permit. The R-1-PRD district is consistent with the Medium and Medium-High Density Residential land use designation of the General Plan.

The proposed Project includes a Tentative Map for the Development Area that is planned for development in phases. The Tentative Map covers approximately 77 acres within three Assessor parcels (APNs); 557-021-20, -19, and -21.

The Tentative Map will result in the subdivision of a total of approximately 77 acres into 605 single family residential units, with an additional 58 out lots for roads, utilities, greenspace, landscaping, and pedestrian paths. The Project objectives also include the installation of new public roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping.

The proposed Project includes a Planned Development Permit (PDP) for the Development Area of the Project, which will incorporate a program of enhanced amenities (e.g., additional open space, park improvements and/or trail development). The PDP may allow for modifications to the applicable development standards, such as lot coverage, setbacks and building heights.

Figures 6, 7 and 8 illustrate the proposed site plans for the Development Area.

The proposed Project includes an annexation of three APNs totaling approximately 77 acres. This acreage includes the Development Area.

The proposed Project includes a Residential Site Plan Review (RSPR) for the Development Area as a condition of a subdivision map implementing provisions of zoning.

The proposed Project includes an amendment of the City's Sphere of Influence (SOI) to include the entirety the approximately 155-acre Project site. The area is currently located in the City's

Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno County Local Agency Formation Commission (LAFCO).

Development Project Characteristics

The proposed Project is primarily a residential development anticipated to provide up to 605 residential units. The Development Project would provide approximately 1.49 acres of private greenspace. Other uses to support and compliment the proposed residential development include public utility infrastructure, public and private roadways, curb/gutters/sidewalks, pedestrian facilities, private parking, street lighting, and street signage.

Housing development will depend on market conditions and demand. The plan for infrastructure allows for development to occur in phases to respond to the market conditions and demand.

The proposed Project will provide a variety of housing types and lot sizes that will accommodate a range of housing objectives and buyer needs with a goal to ensure housing for a variety of families and lifestyles. The Development Area will accommodate up to 605 residential units. Specifically, the northern portion of the Development Area is planned to include the development of up to 107 single-family residences with lot sizes ranging from approximately 7,500 square feet to 19,300 square feet. The southern portion of the Development Area is planned for smaller lot single-family residences, with lot sizes ranging from approximately 1,980 to 3,800 square feet, and with larger corner lots that are approximately 4,200 to 7,300 square feet. Figures 6, 7, and 8 illustrate the Project site plans.

The proposed Project includes 1.49 acres of private greenspace including a private pool and park area. There are three separate greenspaces proposed, one located in the northern portion of the Development Area, one in the southwestern portion and one in the southeastern portion.

The proposed Project includes a hierarchy of roadways to accommodate the capacity needs of the existing street network as well as provide additional vehicular access to the Development Area. North Sunnyside Avenue and East Shepherd Avenue are the main arterial roadways providing access to the Development Area.

The neighborhoods within the Development Area will include a network of public and private residential streets to provide an efficient flow of traffic through the area. Sidewalks will also be included per the City standards.

Utilities and Planned Infrastructure Improvements

The construction of on-site infrastructure improvements would be required to accommodate development of the Development Area, as described below.

Water System

The Project site will be served by a new potable and non-potable water distribution system. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project. The City's Water Reuse Facility produces tertiary treated effluent that can be used for agriculture or landscape irrigation.

Wastewater System

The Project site will be served by a new wastewater collection system installed within proposed public utilities easements. The proposed wastewater conveyance facilities will connect to the existing sewer mains as part of the City of Clovis collection and treatment system. Wastewater treatment will be provided at the existing Fresno-Clovis Regional Wastewater Treatment Plant in the City of Fresno. By agreement with the City of Fresno, the City of Clovis is entitled to a maximum capacity of 9.3 million gallons per day (mgd). The Fresno-Clovis Regional Wastewater Treatment Plant is owned and operated by the City of Fresno and has a maximum capacity of 80 mgd. If required, the City has the capability to acquire additional capacity at the Wastewater Treatment Plant. Wastewater treatment will also be provided by the City's Water Reuse Facility. The plant serves the new growth areas of the City in the southeast, northwest, and ultimately the northeast urban centers. The plant is designed to accommodate future expansion and will ultimately treat 8.4 mgd.

Storm Drainage

The Project site will include construction of a new storm drainage system, which will confirm to applicable standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications. This includes, but not limited to the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. Stormwater throughout the City is collected in FMFCD's basins.

Regulated Public Utilities

Electrical and gas, provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along E. Shepherd Avenue and from existing residential development surrounding the Project site. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Utility improvements would be installed in conjunction with planned street improvements.

Alternatives Considered

Three alternatives to the proposed Project were developed based on input from City staff. The alternatives that are anticipated to be analyzed in the EIR include the following three alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Alternative:** Under this alternative, the proposed Project would be developed with the same number of units as described in the Project Description, but the density of the residential uses would be increased, reducing the overall footprint of the developed areas and preserving the remaining Development Area for agricultural production.
- **Reduced Sphere of Influence Alternative:** Under this alternative, the proposed Project would exclude the 78-acre SOI Expansion north and east of the Development Area.

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives.

Under this alternative, the proposed Project would be developed with the same components as described in the Project Description, but density of the residential uses would be increased. Under the Increased Density Alternative, the same number of residential units as the proposed Project (607 units) would be constructed within the Development Area. The residential areas would be reduced at increased densities of approximately 9.8 dwelling units per acre (du/ac) to allow for the preservation of approximately 15 acres agricultural lands. The residential density under the Increased Density Alternative would fall within the allowed density for the City's General Plan designation of Medium High Density Residential (7.1 to 15 du/ac). Under the proposed Project, the residential density would be 5.2 units per gross acre.

Under this alternative, the proposed Project would only expand the Sphere of Influence and annex the Developed Area and would exclude the 78-acre Sphere of Influence (SOI) expansion to the north and east of the Development Area.

Uses of the EIR and Required Agency Approvals

This EIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed Project.

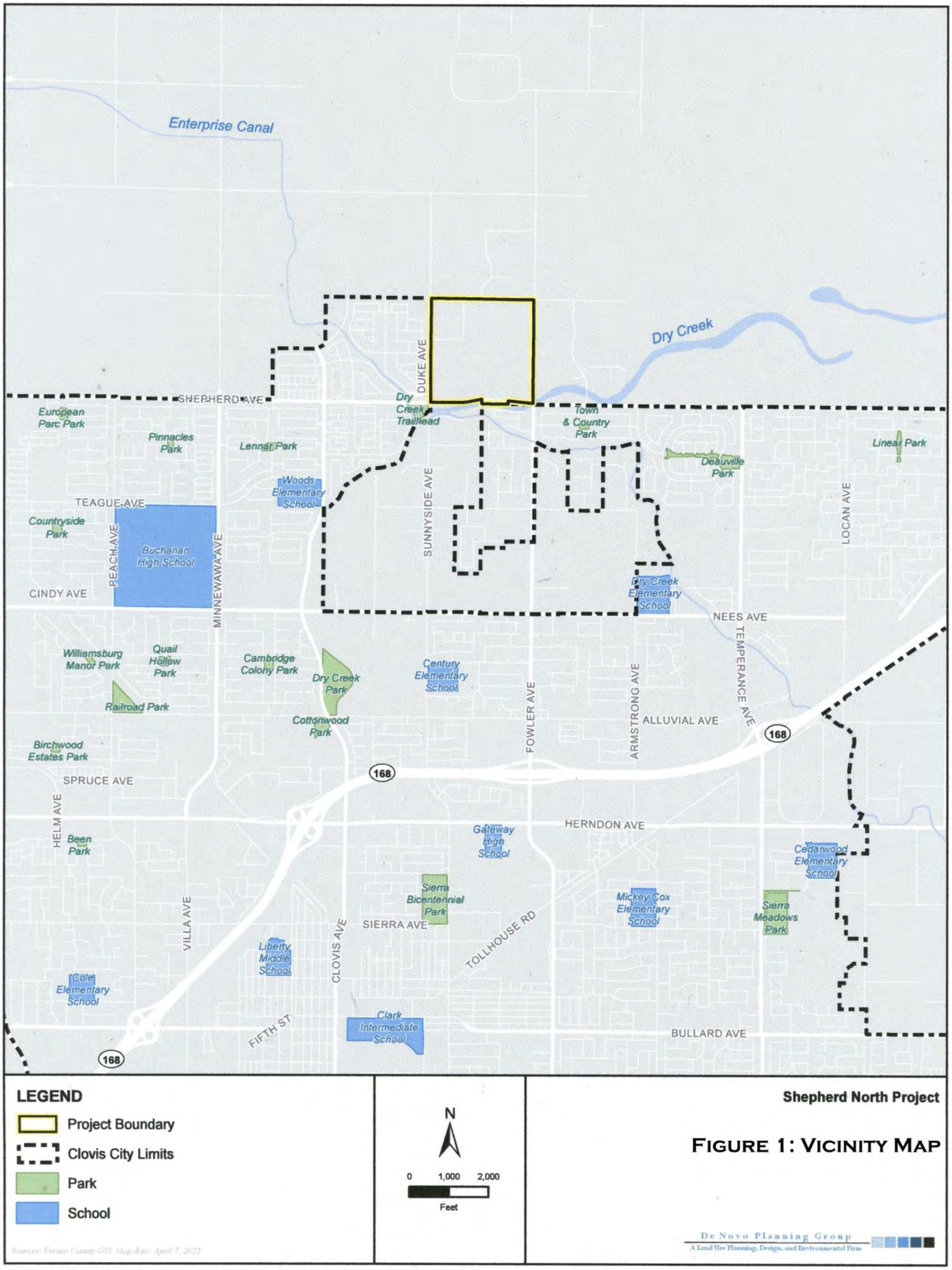
The City of Clovis will be the Lead Agency for the proposed Project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Actions that would be required from the City include, but are not limited to the following:

- Certification of the EIR;

- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of City of Clovis General Plan Amendment (Land Use Element);
- Approval of City of Clovis Zoning Pre-zoning;
- Approval of Residential Site Plan Review;
- Approval of Vesting Tentative Maps;
- Approval of Planned Development Permit;
- Approval of SOI Expansion and Authorization to submit SOI Amendment request to Fresno LAFCO;
- Approval of Annexation of the Development Area and Inhabited Area and Authorization to submit Annexation request to Fresno LAFCO;
- Approval of future Final Maps;
- Approval of future Planned Development Permit;
- Approval of future Grading Plans;
- City review, approval, of construction and utility plans; and
- Approval of future Building Permits.

The following agencies may be required to issue permits or approve certain aspects of the proposed Project. Other governmental agencies that may require approval include, but are not limited to, the following:

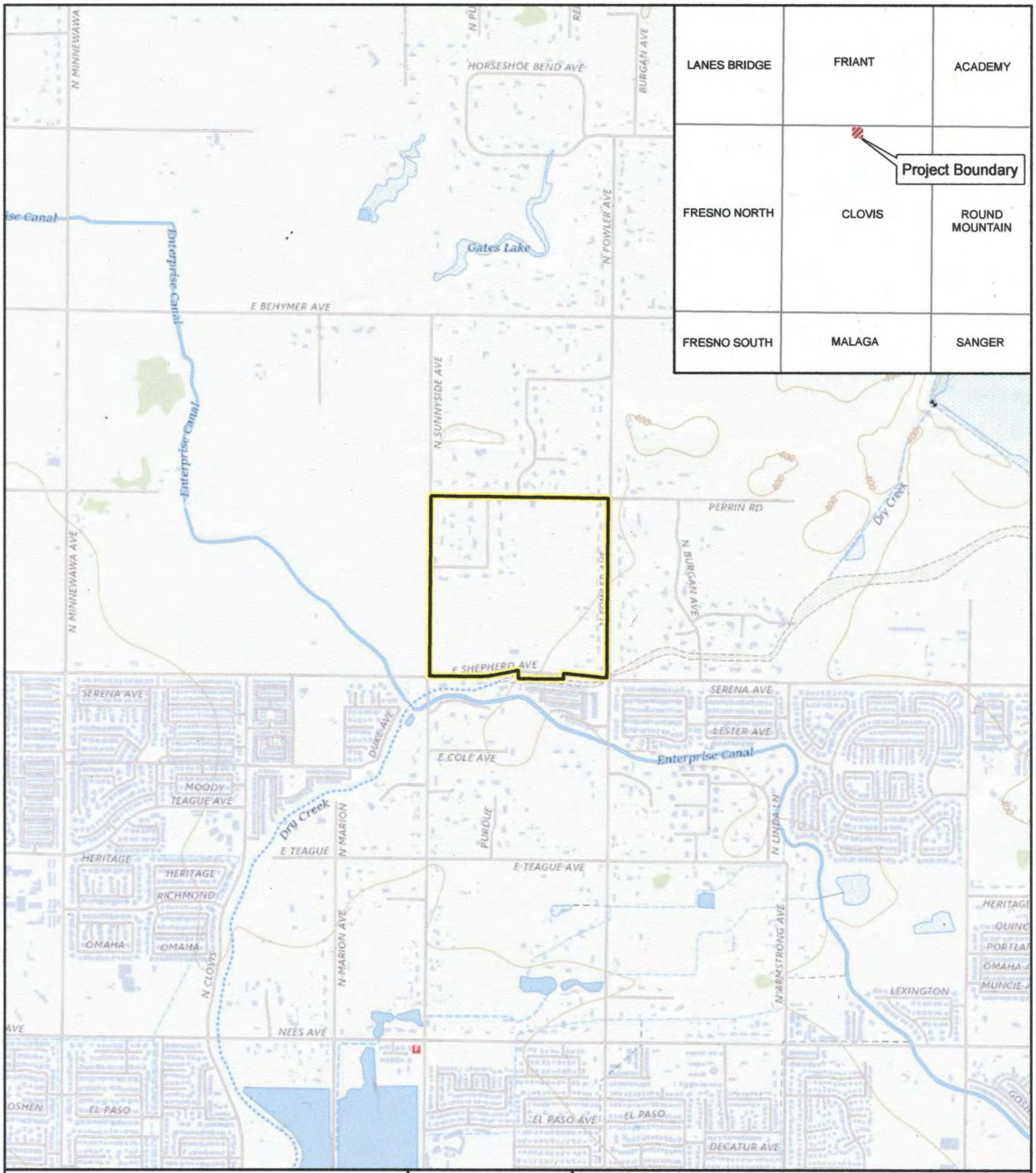
- Fresno Local Agency Formation Commission (LAFCO) – SOI Amendment, Annexation, and Detachment from the Fresno County Fire Protection District and the Kings River Conservation District;
- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits; and
- Fresno Metropolitan Flood Control District – review of stormwater facilities, grading, and street improvements.



Sources: Fresno County GIS. Map date: April 7, 2022.

Shepherd North Project

FIGURE 1: VICINITY MAP



LEGEND

▭ Project Boundary

N

0 400 800

Feet

Sources: Fresno County GIS, ArcGIS Online USGS Topographic Map Service, Map date: April 7, 2022

Shepherd North Project

FIGURE 2: USGS TOPOGRAPHIC MAP
CLOVIS QUADRANGLE

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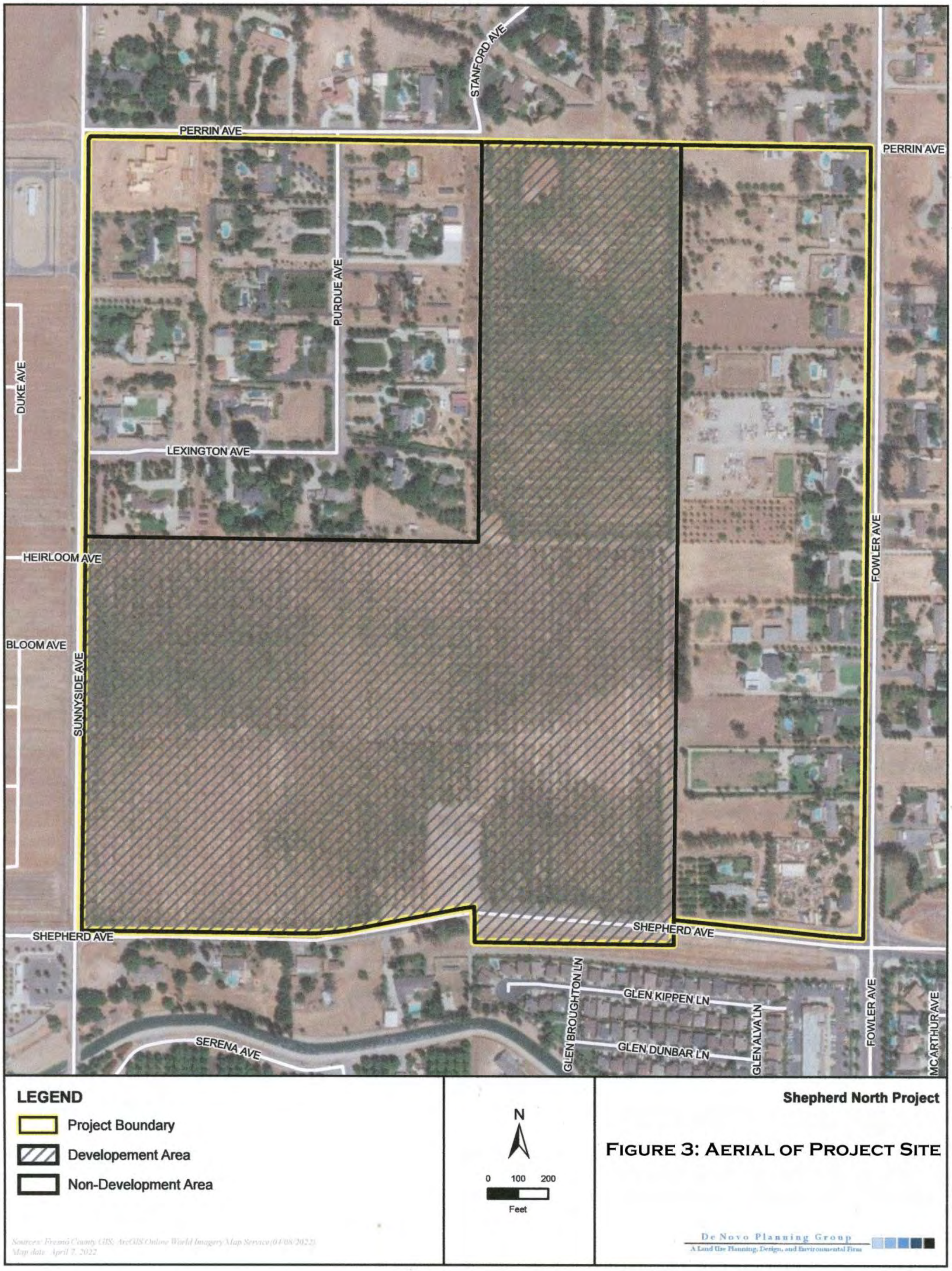
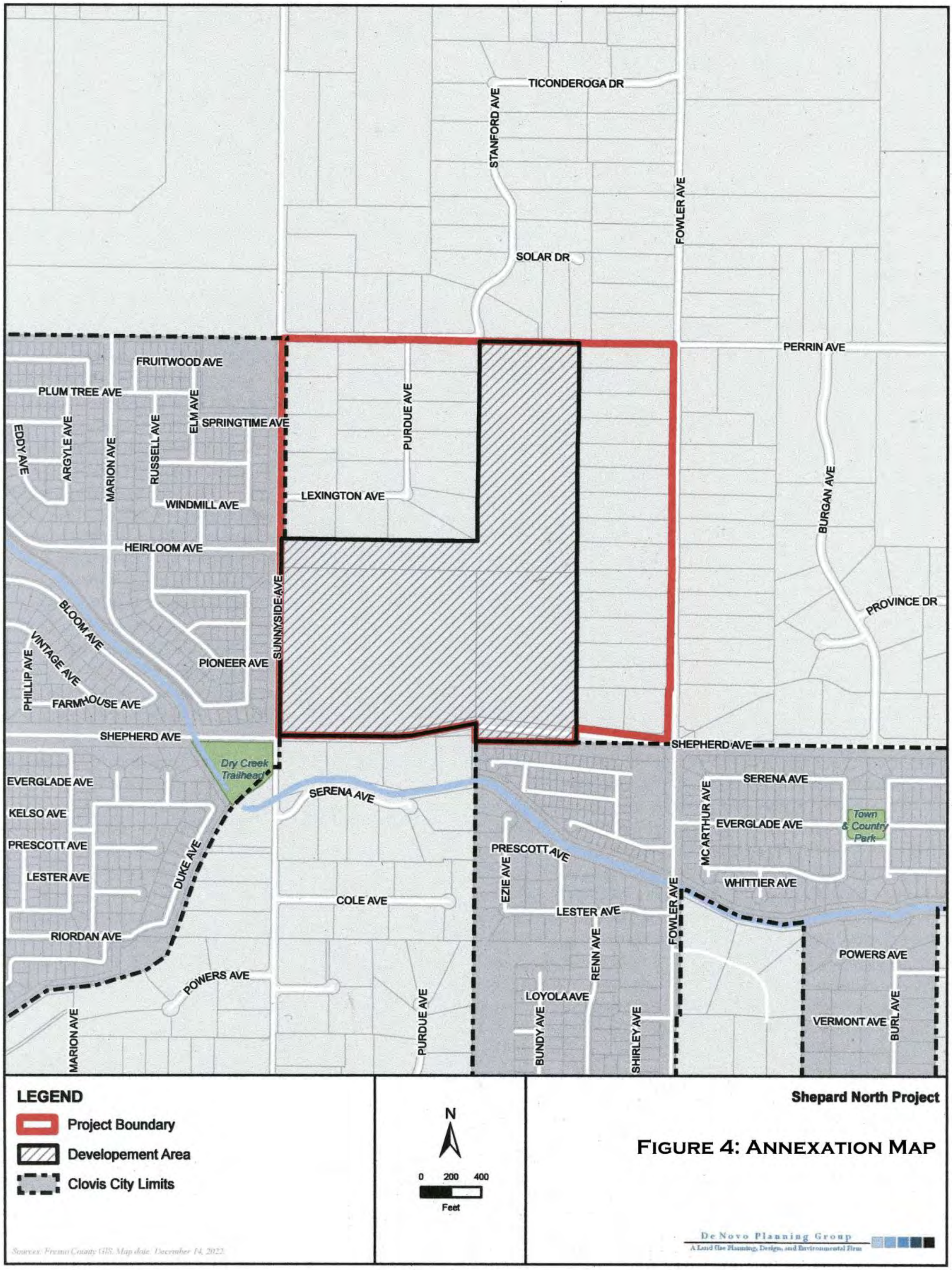


Sources: Fresno County GIS; ArcGIS Online World Imagery Map Service (04/08/2022)
Map date: April 7, 2022

Shepherd North Project

FIGURE 3: AERIAL OF PROJECT SITE



Sources: Fresno County GIS. Map date: December 14, 2022.

Shepard North Project

FIGURE 4: ANNEXATION MAP

Shepherd North Project

FIGURE 5: ASSESSOR PARCEL MAP

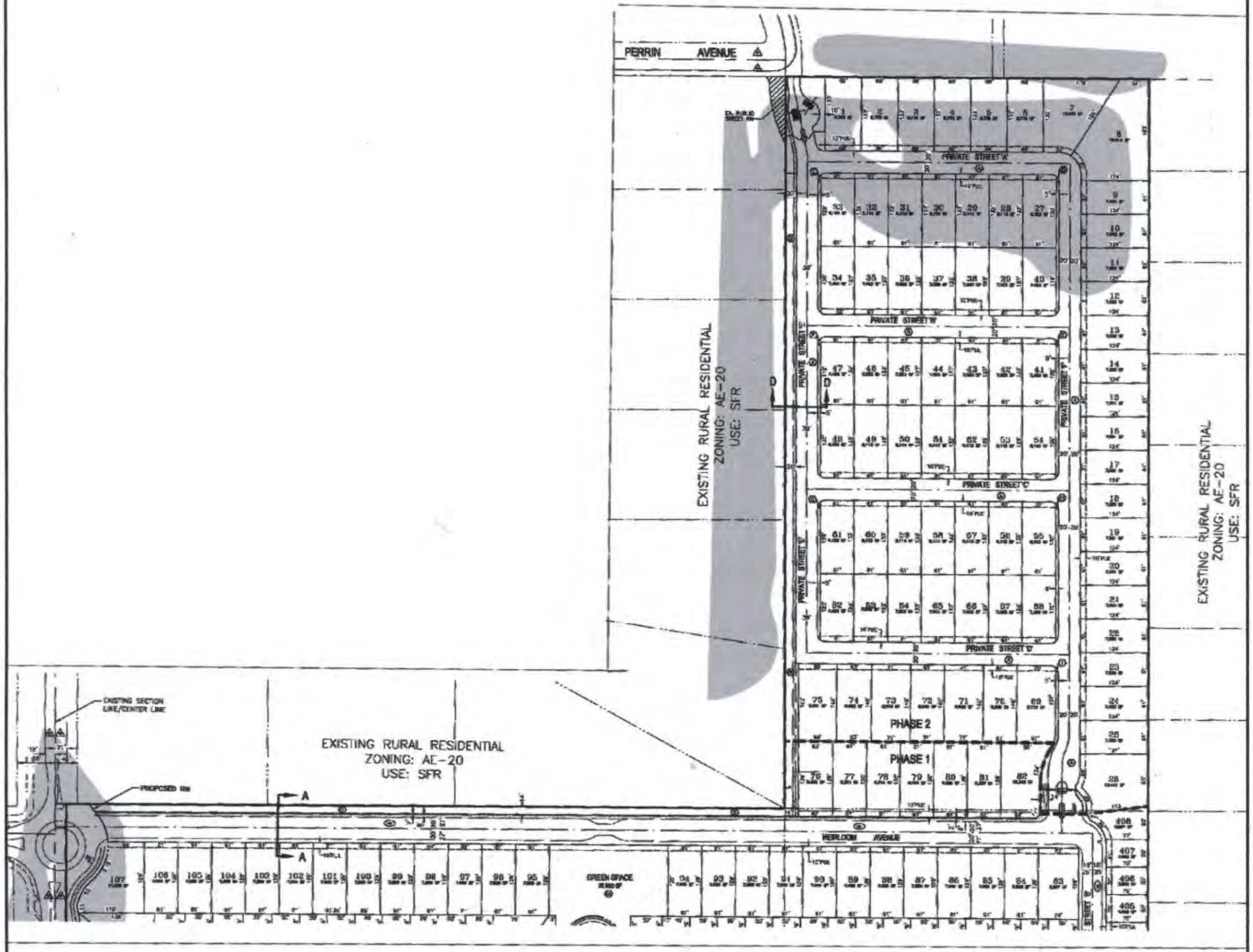


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FIGURE 6: TENTATIVE SUBDIVISION MAP NORTH

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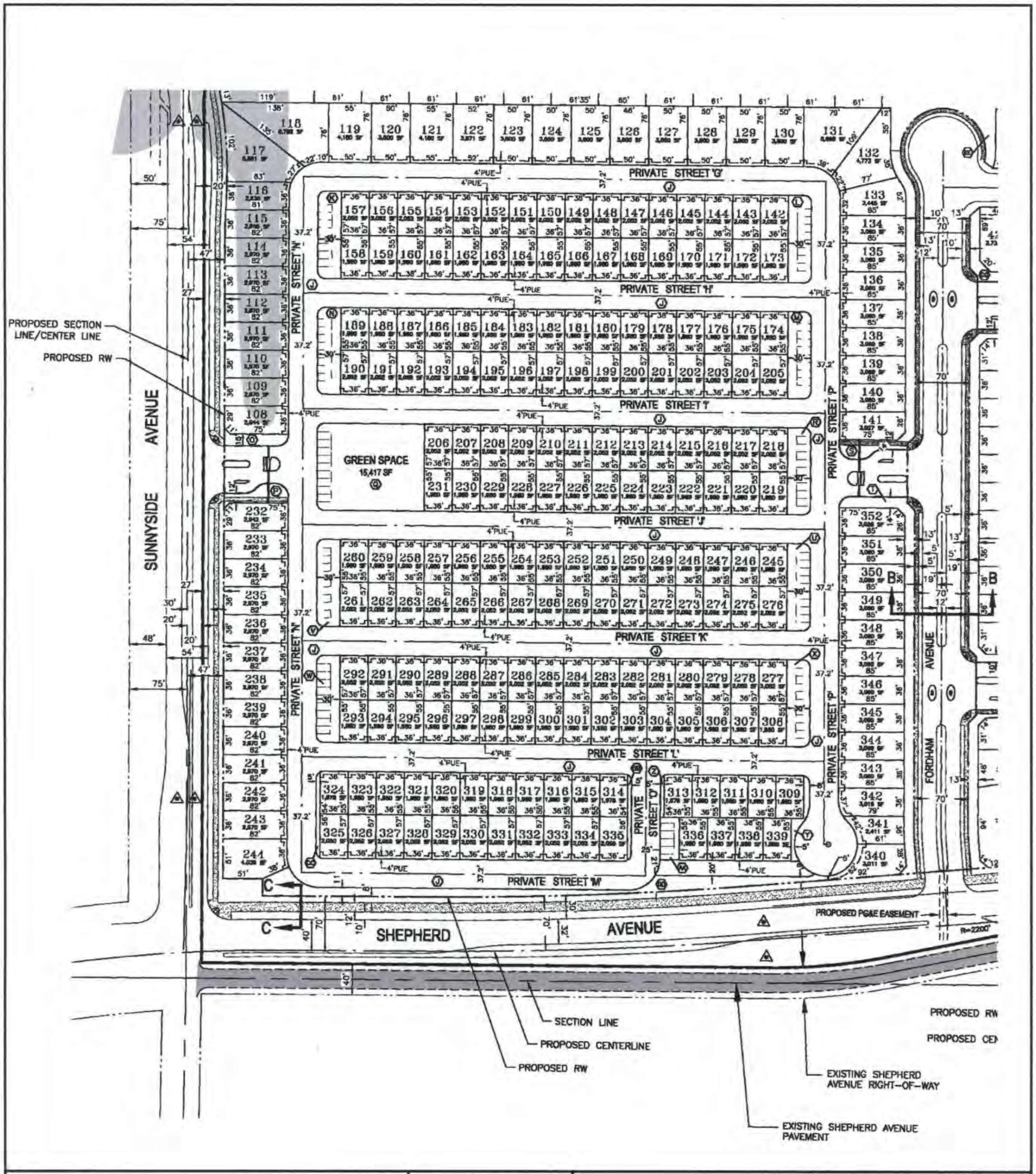

Shepherd North Project

FIGURE 7: TENTATIVE SUBDIVISION MAP SOUTHWEST

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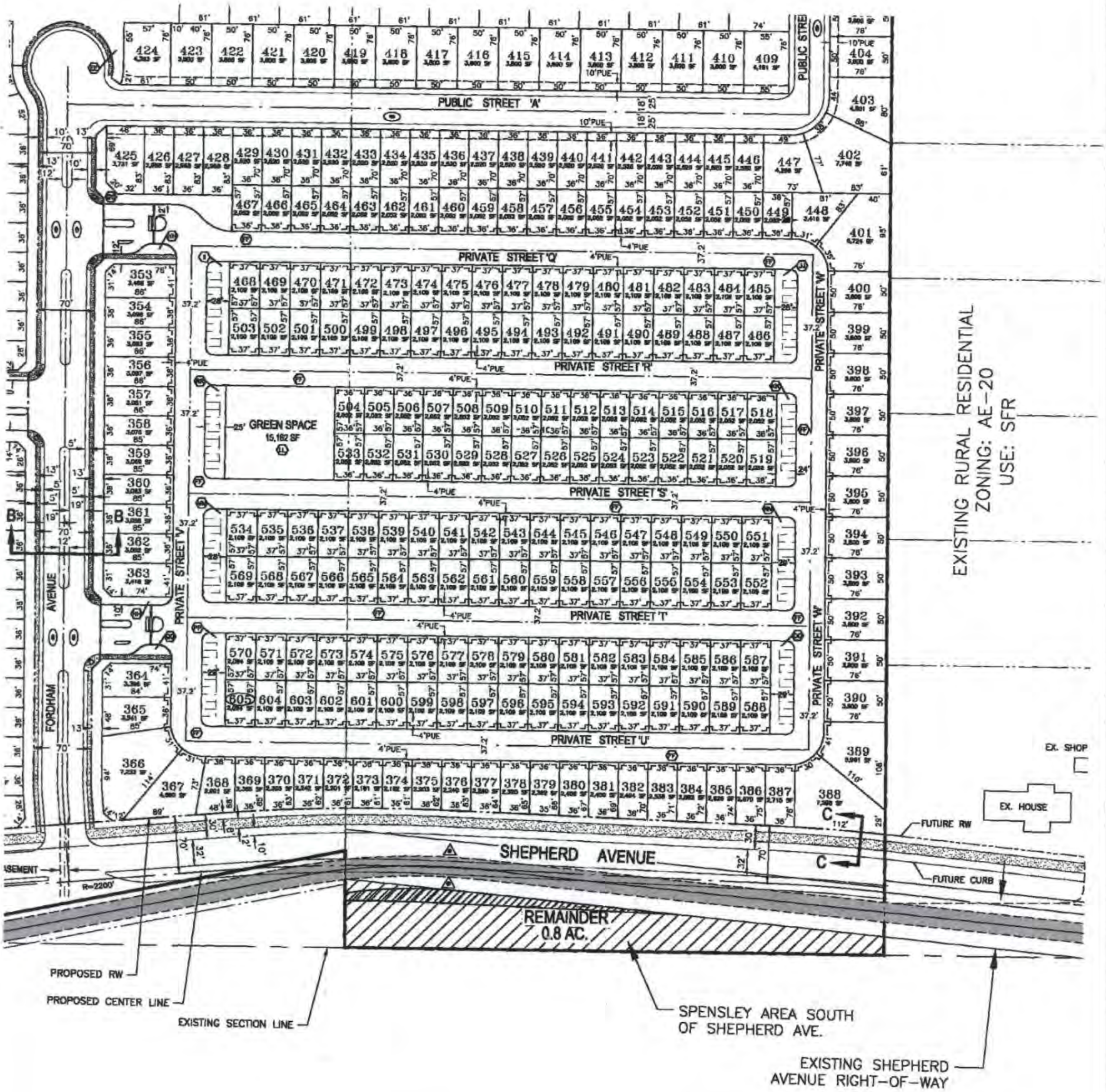

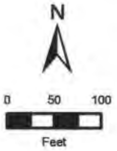

Shepherd North Project

FIGURE 8: TENTATIVE SUBDIVISION MAP SOUTHEAST

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STATE REGULATIONS

State historic preservation regulations affecting this project include the statutes and guidelines contained in the California Environmental Quality Act (CEQA; Public Resources Code sections 21083.2 and 21084.1 and sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA Section 15064.5 requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. Public Resources Code Section 21098.1 further cites: A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

An “historical resource” includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript that is historically or archaeologically significant (Public Resources Code section 5020.1).

Advice on procedures to identify such resources, evaluate their importance, and estimate potential effects is given in several agency publications such as the series produced by the Governor’s Office of Planning and Research (OPR), *CEQA and Archaeological Resources,* 1994. The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including, but not limited to, museums, historical commissions, associations and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains (California Health and Safety Code Section 7050.5, California Public Resources Codes Sections 5097.94 et al).

The California Register of Historical Resources (Public Resources Code Section 5020 et seq.)

The State Historic Preservation Office (SHPO) maintains the California Register of Historical Resources (CRHR). Properties listed, or formally designated as eligible for listing, on the National Register of Historic Places are automatically listed on the CRHR, as are State Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

For the purposes of CEQA, an historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources. When a project will impact a site, it needs to be determined whether the site is an historical resource. The criteria are set forth in Section 15064.5(a) (3) of the CEQA Guidelines, and are defined as any resource that does any of the following:

A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

B. Is associated with the lives of persons important in our past;

C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

D. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, the CEQA Guidelines, Section 15064.5(a) (4) states:

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

California Health and Safety Code Sections 7050.5, 7051, And 7054

These sections collectively address the illegality of interference with human burial remains, as well as the disposition of Native American burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures.

California Public Resources Code Section 15064.5(e)

This law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction. The section establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project and establishes the Native American Heritage Commission as the entity responsible to resolve disputes regarding the disposition of such remains.

Assembly Bill 52

Assembly Bill (AB) 52 establishes a formal consultation process for California tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts. AB 52 defines a "California Native American Tribe" as a Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission. AB 52 requires formal consultation with California Native American Tribes prior to determining the level of environmental document if a tribe has requested to be informed by the lead agency of proposed projects. AB 52 also requires that consultation address project alternatives, mitigation measures, for significant effects, if requested by the California Native American Tribe, and that consultation be considered concluded when either the parties agree to measures to mitigate or avoid a significant effect, or the agency concludes that mutual agreement cannot be reached. Under AB 52, such measures shall be recommended for inclusion in the environmental document and adopted mitigation monitoring program if determined to avoid or lessen a significant impact on a tribal cultural resource.

CULTURAL SETTING

Archeology

The Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data, but the emphasis has been in the northern portion of the valley. In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and excavation were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmiller site (CA-SAC-107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

In the southern San Joaquin Valley, with the exception of Hewes's excavation at CA-FRE-48 (the Tranquility Site), the foci of early investigations have been the old shorelines of the interior lakes; Tulare, Kern, and Buena Vista. In 1899, Dr. P. M. Jones directed fieldwork in the Buena Vista-Tulare Lake area of Kern County. Jones investigated 150 mounds and conducted trenching of several sites including CA-KER-53. In 1909, N. C. Nelson investigated prehistoric Site CA-KER-49, which is located to the west of Buena Vista Lake. Later, four surveys and excavations were conducted in the same locale under the auspices of the University of California. A compilation of these investigation results was published in 1926 by Gifford and Schenck.

As a result of this early work, an elaborate culture complex was defined for the late prehistoric period. This complex can be ascribed probably to the Yokuts and their direct ancestors. The material culture of this late temporal period complex included steatite vessels and beads, finely-made projectile points, pottery, shaped stone mortars, *Tivela* disc beads, use of asphaltum, and the presence of metates and manos. Flexed burials were the predominant interment mode. Earlier complexes underlying the late cultural expressions were represented by chipped stone crescents, large projectile points, atlatl spurs, and weights. Mortuary practices, generally thought to be related, include extended rather than flexed burial position, a situation analogous to that of the northern valley (Gifford and Schenck 1926; Lillard, Heizer, and Fenenga 1939; Moratto 1972).

Presence of “Early Man,” although not found in direct association with extinct animals, is demonstrated by the frequency of chipped stone crescents and fluted points similar to those of the Clovis-Folsom Complex in the American Southwest. Although fluted points have been found near the shores of Tulare Lake, an area that has also produced surface finds of extinct mammal bone of Pleistocene age, the association is not substantiated by controlled excavations and remains speculative (Riddell and Olsen 1969). Most of the point collection had been acquired by D. Witt over a period of 30 years.

Under the direction of Wedel (1941), the Civil Works Administration, in conjunction with the Smithsonian Institution, initiated the first major excavations using stratigraphic controls. Investigations of CA-KER-39 and CA-KER-60 as well as several smaller sites near Buena Vista Lake produced evidence of two distinct cultural entities or occupation periods. Wedel lacked methods for dating these two entities by cross-comparison of the assemblages, he tentatively stated that the early occupation at Buena Vista Lake appeared to be temporally older and less developed than the Early Horizon (Windmiller Pattern) of the Delta region. He compared this early component to the Oak Grove or Milling Stone culture of the Santa Barbara area (Rogers 1939). He divided the later cultural entity into two distinct phases, both clearly distinguished from the earlier cultural phase by artifact types. Wedel (1941:144-145) estimated that neither of these cultural periods exceeded 1500 B.P. (years Before the Present). Later, other investigators proposed far earlier ages for these early occupations, with dates ranging from 2000 to 7000 B.P. (Baumhoff and Olmstead 1963, 1964; Heizer 1964; Meighan 1959).

Later investigations in 1963 and 1964 at CA-KER-116 near Buena Vista Lake produced materials similar to Wedel’s early occupation. These materials occurred in the lower levels of the “upper deposit,” while an even deeper cultural deposit yielded materials similar to those of the San Dieguito Complex. Artifacts included a chipped stone crescent, crude point fragments, and an atlatl spur. Radiocarbon age determinations on shell from the lowest cultural levels returned a date of circa 8200 B.P. (Fredrickson and Grossman 1966, 1977; Fredrickson 1967).

Despite the previously mentioned investigations, the prehistory of the southern San Joaquin remains as yet poorly understood, without a tightly defined chronological sequence of cultural development.

Ethnology

Ethnographic literature is often uncertain in definition of cultural boundaries for Indian groups. Early displacement by white intrusion resulted in population shifts to avoid conflict with the Spanish, and later with the miners and settlers. The ravages of disease and warfare decimated the native people, further weakening cultural identity. Informants were often uncertain of original territories of the various tribal groupings.

The Foothill Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

The Foothill Yokuts were a group of about 15 named tribes who occupied the western Sierra Nevada foothills from the Fresno River to the Kern River. A further subdivision separated the groups into northern, central and southern groups. The area controlled by individual groups varied over time. There is no information to indicate that there was a village in the project vicinity, but this does not preclude the possibility.

Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs which formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925). The housepit depressions ranged in diameter from between 3 to 18 meters.

Latta (1949:99) reported that a village of 200 to 300 Yokuts might have four or five large houses that were used for ten or twelve years or until a family member died, at which time the Indians burned the house in which the death had occurred. If a sick or aged person died outside the dwelling, the family did not burn the house. When a Northern Yokuts died, his body was cremated or buried in a flexed position. Southern tribes normally buried their dead, although they did cremate shamans, persons who died away from their village and, among the Tachi, persons of great importance.

The Yokuts experienced severe depopulation after contact with the Spanish and subsequent explores. The most devastating impacts of the Spanish colonization effort were not the result of military conflicts, but came from Old World diseases newly introduced to the native people.

Historical Context

Early Explorations

The early recorded inhabitants of the region were members of the Yokuts tribe. Although the Spanish missions were established closer to the Pacific coast between 1769 and 1817, the general project area was first visited in the early 1800s by Spanish explorers, who visited the San Joaquin Valley with three goals: to search for runaway neophytes from the missions in the coastal regions, to punish the Indian raiders, and to select sites for new missions. In 1806, a group led by Gabriel Moraga and Father Pedro Muñoz, left Mission San Juan Bautista heading north to about the Mokelumne River. They then turned south, and travelled along the edge of the mountains crossing the San Joaquin River and passing through Tejon Pass, arriving at Mission San Fernando. In 1815, José Dolores Pico marched an expedition group from Monterey into the region. Following the San Joaquin River, he passed through the area in search of runaways, traveling as far south as the Kern River. The expedition returned to the starting point in Monterey with nine prisoners and a number of horses.

After control of California passed from Spain to Mexico in 1822, Mexican explorations into the interior continued, with José Dolores Pico conducting a major expedition along the San Joaquin River in 1825-1826. This expedition was considered successful in that some neophytes were captured, hostile Indians killed, some of the tribal groups intimidated, and some stolen horses recovered. In 1828, Sebastián Rodríguez led a similar expedition into the same region. His expedition captured a number of neophytes as well as some of the stolen horses, an item that had become an important dietary staple for the Indian tribes in the San Joaquin Valley region (Beck and Haase 1974).

The expeditions did not leave physical evidence, but there were definitely effects to the Native American populations. Causing even more of an effect on the native population were the diseases brought in to the Native populations of the Central Valley in the early 1830s.

Ranchos

In Fresno County, there was only one early land grant, a rancho along the current southern border of the county: Laguna de Tache. The era of the Spanish and Mexican land grants did not directly affect the project area.

Clovis

The extension of the railroad system throughout the San Joaquin Valley allowed the increased expansion of a market for the agricultural production of the region. A branch line of the Southern Pacific Railroad (first known as the Pollasky Railroad or the San Joaquin Railroad) was built through this region circa 1891. Marcus Pollasky served as the promoter, and monies were raised locally for the construction costs. Clovis Cole, the owner of the large wheat ranch, donated land for the route, and a station was established here on the line and named Clovis (Gudde 1969; City of Clovis 1962).

After the completion of the railroad, the construction of the flume from Shaver Lake to the east was soon completed by the Fresno Flume and Irrigation Company. The 45-mile-long flume could deliver 200,000 board feet of lumber through the vee-shaped watercourse in a 24-hour period. At the end of the flume, there was a finishing and distributing plant. Other, better grade lumber was delivered to Clovis down Tollhouse Grade, hauled by ox and horse teams. In the early years, 140 men were employed by the lumber company, with an annual payroll of $450,000. The Clovis lumber plant occupied a 40 acre site. The factory, warehouse, planing mill and engine house all burned to the ground in 1898, but were soon rebuilt. As many as 400 men were employed by the company. The mill was located on the south side of Fifth Street (City of Clovis 1962; Clovis Centennial Book Committee 2011).

The mill in Clovis produced "ordinary lines of lumber," shakes, trays, sweat boxes, raisin boxes, orange boxes, cedar posts, ties, poles, and also pine and oak cordwood (*Fresno Republican* 1897: 96). The ever increasing agricultural use of the San Joaquin Valley, due to improvements and expansion of irrigation systems, led to a large market for the fruit packing boxes, allowing shipment of the produce to a wider marketplace.

Clovis was laid out by a licensed surveyor, working for the co-owners of the land: Clovis Cole, Clarence Pallos and George Owen. Early homes were utilitarian, and the streets were ungraded (City of Clovis 1962).

The town's population expanded rapidly from about 500 residents in 1905 to about 1,000 in 1910. Nearby, the population was increasing within the local rural agricultural colonies, with large acreages broken up into 20 acre tracts advertised for sale to Midwesterners. By 1919, local population had grown to 1,500. At this point, the lumber business is still the main support of the economy, but the area produced huge crops of Malaga grapes and figs (Clovis Centennial Book Committee 2011; Vandor 1919:269)

For the first 21 years, there was no organized government in Clovis. Late in 1911, and election was held, and the City incorporated in 1912. Most of the early businesses in town were located on Front Street, now known as Clovis Avenue, on the west side of the tracks (City of Clovis 1962).

Historical Background for the Development Area

The early use of land in the Big Dry Creek region was for cultivation of wheat. Improvements such as the development of the railroad, allowing marketing of more perishable crops, and irrigation canals, providing a steady source of water year round, also encouraged the growth of crops such as grapes. The establishment of orchards and vineyards allowed more profitability with smaller tracts of land, and many pieces of land were subdivided as portions of agricultural colonies.

Much of the project site is a portion a 160-acre tract first acquired by Rebecca Wilson Norman Strother in 1873 as a land patent. Strother had been born in Mississippi in 1818, and had eight daughters and one son, who died as a child, with her husband. He died in Mississippi in 1868, and she travelled west to Fresno County. Mrs. Strother apparently did not reside on the land, but likely transferred ownership to one of her daughters who did choose to live in the region.

In 1880, Mrs. Strother lived in Santa Rosa with two of her unmarried daughters (Federal census 1880). Her will was prepared at this time, leaving her estate to the two unmarried daughters, and specifically excluding the married daughters. She died in 1883.

One of the daughters, Laura Strother, also acquired land in the area, the land immediately north of the Project site consisting of the northwest quarter of section 21.

William Shipp was married to a Strother daughter, Mary. He brought his family to California in 1868. The Shipps acquired large tracts of land in the Big Dry Creek area, and ran large herds of sheep. It appears that this land may have been part of the Shipp place.

Early maps show the Enterprise Canal near the Project Area. The Enterprise Canal had been constructed by 1891, south of the Project site (Thompson 1891).

In 1891, R. T. Owen owned the south half of section 21, including the land of the Project site. In 1892, he lived in the Temperance Township according to voter records, so it cannot be certain where precisely he lived without further research.

Owen, his father and brother had been farmers and ranchers in the area. He continued to raise grain in the region until 1902. The 1891 map shows a building to the east of the current building on Owen's holding. A 1919 biography describes the R.T. Owen residence as "the first fine house in Clovis," suggesting he lived closer to the early townsite after he sold the project area.

By 1907, the south half of section 21 and the northeast quarter of the section had been acquired by Hugh Bissell (Official County Map 1907).

Hugh Bissell, a native of Iowa, had farmed for a number of years in Missouri, and came to California in 1885. He first settled in Modesto, then a year later, moved to Fresno County. He had a ranch near Fresno, that he sold in 1898. He leased a tract of about 3,000 acres for dry grain farming. He quit grain farming in 1906, and purchased 320 acres of what was known as the Shipp place for $20 an acre. Bissell also purchased the northeast quarter of the section, so his ranch totaled 480 acres. Bissell wanted to improve the land for intensive farming, so he sank wells and found that the water readily came to the ground surface. Even though others thought it impossible, he installed a pumping plant for irrigation. With a six-inch centrifugal pump, run by a twenty-horsepower engine, he was able to irrigate the land, and set up the first vineyard above the ditch. He made a success of the vineyard and the orchard on the property, later irrigated by a total of three pumping plants (Vandor 1919; Official Map of Fresno County 1907).

In 1910, the residents of the Project Area included High Bissell, a widower since 1908, his daughter-in-law (widowed in 1909), his grandson William, son Ralph, six hired men, and a house servant (Federal Census 1910). It is not certain where the residents were housed on the property. The large residence appears to date to about 1915.

At various points, Bissell sold off portions of the ranch, and in 1919, had 160 acres, including the much of the Project site. The land had increased in value from $20 an acre to $750 an acre.

In a 1919 biography, Bissell was credited with having developed “a wonderfully productive and valuable place, and erecting a large comfortable residence, constructed of cement blocks, making it one of the show places of the district.”

As well as his involvement in viticulture and horticulture, Bissell served as a director for the National Bank of Clovis. Bissell also served with various groups related to the production of raisins (Vandor 1919).

The family remained on the property until an unknown date. By 1920, Hugh Bissell had moved to Fresno. By 1930, his son Raymond had moved with his family to Madera. The later history of ownership and use of the residence is not known. It currently houses an employee and family of the former landowner, Cal Pecan.

ENVIRONMENTAL SETTING

The Development Area portion of the project area contains a mosaic of six soil series with the northern most San Joaquin loam, with Ramona loam located to the south of that. Atwater sandy loam is located to the south and west of Ramona loam along the western edge. Grangeville fine sandy loam and Grangeville fine sandy loam saline alkali occupies the southern portion with Visalia sandy loam in a pocket in the southeast portion (www.usds.gov).

San Joaquin loam is derived from decomposed granite deposited by alluvial action. It is up to five feet thick with a restricted layer (hardpan) at about three feet in depth. Ramona loam is also derived from decomposed granite deposited by alluvial action. It is slightly shallower than neighboring San Joaquin loam but has a much more pronounced restrictive layer also at a depth of about three feet (www.usda.gov)

Grangeville fine sandy loam and Grangeville fine sandy loam saline alkali are both derived from decomposed granite with the saline alkali series being a more recent deposition. Both soil series average about 80 inches in depth with no restrictive layer present. Visalia sandy loam, like its neighbor to the north, Grangeville fine sandy loam saline alkali is also recently deposited decomposed granite and is about five feet thick with no restrictive layer present (www.usda.gov).

San Joaquin loam was deposited during the Early to Mid-Pleistocene and is considered to have a very low potential for buried cultural resources. Atwater sandy loam was deposited during the Late Pleistocene and is thought to have a low potential for buried cultural resources (Rosenthal and Meyer 2004: Appendix D).

Grangeville fine sandy loam and Grangeville fine sandy loam saline alkali were deposited very recently during the historic period and are believed to have a very high sensitivity for buried cultural resources (Rosenthal and Meyer 2004: Appendix D).

The Development Area portion of the project area has no surface water however Dry Creek is located adjacent to the southern boundary. Overall, the northern portion has a low sensitivity for buried cultural resources while the southern portion near Dry Creek has a moderate to high potential based on the much more youthful age of the sediments and setting adjacent to Dry Creek.

RESEARCH

A record search has been conducted for the North Shepherd Project site and a 0.25-mile radius through the South San Joaquin Valley Information Center of the California Historical Resources Information System (RS#22-461, Appendix 2).

The project area includes one recorded resource, P-10-07197. Formerly, the site was a 1909 residence, recorded in 2017 by Peak & Associates. The residence has been removed from the property, and the former location appears to lie in a non-development area, not proposed for housing.

Within the search area radius, there are three recorded resources, all historic period resources. They include: P-10-005511, two branches of the Helm Colonial Ditch; P10-005934, a section of the Enterprise Canal; and P-10-007198, a residence at 4707 N. Preuss Avenue.

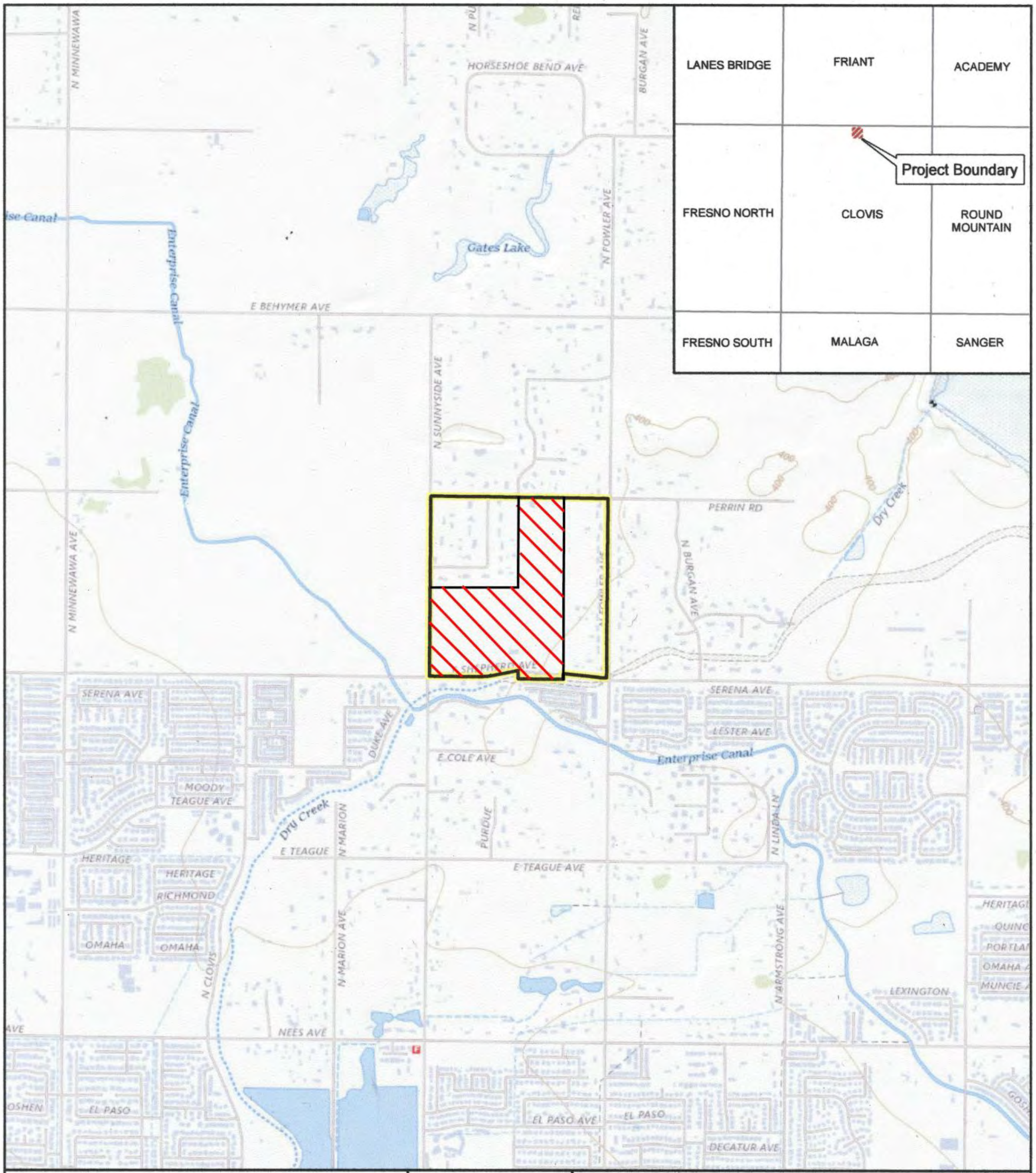
Four surveys surveys have been reported within the Project site. Bissonette's 1993 survey is shown to have included hundreds of acres of land in the region including the Project site. We believe it is not plotted correctly by the SSJVC, in part due to the lack of a survey coverage map in the report (FR-01219). Bissonette only spent two days doing fieldwork, and said she walked along the pipelines and channel routes with transects and within a five meter radius of proposed culverts.

Varner reportedly surveyed the major portion of the Development Area in 2001 with negative findings. He did note the presence of the historic building (FR-02203), but did not record it during his survey.

Peak & Associates conducted a complete, intensive survey of the Development Area in 2017 (FR-3009), recording the historic residence at the southern boundary (Figure 9). One other negative survey for a cell tower was conducted by Lossee in 2006 (FR-02285) in the eastern portion of the Project site. Several cultural resource surveys have been conducted in the vicinity of the Project site. Full report citations and survey locations are included in Appendix 2.

RECOMMENDATIONS

Although no prehistoric sites were found during the survey of the Development Area, there is a slight possibility that a site may exist and be totally obscured by vegetation, fill, or other historic activities, leaving no surface evidence. In particular, the former location of the residence adjacent to the natural



LEGEND

▭ Project Boundary

▨ Complete Intensive Survey Coverage (Development Area)

N

0 400 800
Feet

Sources: Fresno County GIS, ArcGIS Online USGS Topographic Map Service.
Map date: April 7, 2022

Shepherd North Project

FIGURE 9: SURVEY COVERAGE

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course of Dry Creek and the southern section of the Development Area is sensitive. An archeological monitor is advised during any grading and trenching in the southern portion, particularly near the former location of the residence.

Should artifacts or unusual amounts of stone, bone, or shell be uncovered during construction activities, an archeologist should be consulted for on-the-spot evaluation of the finding. If the bone appears to be human, state law requires that the Fresno County Coroner be contacted. If the Coroner determines that the bone is human and is most likely Native American in origin, he must contact the Native American Heritage Commission (916-322-7791).

If additional parcels in the Project site are to be developed in the future, a cultural resources survey shall be conducted to identify and evaluate any prehistoric or historic period resources that may be present.

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APPENDIX 1

Resume

PEAK & ASSOCIATES, INC.
RESUME

MELINDA A. PEAK **January 2023**
Senior Historian/Archeologist
3941 Park Drive, Suite 20 #329
El Dorado Hills, CA 95762
(916) 939-2405

PROFESSIONAL EXPERIENCE

Ms. Peak has served as the principal investigator on a wide range of prehistoric and historic excavations throughout California. She has directed laboratory analyses of archeological materials, including the historic period. She has also conducted a wide variety of cultural resource assessments in California, including documentary research, field survey, Native American consultation and report preparation.

In addition, Ms. Peak has developed a second field of expertise in applied history, specializing in site-specific research for historic period resources. She is a registered professional historian and has completed a number of historical research projects for a wide variety of site types.

Through her education and experience, Ms. Peak meets the Secretary of Interior Standards for historian, architectural historian, prehistoric archeologist and historic archeologist.

EDUCATION

M.A. - History - California State University, Sacramento, 1989
Thesis: *The Bellevue Mine: A Historical Resources Management Site Study in Plumas and Sierra Counties, California*
B.A. - Anthropology - University of California, Berkeley

PROJECTS

In recent years, Ms. Peak has led the team completing the cultural resource sections for General Plan and General Plan Updates, for a number of cities/neighborhoods including Campbell, Milpitas, Yountville, Manteca, The Springs, Sebastopol, Martinez, Brentwood, Colusa County and Foster City. Older General Plan efforts include Wheatland, Rocklin, Sheridan, Granite Bay and South Sutter County.

In recent months, Ms. Peak has completed a number of determinations of eligibility and effect documents in coordination with the Corps of Engineers for projects requiring federal permits, assessing the eligibility of a number of sites for the National Register of Historic Places.

She has also completed historical research and historic site evaluation projects on a wide variety of topics for a number of projects including the development of a winery in a ranch in Folsom, commercial buildings in the City of Davis, a lumber mill in Clovis, levees, warehouses, older farmhouses dating to the 1860s, an early roadhouse, bridges, canals, a former small-town site, and a section of an electric railway line.

In recent years, Ms. Peak has prepared a number of cultural resource overviews and predictive models for blocks of land proposed for future development for general and specific plans. She has been able to direct a number of surveys of these areas, allowing the model to be tested.

Ms. Peak completed the cultural resource research and contributed to the text prepared for the DeSabla-Centerville PAD for the initial stage of the FERC relicensing. She also served cultural resource project manager for the FERC relicensing of the Beardsley-Donnells Project. For the South Feather Power Project and the Woodleaf-Palermo and Sly Creek Transmission Lines, her team completing the technical work for the project.

She served as principal investigator for the multi-phase Twelve Bridges Golf Club project in Placer County. She served as liaison with the various agencies, helped prepare the historic properties treatment plan, managed the various phases of test and data recovery excavations, and completed the final report on the analysis of the test phase excavations of a number of prehistoric sites.

Ms. Peak has served as project manager for a number of major survey and excavation projects in recent years, including the many surveys and site definition excavations for the 172-mile-long Pacific Pipeline proposed for construction in Santa Barbara, Ventura and Los Angeles counties. She also completed an archival study in the City of Los Angeles for the project, and served as principal investigator for a major coaxial cable removal project for AT&T.

Additionally, she completed a number of small surveys, served as a construction monitor at several urban sites, and conducted emergency recovery excavations for sites found during monitoring. She has directed the excavations of several historic complexes in Sacramento, Placer and El Dorado Counties.

Ms. Peak is the author of a chapter and two sections of a published history (1999) of Sacramento County, *Sacramento: Gold Rush Legacy, Metropolitan Destiny*. She served as the consultant for a children's book on California, published by Capstone Press in 2003 in the Land of Liberty series.

APPENDIX 2

SSJVIC Record Search

California
Historical
Resources
Information
System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley
California State University, Bake
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

12/20/2022

Robert Gerry
Peak & Associates, Inc.
3941 Park Drive Ste 30-329
El Dorado Hills, CA 95762

Re: Clovis North/Shepherd Project Area
Records Search File No.: 22-461

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on the Clovis USGS 7.5' quad. The following reflects the results of the records search for the project area and the 0.25 mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ GIS data

Resources within project area:	P-10-007197
Resources within 0.25 mile radius:	P-10-005511, 005934, 007198
Reports within project area:	FR-01219, 02203, 02285, 03009
Reports within 0.25 mile radius:	FR-00107, 00293, 00534, 01849, 01869, 02289, 02490, 03015, 03067

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed

Resource Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed

Report Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed

Report Copies: ☒ enclosed ☐ not requested ☐ nothing listed

OHP Built Environment Resources Directory: ☒ enclosed ☐ not requested ☐ nothing listed

Archaeological Determinations of Eligibility: ☐ enclosed ☐ not requested ☒ nothing listed

CA Inventory of Historic Resources (1976): ☐ enclosed ☒ not requested ☐ nothing listed

Caltrans Bridge Survey: Not available at SSJVIC; please see https://dot.ca.gov/programs/environmental-analysis/cultural-studies/california-historical-bridges-tunnels

Ethnographic Information: Not available at SSJVIC

Historical Literature: Not available at SSJVIC

Historical Maps: Not available at SSJVIC; please see http://historicalmaps.arcgis.com/usgs/

Local Inventories: Not available at SSJVIC

GLO and/or Rancho Plat Maps: Not available at SSJVIC; please see http://www.glorecords.blm.gov/search/default.aspx#searchTabIndex=0&searchByTypeIndex=1 and/or http://www.oac.cdlib.org/view?docId=hb8489p15p;developer=local;style=oac4;doc.view=items

Shipwreck Inventory: Not available at SSJVIC; please see https://www.slc.ca.gov/shipwrecks/

Soil Survey Maps: Not available at SSJVIC; please see http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

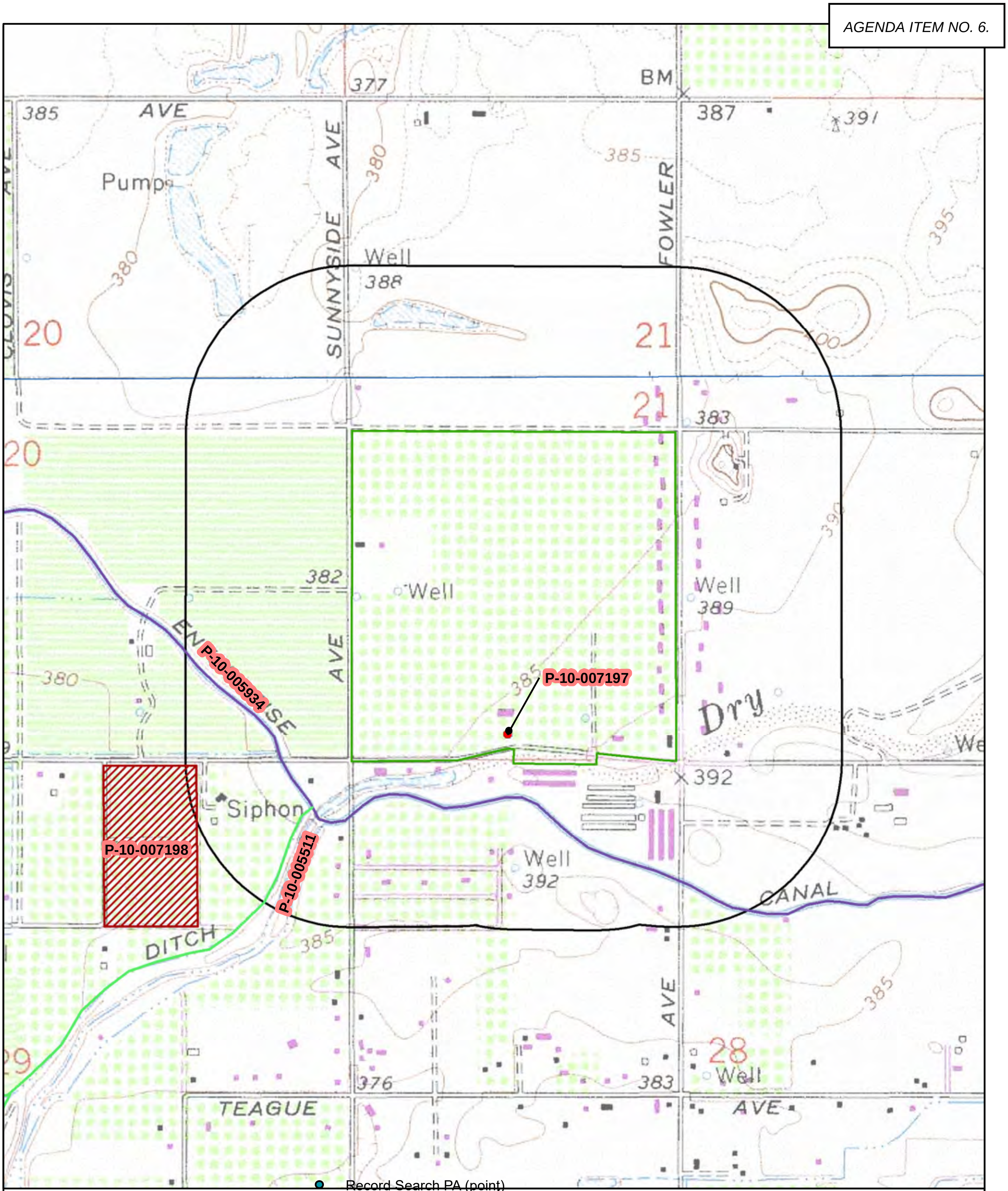
Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Jeremy E David
Assistant Coordinator



● Record Search PA (point)

May depict confidential cultural resource locations.
Do not distribute.

🟩 Project Area

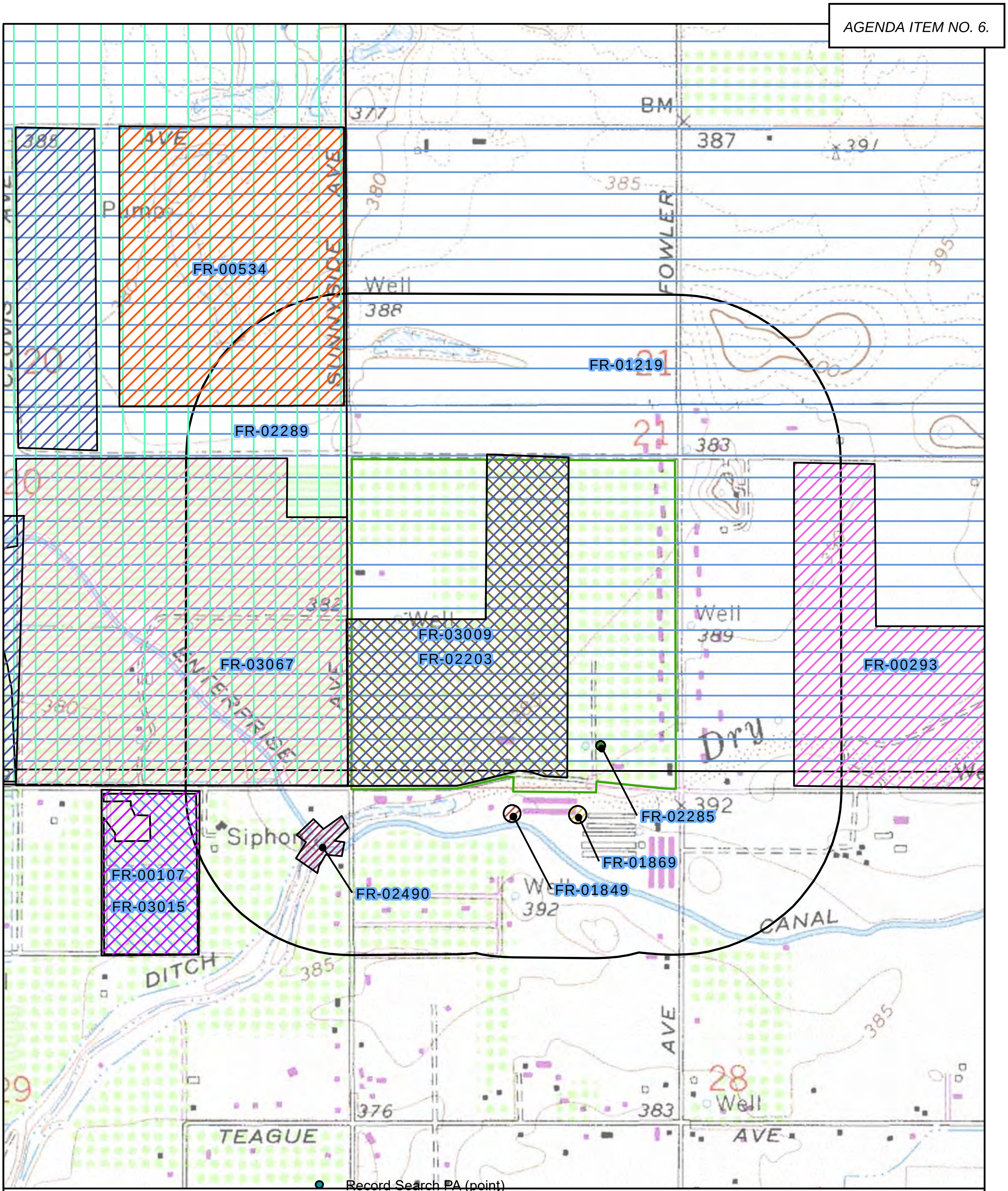
☐ Record Search radius

Resource Map
SSJV Information Center Record Search 22-461
Requester: Robert Gerry, Peak & Associates, Inc.
Project Name: Clovis North/Shepherd Project Area
USGS 7.5' Quad(s): Clovis
County: Fresno

Resource List

SSJVIC Record Search 22-461

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-10-005511	CA-FRE-003344H	Resource Name - West Branch Helm Colonial Ditch; Resource Name - Helm Colonial Ditch (South Branch); OHP PRN - FHWA050808S	Structure	Historic	HP20	2005 (Wendy M. Nettles, Applied EarthWorks, Inc.); 2019 (Carlos van Onna, Applied EarthWorks, Inc.)	FR-02123, FR-02997
P-10-005934	CA-FRE-003564H	Resource Name - Enterprise Canal; OTIS Resource Number - 534499; OHP Property Number - 163775	Structure	Historic	HP20	2007 (R. Baloian, Applied EarthWorks, Inc.); 2013 (Randy Baloian, Applied EarthWorks, Inc.); 2017 (Ward Stanley and Randy Baloian, Applied EarthWorks, Inc.)	FR-02615, FR-02919, FR-03067
P-10-007197		Resource Name - 5230 E. Shepherd Avenue, Clovis	Building	Historic	HP02	2017 (Michael Lawson, Peak & Associates, Inc.)	FR-03009
P-10-007198	CA-FRE-003901H	Resource Name - 4707 N. Preuss Avenue (AE-4027-01); Other - 4707 East Shepherd Avenue (historical)	Building, Structure	Historic	HP02; HP33	2019 (Annie McCausland, Applied EarthWorks, Inc.)	FR-03015



● Record Search PA (point)

🟩 Project Area

☐ Record Search radius

May depict confidential cultural resource locations.
Do not distribute.

0 0.05 0.1 0.2 Miles

0 0.075 0.15 0.3 Kilometers

N

Reports Map
SSJV Information Center Record Search 22-461
Requester: Robert Gerry, Peak & Associates, Inc.
Project Name: Clovis North/Shepherd Project Area
USGS 7.5' Quad(s): Clovis
County: Fresno

Report List

SSJVIC Record Search 22-461

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
FR-00107	NADB-R - 1141375	1977	Beck, Allen C.	Archeological Reconnaissance of the Proposed Sobaje land Development, Tentative Tract No. 4042; Environmental Assessment No. 3418	Consulting Archaeologist	
FR-00293	NADB-R - 1140567	1993	Bissonnette, Linda Dick	Phase I Cultural Resources Assessment for the Eagle Gate Corporation Subdivision, Shepherd Avenue Near Fowler Avenue, Fresno County	Cultural Resources Consulting	
FR-00534		1991	Jones & Stokes Associates, Inc.	Archaeological Survey Report for the Behymer Lake Storm Drainage and Flood Control Project Initial Study	Jones & Stokes Associates, Inc.	
FR-01219		1993	Bissonnette, Linda Dick	Fresno Metropolitan Flood Control District Drainage Area "BY" Facilities	Cultural Resources Consulting	
FR-01849	Submitter - CV-607-C1	2000	Pastron, Allen G. and Brown, R. Keith	Historical and Cultural Resource Assessment for a Proposed Telecommunications Facility, Site No. CV-607-C1, 8901 Fowler Avenue, Fresno County, California	Brown & Mills, Inc.	
FR-01869		2001	Nadolski, John A.	Archaeological Investigations for Tower modifications at 34 Cell Tower Sites	Pacific Legacy, Inc.	
FR-02203		2006	Varner, Dudley M.	A Cultural Resource Study of the Battlin Brooks Property, Fresno County, California	Varner Associates	
FR-02285		2006	Losee, Carolyn	New Tower Submission Packet, FCC Form 620, for 5388 East Shepard Avenue	Archaeological Resources Technology	
FR-02289		2006	Nettles, Wendy M. and Baloian, Randy	Cultural Resources Reconnaissance Survey of the City of Clovis Northwest Urban Center Specific Plan Area, Fresno County, California	Applied EarthWorks, Inc.	10-006109
FR-02490	Submitter - Project No. 10-SCAO-015	2009	Chotkowski, Michael A.	Section 106 Compliance for Enterprise Canal at Big Dry Creek Improvement Project, Fresno County, California	Bureau of Reclamation	
FR-03009	Submitter - Job #17-093	2017	Peak, Melinda A.	Cultural Resource Assessment for the Tract 6205, City of Clovis Fresno County, California	Peak & Associates, Inc.	10-007197
FR-03015	Other - Record Search 19-104	2019	Ottenhoff, Randy, McCausland, Annie, and Dyste, Diana T.	Cultural Resource Inventory and Evaluation for the Lennar Tract 6263 Residential Development, City of Clovis, Fresno County, California	Applied EarthWorks, Inc.	10-007198
FR-03067		2018	Stanley, Ward, Baloian, Randy, and Baloian, Mary	Cultural Resource Inventory and Evaluation for the Tract 6200 Development in the City of Clovis, Fresno County, California	Applied EarthWorks, Inc.	10-005934

Appendix F

Geotechnical

GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED TRACT 6205 (SPENSLEY PROPERTY)
SUNNYSIDE AND SHEPHERD AVENUES
CLOVIS, CALIFORNIA

PROJECT NO. 012-18204
JANUARY 24, 2019

Prepared for:

MR. JEFFREY HARRIS
WILSON HOMES
7550 N. PALM AVENUE, STE 102
FRESNO, CALIFORNIA 93711

Prepared by:

KRAZAN & ASSOCIATES, INC.
GEOTECHNICAL ENGINEERING DIVISION
215 WEST DAKOTA AVENUE
CLOVIS, CALIFORNIA 93612
(559) 348-2200

Krazan & ASSOCIATES, INC.

GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

January 24, 2019

KA No. 012-18204

Mr. Jeffrey Harris
Wilson Homes
7550 N. Palm Avenue, Ste 102
Fresno, California 93711

RE: Geotechnical Engineering Investigation
Proposed Tract 6205 (Spensley Property)
Sunnyside and Shepherd Avenues
Clovis, California

Dear Mr. Harris:

In accordance with your request, we have completed a Geotechnical Engineering Investigation for the above-referenced site. The results of our investigation are presented in the attached report.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (559) 348-2200.

DAVID R. JAROSZ II
NO. 2698
EXP. 6/30/2020

Respectfully submitted,
KRAZAN & ASSOCIATES, INC.

David R. Jarosz, II
Managing Engineer
RGE No. 2698/RCE No. 60185

DRJ:ht

Krazan & ASSOCIATES, INC.

GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

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Krazan & ASSOCIATES, INC.

GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

January 24, 2019 KA Project No. 012-18204

GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED TRACT 6205 (SPENSLEY PROPERTY)
SUNNYSIDE AND SHEPHERD AVENUES
CLOVIS, CALIFORNIA

INTRODUCTION

This report presents the results of our Geotechnical Engineering Investigation for the proposed Residential Development, identified as Tract 6205 (Spensley Property) to be located at the northeast corner of Sunnyside Avenue and Shepherd Avenue in Clovis, California. Discussions regarding site conditions are presented herein, together with conclusions and recommendations pertaining to site preparation, Engineered Fill, utility trench backfill, drainage and landscaping, foundations, concrete floor slabs and exterior flatwork, retaining walls, soil cement reactivity and pavement design.

A site plan showing the approximate boring locations is presented following the text of this report. A description of the field investigation, boring logs and the boring log legend are presented in Appendix A. Appendix A contains a description of laboratory testing phase of this study; along with laboratory test results. Appendices B and C contain guides to earthwork and pavement specifications. When conflicts in the text of the report occur with the general specifications in the appendices, the recommendations in the text of the report have precedence.

PURPOSE AND SCOPE

This investigation was conducted to evaluate the soil and groundwater conditions at the site, to make geotechnical engineering recommendations for use in design of specific construction elements and to provide criteria for site preparation and Engineered Fill construction.

Our scope of services was outlined in our proposal dated December 10, 2018 (KA Proposal No. P739-18) and included the following:

- A site reconnaissance by a member of our engineering staff to evaluate the surface conditions at the project site.
- A field investigation consisting of drilling 19 borings to depths ranging from approximately 10 to 20 feet for evaluation of the subsurface conditions at the project site.
- Performing laboratory tests on representative soil samples obtained from the borings to evaluate the physical and index properties of the subsurface soils.

With Offices Serving The Western United States
215 West Dakota Avenue • Clovis CA 93612 • (559) 348-2200 • Fax: (559) 348-2201

- Evaluation of the data obtained from the investigation and an engineering analysis to provide recommendations for use in the project design and preparation of construction specifications.
- Preparation of this report summarizing the results, conclusions, recommendations, and findings of our investigation.

PROPOSED CONSTRUCTION

We understand that design of the proposed development is currently underway; structural load information and other final details pertaining to the structures are unavailable. On a preliminary basis, it is understood that development will consist of single family residential lots. It is understood the buildings will be single- or two-story wood-framed structures utilizing concrete slab-on-grade construction. Footing loads are anticipated to be light to moderate. On-site landscaping and roadways will be associated with the project.

In the event these structural or grading details are inconsistent with the final design criteria, the Soils Engineer should be notified so that we may update this writing as applicable.

SITE LOCATION, SITE HISTORY AND SITE DESCRIPTION

The site is irregular in shape and encompasses approximately 75.05 acres. The site is located at the northeast corner of Sunnyside Avenue and Shepherd Avenue in Clovis, California. The site is predominately surrounded by residential developments, rural residential developments and agricultural land.

Site history was obtained by reviewing historical aerial photographs taken in 1998, 2006 and 2015. Review of the 1998 aerial photograph indicates the project site predominately consisted of agricultural land occupied by an orchard. A rural residential development with associated barns and sheds was located in the southern portion of the site. In addition, a rural residential development was located in the northeastern portion of the site. Furthermore, a maintenance shed was located in the central-east portion of the site.

Review of the 2006 and 2015 aerial photographs indicate that the project site conditions appeared to be relatively similar to that noted in the 1998 aerial photograph.

Presently, the site conditions appear relatively similar to that noted in the previous aerial photographs. Two rural residential developments with associated barns and sheds are located in the southern and northern portions of the site. In addition, a maintenance building is located in the central-east portion of the site. The remainder of the site is occupied by an orchard. Gravel and paved driveways were located within portions of the site. Buried utility lines are located within the site associated with the existing developments. Portions of the site are covered by a sparse to moderate weed growth and the surface soils have a loose consistency. The site is relatively level with no major changes in grade.

GEOLOGIC SETTING

The San Joaquin Valley, which includes the Clovis area, is a topographic and structural basin that is bounded on the east by the Sierra Nevada and on the west by the Coast Ranges. The Sierra Nevada, a fault block dipping gently southwestward, is made up of igneous and metamorphic rocks of pre-Tertiary age that comprise the basement complex beneath the Valley. The Coast Ranges contain folded and faulted sedimentary rocks of Mesozoic and Cenozoic age, which are similar to those rocks that underlie the Valley at depth and nonconformably overlie the basement complex; gently dipping to nearly horizontal sedimentary rocks of Tertiary and Quaternary age overlie the older rocks. These younger rocks are mostly of continental origin and in the Clovis area, they were derived from the Sierra Nevada.

The San Joaquin River is the principal river in the area. Alluvial fans formed by this river are the largest geomorphic features in the Clovis area. The formation of the fans has resulted in rather flat regional topography.

The Coast Ranges evolved as a result of folding, faulting and accretion of diverse geologic terrains. They are composed chiefly of sedimentary and metamorphic rocks that are sharply deformed into complex structures. They are broken by numerous faults, the San Andreas Fault being the most notable structural feature.

Both the Sierra Nevada and Coast Range are geologically young mountain ranges and possess active and potentially active fault zones. Major active faults and fault zones occur at some distance to the east, west and south of the Clovis area. The Owens Valley Fault Zone bounds the eastern edge of the Sierra Nevada block and contains both active and potentially active faults.

Portions of the Ortigalita, Calaveras, Hayward and Rinconada Faults, which are to the west, are considered potentially active. The San Andreas Fault is possibly the best known fault and is located approximately 60 to 70 miles to the west.

There are no active fault traces in the project vicinity. Accordingly, the project area is not within an Earth Quake Fault Zone (Special Studies Zone) and will not require a special site investigation by an Engineering Geologist.

Clovis residents could feel the affects of a large seismic event on one of the nearby active or potentially active fault zones. Clovis has experienced groundshaking from earthquakes in the historical past. According to the Five County Seismic Safety Element, groundshaking of VII intensity (Modified Mercali Scale) was felt in Clovis from the 1872 Owens Valley Earthquake. This is the largest known earthquake event affecting the Clovis area.

Secondary hazards from earthquakes include rupture, seiche, landslides, liquefaction and subsidence. Since there are no known faults within the immediate area, ground rupture from surface faulting should not be a potential problem. Seiche and landslides are not hazards in the area either. Liquefaction potential (sudden loss of shear strength in a saturated cohesionless soil) should be low since groundwater occurs below 60 feet. Lastly, deep subsidence problems may be low to moderate according to the conclusions of the Five County Seismic Safety Element. However, there are no known occurrences of structural or architectural damage due to deep subsidence in the Clovis area.

FIELD AND LABORATORY INVESTIGATIONS

Subsurface soil conditions were explored by drilling 19 borings to depths ranging from approximately 10 to 20 feet below existing site grade, using a truck-mounted drill rig. In addition, 4 bulk subgrade samples were obtained from the site for laboratory R-value testing. The approximate boring and bulk sample locations are shown on the site plan. During drilling operations, penetration tests were performed at regular intervals to evaluate the soil consistency, obtain information regarding the engineering properties of the subsoils and to retain soil samples for laboratory testing. The soils encountered were continuously examined and visually classified in accordance with the Unified Soil Classification System. A more detailed description of the field investigation is presented in Appendix A.

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, density, gradation, shear strength, consolidation potential, expansion potential, R-value and moisture-density relationships of the materials encountered. In addition, chemical tests were performed to evaluate the soil cement reactivity. Details of the laboratory test program and the results of laboratory test are summarized in Appendix A. This information, along with the field observations, was used to prepare the final boring logs in Appendix A.

SOIL PROFILE AND SUBSURFACE CONDITIONS

Based on our findings, the subsurface conditions encountered appear typical of those found in the geologic region of the site. The upper soils are identified as by the Soil Conservation Service as belonging to the Atwater, Grangeville, Hanford, Ramona, San Joaquin and Visalia Series. These Series are often underlain at a shallow depth by a clayey or cemented substratum locally referred to as "hardpan." The soils within these Series generally consist of sands, silts, and occasional clays.

More specifically, the surface soils consisted of approximately 6 to 12 inches of very loose silty sand, silty sand with trace clay and silty clayey sand. These soils are disturbed, have low strength characteristics, and are highly compressible when saturated.

Below the loose surface soils, approximately 2 to 3 feet of loose to very dense silty sand, silty sand with trace clay, silty clayey sand and silty sand/sandy silt were encountered. Some of these soils were weakly cemented in parts. Field and laboratory tests suggest that these soils are moderately strong and slightly compressible. The clayey soils have a low potential for expansion. Penetration resistance ranged from 13 to 57 blows per foot. Dry densities ranged from 91 to 119 pcf. Representative soil samples consolidated approximately 1 and 2 percent under a 2 ksf load when saturated. Representative soil samples had angles of internal friction of 29 and 37 degrees. Representative samples of the clayey soils had expansion indices of 3 and 5.

Below 2½ to 8 feet in several of the borings, a very dense weakly cemented silty sand, locally referred to as hardpan, was encountered. The cemented nature of the subsoil hampered recovery of undisturbed soil samples. However, these cemented soils can be generally characterized as relatively strong, slightly compressible, and have a low permeability. Penetration resistance was generally greater than 50 blows per 6 inches. These soils had similar strength characteristics as the upper soils.

Below 3 to 4 feet in the majority of the borings, alternating layers of predominately medium dense to very dense silty sand, silty sand with trace clay, clayey sand, silty sand/sand or sand were encountered. Field and laboratory tests suggest that these soils had similar strength characteristics as the upper soils. Penetration resistance ranged from 15 blows per foot to greater than 50 blows per 6 inches. Dry densities ranged from 86 to 129 pcf. These soils extended to the termination depth of our borings.

For additional information about the soils encountered, please refer to the boring logs in Appendix A.

GROUNDWATER

Test boring locations were checked for the presence of groundwater during and immediately following the drilling operations. Free groundwater was not encountered.

Cemented silty sand and silty sand with trace clay, locally referred to as "hardpan," were encountered below 2½ to 8 feet in several of the borings. This cementation retards the free percolation of the surface water into the soil stratum below the hardpan frequently resulting in a temporary perched water table condition at or near the ground surface.

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of our field and laboratory investigations, along with previous geotechnical experience in the project area, the following is a summary of our evaluations, conclusions, and recommendations.

Administrative Summary

In brief, the subject site and soil conditions, with the exception of the loose surface soils, previous development, and existing development appear to be conducive to the development of the project. The surface soils have a loose consistency. These soils are disturbed, have low strength characteristics and are highly compressible when saturated. Accordingly, it is recommended that the surface soils be recompacted. This compaction effort should stabilize the surface soils and locate any unsuitable or pliant areas not found during our field investigation.

The on-site upper soils consist of silty sand, silty sand with trace clay, clayey sand, silty sand/sand and sand. The clayey soils appeared to have a low swell potential. The estimated swell pressures of the clayey soils may cause minor movement effecting slabs and possible stucco or similar brittle exterior finishes. To reduce potential soil movement, it is recommended the upper 12 inches of soil within slab-on-grade and exterior flatwork areas consist of non-expansive Engineered Fill. Preliminary testing indicates the on-site soils will be suitable for reuse as non-expansive Engineered Fill, provided they are cleansed of excessive organics and debris. During construction, it is recommended that additional tests be performed on the on-site soils to verify their physical and index properties.

Fill material was not encountered in our borings. However, fill may be encountered between the boring locations. It is anticipated fill soils will consist of silty sand, silty sand with trace clay and silty clayey sand. The thickness and extent of fill material was determined based on limited test borings and visual observation. Verification of the extent of fill should be determined during site grading. It is recommended that fill soils that have not been properly compacted and certified be excavated and recompacted. Prior to backfilling, the bottom of the excavation should be observed by Krazan & Associates, Inc. to verify no additional removal is required.

The site is presently occupied by an orchard. Tree removal operations should include roots greater than 1 inch in diameter. The resulting excavations should be backfilled with Engineered Fill compacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557.

Two rural residential developments and a maintenance shed are located within the site. Associated with these developments are buried structures such as utility lines, irrigation lines, drainage lines, septic systems and possible water wells. Demolition activities should include proper removal all buried structures. Water wells should be abandoned in accordance with county standards. The resulting excavations should be backfilled with Engineered Fill. It is suspected that demolition activities of the existing structures will disturbed the upper soils. Following demolition activities, it is recommended that the disturbed soils be removed and/or recompacted. Any buried structures or loosely backfilled excavations encountered during construction should be properly removed and the resulting excavations backfilled with Engineered Fill. Disturbed areas caused by demolition activities should be recompacted.

Cemented silty sand and silty sand with clay, locally referred to as hardpan, were encountered below 2½ to 8 feet in some of the borings. Hardpan is an excellent foundation-bearing material because of its apparent rock-like properties caused by particle cementation. However, this same cementation also retards the free percolation of the surface water into the soil stratum below the hardpan, frequently resulting in a temporary perched water table condition at or near the ground surface. This perched water condition has a substantial affect on the strength characteristics of the surface soils. As a mitigation measure, very positive drainage should be established around the proposed structures.

Relatively clean sands were encountered at various locations throughout the site. The possibility exists that site grading operations could expose these soils in areas of proposed buildings, pavements, and/or retaining walls. The Contractor should note that these soils lack the cohesion necessary to stand vertically, even in shallow excavations such as footing trenches. If these conditions are encountered, it will be necessary to over-excavate the affected area(s) to a minimum of 2 feet below the proposed bearing surface. These areas may be backfilled using a mix of the silty sand and sand soils that contains at least 20 percent fines and meeting the requirements for Engineered Fill. This material may be obtained from elsewhere at the site, imported to the site from an approved off-site source, or manufactured through blending of the excavated clean sand with other suitable material containing a higher percentage of fines to result in material meeting the requirements for Engineered Fill.

After completion of the recommended site preparation, the site should be suitable for shallow footing support. The proposed structure footings may be designed utilizing an allowable bearing pressure of 2,000 psf for dead-plus-live loads. Footings should have a minimum embedment of 12 inches.

Groundwater Influence on Structures/Construction

Although groundwater was not encountered during our field investigation or anticipated to rise within the zone of structural influence within the project area, it is common for surface runoff water to infiltrate the upper sandy soils and perch above the underlying lower permeable hardpan for extended periods during the winter and spring months. This condition, if encountered, could seriously impede grading by causing an unstable subgrade condition. Typical remedial measures include discing and aerating the soils during soil during dry weather, mixing the soil with dryer materials, removing and replacing the soil with an approved fill material, or mixing the soil with an approved lime or cement product. Our firm should be consulted prior to implementing remedial measures to observe the unstable subgrade conditions and provide appropriate recommendations.

Some structures in the Clovis area are founded on hardpan have experienced standing water for extended periods of time in crawl spaces below wooden floors or within sunken floor slab areas. The sources of the water were natural precipitation and landscape irrigation, and consequently, wood floor and sunken floor slab construction in hardpan soils are discouraged.

Site Preparation

General site clearing should include removal of vegetation; existing utilities; concrete structures including foundations; basement walls and floors; existing stockpiled soil; trees and associated root systems; rubble; rubbish; and any loose and/or saturated materials. Site stripping should extend to a minimum depth of 2 to 4 inches, or until all organics in excess of 3 percent by volume are removed. Deeper stripping may be required in localized areas. These materials will not be suitable for use as Engineered Fill. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas.

Fill material was not encountered in our borings. However, fill may be encountered between the boring locations. It is anticipated fill soils will consist of silty sand and sandy silt. The thickness and extent of fill material was determined based on limited test borings and visual observation. Verification of the extent of fill should be determined during site grading. It is recommended that fill soils that have not been properly compacted and certified be excavated and recompacted. Prior to backfilling, the bottom of the excavation should be observed by Krazan & Associates, Inc. to verify no additional removal is required.

The site is presently occupied by two rural residential developments with associated barns and sheds. Associated with these developments are buried structures, such as utility lines, irrigation lines, septic systems, and water wells. Demolition activities should include proper removal of any buried structures. Any buried structures or loosely backfilled excavations encountered during construction should be properly removed and the resulting excavations backfilled. Excavations, depressions, or soft and pliant areas extending below planned finish subgrade level should be cleaned to firm undisturbed soil, and backfilled with Engineered Fill. In general, any septic tanks, debris pits, cesspools, or similar structures should be entirely removed. Concrete footings should be removed to an equivalent depth of at least 3 feet below proposed footing elevations or as recommended by the Soils Engineer. Water wells should be abandoned in accordance with county standards. Any other buried structures should be removed in accordance with the recommendations of the Soils Engineer. Resulting excavations should be backfilled with Engineered Fill.

The site is presently occupied by an orchard. Tree removal operations should include roots greater than 1 inch in diameter. The resulting excavations should be backfilled with Engineered Fill compacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557.

Following stripping, fill removal, tree removal, and demolition activities, the exposed subgrade within proposed building, exterior flatwork, and pavement areas should be excavated/scarified to a depth of at least 12 inches, worked until uniform and free from large clods, moisture-conditioned as necessary, and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. Limits of recompaction should extend 5 feet beyond structural elements.

The on-site upper soils predominately consist of silty sand, silty sand with trace clay and silty clayey sand. The clayey soils appeared to have a low swell potential. The estimated swell pressures of the clayey soils may cause minor movement effecting slabs and possible stucco or similar brittle exterior finishes. To reduce potential soil movement, it is recommended the upper 12 inches of soil within slab-on-grade and exterior flatwork areas consist of non-expansive Engineered Fill. Preliminary testing indicates the on-site soils will be suitable for reuse as non-expansive Engineered Fill, provided they are cleansed of excessive organics and debris. During construction, it is recommended that additional tests be performed on the on-site soils to verify their physical and index properties.

The upper soils, during wet winter months, become very moist due to the absorptive characteristics of the soil. Earthwork operations performed during winter months may encounter very moist unstable soils, which may require removal to grade a stable building foundation. Project site winterization consisting of placement of aggregate base and protecting exposed soils during the construction phase should be performed.

A representative of our firm should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Soils Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section and the Engineered Fill section.

Engineered Fill

The on-site, native and fill soils are predominately silty sand, silty sand with trace clay, clayey sand, silty sand/sand and sand. These soils will be suitable for reuse as Engineered Fill, provided they are cleansed of excessive organics and debris. Soils with an expansion index greater than 15 will not be suitable for reuse as non-expansive Engineered Fill and shouldn't be used in the upper 12 inches of slab-on-grade and exterior flatwork areas. These soils may be used for General Engineered Fill within non-structural areas, paved areas, and within slab-on-grade and exterior flatwork areas below 12 inches from finished pad grade, provided they are cleansed of excessive organics and debris. Clayey soils should be moisture-conditioned to at least 2 percent above optimum moisture content during placement. During construction it is recommended that additional tests be performed on the on-site soils to verify their physical and index properties.

Relatively clean sands were encountered at various locations throughout the site. The possibility exists that site grading operations could expose these soils in areas of proposed buildings, pavements, and/or retaining walls. The Contractor should note that these soils lack the cohesion necessary to stand vertically, even in shallow excavations such as footing trenches. If these conditions are encountered, it will be necessary to over-excavate the affected area(s) to a minimum of 2 feet below the proposed bearing surface. These areas may be backfilled using a mix of the silty sand and sand soils that contains at least 20 percent fines and meeting the requirements for Engineered Fill. This material may be obtained from elsewhere at the site, imported to the site from an approved off-site source, or manufactured through blending of the excavated clean sand with other suitable material containing a higher percentage of fines to result in material meeting the requirements for Engineered Fill.

The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since he has complete control of the project site at that time.

Imported Fill should consist of a well-graded, slightly cohesive, fine silty sand or sandy silt, with relatively impervious characteristics when compacted. This material should be approved by the Soils Engineer prior to use and should typically possess the following characteristics:

Percent Passing No. 200 Sieve	20 to 50
Plasticity Index	10 maximum
UBC Standard 29-2 Expansion Index	15 maximum

Fill soils should be placed in lifts approximately 6 inches thick, moisture-conditioned as necessary, and compacted to achieve at least 90 percent of maximum density based on ASTM D1557. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.

Drainage and Landscaping

The ground surface should slope away from building pad and pavement areas toward appropriate drop inlets or other surface drainage devices. In accordance with Section 1804 of the 2016 California Building Code, it is recommended that the ground surface adjacent to foundations be sloped a minimum of 5 percent for a minimum distance of 10 feet away from structures, or to an approved alternative means of drainage conveyance. Swales used for conveyance of drainage and located within 10 feet of foundations should be sloped a minimum of 2 percent. Impervious surfaces, such as pavement and exterior concrete flatwork, within 10 feet of building foundations should be sloped a minimum of 1 percent away from the structure. Drainage gradients should be maintained to carry all surface water to collection facilities and off-site. These grades should be maintained for the life of the project.

Slots or weep holes should be placed in drop inlets or other surface drainage devices in pavement areas to allow free drainage of adjoining base course materials. Cutoff walls should be installed at pavement edges adjacent to vehicular traffic areas, these walls should extend to a minimum depth of 12 inches below pavement subgrades to limit the amount of seepage water that can infiltrate the pavements. Where cutoff walls are undesirable subgrade drains can be constructed to transport excess water away from planters to drainage interceptors. If cutoff walls can be successfully used at the site, construction of subgrade drains is considered unnecessary.

Utility Trench Backfill

Utility trenches should be excavated according to accepted engineering practice following OSHA (Occupational Safety and Health Administration) standards by a Contractor experienced in such work. The responsibility for the safety of open trenches should be borne by the Contractor. Traffic and vibration adjacent to trench walls should be reduced and cyclic wetting and drying of excavation side slopes should be avoided. Depending upon the location and depth of some utility trenches, groundwater flow into open excavations could be experienced, especially during or shortly following periods of precipitation.

Sandy soil conditions were encountered at the site. These cohesionless soils have a tendency to cave in trench wall excavations. Shoring or sloping back trench sidewalls may be required within these sandy soils.

Utility trench backfill placed in or adjacent to buildings and exterior slabs should be compacted to at least 90 percent of maximum density based on ASTM Test Method D1557. The utility trench backfill placed in pavement areas should be compacted to at least 90 percent of maximum density based on ASTM Test Method D1557. Pipe bedding should be in accordance with pipe manufacturer's recommendations.

The Contractor is responsible for removing all water sensitive soils from the trench regardless of the backfill location and compaction requirements. The Contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

Foundations

The proposed structures may be supported on a shallow foundation system bearing on undisturbed native soil or on Engineered Fill. Spread and continuous footings can be designed for the following maximum allowable soil bearing pressures:

Load	Allowable Loading
Dead Load Only	1,500 psf
Dead-Plus-Live Load	2,000 psf
Total Load, including wind or seismic loads	2,650 psf

The footings should have a minimum depth of 12 inches below pad subgrade (soil grade) or adjacent exterior grade, whichever is lower. Footings should have a minimum width of 12 inches, regardless of load.

The footing excavations should not be allowed to dry out at any time prior to pouring concrete. It is recommended that all footings be reinforced by at least one No. 4 reinforcing bar in both top and bottom.

The total movement is not expected to exceed 1 inch. Differential movement should be less than 1 inch. Most of the settlement is expected to occur during construction as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded or saturated.

Resistance to lateral footing displacement can be computed using an allowable friction factor of 0.35 acting between the base of foundations and the supporting subgrade. Lateral resistance for footings can alternatively be developed using an allowable equivalent fluid passive pressure of 325 pounds per cubic foot acting against the appropriate vertical footing faces. The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance. A ⅓ increase in the above value may be used for short duration, wind, or seismic loads.

Floor Slabs and Exterior Flatwork

The 2010 California Residential Code (CRC) Section R506.2.3 specifies that "a 6 mil polyethylene or *approved* vapor retarder with joints lapped not less than 6 inches shall be placed between the concrete floor slab and the base course or the prepared subgrade where no base course exists." Prior to adoption of this code section, traditional construction practice in the Fresno/Clovis area was to place an additional layer of sand or rock dust (per American Concrete Institute) to act as a blotting layer between the vapor retarder and the underside of the concrete slab. This blotting layer acted not only to protect the vapor barrier from punctures or tears during construction, but also served to promote even curing of the concrete slab. In the semi-arid climate of the Fresno/Clovis area, placement of the vapor retarder directly beneath the concrete slab has been known to result in rapid curing of the upper slab surface, especially during periods of elevated temperatures and/or sustained wind, as compared to the lower slab surface. Uneven curing of the upper and lower slab surfaces can result in excessive slab cracking and/or slab curling.

Based on our conversations, it is our understanding that Wilson Homes has developed a standard design for residential interior concrete slab-on-grade floors. The design incorporates a 2-inch layer of sand as a capillary break over the compacted subgrade soil. The sand layer is overlain by a layer of 10-mil PVC vapor retarder membrane, which is overlain by a 2-inch layer of sand, and finally by a minimum 3½-inch thick concrete slab. This system has reportedly been utilized by Wilson Homes with success in the past and has resulted in adequate performance of interior flooring materials.

It is recommended that the concrete slabs be reinforced at a minimum with #3 bars at 24 inches on center to reduce crack separation and possible vertical offset at the cracks. Thicker floor slabs with increased concrete strength and reinforcement should be designed wherever heavy concentrated loads, heavy equipment, or machinery is anticipated.

After reviewing Wilson Homes' standard design for residential interior concrete slab-on-grade floors for use in the Fresno/Clovis area, it is our opinion that this design, while deviating from Section R506.2.3 of the 2010 CRC, is an acceptable equivalent alternative to the criteria specified in the 2010 CRC. Based on our recommendation, Krazan & Associates requests that the local building official, i.e., City of Clovis, allow this standard design to be utilized for the subject residential tract.

Because this standard design does potentially allow for excessive moisture to be contained in the upper sand or rock dust layer from either rainfall or excessive moistening prior to pouring the slab, Krazan & Associates recommends that the upper sand layer be inspected prior to concrete placement to confirm that no ponding or standing water is present.

Lateral Earth Pressures and Retaining Walls

Walls retaining horizontal backfill and capable of deflecting a minimum of 0.1 percent of its height at the top may be designed using an equivalent fluid active pressure of 40 pounds per square foot per foot of depth. Walls incapable of this deflection or are fully constrained walls against deflection may be designed for an equivalent fluid at-rest pressure of 60 pounds per square foot per foot of depth. Expansive soils should not be used for backfill against walls. The wedge of non-expansive backfill material should extend from the bottom of each retaining wall outward and upward at a slope of 2:1 (horizontal to vertical) or flatter. The stated lateral earth pressures do not include the effects of hydrostatic water pressures generated by infiltrating surface water that may accumulate behind the retaining walls; or loads imposed by construction equipment, foundations, or roadways.

Retaining and/or below grade walls should be drained with either perforated pipe encased in free-draining gravel or a prefabricated drainage system. The gravel zone should have a minimum width of 12 inches wide and should extend upward to within 12 inches of the top of the wall. The upper 12 inches of backfill should consist of native soils, concrete, asphaltic concrete, or other suitable backfill to reduce surface drainage into the wall drain system. The aggregate should conform to Class 2 permeable materials graded in accordance with CalTrans Standard Specifications (2010). Prefabricated drainage systems, such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer's recommendations. If a prefabricated drainage system is proposed, our firm should review the system for final acceptance prior to installation.

Drainage pipes should be placed with perforations down and should discharge in a non-erosive manner away from foundations and other improvements. The pipes should be placed no higher than 6 inches above the heel of the wall, in the center line of the drainage blanket and should have a minimum diameter of four inches. Collector pipes may be either slotted or perforated. Slots should be no wider than ⅛ inch in diameter, while perforations should be no more than ¼ inch in diameter. If retaining walls are less than 6 feet in height, the perforated pipe may be omitted in lieu of weep holes on 4 feet maximum spacing. The weep holes should consist of 4-inch diameter holes (concrete walls) or unmortared head joints (masonry walls) and not be higher than 18 inches above the lowest adjacent grade. Two 8-inch square overlapping patches of geotextile fabric (conforming to CalTrans Standard Specifications for "edge drains") should be affixed to the rear wall opening of each weep hole to retard soil piping.

During grading and backfilling operations adjacent to any walls, heavy equipment should not be allowed to operate within a lateral distance of 5 feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand-operated equipment ("whackers," vibratory plates, or pneumatic compactors) should be used to compact the backfill soils.

R-Value Test Results and Pavement Design

Four subgrade soil samples were obtained from the project site for R-value testing at the locations shown on the attached site plan. The samples were tested in accordance with the State of California Materials Manual Test Designation 301. Results of the tests are as follows:

Sample	Depth	Description	R-Value at Equilibrium
1	12-24"	Silty Sand (SM)	51
2	12-24"	Silty Sand (SM)	45
3	12-24"	Silty Sand (SM)	59
4	12-24"	Silty Sand (SM)	43

The test results are moderate and indicate good subgrade support characteristics under dynamic traffic loads. The following table shows the recommended pavement sections for various traffic indices.

Traffic Index	Asphaltic Concrete	Class II Aggregate Base*	Compacted Subgrade**
4.0	2.0"	4.0"	12.0"
4.5	2.5"	4.0"	12.0"
5.0	2.5"	4.0"	12.0"
5.5	3.0"	4.0"	12.0"
6.0	3.0"	5.5"	12.0"
6.5	3.5"	5.5"	12.0"
7.0	4.0"	6.0"	12.0"
7.5	4.0"	7.0"	12.0"

**** 95% compaction based on ASTM Test Method D1557 or CAL 216***
***** 90% compaction based on ASTM Test Method D1557 or CAL 216***

If traffic indices are not available, an estimated (typical value) index of 4.5 may be used for light automobile traffic, and an index of 7.0 may be used for light truck traffic.

The following recommendations are for light-duty and heavy-duty Portland Cement Concrete Pavement Sections based on the design procedures developed by the Portland Cement Association.

PORTLAND CEMENT PAVEMENT
LIGHT DUTY

Traffic Index	Portland Cement Concrete***	Class II Aggregate Base*	Compacted Subgrade**
4.5	5.0"	--	12.0"

HEAVY DUTY

Traffic Index	Portland Cement Concrete***	Class II Aggregate Base*	Compacted Subgrade**
7.0	6.5"	--	12.0"

**** 95% compaction based on ASTM Test Method D1557 or CAL 216***
***** 90% compaction based on ASTM Test Method D1557 or CAL 216***
******Minimum compressive strength of 3000 psi***

It is recommended that any uncertified fill material encountered within pavement areas be removed and/or recompacted. The fill materials should be moisture-conditioned to near optimum moisture and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. As an alternative, the Owner may elect not to recompact the existing fill within paved areas. However, the Owner should be aware that the paved areas may settle which may require annual maintenance. At a minimum, it is recommended that the upper 12 inches of subgrade soil be moisture-conditioned to a minimum of 2 percent above optimum moisture content and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557.

Seismic Parameters – 2016 California Building Code

The Site Class per Section 1613 of the 2016 California Building Code (2016 CBC) and Table 20.3-1 of ASCE 7-10 is based upon the site soil conditions. It is our opinion that a Site Class D is most consistent with the subject site soil conditions. For seismic design of the structures based on the seismic provisions of the 2016 CBC, we recommend the following parameters:

Seismic Item	Value	CBC Reference
Site Class	D	Section 1613.3.2
Site Coefficient F_a	1.345	Table 1613.3.3 (1)
S_s	0.568	Section 1613.3.1
S_{MS}	0.765	Section 1613.3.3
S_{DS}	0.510	Section 1613.3.4
Site Coefficient F_v	1.922	Table 1613.3.3 (2)
S_1	0.239	Section 1613.3.1
S_{M1}	0.459	Section 1613.3.3
S_{D1}	0.306	Section 1613.3.4

Soil Cement Reactivity

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete (or stucco) and the soil. HUD/FHA and UBC have developed criteria for evaluation of sulfate levels and how they relate to cement reactivity with soil and/or water.

Soil samples were obtained from the site and tested in accordance with State of California Materials Manual Test Designation 417. The sulfate concentrations detected in these soil samples were less than 0.02 percent and are below the maximum allowable values established by HUD/FHA and UBC. Therefore, no special design requirements are necessary to compensate for sulfate reactivity with the cement.

Compacted Material Acceptance

Compaction specifications are not the only criteria for acceptance of the site grading or other such activities. However, the compaction test is the most universally recognized test method for assessing the performance of the Grading Contractor. The numerical test results from the compaction test cannot be used to predict the engineering performance of the compacted material. Therefore, the acceptance of compacted materials will also be dependent on the stability of that material. The Soils Engineer has the option of rejecting any compacted material regardless of the degree of compaction if that material is considered to be unstable or if future instability is suspected. A specific example of rejection of fill material passing the required percent compaction is a fill which has been compacted with an in situ moisture content significantly less than optimum moisture. This type of dry fill (brittle fill) is susceptible to future settlement if it becomes saturated or flooded.

Testing and Inspection

A representative of Krazan & Associates, Inc. should be present at the site during the earthwork activities to confirm that actual subsurface conditions are consistent with the exploratory fieldwork. This activity is an integral part of our service, as acceptance of earthwork construction is dependent upon compaction testing and stability of the material. This representative can also verify that the intent of these recommendations is incorporated into the project design and construction. Krazan & Associates, Inc. will not be responsible for grades or staking, since this is the responsibility of the Prime Contractor.

LIMITATIONS

Soils Engineering is one of the newest divisions of Civil Engineering. This branch of Civil Engineering is constantly improving as new technologies and understanding of earth sciences advance. Although your site was analyzed using the most appropriate and most current techniques and methods, undoubtedly there will be substantial future improvements in this branch of engineering. In addition to advancements in the field of Soils Engineering, physical changes in the site, either due to excavation or fill placement, new agency regulations, or possible changes in the proposed structure after the soils report is completed may require the soils report to be professionally reviewed. In light of this, the Owner should be aware that there is a practical limit to the usefulness of this report without critical review. Although the time limit for this review is strictly arbitrary, it is suggested that 2 years be considered a reasonable time for the usefulness of this report.

Foundation and earthwork construction is characterized by the presence of a calculated risk that soil and groundwater conditions have been fully revealed by the original foundation investigation. This risk is derived from the practical necessity of basing interpretations and design conclusions on limited sampling of the earth. The recommendations made in this report are based on the assumption that soil conditions do not vary significantly from those disclosed during our field investigation. If any variations or undesirable conditions are encountered during construction, the Soils Engineer should be notified so that supplemental recommendations may be made.

The conclusions of this report are based on the information provided regarding the proposed construction. If the proposed construction is relocated or redesigned, the conclusions in this report may not be valid. The Soils Engineer should be notified of any changes so the recommendations may be reviewed and re-evaluated.

This report is a Geotechnical Engineering Investigation with the purpose of evaluating the soil conditions in terms of foundation design. The scope of our services did not include any Environmental Site Assessment for the presence or absence of hazardous and/or toxic materials in the soil, groundwater, or atmosphere; or the presence of wetlands. Any statements, or absence of statements, in this report or on any boring log regarding odors, unusual or suspicious items, or conditions observed, are strictly for descriptive purposes and are not intended to convey engineering judgment regarding potential hazardous and/or toxic assessment.

The geotechnical engineering information presented herein is based upon professional interpretation utilizing standard engineering practices and a degree of conservatism deemed proper for this project. It is not warranted that such information and interpretation cannot be superseded by future geotechnical engineering developments. We emphasize that this report is valid for the project outlined above and should not be used for any other sites.

If you have any questions or if we may be of further assistance, please do not hesitate to contact our office at (559) 348-2200.

Respectfully submitted,
KRAZAN & ASSOCIATES, INC.

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Project Engineer

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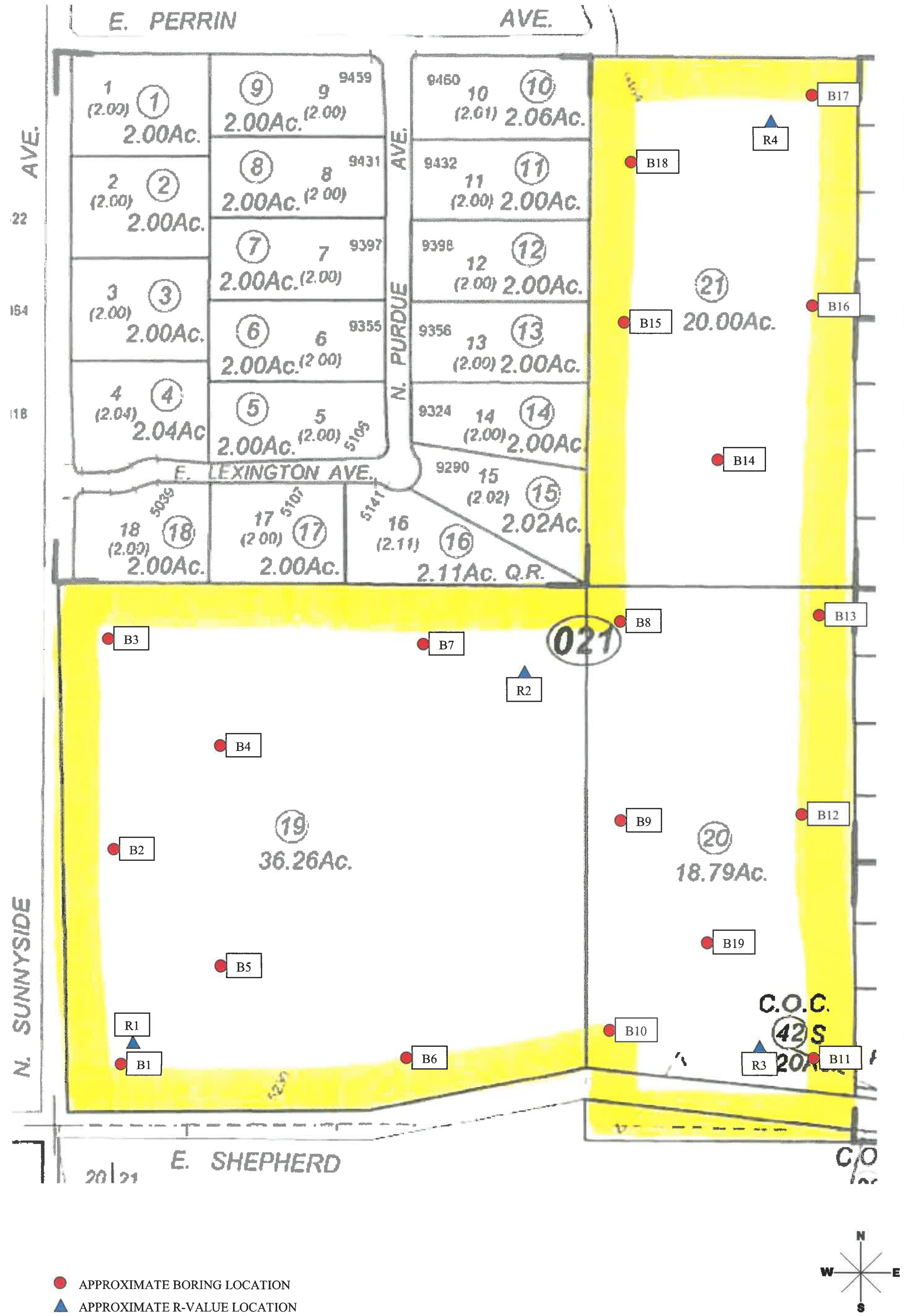
RGE No. 2698/RCE No. 60185

SN/DRJ:ht



● APPROXIMATE BORING LOCATION

▲ APPROXIMATE R-VALUE LOCATION

SITE MAP	**Scale:** NTS	**Date:** January 2019	Krazan GEOTECHNICAL ENGINEERING
Tract 6205 (Spensley Property) Sunnyside and Shepherd Avenues Clovis, California	**Drawn by:** HT	**Approved by:** DJ	
	Project No. 012-18204	**Figure No.** 1	

APPENDIX A

FIELD AND LABORATORY INVESTIGATIONS

Field Investigation

The field investigation consisted of a surface reconnaissance and a subsurface exploratory program. Nineteen 4½-inch exploratory borings were advanced. The boring locations are shown on the site plan.

The soils encountered were logged in the field during the exploration and, with supplementary laboratory test data, are described in accordance with the Unified Soil Classification System.

Modified standard penetration tests were performed at selected depths. This test represents the resistance to driving a 2½-inch diameter core barrel. The driving energy was provided by a hammer weighing 140 pounds falling 30 inches. Relatively undisturbed soil samples were obtained while performing this test. Bag samples of the disturbed soil were obtained from the auger cuttings. All samples were returned to our Clovis laboratory for evaluation.

Laboratory Investigation

The laboratory investigation was programmed to determine the physical and mechanical properties of the foundation soil underlying the site. Test results were used as criteria for determining the engineering suitability of the surface and subsurface materials encountered.

In situ moisture content, dry density, consolidation, direct shear and sieve analysis tests were determined for the undisturbed samples representative of the subsurface material. Expansion index and R-value tests were completed for select bag samples obtained from the auger cuttings. These tests, supplemented by visual observation, comprised the basis for our evaluation of the site material.

The logs of the exploratory borings and laboratory determinations are presented in this Appendix.

AGENDA ITEM NO. 6.

UNIFIED SOIL CLASSIFICATION SYSTEM

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

COARSE-GRAINED SOILS

(more than 50% of material is larger than No. 200 sieve size.)

GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size	Clean Gravels (Less than 5% fines)		
	⁘	GW	Well-graded gravels, gravel-sand mixtures, little or no fines
	○	GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
	Gravels with fines (More than 12% fines)		
	▥	GM	Silty gravels, gravel-sand-silt mixtures
	▩	GC	Clayey gravels, gravel-sand-clay mixtures
SANDS 50% or more of coarse fraction smaller than No. 4 sieve size	Clean Sands (Less than 5% fines)		
	⁙	SW	Well-graded sands, gravelly sands, little or no fines
	∴	SP	Poorly graded sands, gravelly sands, little or no fines
	Sands with fines (More than 12% fines)		
	▥	SM	Silty sands, sand-silt mixtures
	▨	SC	Clayey sands, sand-clay mixtures

FINE-GRAINED SOILS

(50% or more of material is smaller than No. 200 sieve size.)

SILTS AND CLAYS Liquid limit less than 50%	▥	ML	Inorganic silts and very fine sands, rock flour, silty of clayey fine sands or clayey silts with slight plasticity
	▨	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	▤	OL	Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS Liquid limit 50% or greater	▥	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
	▨	CH	Inorganic clays of high plasticity, fat clays
	≋	OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS	⁂	PT	Peat and other highly organic soils

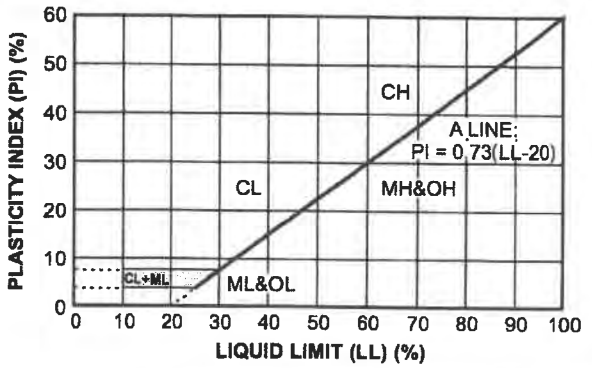
CONSISTENCY CLASSIFICATION

Description	Blows per Foot
Granular Soils	
Very Loose	< 5
Loose	5 – 15
Medium Dense	16 – 40
Dense	41 – 65
Very Dense	> 65
Cohesive Soils	
Very Soft	< 3
Soft	3 – 5
Firm	6 – 10
Stiff	11 – 20
Very Stiff	21 – 40
Hard	> 40

GRAIN SIZE CLASSIFICATION

Grain Type	*Standard Sieve Size*	*Grain Size in Millimeters*
Boulders	Above 12 inches	Above 305
Cobbles	12 to 13 inches	305 to 76.2
Gravel	3 inches to No. 4	76.2 to 4.76
Coarse-grained	3 to ¾ inches	76.2 to 19.1
Fine-grained	¾ inches to No. 4	19.1 to 4.76
Sand	No. 4 to No. 200	4.76 to 0.074
Coarse-grained	No. 4 to No. 10	4.76 to 2.00
Medium-grained	No. 10 to No. 40	2.00 to 0.042
Fine-grained	No. 40 to No. 200	0.042 to 0.074
Silt and Clay	Below No. 200	Below 0.074

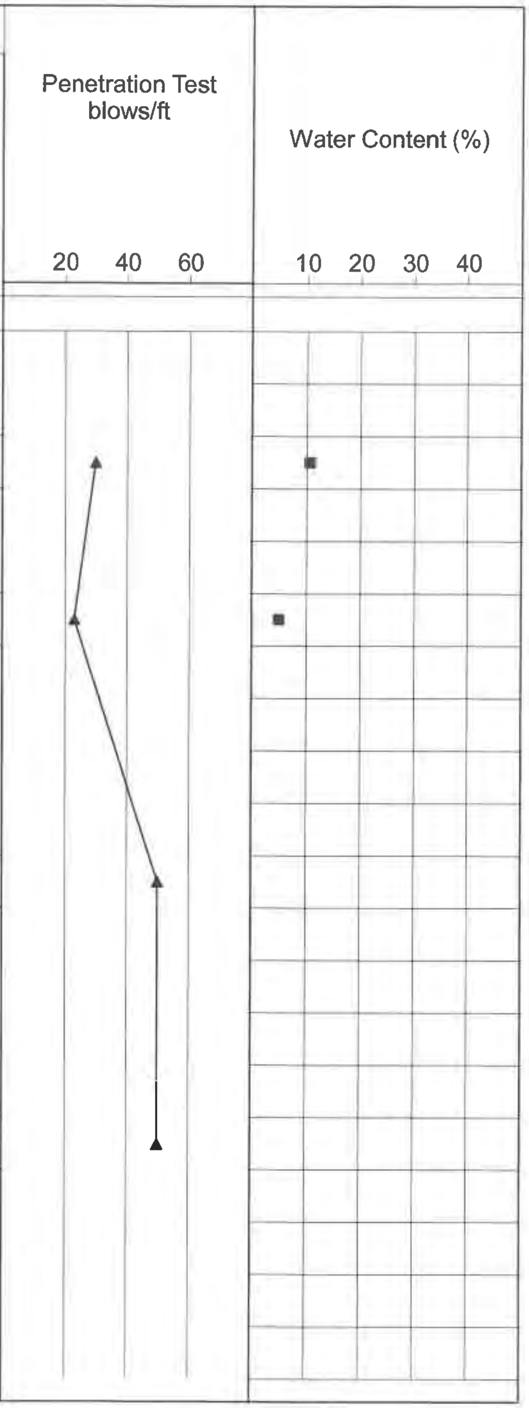
PLASTICITY CHART



Log of Boring B1

Project: Tract 6205
Project No: 012-18204
Client: Wilson Homes
Figure No.: A-1
Location: Sunnyside and Shepherd Avenues, Clovis, California
Logged By: Wayne Andrade
Depth to Water>
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0	▨	***SILTY SAND (SM)*** Very loose, fine-grained; brown, moist, drills easily Medium dense, light brown and damp below 1 foot				
	▨		92.5	10.6	■	30
	▨		110.6	5.0	■	23
8	▨	***SILTY SAND (SM)*** Very dense, fine- to medium-grained; weakly cemented, light brown, damp, drills hard				
	▨				■	50+
	▨				■	50+
20						



Drill Method: Solid Flight
Drill Date: 12-13-18
Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches
Driller: Chris Wyneken
Elevation: 20 Feet
Sheet: 1 of 1

Log of Boring B2

Project: Tract 6205

Project No: 012-18204

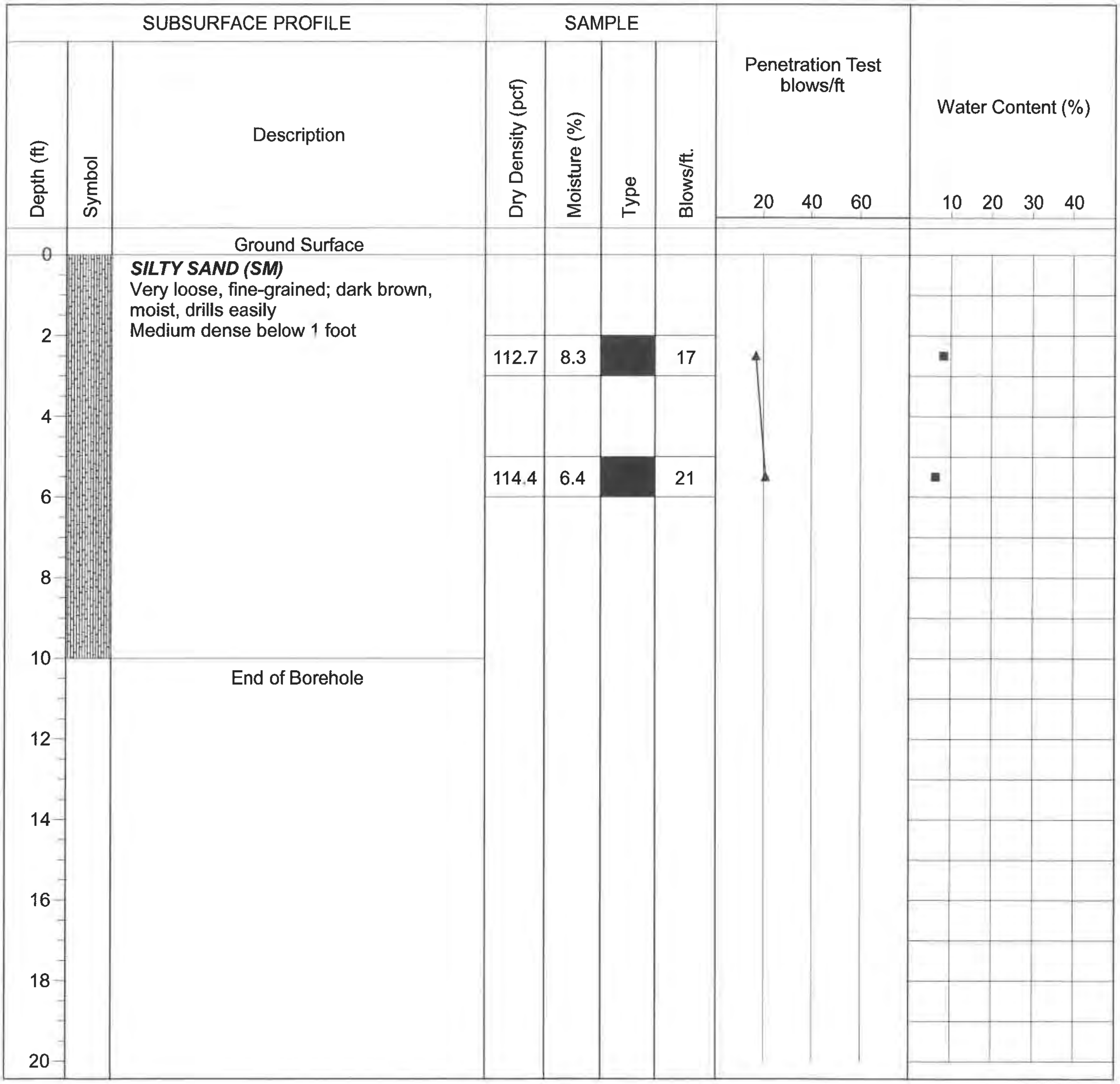
Client: Wilson Homes

Figure No.: A-2

Location: Sunnyside and Shepherd Avenues, Clovis, California

Logged By: Wayne Andrade

Depth to Water> **Initial:** None **At Completion:** None



SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
	▨	***SILTY SAND (SM)*** Very loose, fine-grained; dark brown, moist, drills easily Medium dense below 1 foot				
			112.7	8.3	■	17
			114.4	6.4	■	21
10		End of Borehole				

Drill Method: Solid Flight

Drill Date: 12-13-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 10 Feet

Sheet: 1 of 1

Log of Boring B3

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

Figure No.: A-3

Location: Sunnyside and Shepherd Avenues, Clovis, California

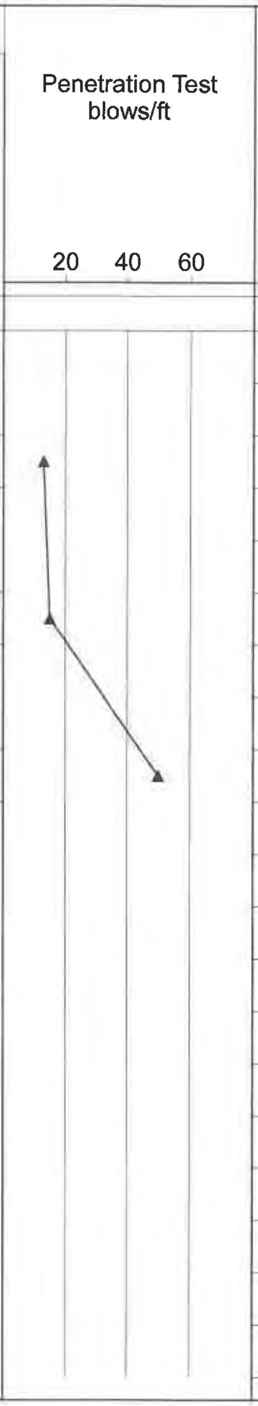
Logged By: Wayne Andrade

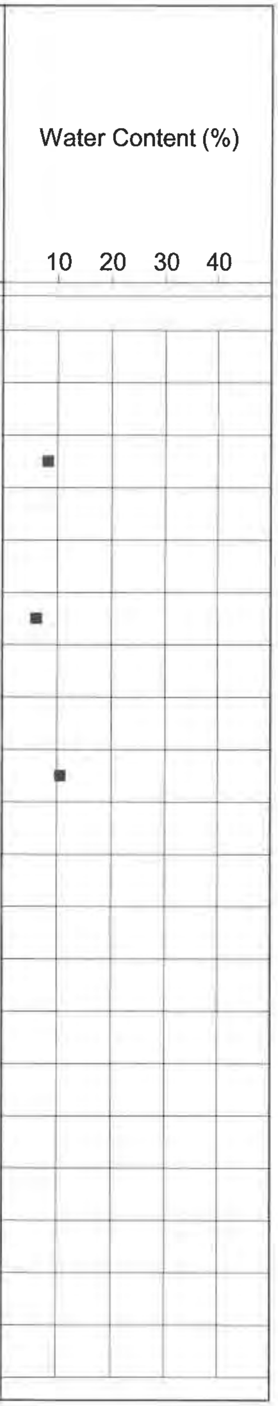
Depth to Water>

Initial: None

At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
	▨	***SILTY SAND (SM)*** Very loose, fine- to medium-grained; dark brown, moist, drills easily Loose below 1 foot Light brown below 1½ feet				
2						
			119.2	8.3	■	13
4						
			101.5	6.2	■	15
6						
	▨	***SILTY SAND (SM)*** Very dense, fine-grained, weakly cemented; brown, damp, drills hard				
8						
			110.7	10.6	■	50+
10						
12						
	▨	***SILTY SAND (SM)*** Medium dense, fine-grained; brown, moist, drills easily				
14						
		End of Borehole				
16						
18						
20						


Penetration Test blows/ft


Water Content (%)

Drill Method: Solid Flight

Drill Date: 12-13-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 15 Feet

Sheet: 1 of 1

Log of Boring B4

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

Figure No.: A-4

Location: Sunnyside and Shepherd Avenues, Clovis, California

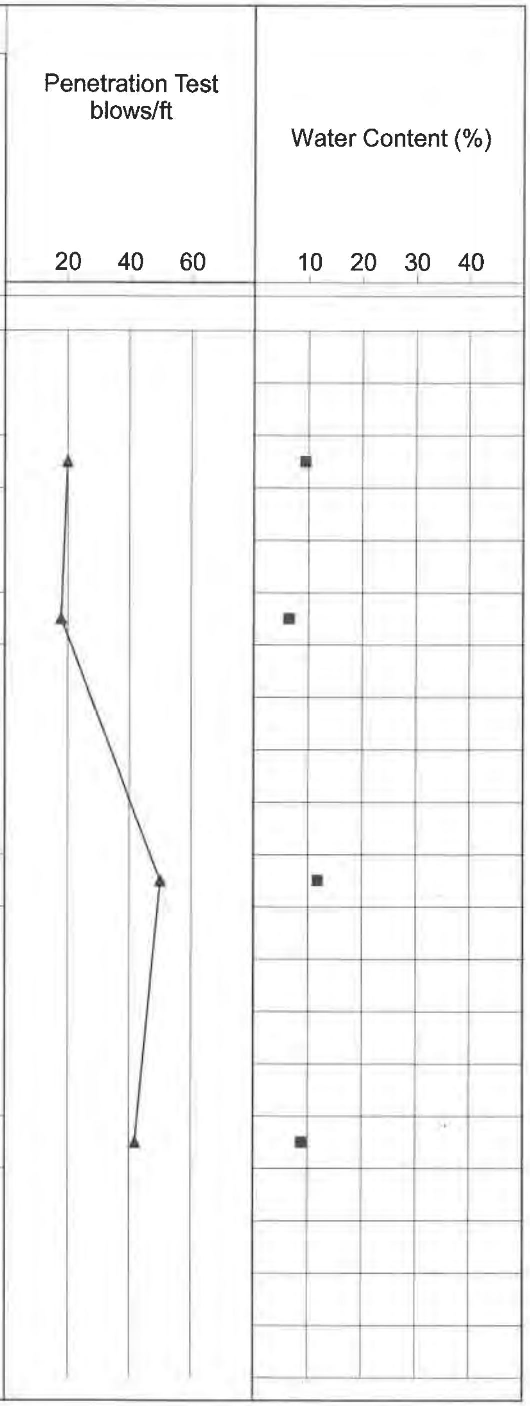
Logged By: Wayne Andrade

Depth to Water>

Initial: None

At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0	▨	***SILTY SAND (SM)*** Very loose, fine- to medium-grained; dark brown, moist, drills easily Loose below 1 foot				
2	▨	Medium dense and brown below 2 feet	113.3	9.5	■	20
4	▨					
	▨		101.6	6.5	■	18
6	▨	Dense and drills firmly below 7 feet				
8	▨	Very dense and drills hard below 9 feet				
10	▨		115.0	11.9	■	50+
12	▨	Dense and drills firmly below 13 feet				
14	▨	With increased SAND below 15 feet				
	▨		116.2	8.9	■	42
16	▨					
18	▨					
20						



Drill Method: Solid Flight

Drill Date: 12-13-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 20 Feet

Sheet: 1 of 1

Log of Boring B5

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

Figure No.: A-5

Location: Sunnyside and Shepherd Avenues, Clovis, California

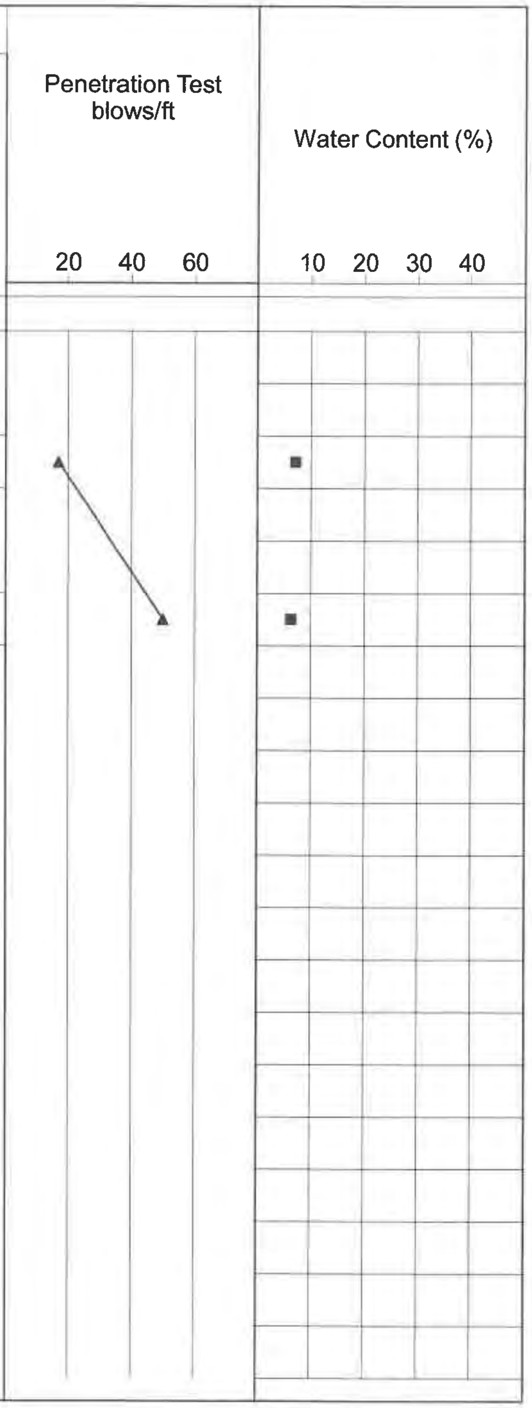
Logged By: Wayne Andrade

Depth to Water>

Initial: None

At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0–10	▨	***SILTY SAND (SM)*** Very loose, fine- to medium-grained; dark brown, moist, drills easily Loose below 1 foot Medium dense with interbeds of SILTY SAND/SAND SILT below 2 feet				
2.5			96.4	7.1	■	17
5.5		Very dense and drills hard below 5½ feet	107.8	6.3	■	50+
10		End of Borehole				



Drill Method: Solid Flight

Drill Date: 12-13-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 10 Feet

Sheet: 1 of 1

Log of Boring B6

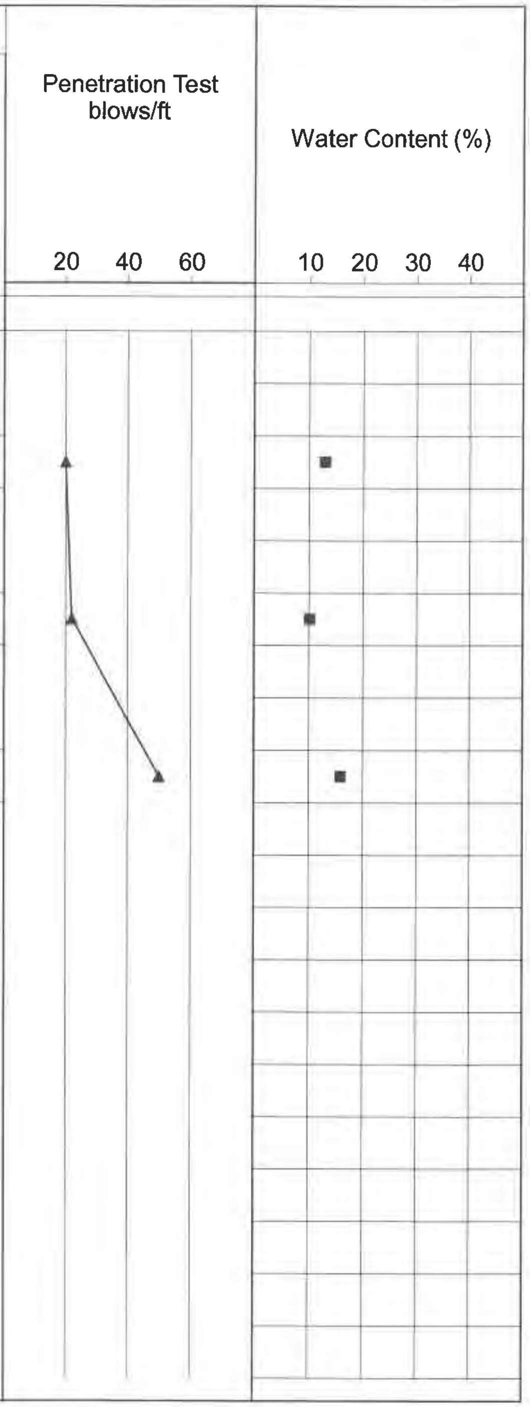
Project: Tract 6205
Project No: 012-18204

Client: Wilson Homes
Figure No.: A-6

Location: Sunnyside and Shepherd Avenues, Clovis, California
Logged By: Wayne Andrade

Depth to Water>
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0	▥	***SILTY SAND (SM)*** Very loose, fine- to medium-grained; dark brown, moist, drills easily Medium dense and brown below 1 foot				
2	▥		90.7	13.0	■	20
5	▥	With increased SILT below 5 feet	95.6	10.2	■	22
7.5	▨	***CLAYEY SAND (SC)*** Very dense, fine-grained; light brown/brown, damp, drills hard				
8	▨		96.5	15.9	■	50+
15		End of Borehole				



Drill Method: Solid Flight
Drill Date: 12-13-18

Drill Rig: CME 45C-1
Hole Size: 4½ Inches

Krazan and Associates

Driller: Chris Wyneken
Elevation: 15 Feet
Sheet: 1 of 1

AGENDA ITEM NO. 6.

Log of Boring B7

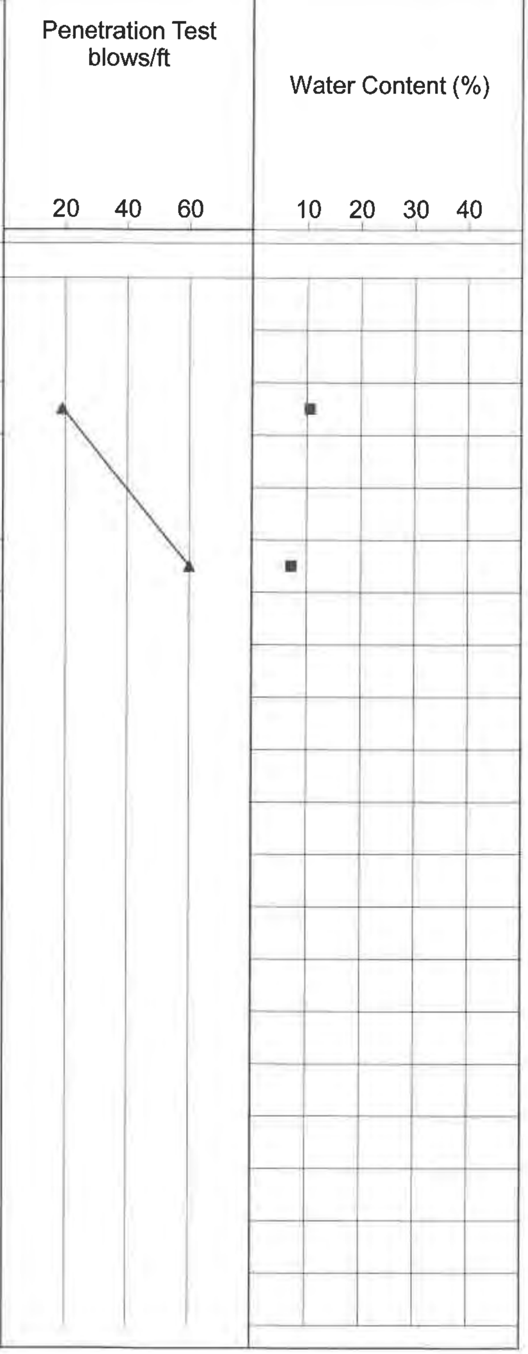
Project: Tract 6205
Project No: 012-18204

Client: Wilson Homes
Figure No.: A-7

Location: Sunnyside and Shepherd Avenues, Clovis, California
Logged By: Wayne Andrade

Depth to Water>
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
	▨	***SILTY SAND (SM)*** Very loose, fine-grained; dark brown, moist, drills easily Loose below 1 foot Medium dense and light brown below 2 feet	113.2	10.6	■	19
	▨	***CLAYEY SILTY SAND (SM/SC)*** Dense, fine- to medium-grained; light brown, damp, drills firmly	128.4	7.2	■	60
10		End of Borehole				



Drill Method: Solid Flight
Drill Date: 12-13-18

Drill Rig: CME 45C-1
Hole Size: 4½ Inches

Krazan and Associates

Driller: Chris Wyneken
Elevation: 10 Feet

Sheet: 1 of 1

AGENDA ITEM NO. 6.

Log of Boring B8

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

Figure No.: A-8

Location: Sunnyside and Shepherd Avenues, Clovis, California

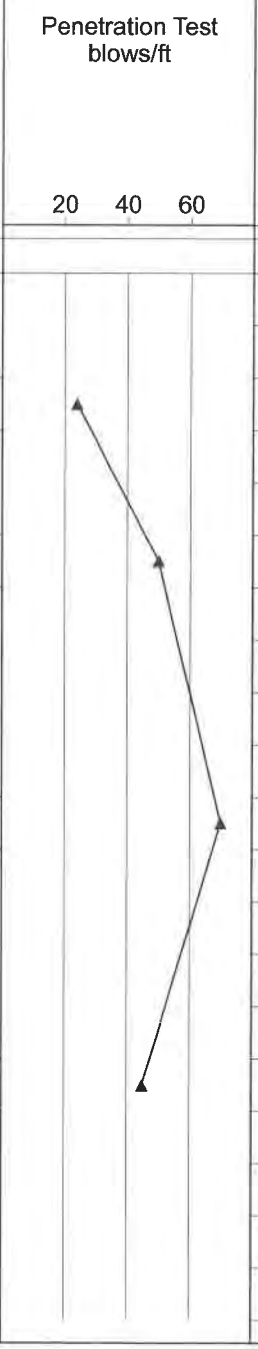
Logged By: Wayne Andrade

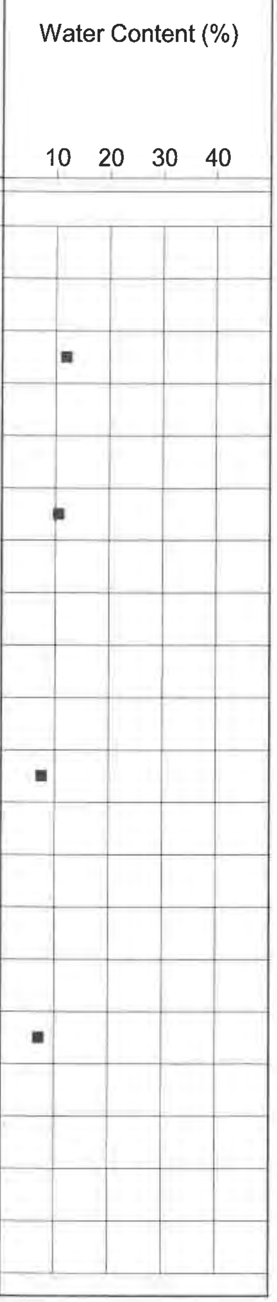
Depth to Water>

Initial: None

At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine-grained; dark brown, moist, drills easily Loose below 1 foot				
2		Medium dense and light brown below 2 feet	111.0	12.0	■	24
4						
6		Very dense, with trace CLAY and drills hard below 5 feet	101.0	10.6	■	50+
8		With decreased CLAY and increased SAND below 8 feet				
10			122.4	7.5	■	70
12						
14		***SILTY SAND/SAND (SM/SP)*** Dense, fine- to medium-grained; light brown, damp, drills firmly				
16			97.2	7.1	■	45
18						
20						





Drill Method: Solid Flight

Drill Date: 12-13-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 20 Feet

Sheet: 1 of 1

Log of Boring B9

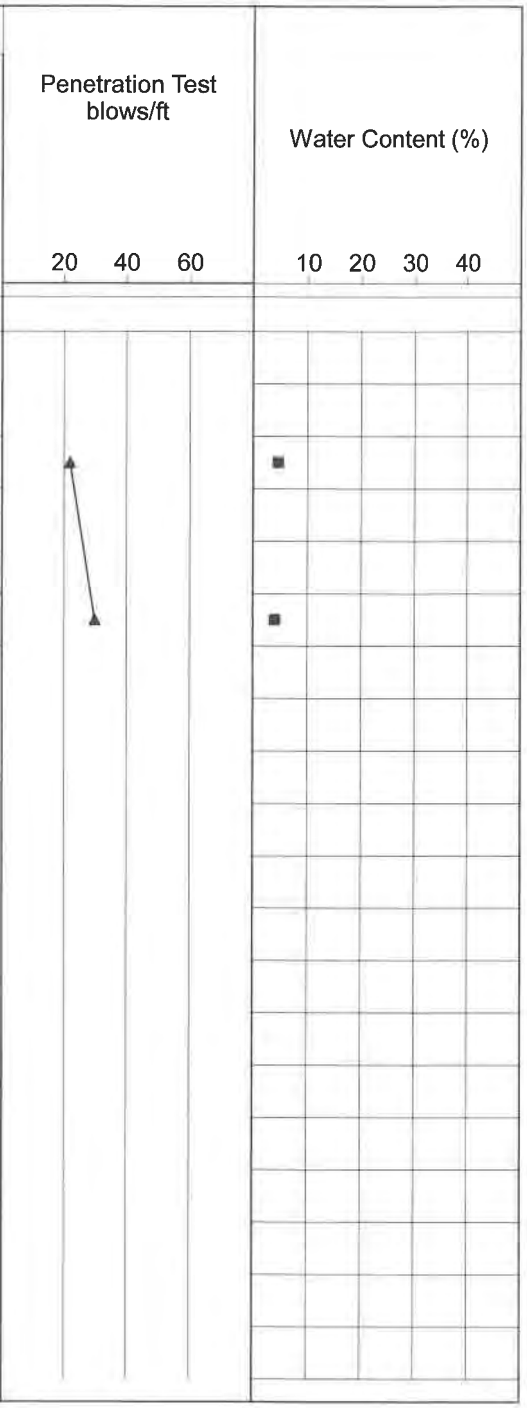
Project: Tract 6205
Project No: 012-18204

Client: Wilson Homes
Figure No.: A-9

Location: Sunnyside and Shepherd Avenues, Clovis, California
Logged By: Wayne Andrade

Depth to Water>
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
0	▨	***SILTY SAND (SM)*** Very loose, fine- to medium-grained; dark brown, moist, drills easily Loose below 1 foot				
2	▨	***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; light gray, damp, drills easily	108.8	4.6	■	22
5	▨		105.4	4.0	■	30
10		End of Borehole				



Drill Method: Solid Flight
Drill Date: 12-13-18

Drill Rig: CME 45C-1
Hole Size: 4½ Inches

Krazan and Associates

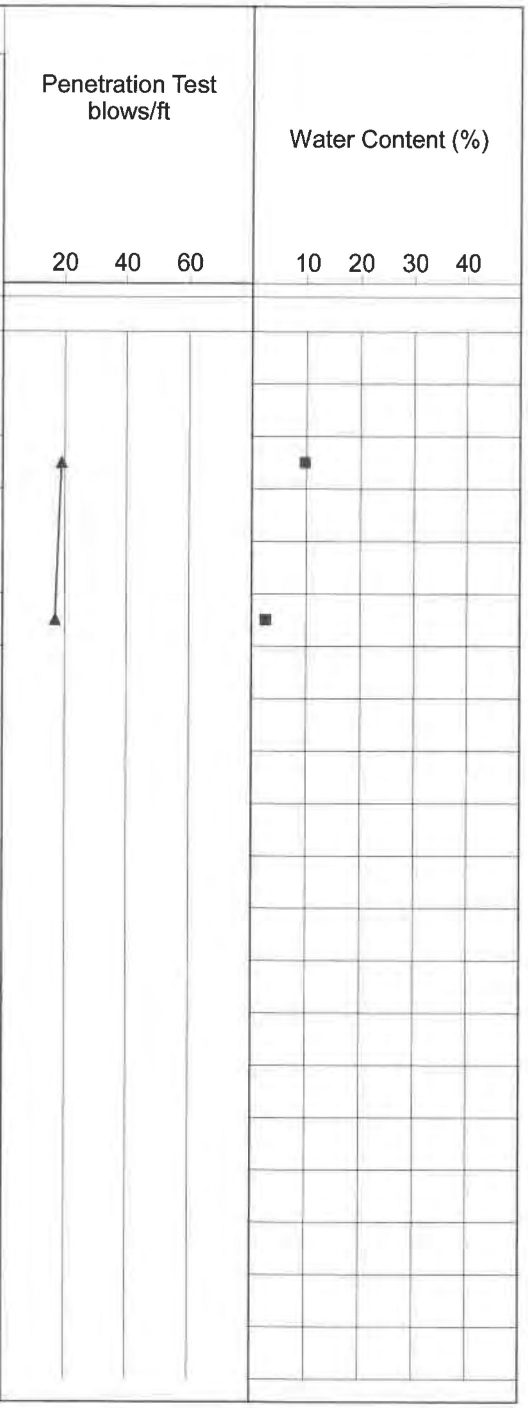
Driller: Chris Wyneken
Elevation: 10 Feet

Sheet: 1 of 1

Log of Boring B10

Project: Tract 6205
Project No: 012-18204
Client: Wilson Homes
Figure No.: A-10
Location: Sunnyside and Shepherd Avenues, Clovis, California
Logged By: Wayne Andrade
Depth to Water>
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0	▨	***SILTY SAND (SM)*** Very loose, fine- to medium-grained; dark brown, moist, drills easily Loose below 1 foot Medium dense, with increased SAND and light brown below 2 feet				
2	▨		111.1	9.8	■	19
4	▨	***SAND (SP)*** Medium dense, fine- to medium-grained; light gray, damp, drills easily				
	▨		110.4	2.6	■	17
6	▨					
8	▨					
10		End of Borehole				
12						
14						
16						
18						
20						



Drill Method: Solid Flight
Drill Date: 12-13-18
Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches
Driller: Chris Wyneken
Elevation: 10 Feet
Sheet: 1 of 1

Log of Boring B11

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

Figure No.: A-11

Location: Sunnyside and Shepherd Avenues, Clovis, California

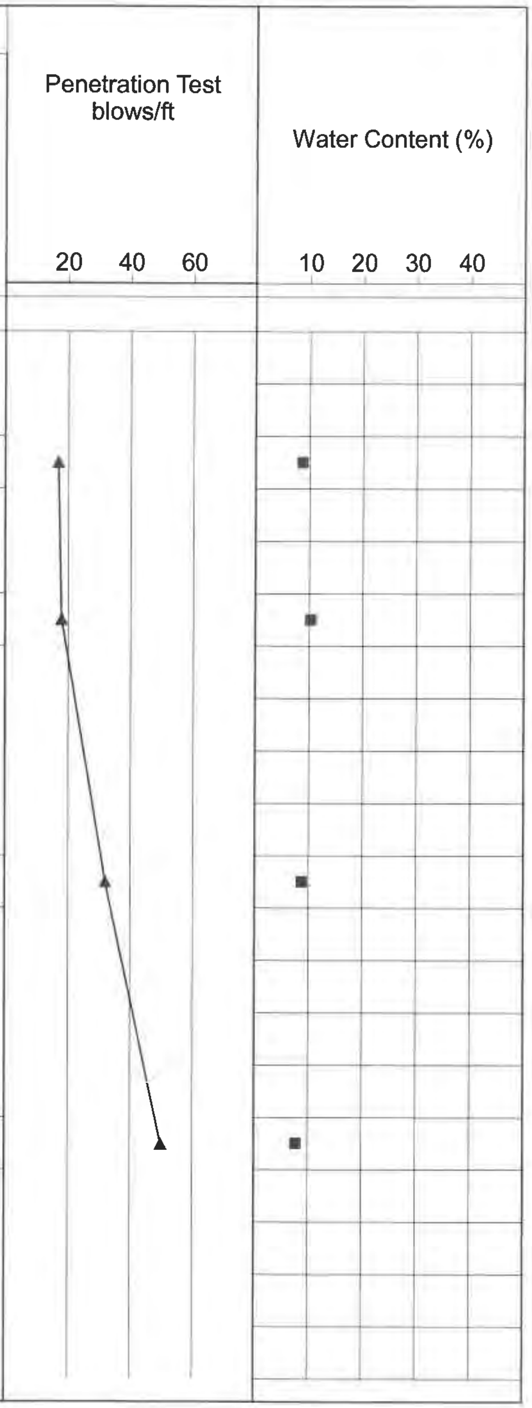
Logged By: Wayne Andrade

Depth to Water>

Initial: None

At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
	▨	***SILTY SAND (SM)*** Very loose, fine-grained; dark brown, moist, drills easily Loose below 1 foot Medium dense below 2 feet				
2			104.0	8.7	■	17
6			98.2	10.3	■	18
10			108.8	8.8	■	32
14	▨	***CLAYEY SAND (SC)*** Very dense, fine-grained; brown, moist, drills hard				
16			111.8	7.8	■	50+
20						



Drill Method: Solid Flight

Drill Date: 12-20-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 20 Feet

Sheet: 1 of 1

Log of Boring B12

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

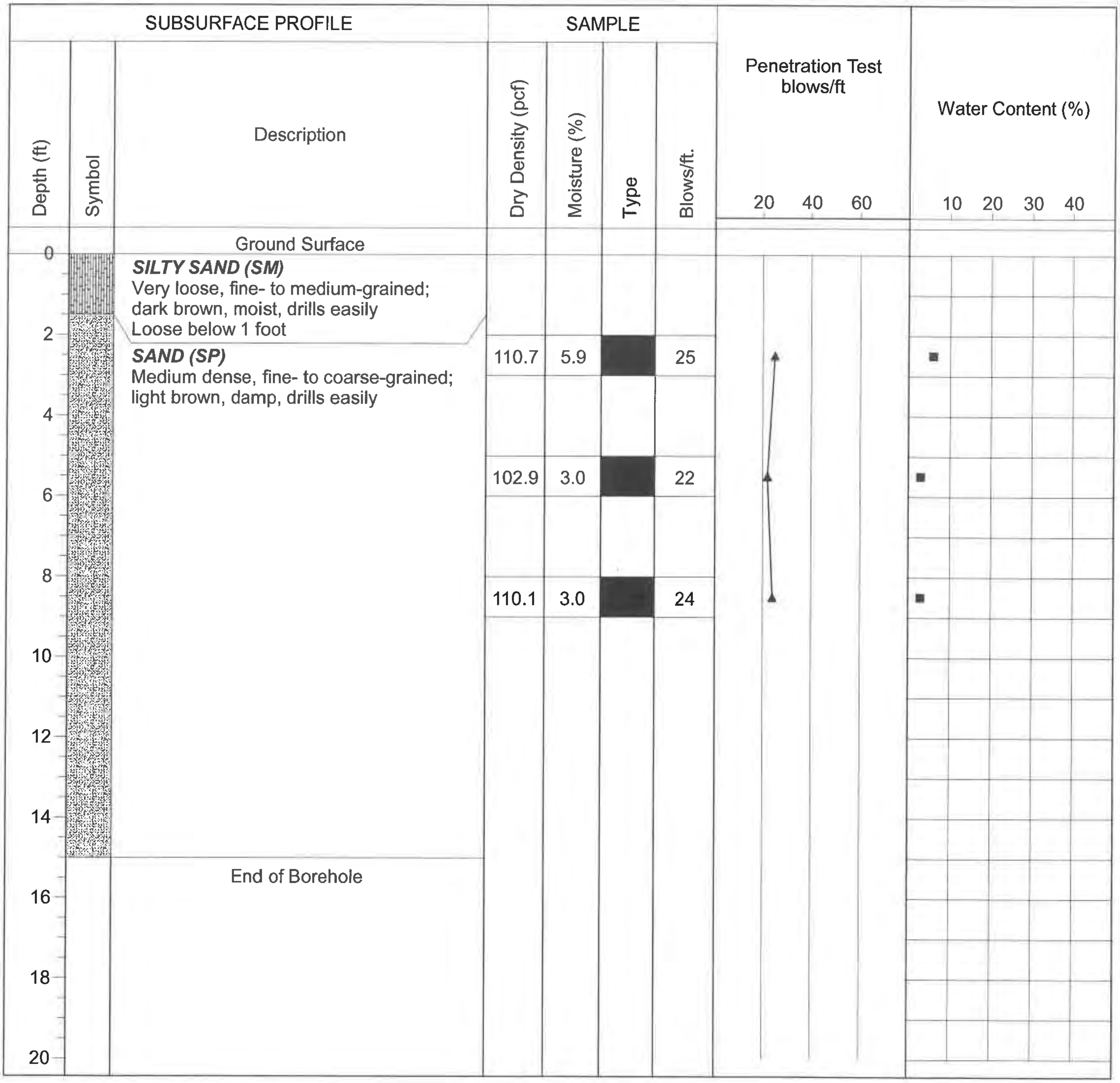
Figure No.: A-12

Location: Sunnyside and Shepherd Avenues, Clovis, California

Logged By: Wayne Andrade

Depth to Water> **Initial:** None **At Completion:** None

SUBSURFACE PROFILE



Description

Ground Surface

SILTY SAND (SM)
Very loose, fine- to medium-grained; dark brown, moist, drills easily
Loose below 1 foot

SAND (SP)
Medium dense, fine- to coarse-grained; light brown, damp, drills easily

End of Borehole

SAMPLE

Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
110.7	5.9	■	25
102.9	3.0	■	22
110.1	3.0	■	24

Drill Method: Solid Flight

Drill Date: 12-20-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 15 Feet

Sheet: 1 of 1

AGENDA ITEM NO. 6.

Log of Boring B13

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

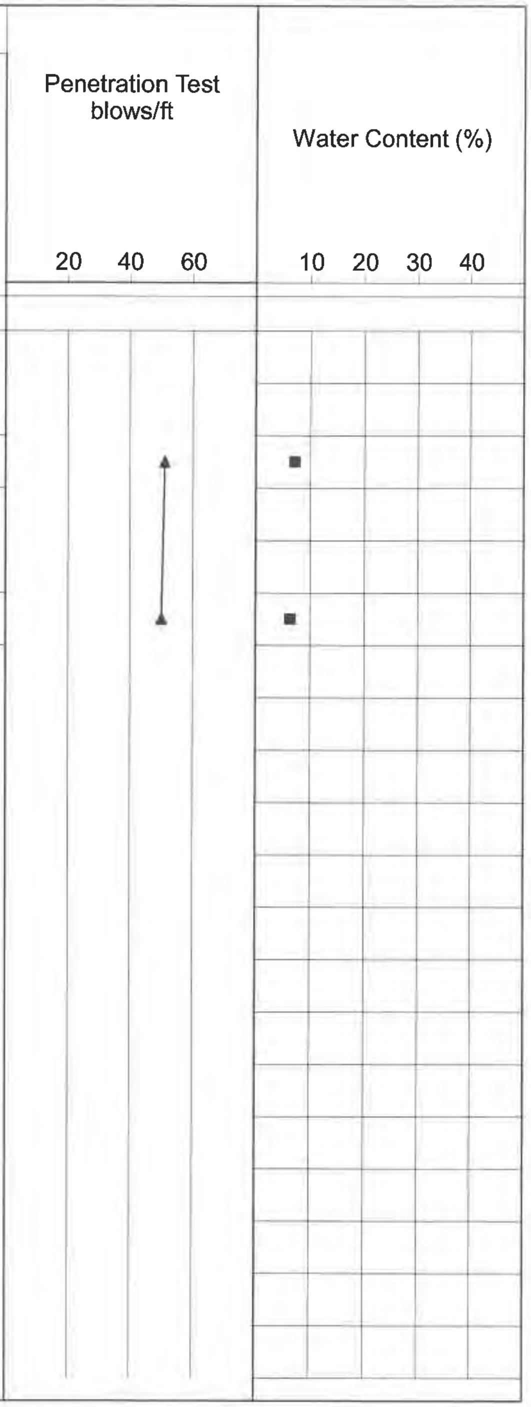
Figure No.: A-13

Location: Sunnyside and Shepherd Avenues, Clovis, California

Logged By: Wayne Andrade

Depth to Water> **Initial:** None **At Completion:** None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0	▨	***SILTY SAND (SM)*** Very loose, fine- to medium-grained; brown, moist, drills easily Loose below 1 foot				
2			108.4	7.2	■	51
	▨	***SILTY SAND (SM)*** Very dense, fine- to medium-grained with trace CLAY; light brown, damp, drills hard				
4						
			86.0	6.4	■	50+
6						
8						
10		End of Borehole				
12						
14						
16						
18						
20						



Drill Method: Solid Flight

Drill Date: 12-20-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 10 Feet

Sheet: 1 of 1

AGENDA ITEM NO. 6.

Log of Boring B14

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

Figure No.: A-14

Location: Sunnyside and Shepherd Avenues, Clovis, California

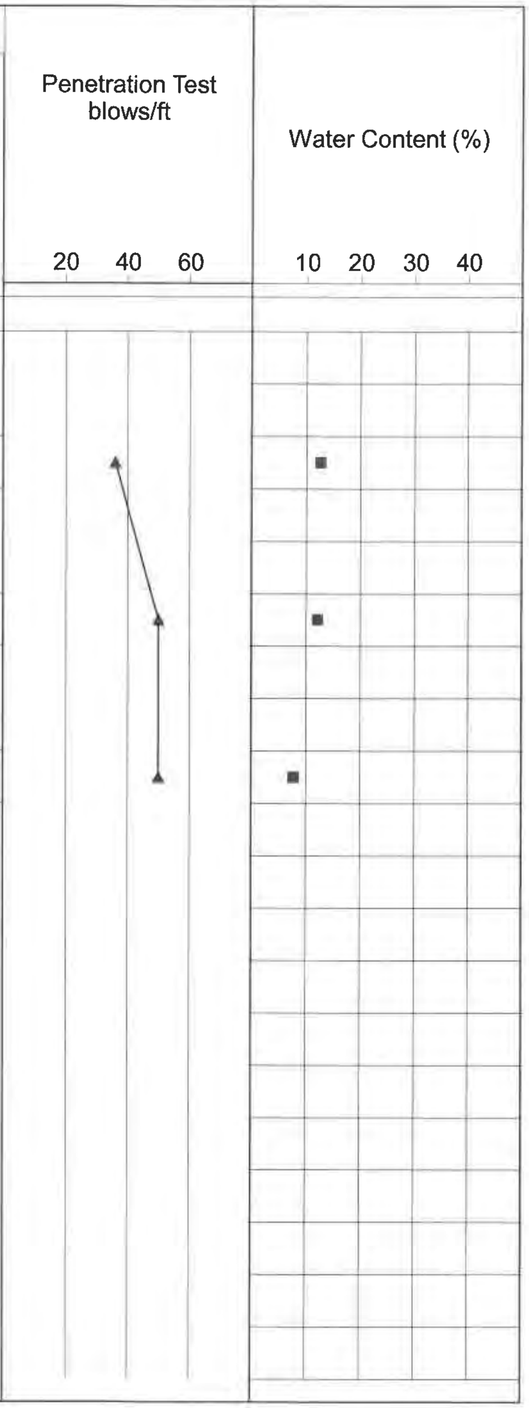
Logged By: Wayne Andrade

Depth to Water>

Initial: None

At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0		***SILTY SAND (SM)*** Very loose, fine- to medium-grained; brown, moist, drills easily Loose below 1 foot				
2		***SILTY SAND (SM)*** Medium dense, fine- to medium-grained with trace clay; light brown, damp, drills easily Very dense and drills hard below 5 feet	116.7	12.7	■	36
6			97.1	12.2	■	50+
8			122.9	7.8	■	50+
		End of Borehole				



Drill Method: Solid Flight

Drill Date: 12-20-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 15 Feet

Sheet: 1 of 1

AGENDA ITEM NO. 6.

Log of Boring B15

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

Figure No.: A-15

Location: Sunnyside and Shepherd Avenues, Clovis, California

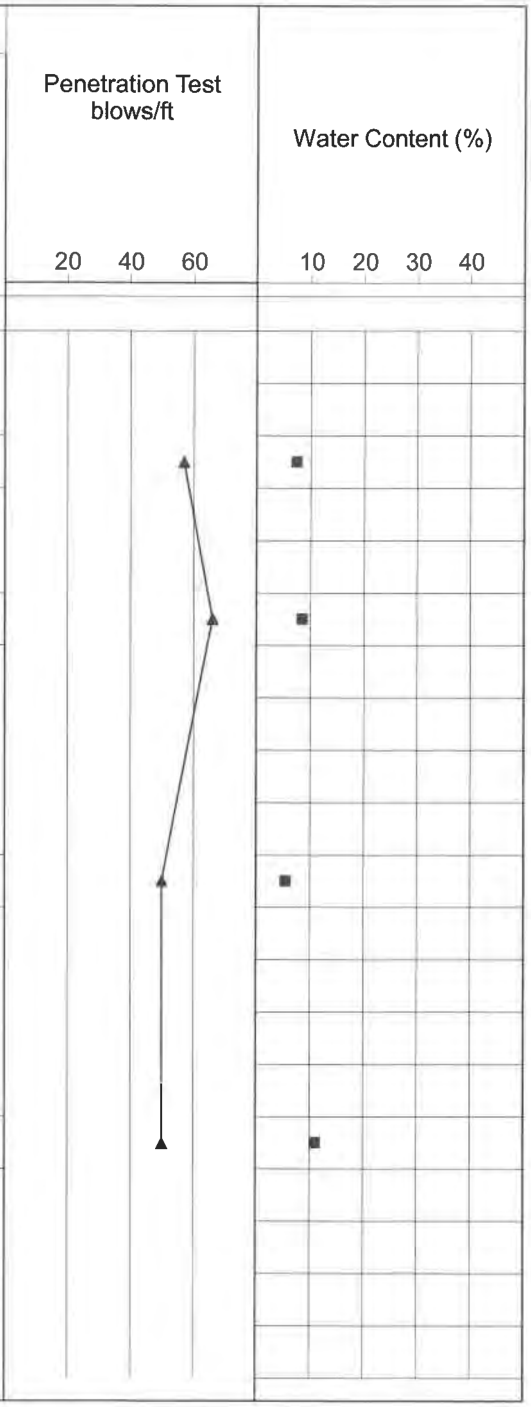
Logged By: Wayne Andrade

Depth to Water>

Initial: None

At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0 2		***SILTY SAND (SM)*** Very loose, fine- to medium-grained; brown, moist, drills easily Loose below 1 foot Medium dense below 2 feet	116.4	7.4	■	57
4		***SILTY SAND (SM)*** Very dense, fine- to medium-grained with trace CLAY, weakly cemented; light brown, damp, drills hard				
6		***SILTY SAND (SM)*** Very dense, fine- to medium-grained with trace CLAY; light brown, damp, drills easily	129.1	8.5	■	66
8 10 12		***CLAYEY SAND (SC)*** Very dense, fine- to medium-grained; brown, moist, drills hard	115.7	5.5	■	50+
14 16 18 20		***SILTY SAND (SM)*** Very dense, fine- to medium-grained; light brown, damp, drills hard	123.5	11.1	■	50+



Drill Method: Solid Flight

Drill Date: 12-20-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 20 Feet

Sheet: 1 of 1

Log of Boring B16

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

Figure No.: A-16

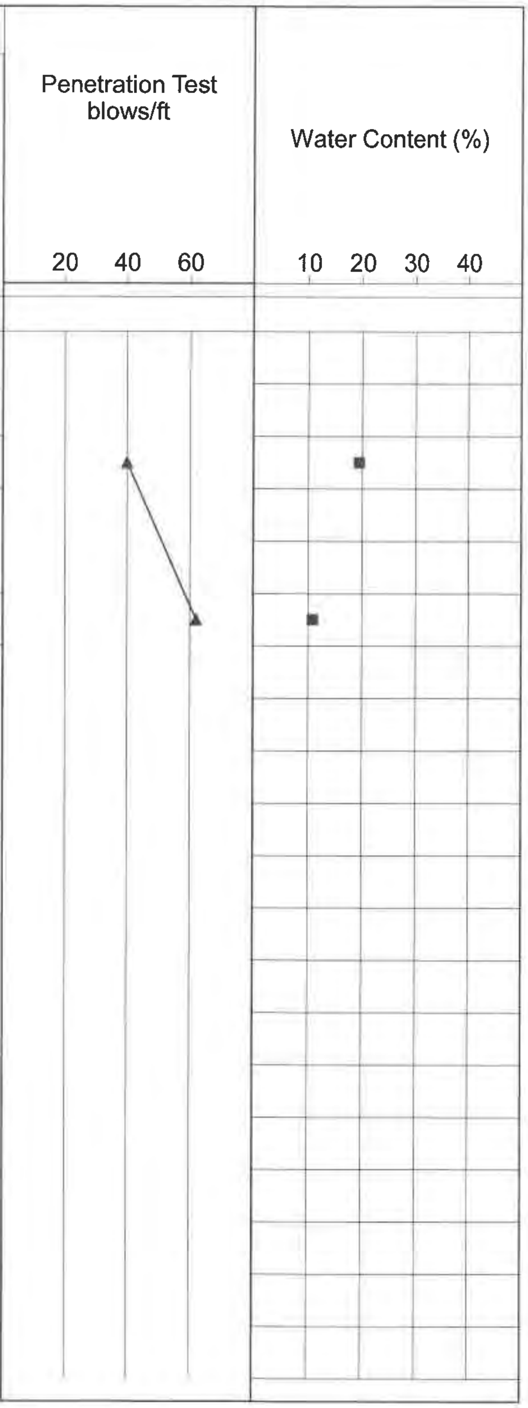
Location: Sunnyside and Shepherd Avenues, Clovis, California

Logged By: Wayne Andrade

Depth to Water> **Initial:** None **At Completion:** None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
	▨	***SILTY CLAYEY SAND (SC)*** Very loose, fine- to medium-grained; brown, moist, drills easily Medium dense below 1 foot	96.0	19.5	■	40
	▨	***SILTY SAND (SM)*** Very dense, fine-grained, weakly cemented; light brown, damp, drills hard				
	▨	***SILTY SAND (SM)*** Dense, fine- to medium-grained with trace CLAY; brown, damp, drills firmly	107.0	10.9	■	62
10		End of Borehole				

Depth (ft): 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20



Drill Method: Solid Flight

Drill Date: 12-20-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

Driller: Chris Wyneken

Elevation: 10 Feet

Sheet: 1 of 1

Log of Boring B17

Project: Tract 6205

Client: Wilson Homes

Location: Sunnyside and Shepherd Avenues, Clovis, California

Depth to Water>

Initial: None

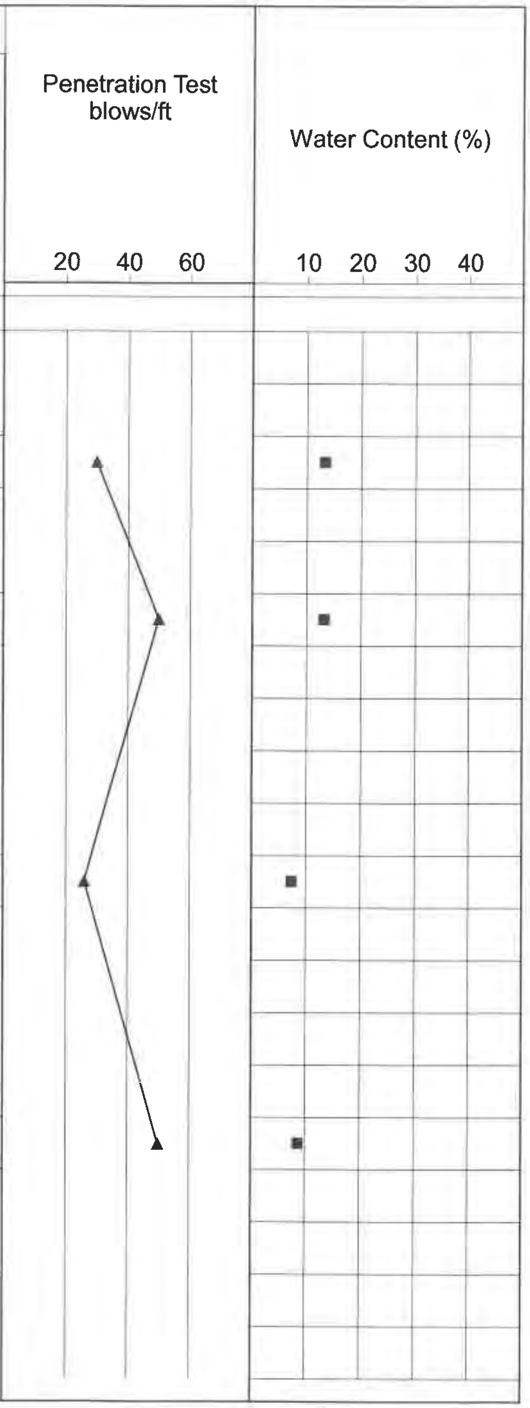
Project No: 012-18204

Figure No.: A-17

Logged By: Wayne Andrade

At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
	▨	***SILTY SAND (SM)*** Very loose, fine-grained with CLAY; dark brown, moist, drills easily Medium dense below 1 foot				
2	▨		117.8	13.4	■	30
4	▨					
	▨		120.1	13.3	■	50+
6	▨	***SILTY SAND (SM)*** Very dense, fine-grained; light brown, damp, drills hard				
8	▨					
10	▨	Medium dense below 10 feet	103.1	7.4	■	26
12	▨					
14	▨	Very dense below 14 feet				
	▨		99.5	8.7	■	50+
16	▨					
18	▨					
20						



Drill Method: Solid Flight

Drill Rig: CME 45C-1

Driller: Chris Wyneken

Krazan and Associates

Drill Date: 12-20-18

Hole Size: 4½ Inches

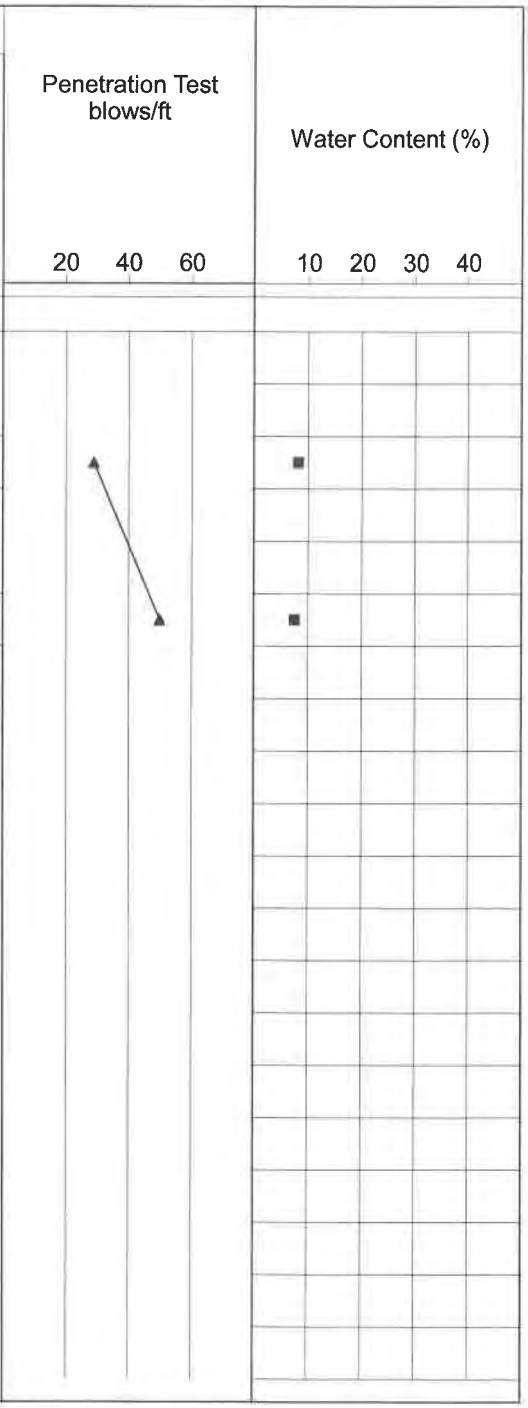
Elevation: 20 Feet

Sheet: 1 of 1

Log of Boring B18

Project: Tract 6205
Project No: 012-18204
Client: Wilson Homes
Figure No.: A-18
Location: Sunnyside and Shepherd Avenues, Clovis, California
Logged By: Wayne Andrade
Depth to Water>
Initial: None
At Completion: None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
		Ground Surface				
0	▨	***CLAYEY SILTY SAND (SM/SC)*** Very loose, fine-grained; brown, moist, drills easily Loose below 1 foot Medium dense below 1½ feet				
2	▨		108.4	8.2	■	29
4	▨	***SILTY SAND (SM)*** Very dense, fine- to medium-grained, weakly cemented; light brown, damp, drills hard				
6	▨		109.6	7.5	■	50+
8	▨	***SILTY SAND (SM)*** Medium dense, fine- to medium-grained; light brown, damp, drills easily				
10		End of Borehole				
12						
14						
16						
18						
20						



Drill Method: Solid Flight
Drill Date: 12-20-18
Drill Rig: CME 45C-1
Krazan and Associates
Hole Size: 4½ Inches
Driller: Chris Wyneken
Elevation: 10 Feet
Sheet: 1 of 1

AGENDA ITEM NO. 6.

Log of Boring B19

Project: Tract 6205

Project No: 012-18204

Client: Wilson Homes

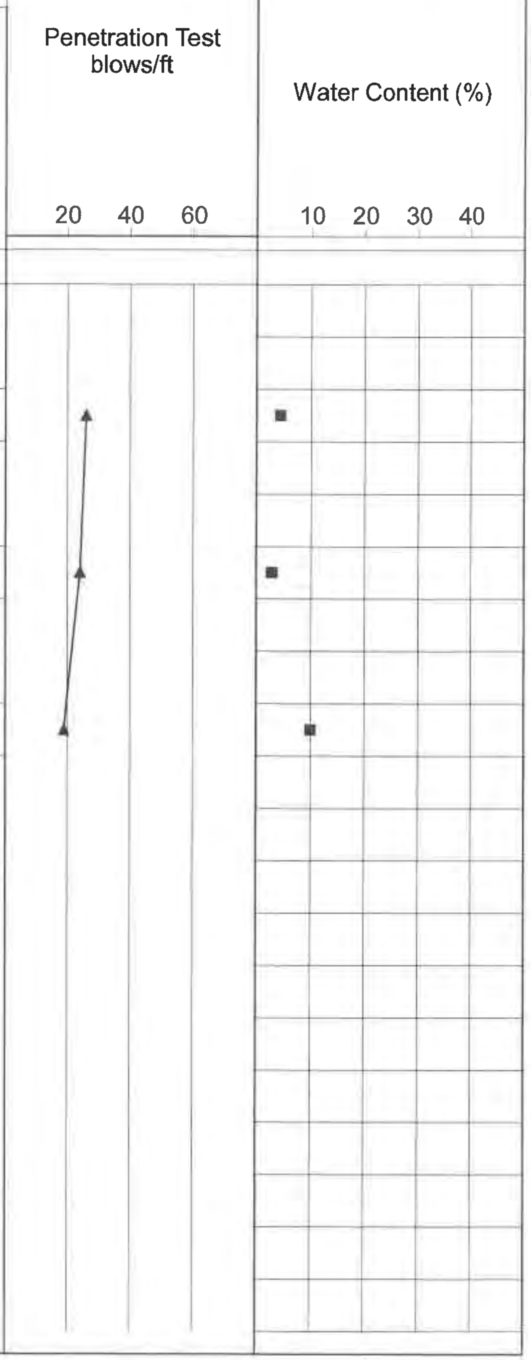
Figure No.: A-19

Location: Sunnyside and Shepherd Avenues, Clovis, California

Logged By: Wayne Andrade

Depth to Water> **Initial:** None **At Completion:** None

SUBSURFACE PROFILE			SAMPLE			
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture (%)	Type	Blows/ft.
0		Ground Surface				
		SILTY SAND (SM) Very loose, fine- to medium-grained with trace CLAY; brown, moist, drills easily Loose below 1 foot				
2		***SAND (SP)*** Medium dense, fine- to coarse-grained; light gray/light brown, damp, drills easily	117.3	4.3	■	23
			108.9	2.8	■	24
		SILTY SAND (SM) Medium dense, fine- to medium-grained; light brown, damp, drills easily	115.4	10.0	■	19
		End of Borehole				



Drill Method: Solid Flight

Drill Date: 12-20-18

Drill Rig: CME 45C-1

Krazan and Associates

Hole Size: 4½ Inches

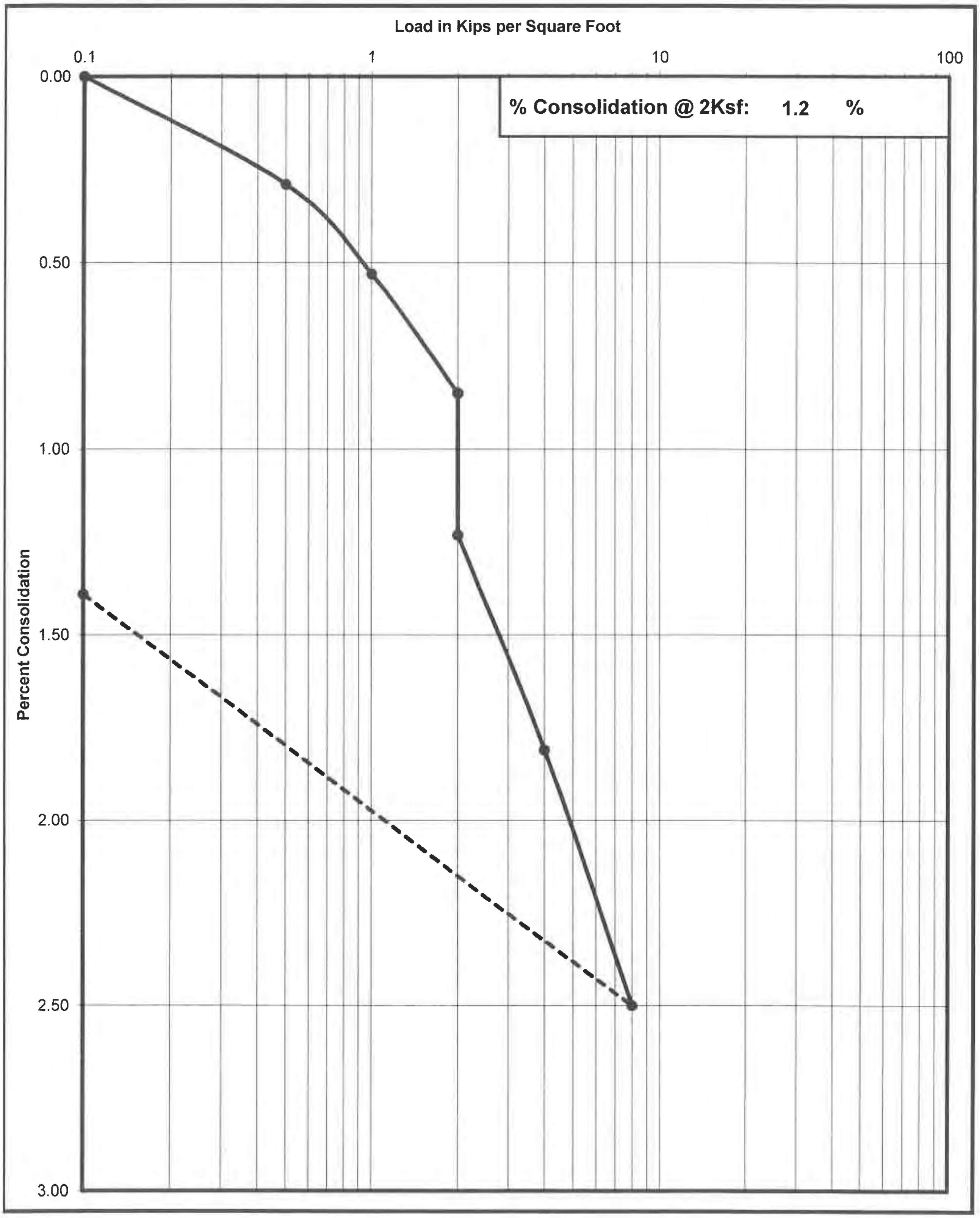
Driller: Chris Wyneken

Elevation: 15 Feet

Sheet: 1 of 1

Consolidation Test

Project No	Boring No. & Depth	Date	Soil Classification
012-18204	B3 @ 2-3'	1/2/2019	SM



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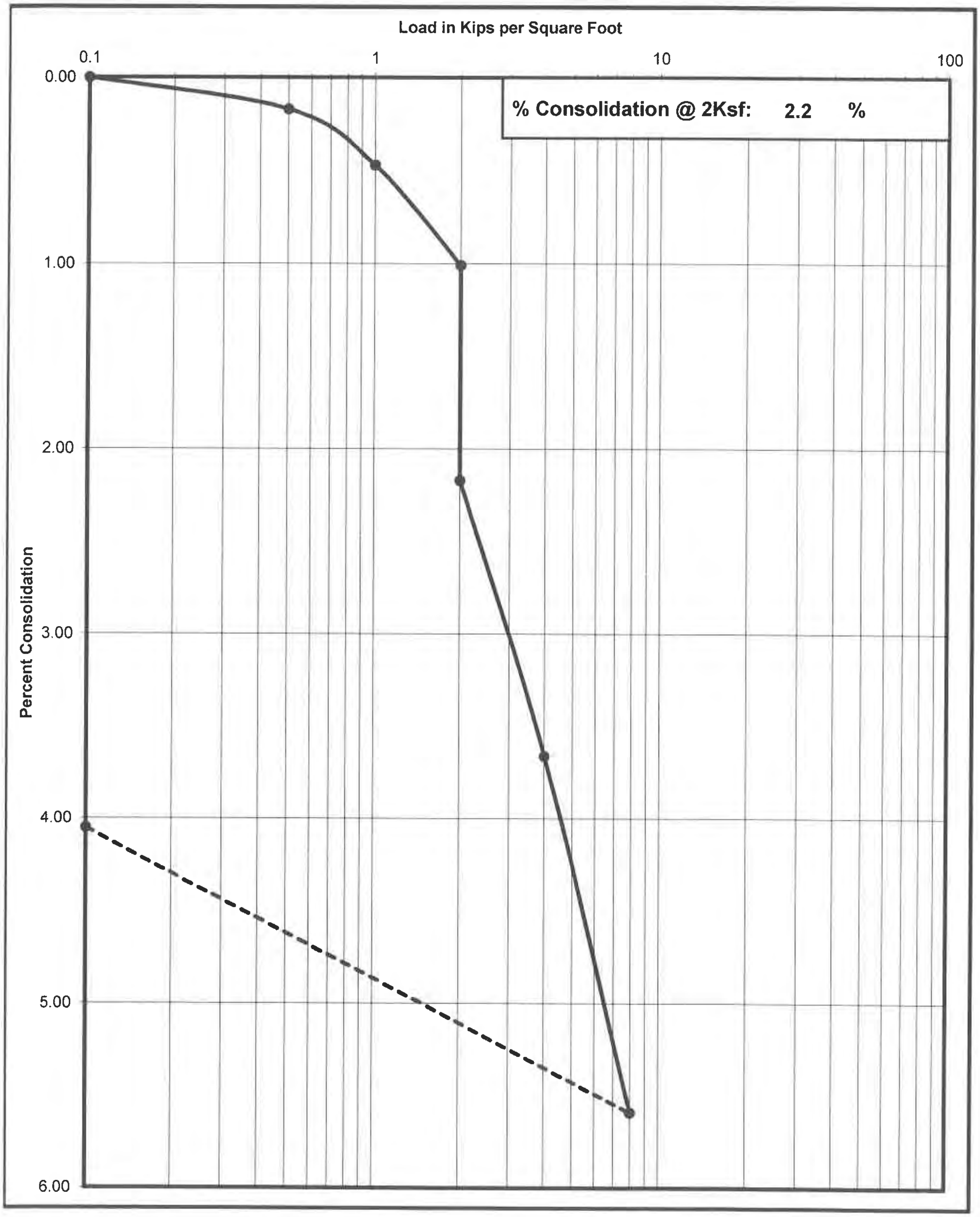
Consolidation Test

Project No	Boring No. & Depth	Date	Soil Classification
012-18204	B10 @ 2-3'	1/2/2019	SM



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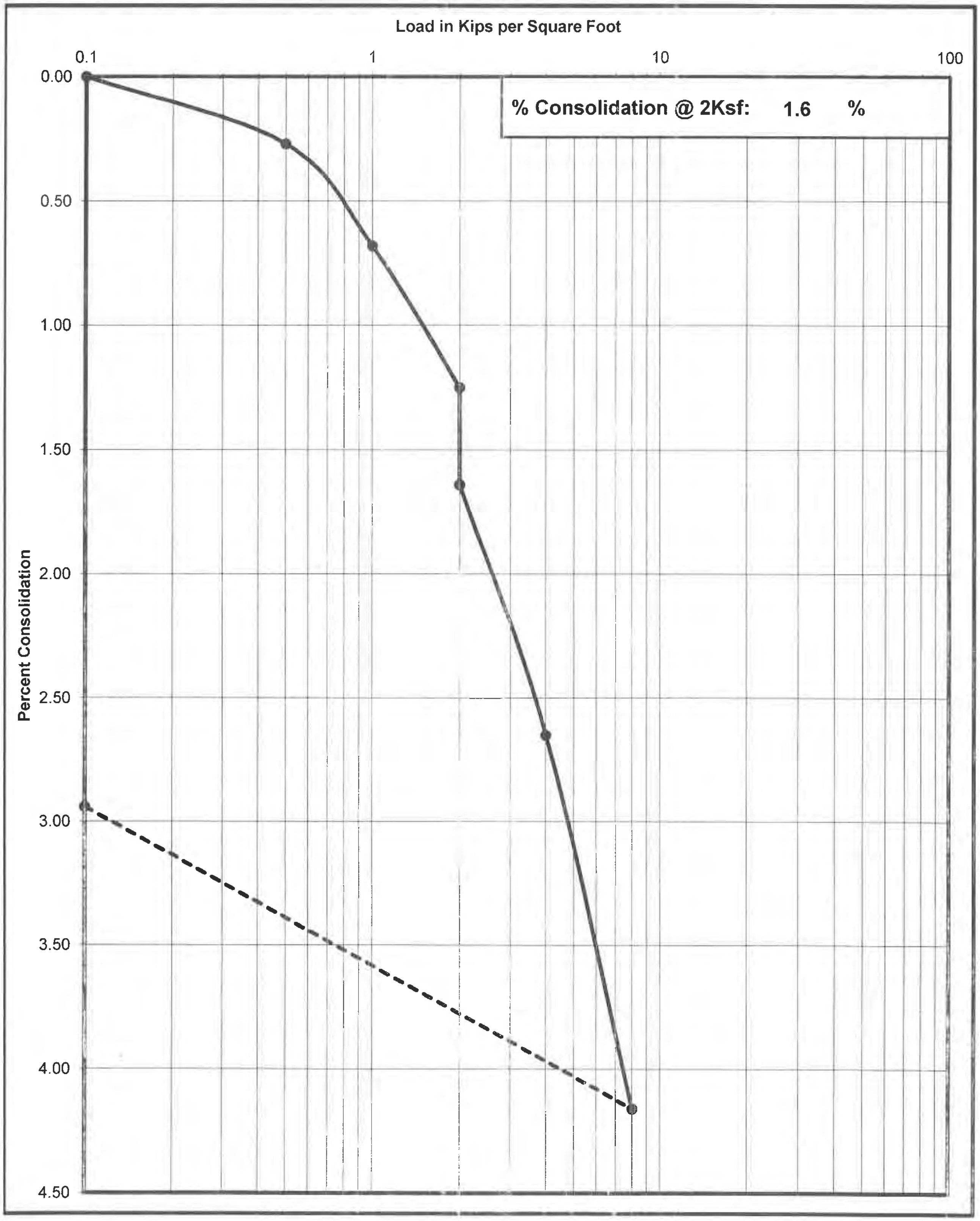
Consolidation Test

Project No	Boring No. & Depth	Date	Soil Classification
012-18204	B11 @ 2-3'	1/14/2019	SM



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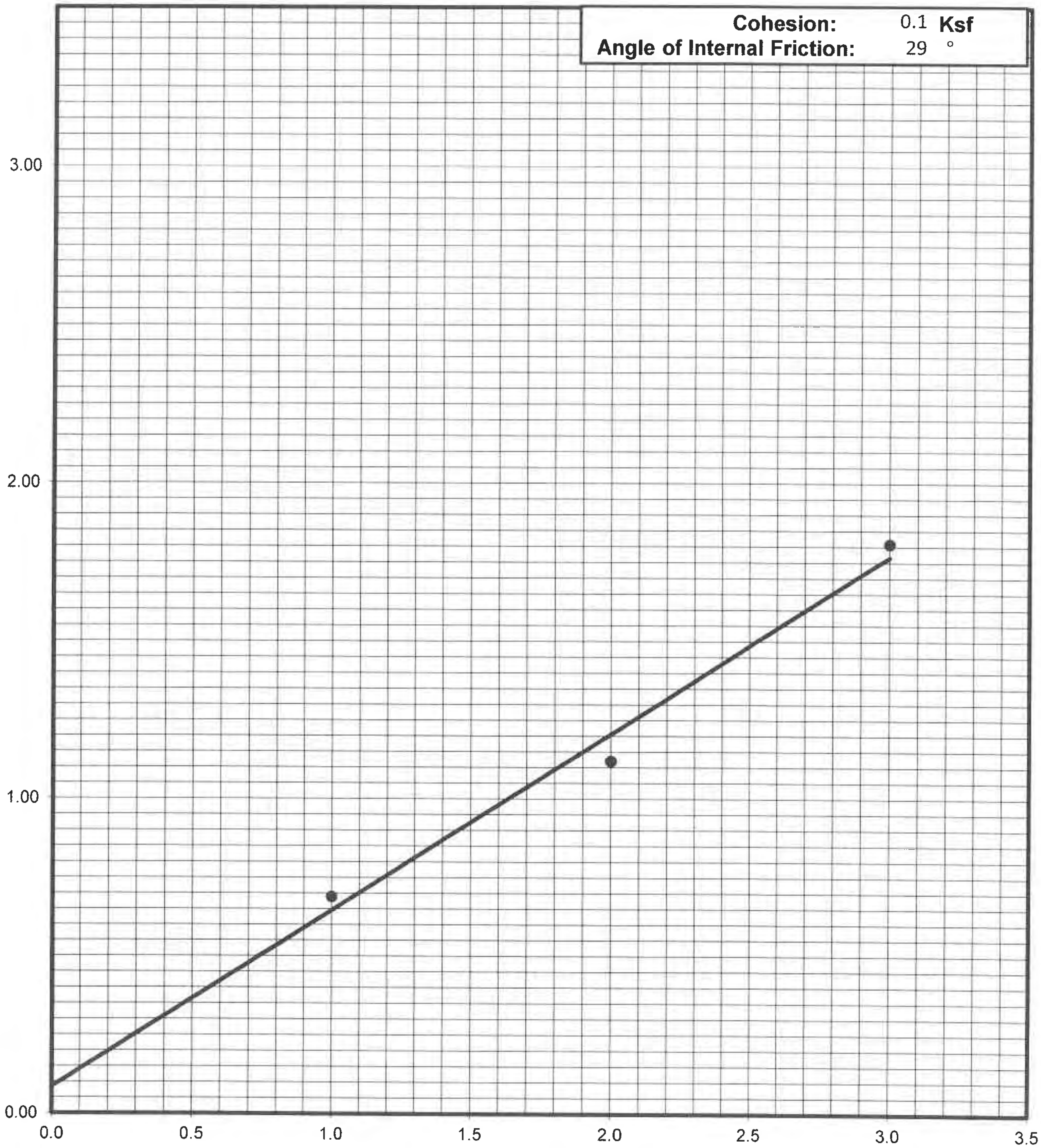
Shear Strength Diagram (Direct Shear)
ASTM D - 3080 / AASHTO T - 236

Project Number	Boring No. & Depth	Soil Type	Date
012-18204	B5 @ 2-3'	SM-ML	1/2/2019



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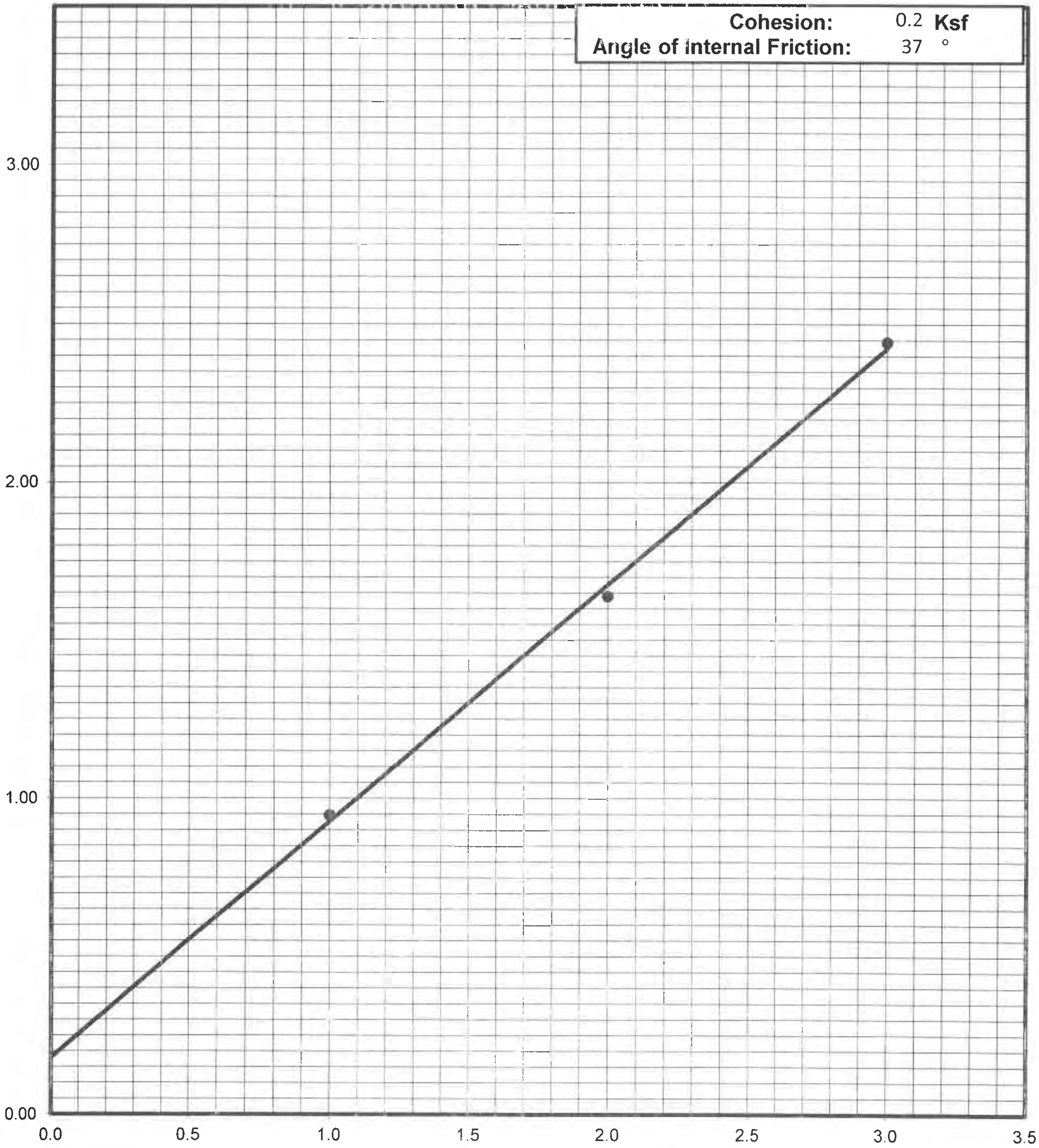
Shear Strength Diagram (Direct Shear)

ASTM D - 3080 / AASHTO T - 236

Project Number	Boring No. & Depth	Soil Type	Date
012-18204	B17 @ 2-3'	SM	1/14/2019



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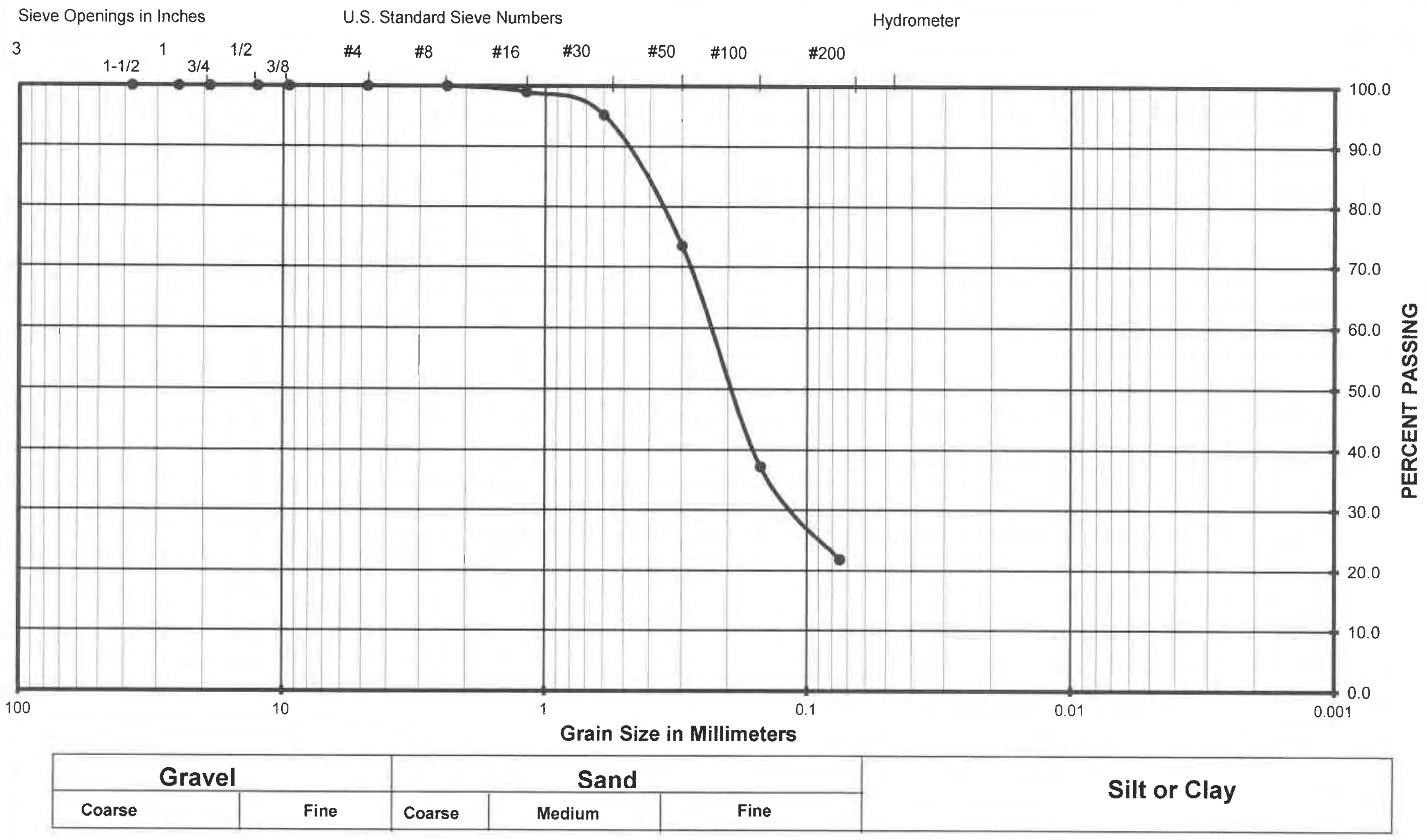
Grain Size Analysis



(Unified Soils Classification)

Project Name	Tract 6205 (Spensley Property)
Project Number	012-18204
Soil Classification	SM
Sample Number	B3 @ 2-3'

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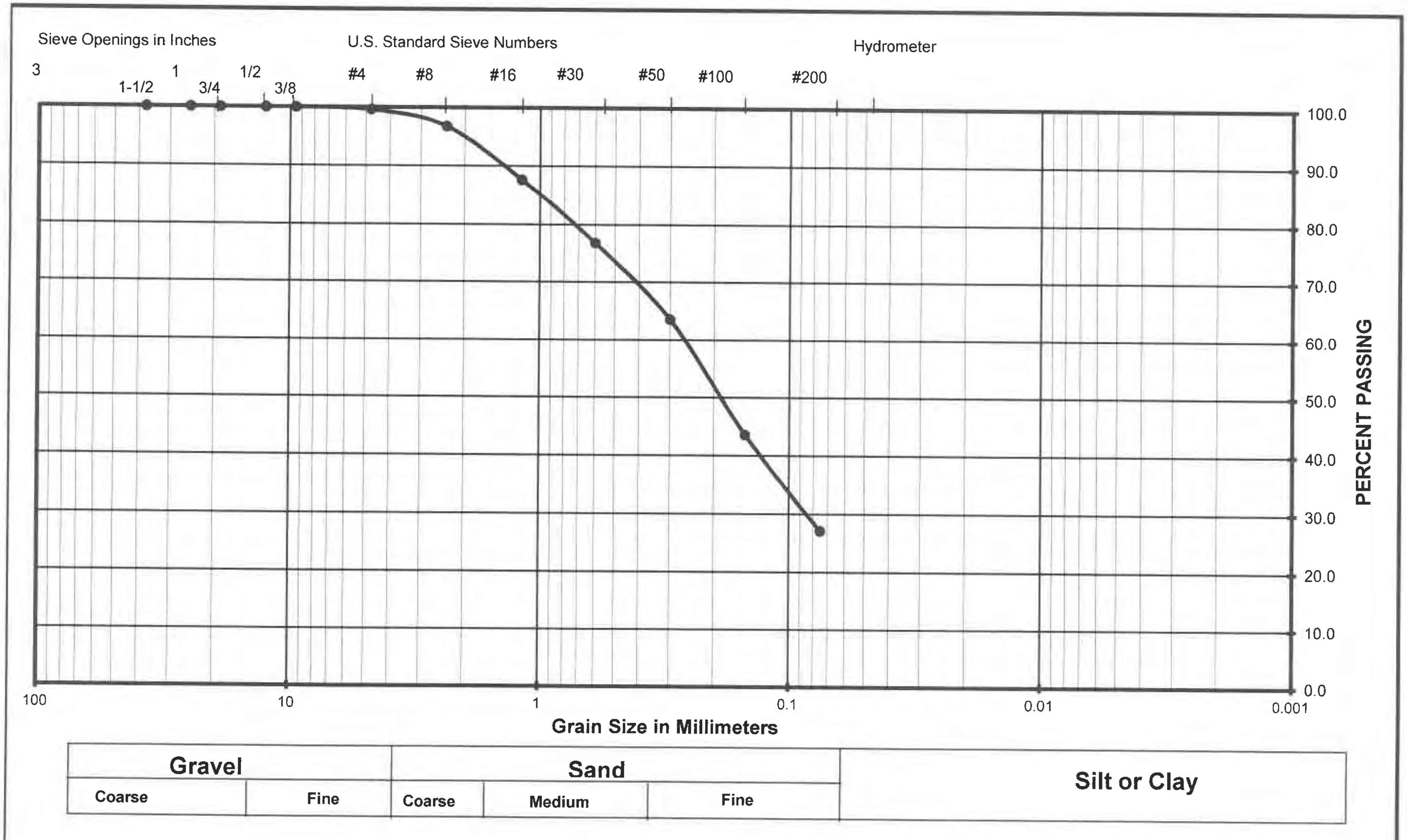
Grain Size Analysis



(Unified Soils Classification)

Project Name	Tract 6205 (Spensley Property)
Project Number	012-18204
Soil Classification	SM
Sample Number	B10 @ 2-3'

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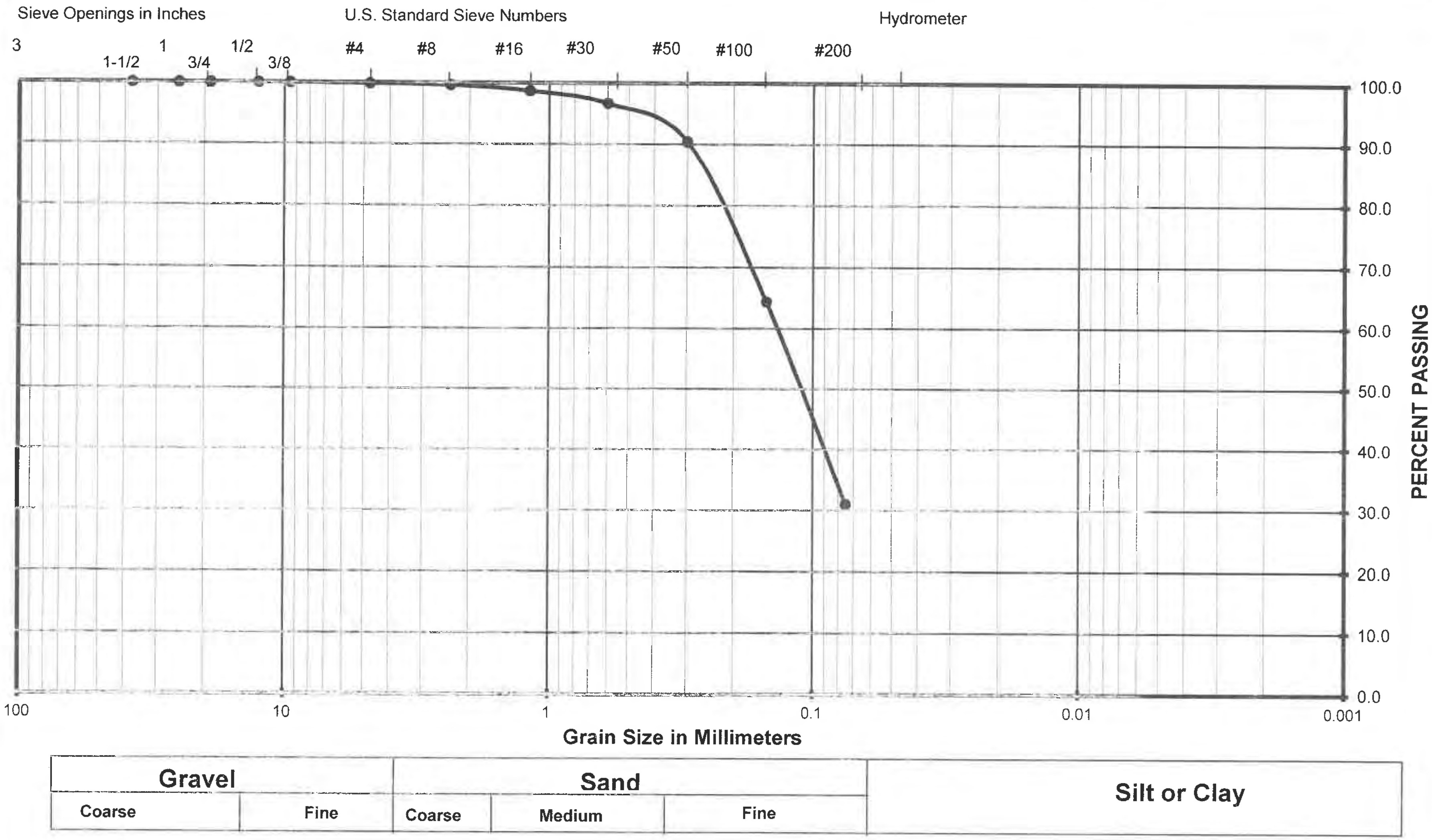
Grain Size Analysis



(Unified Soils Classification)

Project Name	Tract 6205 (Spensley Property)
Project Number	012-18204
Soil Classification	SM
Sample Number	B11 @ 2-3'

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Expansion Index Test

ASTM D - 4829

Project Number : 012-18204
Project Name : Tract 6205 (Spensley Property)
Date : 1/14/2019
Sample location/ Depth : B13 @ 2.5-5'
Sample Number : X2
Soil Classification : SM

Trial #	**1**	**2**	**3**
Weight of Soil & Mold, gms	786.3		
Weight of Mold, gms	368.5		
Weight of Soil, gms	417.8		
Wet Density, Lbs/cu.ft.	126.0		
Weight of Moisture Sample (Wet), gms	300.0		
Weight of Moisture Sample (Dry), gms	277.5		
Moisture Content, %	8.1		
Dry Density, Lbs/cu.ft.	116.6		
Specific Gravity of Soil	2.7		
Degree of Saturation, %	49.1		

Time	Inital	30 min	1 hr	6hrs	12 hrs	24 hrs
Dial Reading	0	--	--	--	--	0.0027

Expansion Index $_{\text{measured}}$ = 2.7

Expansion Index = 3

Expansion Potential Table	
Exp. Index	Potential Exp.
0 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
>130	Very High

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Expansion Index Test

ASTM D - 4829

Project Number : 012-18204
Project Name : Tract 6205 (Spensley Property)
Date : 1/14/2019
Sample location/ Depth : B16 @ 0-3'
Sample Number : X3
Soil Classification : SM

Trial #	**1**	**2**	**3**
Weight of Soil & Mold, gms	774.4		
Weight of Mold, gms	369.9		
Weight of Soil, gms	404.5		
Wet Density, Lbs/cu.ft.	122.0		
Weight of Moisture Sample (Wet), gms	300.0		
Weight of Moisture Sample (Dry), gms	274.0		
Moisture Content, %	9.5		
Dry Density, Lbs/cu.ft.	111.4		
Specific Gravity of Soil	2.7		
Degree of Saturation, %	50.0		

Time	Inital	30 min	1 hr	6hrs	12 hrs	24 hrs
Dial Reading	0	--	--	--	--	0.0048

Expansion Index $_{\text{measured}}$ = 4.8

Expansion Index = 5

Expansion Potential Table	
Exp. Index	Potential Exp.
0 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
>130	Very High

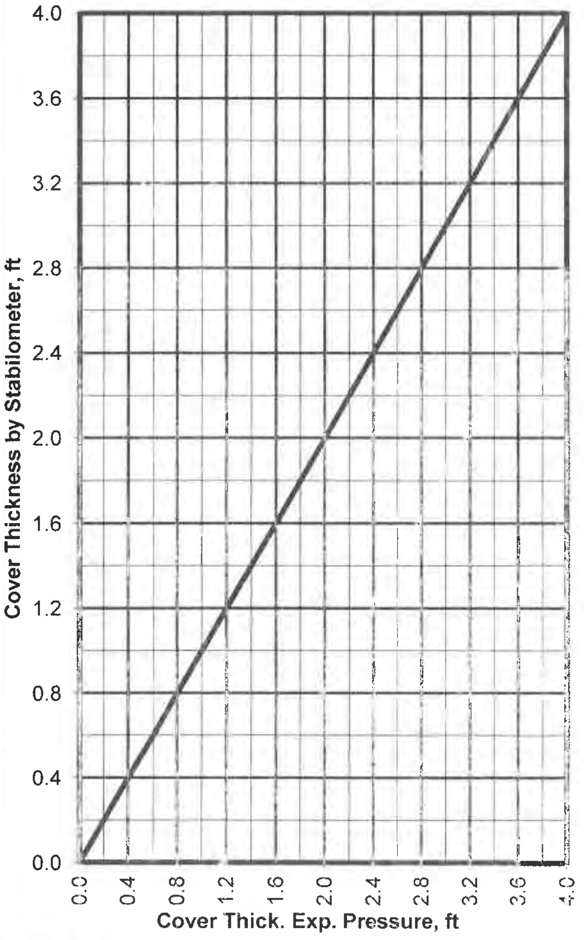
Krazan Testing Laboratory

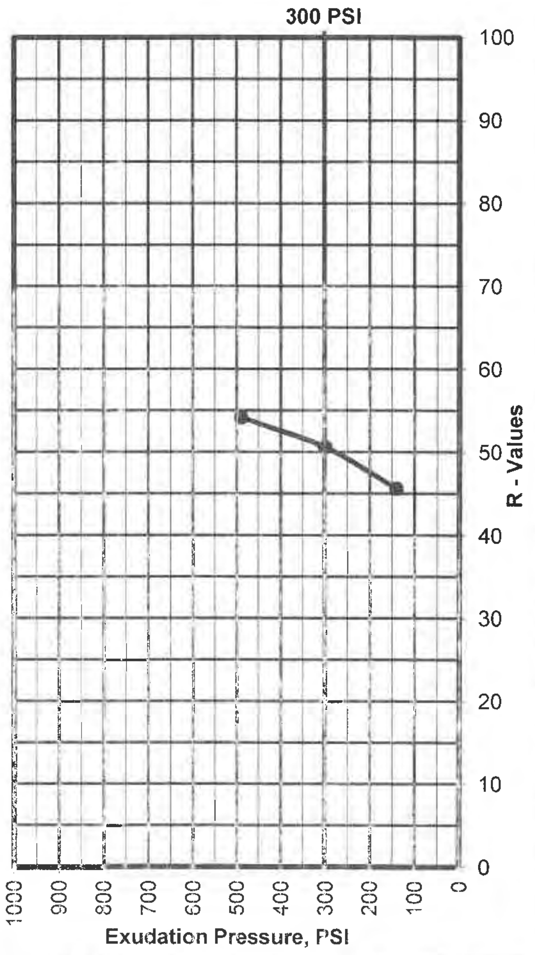
R - VALUE TEST
ASTM D - 2844 / CAL 301

Project Number : 012-18204
Project Name : Tract 6205 (Spensley Property)
Date : 1/14/2019
Sample Location/Curve Number : RV#1
Soil Classification : SM

TEST	A	B	C
Percent Moisture @ Compaction, %	15.0	15.5	14.3
Dry Density, lbm/cu.ft.	116.7	115.8	117.3
Exudation Pressure, psi	300	140	490
Expansion Pressure, (Dial Reading)	150	150	150
Expansion Pressure, psf	650	650	650
Resistance Value R	51	46	54

R Value at 300 PSI Exudation Pressure	**51**
R Value by Expansion Pressure (TI =): 5	**Expansion Pressure nil**





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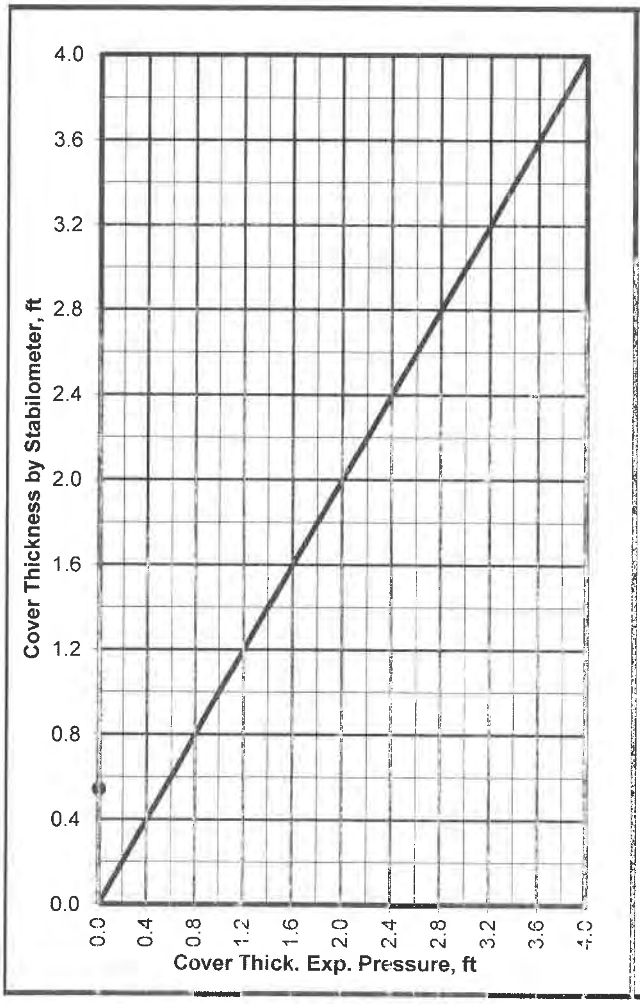
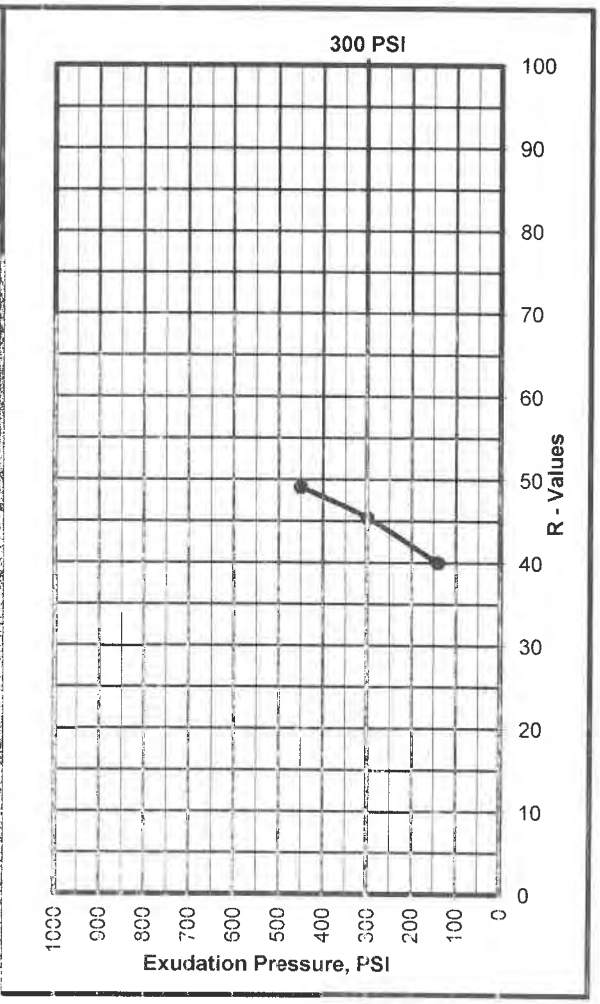
R - VALUE TEST
ASTM D - 2844 / CAL 301

Project Number	:	012-18204
Project Name	:	Tract 6205 (Spensley Property)
Date	:	1/14/2019
Sample Location/Curve Number	:	RV#2
Soil Classification	:	SM

TEST	A	B	C
Percent Moisture @ Compaction, %	13.2	13.7	14.2
Dry Density, lbm/cu.ft.	120.5	120.5	120.5
Exudation Pressure, psi	450	300	140
Expansion Pressure, (Dial Reading)	0	0	0
Expansion Pressure, psf	0	0	0
Resistance Value R	49	45	40

R Value at 300 PSI Exudation Pressure	**45**
R Value by Expansion Pressure (TI =): 5	**Expansion Pressure nil**





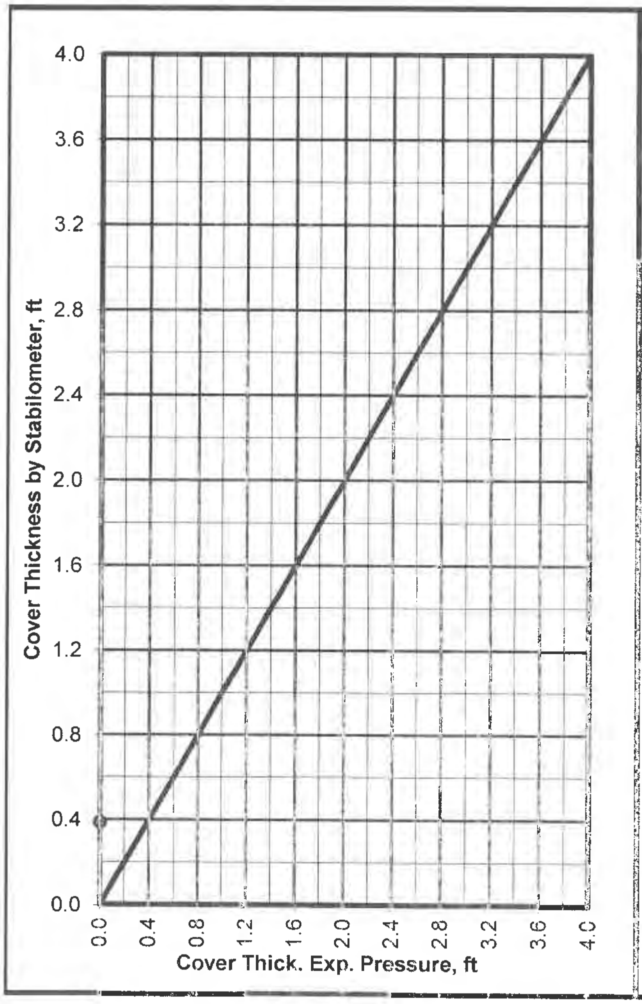
Krazan Testing Laboratory

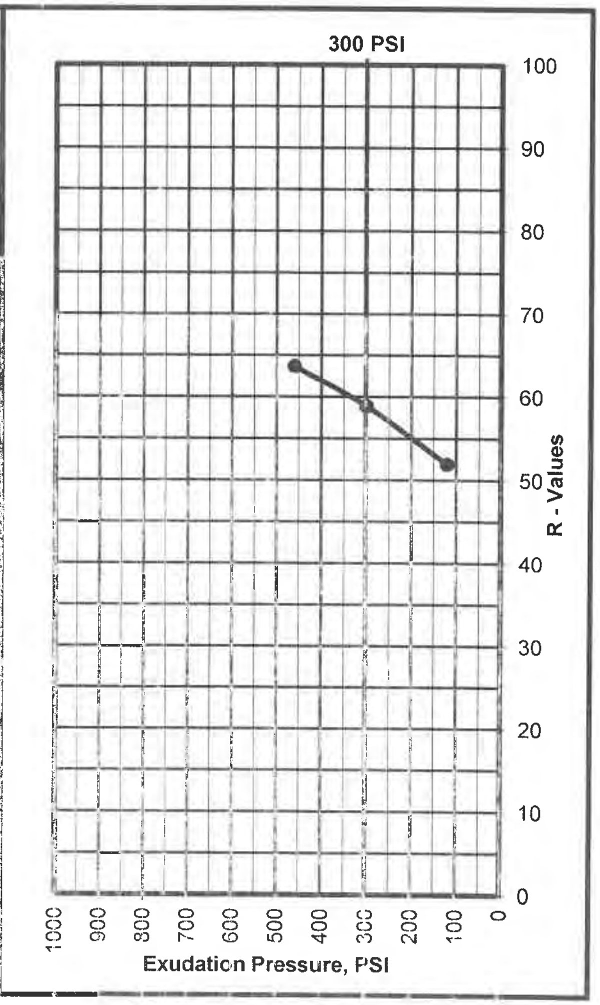
R - VALUE TEST
ASTM D - 2844 / CAL 301

Project Number : 012-18204
Project Name : Tract 6205 (Spensley Property)
Date : 1/14/2019
Sample Location/Curve Number : RV#3
Soil Classification : SM

TEST	A	B	C
Percent Moisture @ Compaction, %	12.1	12.6	13.1
Dry Density, lbm/cu.ft.	119.0	118.6	118.1
Exudation Pressure, psi	460	300	120
Expansion Pressure, (Dial Reading)	0	0	0
Expansion Pressure, psf	0	0	0
Resistance Value R	64	59	52

R Value at 300 PSI Exudation Pressure	**59**
R Value by Expansion Pressure (TI =): 5	**Expansion Pressure nil**





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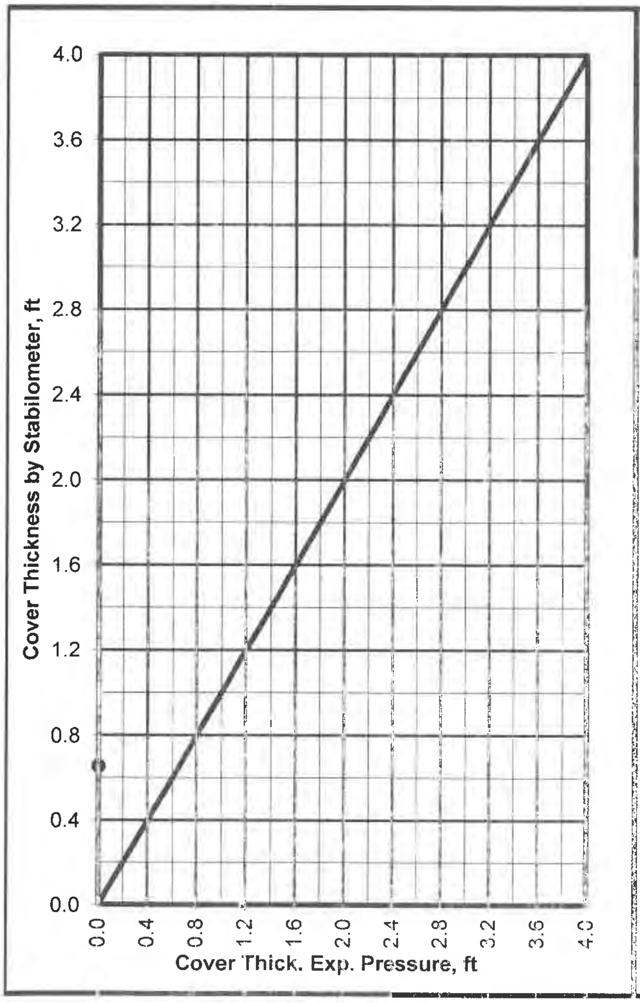
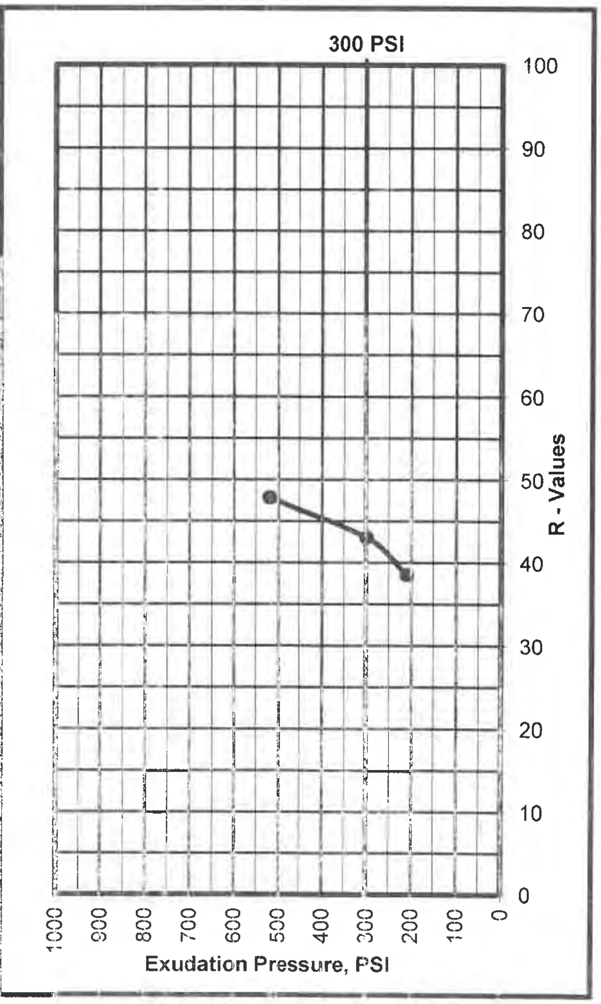
R - VALUE TEST
ASTM D - 2844 / CAL 301

Project Number : 012-18204
Project Name : Tract 6205 (Spensley Property)
Date : 1/14/2019
Sample Location/Curve Number : RV#4
Soil Classification : SM

TEST	A	B	C
Percent Moisture @ Compaction, %	15.8	15.3	14.8
Dry Density, lbm/cu.ft.	114.2	114.2	114.1
Exudation Pressure, psi	210	300	520
Expansion Pressure, (Dial Reading)	0	0	0
Expansion Pressure, psf	0	0	0
Resistance Value R	39	43	48

R Value at 300 PSI Exudation Pressure	43
R Value by Expansion Pressure (TI =): 5	**Expansion Pressure nil**





Krazan Testing Laboratory

APPENDIX B

EARTHWORK SPECIFICATIONS

GENERAL

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

SCOPE OF WORK: These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including but not limited to the furnishing of all labor, tools, and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans, and disposal of excess materials.

PERFORMANCE: The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of Krazan and Associates, Inc., hereinafter known as the Soils Engineer and/or Testing Agency. Attainment of design grades when achieved shall be certified to by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary readjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the soil negligence of the Owner or the Engineers.

TECHNICAL REQUIREMENTS: All compacted materials shall be densified to a density not less that 90 percent relative compaction based on ASTM Test Method D1557-78, UBC or CAL-216, as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be as determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

SOILS AND FOUNDATION CONDITIONS: The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the soil report.

The Contractor shall make his own interpretation of the data contained in said report, and the Contractor shall not be relieved of liability under the Contractor for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

DUST CONTROL: The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or windblown materials attributable to his work.

SITE PREPARATION

Site preparation shall consist of site clearing and grubbing and the preparations of foundation materials for receiving fill.

CLEARING AND GRUBBING: The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project, earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter, and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed building areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots larger than 1 inch. Tree root removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill or tree root excavation should not be permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

SUBGRADE PREPARATION: Surfaces to receive Engineered Fill, building or slab loads shall be prepared as outlined above, scarified to a depth of 6 inches, moisture-conditioned as necessary, and compacted to 90 percent relative compaction.

Loose soil areas, areas of uncertified fill, and/or areas of disturbed soils shall be moisture-conditioned as necessary and recompacted to 90 percent relative compaction. All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas, which are to receive fill materials, shall be approved by the Soils Engineer prior to the placement of any of the fill material.

EXCAVATION: All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

FILL AND BACKFILL MATERIAL: No material shall be moved or compacted without the presence of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

PLACEMENT, SPREADING AND COMPACTION: The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. However, compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer.

Both cut and fill shall be surface compacted to the satisfaction of the Soils Engineer prior to final acceptance.

SEASONAL LIMITS: No fill material shall be placed, spread, or rolled while it is frozen or thawing or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill are as specified.

APPENDIX C

PAVEMENT SPECIFICATIONS

1. **DEFINITIONS** - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed.

The term “Standard Specifications”: hereinafter referred to is the 2010 Standard Specifications of the State of California, Department of Transportation, and the "Materials Manual" is the Materials Manual of Testing and Control Procedures, State of California, Department of Public Works, Division of Highways. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as defined in the applicable tests outlined in the Materials Manual.

2. **SCOPE OF WORK** - This portion of the work shall include all labor, materials, tools, and equipment necessary for, and reasonably incidental to the completion of the pavement shown on the plans and as herein specified, except work specifically notes as "Work Not Included."

3. **PREPARATION OF THE SUBGRADE** - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 90 percent. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

4. **UNTREATED AGGREGATE BASE** - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class 2 material, 1½ inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent. The aggregate base material shall be spread and compacted in accordance with Section 26 of the Standard Specifications. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

5. **AGGREGATE SUBBASE** - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class 2 material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent, and it shall be spread and compacted in accordance with Section 25 of the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

6. ASPHALTIC CONCRETE SURFACING - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10. The mineral aggregate shall be Type B, ½ inch maximum size, medium grading and shall conform to the requirements set forth in Section 39. The drying, proportioning and mixing of the materials shall conform to Section 39.

The prime coat, spreading and compacting equipment and spreading and compacting mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50° F. The surfacing shall be rolled with a combination of steel wheel and pneumatic rollers, as described in Section 39-6. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine.

7. FOG SEAL COAT - The fog seal (mixing type asphaltic emulsion) shall conform to and be applied in accordance with the requirements of Section 37.

Appendix G

Phase 1 ESA

Krazan & ASSOCIATES, INC.

GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

January 14, 2019 Project No. 014-18235

Mr. Jeffrey Harris
Wilson Homes
7550 N. Palm Avenue, Suite 102
Fresno, California 93711
jharris@wilsondevelopment.com

RE: Phase I Environmental Site Assessment
Tract No. 6205 Property
Northeast corner of N. Sunnyside and E. Shepherd Avenues
Clovis, California 93619

Dear Mr. Harris:

Krazan & Associates, Inc., (Krazan) completed a Phase I Environmental Site Assessment at the referenced site summarized in a report dated January 14, 2019. We appreciate the opportunity to serve your environmental due diligence needs. During the course of this assessment, Krazan identified no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) in conjunction with the subject site as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs), non-scope issues and site development issues are presented:

PAOCs

- Adjacent to the north of the on-site warehouse and lined against its back wall, three approximately 250-gallon aboveground storage (AST) tanks were observed. Two ASTs contained diesel fuel and the third contained gasoline. Additionally, four 55-gallon drums containing motor oil were observed to be located to the west of the ASTs which exhibited *de minimis* staining. The site reconnaissance was completed a day following a heavy rain event and it was not clear if the ground surface below the ASTs and/or drums exhibited any significant petroleum product staining because the ground remained saturated with rainwater precluding visual observations. Consequently, the specific condition of the ground surface underlying the ASTs and drums is unknown.

  For a higher level of due diligence, Krazan recommends that a limited assessment be conducted in the area of the ASTs and drums to assess the presence or absence of potential significant impacts from constituents of concern.

- Krazan's review of aerial photographs indicates that the subject site was utilized for agricultural purposes from at least 1937 to the present and that residential structures and associated outbuildings occupied the property from at least 1937, 1979 and 1987 to the present. No records of USTs for the subject site are on file with the local regulatory agencies; however, USTs on rural or agricultural properties historically have been exempt from requirements for registration with regulatory agencies. Furthermore, Krazan's experience with such properties has shown that it was not uncommon for property owners/operators to install USTs for their convenience, especially in the vicinity of structures, which are undocumented and whose presence would remain unknown in spite of the standard data research conducted in the course of this Phase I ESA. It is therefore possible that subsurface features such as unregistered fuel USTs may exist within the structure-related portions of the subject site which remain unknown based on the absence of any regulatory, municipality, and/or interview data, or other evidence indicating their presence or location. Consequently, despite an absence of data suggesting their presence, the presence or absence of USTs associated with on-site structures in a historical agricultural setting on the subject site is unknown.

For a higher level of due diligence, Krazan recommends that a limited geophysical survey be conducted in the areas of the structures located on the subject site to assess the presence or absence of subsurface metallic anomalies characteristic of underground storage tanks or other subsurface features of concern.

NON-SCOPE ISSUES

- The residential dwellings/structures located on the subject site appears to have been originally constructed in at least 1937, 1979 and 1987. It is unknown if the on-site dwellings/structures contain asbestos-containing materials (ACMs) or lead-based paint (LBP). An asbestos and/or LBP survey and sampling of the on-site dwellings/structures was not included within the scope of this assessment. However, based upon the approximate apparent dates of construction, ACMs and LBP may be present at the subject site. During Krazan’s site reconnaissance, no damaged building materials which appeared to be posing a health hazard were noted within those areas of the on-site residential dwellings/structures observed. Prior to the disturbance of any of the suspect ACMs or LBP at the subject site via renovation or demolition, a comprehensive asbestos and LBP survey designed to determine if the suspect ACM and LBP are regulated materials is recommended. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor should be consulted.

SITE DEVELOPMENT ISSUES

- Based on Krazan’s historical research and interviews, two domestic water wells and five agricultural water wells were observed to be associated with the subject site. If the on-site water wells are not to be used in the future, they should be properly abandoned/destroyed in accordance with state and local guidelines.

If you have any questions regarding the information presented in this report, please call me at (559) 348-2200.

Respectfully Submitted,
KRAZAN & ASSOCIATES, INC.

Arthur C. Farkas, REA No. 07818
Environmental Professional

ACF/mlt

PHASE I ENVIRONMENTAL SITE ASSESSMENT TRACT NO. 6205 PROPERTY NORTHEAST CORNER OF N. SUNNYSIDE AND E. SHEPHERD AVENUES CLOVIS, CALIFORNIA 93619

Pursuant to ASTM E 1527-13

Project No. 014-18235
January 14, 2019

Prepared for:
Mr. Jeffrey Harris
Wilson Homes
7550 N. Palm Avenue, Suite 102
Fresno, California 93711
(559) 436-0900

Prepared by:
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Krazan & ASSOCIATES, INC.
SITE DEVELOPMENT ENGINEERS

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Appendices

AGENDA ITEM NO. 6.

Krazan & ASSOCIATES, INC.

GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

January 14, 2019 Project No. 014-18235

PHASE I ENVIRONMENTALSITE ASSESSMENT
TRACT NO. 6205 PROPERTY
NORTHEAST CORNER OF N. SUNNYSIDE AND E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

1.0 EXECUTIVE SUMMARY

Krazan & Associates, Inc. (Krazan) has conducted a Phase I Environmental Site Assessment (ESA) of the Tract No. 6205 Property located on the northeast corner of North Sunnyside and East Shepherd Avenues in Clovis, California 93619 (subject site). It is incumbent upon the user to read this Phase I ESA report in its entirety. If not otherwise defined within the text of this report, please refer to the Glossary of Terms Section following the References Section for definitions of terms and acronyms utilized within this Phase I ESA report. Krazan conducted the Phase I ESA of the subject site in conformance with the American Society for Testing and Materials (ASTM) E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* This Phase I ESA constitutes all appropriate inquiry (AAI) designed to identify recognized environmental conditions (RECs) in connection with the previous ownership and uses of the subject site as defined by ASTM E 1527-13.

ASTM E 1527-13 Section 1.1.1 *Recognized Environmental Conditions* – In defining a standard of good commercial and customary practice for conducting an environmental site assessment of a parcel of property, the goal of the processes established by this practice is to identify recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions.

During the course of this assessment, Krazan identified no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) or historical RECs (HRECs) in conjunction with the subject site as defined by ASTM E 1527-13. However, potential areas of concern (PAOCs) were revealed related to structures located on the property over the course of historical agricultural use which potentially may have incorporated underground storage tanks (USTs) and the condition of the ground surface underlying on-site fuel aboveground storage tanks (ASTs) and 55-gallon drums. Please refer to Section 8.0 for a discussion of these issues along with non-scope issues and site development issues.

2.0 PURPOSE AND SCOPE OF ASSESSMENT

2.1 Purpose

According to ASTM E 1527-13, the purpose of this practice is to define good commercial and customary practice in the United States of America for conducting an *environmental site assessment* of a parcel of *commercial real estate* with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and *petroleum products.* As such, this practice is intended to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner, contiguous property owner,* or *bona fide prospective purchaser* limitation on CERCLA liability (hereinafter, the *landowner liability protections,* or *LLPs*): that is, the practice that constitutes *all appropriate inquiries* into the previous ownership and uses of the *property* consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35)(B).

2.2 Scope of Work

The Phase I ESA includes the following scope of work: a) a site reconnaissance of existing on-site conditions and observations of adjacent property uses, b) a review of user-provided documents, c) a review of historical aerial photographs, a review of pertinent building permit records, city directories, historical Sanborn Fire Insurance Maps (SFIMs), and interview(s) with person(s) knowledgeable of the previous and current ownership and uses of the subject site, d) a review of local regulatory agency records, and e) a review of local, state, and federal regulatory agency lists compiled by Environmental Data Resources, Inc. (EDR). The scope of work for this Phase I ESA conforms to ASTM E 1527-13. Krazan was provided written authorization to conduct the Phase I ESA by Mr. Jeffrey Harris, Chief Operating Officer with Wilson Homes, on December 13, 2018 in Krazan's December 10, 2018 Proposal/Cost Estimate No. P18-403.

3.0 SITE DESCRIPTION

The subject site is located on the northeast corner of North Sunnyside and East Shepherd Avenues within the City of Clovis, California. General property information and property use are summarized in the following Table I. Refer to Figures No. 1 – 4 following the Reference Section.

TABLE I
Subject Site Information Summary

Current Owner:	Leo Wilson
Assessor's Parcel Number:	557-021-19, -20, and -21
Address:	N/A
Historical Address:	5230 East Shepherd Avenue Clovis, CA 93619
General Location:	Northeast of N. Sunnyside and E. Shepherd Avenues
Acreage:	75.05 acres
Existing Use:	Residential/Agricultural
Number of Structures:	Four
Original Construction Date:	At least 1937
Proposed Use:	Residential Development
Topographic Map:	U.S. Geological Survey, 7.5 minute Clovis, California topographic quadrangle map, dated 1964, photorevised 1981
Topographic Map Location:	Southwest quarter of Section 21, Township 12 South, Range 21 East, Mount Diablo Baseline and Meridian
Latitude/Longitude:	36.8685° / –119.690752°
Topography:	Relatively flat, approximately 385 feet above mean sea level
Approximate Depth to Groundwater:	55-65 feet below ground surface (bgs), State of California Department of Water Resources (DWR)*
Regional Groundwater Flow Direction:	Southwest, DWR

* State of California, Department of Water Resources, *Lines of Equal Elevation of Water in Wells Unconfined Aquifer, San Joaquin Valley, Spring 2010*.

3.1 Geology and Hydrogeology

The subject site is located within the San Joaquin Valley, a broad structural trough bound by the Sierra Nevada and Coast Ranges of California. The San Joaquin Valley, which comprises the southern portion of the Great Valley of California, has been filled with several thousand feet of sedimentary deposits. Sediments in the eastern valley, derived from the erosion of the Sierra Nevada, have been deposited by major to minor west-flowing drainages and their tributaries. Near-surface sediments are dominated by sands and silty sands with lesser silts, minor clays, and gravel. The sedimentary deposits in the region form large coalescing alluvial fans with gentle slopes. The groundwater in the area is reported to be first encountered at a depth of approximately 55-65 feet bgs. The groundwater flow direction in the area of the subject site is generally towards the southwest.

4.0 SITE RECONNAISSANCE

A site reconnaissance, which included a visual observation of the subject site and surrounding properties, was conducted by Ms. Michelle Phillips, Krazan's Environmental Assessor, on January 10, 2019. Krazan's Environmental Assessor was unaccompanied during the site reconnaissance. The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions, including hazardous substances and petroleum products, in connection with the property (including soils, surface waters, and groundwater).

4.1 Observations

The following Table II summarizes conditions encountered during our site reconnaissance. A discussion of visual observations follows Table II. Refer to the Site Map (Figure No. 3) and color photographs following the text for the locations of items discussed in this section of the report.

TABLE II
Summary of Site Reconnaissance

Feature	Observed	Not Observed
Structures (existing)	X	
Evidence of Past Uses (foundations, debris)		X
Hazardous Substances and/or Petroleum Products (including containers)	X	
Aboveground Storage Tanks (ASTs)	X	
Underground Storage Tanks (USTs) or Evidence of USTs		X
Evidence of Underground Pipelines		X
Strong, Pungent, or Noxious Odors		X
Pools of Liquid Likely to be Hazardous Materials or Petroleum Products		X
Drums	X	
Unidentified Substance Containers	X	
Potential Polychlorinated Biphenyl (PCB)-Containing Equipment	X	
Subsurface Hydraulic Equipment		X
Heating/Ventilation/Air conditioning (HVAC)	X	
Stains or Corrosion on Floors, Walls, or Ceilings	X	
Floor Drains, Sumps, or Oil/Water Clarifiers		X
Storm Drains	X	
Pits, Ponds, or Lagoons		X
Stained Soil and/or Pavement		X
Soil Piles		X
Stressed Vegetation		X
Waste or Wastewater (including stormwater) Discharges to Surface/ Surface Waters		X
Wells (irrigation, domestic, dry, injection, abandoned, monitoring wells)	X	
Septic Systems		X

The subject site comprises approximately 75.05 acres of rural residential property with the associated Fresno County APNs of 557-021-19, -20 and -21. The subject site is currently occupied by three residential dwellings and a warehouse. The remainder of the subject site is currently occupied by a pecan orchard (See Photographs No. 1 – 58). Refer to Figure No. 3, Site Map, and related photographs for locations and depictions of the following referenced on-site features:

- A rural residential dwelling with the associated subject site address of 5230 East Shepherd Avenue was observed within the southern portion of the subject site. A domestic water well was observed adjacent to the west of the rural residential dwelling (See Photographs No. 11 – 17).

- Adjacent to the north of the rural residential dwelling was a large warehouse where pecans are dried, packed and shipped. The warehouse was observed to be a steel structure set upon a slab on grade foundation. Large cracks were observed in the concrete foundation. *De minimis* staining was also observed on the foundation. Inside the warehouse were observed multiple pallets of stacked and bagged product, a forklift, several empty pallets, at least three refrigerators, and a ladder. A small storage room and two restrooms were also observed in the warehouse. The storage room was observed to contain a generator, at least three boxes of Roundup® herbicide, and multiple bags of zinc sulfate fertilizer. A small shop area was observed in the northeastern portion of the warehouse and contained multiple various tools and two compressed gas cylinders. The type of gas contained was no longer legible on the cylinders (See Photographs No. 18 – 21, 29).

- The warehouse had a bay attached to the eastern side and observed within the bay were a large electric heater for drying pecans, a concrete-lined subsurface pit that is used to dry the pecans, and at least eight metal access panels for the pit. No evidence of petroleum products was observed within or near the pit. *De minimis* staining was observed on the motor of the electric heater (See Photographs No. 26 – 28).

- Adjacent to the north of the warehouse and lined against its back wall were observed three approximately 250-gallon aboveground storage (AST) tanks. Two ASTs contained diesel fuel and the third contained gasoline. The site reconnaissance was completed a day following a heavy rain event and it was not clear if the ground surface below the ASTs exhibited any petroleum product staining because the ground remained saturated with rainwater precluding visual observations (See Photographs No. 22 – 25). A propane tank and stack of firewood were observed adjacent to the north of the ASTs (See Photograph No. 31).

- Four 55-gallon drums containing motor oil were observed to be located to the west of the ASTs. The drums exhibited *de minimis* staining. Also observed adjacent to the drums were two trash bins, a shopping cart and a tire (See Photograph No. 30).

- At least seven utility vaults were observed to be located on the southern boundary along E. Shepherd Avenue (See Photograph No. 11, 52).

- Four pole-mounted transformers were observed on the subject site. Two of the pole-mounted transformers were observed to be located in the central-eastern portion of the subject site, and two were observed to be located along the eastern boundary on the southern portion of the subject site. The transformer casings displayed no visual evidence of leakage and the ground surface below the transformers displayed no evidence of discoloration. Based on Krazan's observations, the Pacific Gas & Electric (PG&E) Company is the owner of the transformers. The transformers were not labeled as to their polychlorinated biphenyl (PCB) status. Based on the visual absence of apparent unauthorized releases of insulating fluids from the transformers at the time of Krazan's site reconnaissance, the transformers are not currently anticipated to pose an adverse impact to the subject site. However, in the event of a future release/leak of insulating fluids from the transformers, PG&E should be contacted regarding the testing of the transformers for PCB fluids or for their removal/replacement (See Photographs No. 9, 38, 40, 58).

- A small residential structure was observed to be located in the central-eastern portion of the subject site. Access was not granted to the structure at the time of the site reconnaissance because a trailer was parked up against the building, blocking the only entrance to the structure. Additionally, the three windows observed were all too frosted to allow observation of the interior. Multiple items were stored around the structure (See Photographs No. 34 – 37):
    - On the western side was stored an old satellite dish, a pile of concrete debris, a flatbed trailer, and farming equipment;
    - On the southern side was stored a pile of railroad ties, old chain-link fencing, a ladder and farming equipment; and,
    - On the eastern side was stored two trailers, multiple bales of chain link fencing, several stacks of tires and a portable water tank on a trailer.
- Five agricultural water wells were observed to be located on the subject site, two located along the east-west centerline of the subject site to the east of the small residential structure previously mentioned, one located in the southwestern corner of the subject site, one located in the northwestern corner of the subject site, and one located along the eastern boundary of the subject site (See Photographs No. 6, 33 – 34, 37 – 39, 41, and 53).
- A rural residential dwelling was observed within the northwestern portion of the subject site. A domestic water well and associated water tank was observed adjacent to the west of the rural residential dwelling (See Photographs No. 6 – 7, 42 – 49).
- Two large berms containing wood branches and debris from pruning the orchard were observed along the eastern boundary of the subject site. The berms were at least 10-12 feet tall. The larger of the two berms was approximately 550 feet in length, and the smaller was approximately 80 feet in length. The smaller of the two berms appears to be mainly chopped wood. It is unknown how long the berms have been there, and what the condition of the ground is below the berms. Additionally, three flatbed trailers were observed to be located adjacent to the smaller berm (See Photographs No. 50 – 51, 54 – 57).
- During the visual observations of the subject site, no hazardous materials were observed. Exposed surface soils did not exhibit obvious signs of discoloration in accessible areas. No obvious evidence (vent pipes, fill pipes, dispensers, etc.) of USTs was noted within the areas observed. No standing water or major depressions were observed on the subject site. No indications of former structures, such as foundations, were observed on the subject site.
- No high-voltage, tower-mounted electrical transmission lines were observed on or in the vicinity of the subject site.

4.2 Utilities

Based on Krazan's research, the following Table III summarizes companies/municipalities that currently provide or will provide utility services to the subject site:

TABLE III
Municipal Service / Utility Providers

Electricity	Pacific Gas & Electric Company
Natural Gas	Pacific Gas & Electric Company
Potable Water	Domestic Water Well
Sanitary Sewer	City of Clovis

Upon future development, the City of Clovis will provide water services to the subject site.

4.3 Adjacent Streets and Property Usage

The following Table IV summarizes the current adjacent roads and adjacent property uses observed during the site reconnaissance.

TABLE IV
Adjacent Streets and Property Use

Direction	Adjacent Street	Adjacent Property Use (Address)
North	None	Residential
South	E. Shepherd Avenue	Residential
East	None	Residential
West	N. Sunnyside Avenue	Agricultural

Based on the observed uses of the properties located immediately adjacent to the subject site, it is unlikely that significant quantities of hazardous materials are stored at the adjacent properties.

4.4 ASTM Non-Scope Considerations

According to ASTM E 1527-13, there may be environmental issues or conditions at the subject site that are outside the scope of the Phase I ESA practice (non-scope considerations). Some substances may be present at the subject site in quantities and under conditions that may lead to contamination of the subject site or of nearby properties but are not included in CERCLA’s definition of hazardous substances (42 U.S.C. §9601[14]). ASTM non-scope considerations are discussed below.

Asbestos-Containing Materials

Asbestos is a group of naturally occurring mineral fibers that have been used commonly in a variety of building construction materials for insulation and as a fire-retardant. Because of its fiber strength and heat resistant properties, asbestos has been used for a wide range of manufactured goods, mostly in building materials, vehicle brakes, and heat-resistant fabrics, packaging, gaskets, and coatings. When asbestos-containing materials (ACMs) are damaged or disturbed by repair, remodeling, or demolition activities, microscopic asbestos fibers may become airborne and can be inhaled into the lungs, where they can cause significant health problems.

The residential structures located on the subject site were constructed in at least 1937, 1979 and 1987. It is unknown if the on-site structures contain ACMs. An asbestos survey and sampling of the on-site structures was not included within the scope of this assessment. However, based on the approximate dates of construction, ACMs may be present at the subject site. During Krazan's January 10, 2019 site reconnaissance, no damaged building materials or friable suspect ACMs which appeared to be posing a health hazard were noted in the on-site structure in accessible areas. Prior to the disturbance of any of the suspect ACMs at this facility via demolition, a comprehensive asbestos survey designed to determine if the suspect ACM is a regulated material is recommended. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor should be consulted.

Lead-Based Paint

Although lead-based paint (LBP) was banned in 1978, many building constructed prior to 1978 have paint that contains lead. Lead from paint, chips, and dust can pose serious health hazards if not addressed properly.

The residential structures located on the subject site were constructed in at least 1937, 1979 and 1987. It is unknown if the on-site structures contains LBP. An LBP survey and sampling of the on-site structures was not included within the scope of this assessment. However, based on the approximate dates of construction, LBP may be present at the subject site. During Krazan's January 10, 2019, site reconnaissance, no evidence of chipped or peeling paint was observed in association with the on-site structures in accessible areas. Prior to the disturbance of any of the suspect LBP at this facility via demolition, a comprehensive LBP survey designed to determine if the suspect LBP is a regulated material is recommended. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor should be consulted.

Mold and Moisture Intrusion

A class of fungi, molds have been found to cause a variety of health problems in humans, including allergic, toxicological, and infectious responses. Molds are decomposers of organic materials, and thrive in humid environments, and produce spores to reproduce, just as plants produce seeds. When mold spores land on a damp spot indoors, they may begin growing and digesting whatever they are growing on in order to survive. When excessive moisture or water accumulates indoors, mold growth will often occur, particularly if the moisture problem remains undiscovered or unaddressed. As such, interior areas of buildings characterized by poor ventilation and high humidity are the most common locations of mold growth. Building materials including drywall, wallpaper, baseboards, wood framing, insulation and carpeting often play host to such growth. Moisture control is the key to mold control. Molds need both food and water to survive; since molds can digest most things, water is the factor that limits mold growth. The EPA recommends the following action to prevent the amplification of mold growth in buildings:

- Fix leaky plumbing and leaks in the building envelope as soon as possible.
- Watch for condensation and wet spots. Fix source(s) of moisture problem(s) as soon as possible.
- Prevent moisture due to condensation by increasing surface temperature or reducing the moisture level in air (humidity). To increase surface temperature, insulate or increase air circulation. To reduce the moisture level in air, repair leaks, increase ventilation (if outside air is cold and dry), or dehumidify (if outdoor air is warm and humid).
- Keep heating, ventilation, and air conditioning (HVAC) drip pans clean, flowing properly, and unobstructed.
- Vent moisture-generating appliances, such as dryers, to the outside where possible.
- Maintain low indoor humidity, below 60% relative humidity (RH), ideally 30-50%, if possible.
- Perform regular building/HVAC inspections and maintenance as scheduled.
- Clean and dry wet or damp spots within 48 hours.
- Do not let foundations stay wet. Provide drainage and slope the ground away from the foundation.

During Krazan's January 10, 2019, site reconnaissance, spotty mold growth was observed on the exterior back wall of the rural residential structure observed to be located in the southern portion of the subject site. Although the paint beneath the area of mold growth generally appeared to be in good condition, it is unknown if the mold has penetrated the painted surface. The mold growth appears to be related to poor rain water runoff channeling from the roof of the structure. Mold growth was not apparent in any of the remaining structures observed. Given the situation observed on the rural residential structure and the potential for mold growth behind the impacted wallboard, if a higher level of awareness is desired, a mold survey should be conducted by a licensed contractor.

Radon

Radon is a radioactive gas that is found in certain geologic environments and is formed by the natural breakdown of radium, which is found in the earth's crust. A radon survey was not included within the scope of this investigation; however, the State of California Department of Health Services (CDHS) maintains a statewide database of radon results in designated geographic areas. Radon detection devices are placed in homes throughout the study region to determine geographic regions with elevated radon concentrations. The U.S. EPA has set the safety standard for radon gas in homes to be 4.0 pico Curies per liter (pCi/L). The US EPA has prepared a map to assist National, State and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, Zone 1 being those areas with the average predicted indoor radon concentration in residential dwellings exceeding the EPA Action Limit of 4.0 pCi/L. It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site-specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures. Review of the EPA Map of Radon Zones places the Property in Zone 2, where average predicted radon levels are between 2.0 and 4.0 pCi/L. Therefore, the available data suggests that the potential for radon to adversely impact the subject site appears to be low.

Wetlands

As defined by the U.S. EPA and the Department of Army, Corps of Engineers, wetlands are “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Jurisdictional wetlands are regulated under Section 404 of the Clean Water Act (1972, 1977, and 1987, and also the 1985 and 1990 Farm Bills), and are important for protection of aquatic waterfowl and species, water purification, and flood control. According to current Corps of Engineers information, three basic criteria are currently used to define wetlands:

- Wetland hydrology - areas exhibiting surface or near-surface saturation or inundation at some point in time (greater than 12.5 percent of growing season defined on basis of frost-free days) during an average rainfall year.

- Hydrophilic vegetation - frequency of occurrence of wetland indicator plants (plant life growing in water, soil, or substrate that is periodically deficient in oxygen as a result of excessive water content).

- Hydric soil - landscape patterns identified by saturation, flooding, or ponding long enough during the growing season (generally seven days) which develop characteristic color changes in the upper part of the soil as a result of anaerobic conditions.

Based on Krazan’s reconnaissance of the subject site, evidence was not apparent to suggest that the site contained a wetland. Furthermore, according to the U. S. Fish & Wildlife Service (USFWS) National Wetlands Inventory available via the USFWS Internet website, the subject site does not contain a designated wetland. Therefore, at this time, regulations pertaining to wetlands do not appear to impact the subject site.

Environmental Non-Compliance Issues

No obvious material non-compliance issues were identified in connection with the subject site in the process of preparing this report.

Activity and Use Limitations

No activity and use limitations were identified in connection with the subject site in the process of preparing this report.

5.0 USER-PROVIDED INFORMATION

A review of user-provided information was conducted in order to help identify pertinent information regarding potential environmental impacts associated with the subject site. A Final Title Report or Environmental Lien Search were not provided to or prepared by Krazan in conjunction with this assessment.

5.1 Phase I Environmental Site Assessment User Questionnaire

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *Brownfields Amendments*), the *user* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that *all appropriate inquiry* is not complete. The user is asked to provide information or knowledge of the following:

1. Environmental cleanup liens that are filed or recorded against the site.
2. Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry.
3. Specialized knowledge or experience of the person seeking to qualify for the LLPs.
4. Relationship of the purchase price to the fair market value of the *property* if it were not contaminated.
5. Commonly known or *reasonably ascertainable* information about the *property*.

6. The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation.

7. The reason for preparation of this Phase I ESA.

A completed questionnaire was not received from the user. The absence of a completed user questionnaire represents a data gap.

6.0 SITE USAGE SURVEY

The property usage survey included assessing property history, and reviewing local, state, and federal regulatory agency records.

6.1 Site History

A review of a previous environmental assessment, historical aerial photographs, a USGS topographic quadrangle map, City of Clovis Planning and Development Department (CCPDD) and Fresno County Public Works and Development Department (FCPWDD) records, reasonably ascertainable city directories, a search for historical fire insurance maps (HFIMs), and a Phase I ESA interview were utilized to assess the history of the subject site.

Aerial Photograph Interpretation

Historical aerial photographs dated 1937, 1946, 1950, 1957, 1962, 1967, 1973, 1979, 1984, 1987, 1998, 2005, 2009, 2012, and 2016 were reviewed to assess the history of the subject site. These photographs were obtained from Environmental Data Resources, Inc. (EDR). The aerial photograph summary is provided in the following Table V below. Please refer to Appendix A in the Table of Contents for a copy of the Historical Aerial Photographs.

TABLE V
Summary of Aerial Photograph Review

Year/Scale	Site Use	Site and Adjacent Property Observation
1937 1" = 500'	Agricultural/ Residential	A rural residential dwelling and associated out-structures are visible in the central-southern portion of the subject site. The subject site and adjacent properties appear to be utilized for agricultural purposes (row crops). The subject site is bounded to the west by N. Sunnyside Avenue, and to the south by a canal. Rural residential dwellings and associated out-structures are visible in the vicinity to the southwest, south and east of the subject site. Vicinity properties to the north, northwest and northeast of the subject site appear to be fallow land.

TABLE V (continued)
Summary of Aerial Photograph Review

Year/Scale	Site Use	Site and Adjacent Property Observation
1946 1" = 500'	Agricultural/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1937 aerial photograph except that one long rectangular out-structure on the subject site is no longer visible and one additional out-structure, possibly a barn, is visible in the central-southern portion of the subject site. Additionally, the subject site is in cultivation and three garden plots are visible adjacent to the west of the residential dwelling. A rural residential dwelling and associated out-structures are visible on the northern adjacent property. A vicinity property to the south appears to be fallow land.
1950 1" = 500'	Agricultural/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1946 aerial photograph except that the three garden plots are no longer visible adjacent to the west of the residential dwelling. E. Shepherd Avenue has been developed adjacent to the south of the subject site.
1957 1" = 500'	Agricultural/ Fallow Land/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1950 aerial photograph except that the eastern portion of the subject site appears to be fallow land. Several out-structures are no longer visible on the northern adjacent property and the property appears to be fallow land. The adjacent property to the east and vicinity properties to the northeast appear to be fallow land. Two large rectangular structures are visible on the southeastern adjacent property to the subject site. Vicinity properties to the southwest, south and southeast appear to be vacant land. A circular anomaly is visible in the southwestern corner of the subject site which does not appear in the 1957 or 1962 aerial photographs.
1962 1" = 500'	Agricultural/ Vacant Land/ Fallow Land/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1957 aerial photograph except that the southeastern portion of the subject site has been cleared and graded for development. Vicinity properties to the north, northeast and east appear to be vacant land. Three additional large rectangular structures are visible on the southeastern adjacent property.
1967 1" = 500'	Agricultural/ Fallow Land/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1962 aerial photograph except that the eastern portion of the subject site is vacant land. Two large rectangular structures are visible on the southeastern adjacent property to the subject site. Two rural residential structures are visible in the vicinity to the southwest of the subject site.
1973 1" = 500'	Agricultural/ Fallow Land/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1967 aerial photograph except that the southwestern portion of the subject site appears to be utilized for agricultural purposes. Four rural residential dwellings and associated out-structures have been developed on the properties adjacent to the south of the subject site. Three additional large rectangular structures are visible on the southeastern adjacent property.

TABLE V (continued)
Summary of Aerial Photograph Review

Year/Scale	Site Use	Site and Adjacent Property Observation
1979 1" = 500'	Agricultural/ Residential	The subject site appears to be utilized for agricultural purposes. A small residential structure has been developed in the southwestern corner of the northeastern portion of the subject site. One out-structure on the subject site has been removed and replaced with a barn approximately twice as large as the previous structure. At least 15 rural residential dwellings have been developed on the eastern adjacent property to the subject site. At least 8 rural residential dwellings have been developed in the vicinity to the south, 7 rural residential dwellings have been developed in the vicinity to the north and 7 rural residential dwellings have been developed in the vicinity to the northeast of the subject site.
1984 1" = 500'	Agricultural/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1979 aerial photograph except that 5 rural residential dwellings have been developed, and at least 10 plots have been cleared for residential development, on the adjacent properties to the north and west of the subject site. Additionally, a new paved road has been developed to access the newly developed residences.
1987 1" = 500'	Agricultural/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1984 aerial photograph except that a rural residential dwelling has been developed in the northwestern corner of the northeastern portion of the subject site. The adjacent property to the west and vicinity properties to the west and northwest appear to be fallow land. Several additional structures have been developed on the rural residential properties adjacent to the east of the subject site.
1998 1" = 500'	Agricultural/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1987 aerial photograph except that 10 rural residential dwellings have been developed on the adjacent properties to the north and west of the subject site. One rural residential dwelling has been developed on a vicinity property to the north of the subject site. The adjacent property to the west and vicinity properties to the west and northwest appear to have been recently cultivated.
2005 1" = 500'	Agricultural/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 1998 aerial photograph except that the adjacent property to the west and vicinity properties to the west and northwest appear to be utilized for agricultural purposes. Residential tract housing has been developed in the vicinity to the southwest of the subject site.
2009 1" = 500'	Agricultural/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 2006 aerial photograph except that additional residential tract housing has been developed on the southeastern adjacent property and in the vicinity to the southwest of the subject site. A large commercial structure has been developed in the vicinity to the southeast of the subject site.
2012 1" = 500'	Agricultural/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 2009 aerial photograph.

2016 1" = 500'	Agricultural/ Residential	Conditions on the subject site and the adjacent properties appear relatively similar to those noted in the 2012 aerial photograph except that Dry Creek Trailhead has been developed on a southwestern vicinity property, on the southwest corner of N. Sunnyside and E. Shepherd Avenues. A PG&E Substation has been developed in the vicinity to the west of the subject site.

USGS Topographic Quadrangle Map

Krazan's review of the USGS, 7.5 minute, Clovis California topographic quadrangle map dated 1964, photorevised 1981, indicates that two residential structures and a water well are depicted on the subject site. Refer to Figure No. 4, Topographic Map, for reference.

City of Clovis Planning and Development Department and Fresno County Public Works and Development Department

On January 9, 2019, the CCPDD and FCPWDD were visited to review building permit records for the subject site APNs of 557-021-19, -20 and -21, and the historical address of 5230 E. Shepherd Avenue. No building permit records are on file with the CCPDD or FCPWDD for the current APNs or historical subject site addresses. Therefore, no permits for items such as underground storage tanks, demolition, or previous structures/features were revealed for the subject site.

City Directories

Krazan contracted with EDR to provide a review of available city directories for the subject site historic address of 5230 East Shepherd Avenue utilizing approximately five-year intervals. A summary of city directory information is presented in the following Table VI. Please refer to Appendix B in the Table of Contents for a copy of the EDR, City Directory Report.

TABLE VI
Polk Guides Directory Summary

Address	Owner/Occupant	Years
Subject Site		
5230 East Shepherd Avenue	CAL PECAN nuts edible	1996 to 2002

Sanborn Fire Insurance Maps

Krazan reviews SFIMs to evaluate prior land use of the subject site and the adjacent properties. SFIMs typically exist for cities with populations of 2,000 or more, the coverage dependent on the location of the subject site within the city limits. Krazan contracted with EDR to provide copies of available SFIMs for the subject site and the adjacent properties as far back as 1867. EDR's search of

SFIMs revealed no coverage for the subject site and the adjacent properties. Please refer to Appendix C in the Table of Contents for a copy of the EDR SFIM *Unmapped Property* Report.

6.2 Interviews

Krazan strives to conduct an interview with the owner of the subject site. The interview is designed to provide pertinent information regarding potential environmental impacts associated with the subject site.

Subject Site Owner

A completed owner questionnaire was not received from nor was an interview conducted with the property owner. The absence of a completed owner interview/questionnaire represents a data gap.

Previous Subject Site Owners/Occupants

An interview with a previous owner/occupant of the subject site was not reasonably ascertainable. Consequently, the absence of information regarding the history and historical uses of the subject site obtained from an interview of the previous owner and/or occupant constitutes a data gap.

6.3 Agricultural Chemicals

Review of historical aerial photographs indicates the subject site was utilized for agricultural purposes from at least 1937 to present. It is not known if environmentally persistent pesticides and/or herbicides were historically applied to the crops grown on the subject site. Although the potential exists that environmentally persistent pesticides/herbicides were historically applied to the crops grown on the subject site, 1) no material evidence of the use of environmentally persistent pesticides/herbicides was obtained during the course of this assessment, 2) Krazan's sampling analysis of surface soils from properties with similar agricultural histories in the subject site area has typically yielded non-detectable results or very low concentrations for analysis of environmentally persistent pesticides/herbicides, and 3) based upon the soil disturbance in conjunction with the grading and trenching activities during the proposed redevelopment of the subject site, it is likely that potential agricultural chemicals would be significantly mixed and diluted. Consequently, given the above-referenced factors and Krazan's experience in the subject site vicinity which generally indicates that the potential is low for elevated concentrations of environmentally persistent pesticides/herbicides related to agricultural cultivation to exist in the near-surface soils of common agricultural ground at concentrations which would require regulatory action, despite the absence of specific data, the potential for elevated concentrations of environmentally persistent pesticides/herbicides to currently exist in the near-surface soils of the subject site at concentrations which would require regulatory action appears to below.

6.4 Regulatory Agency Interface

A review of regulatory agency records was conducted to help determine if hazardous materials have been handled, stored, or generated on the subject site and/or the adjacent properties and businesses. Regulatory records are reviewed based on the following criteria: 1) properties with known soils and/or groundwater releases considered to represent the potential for impact to the subject site that are located within 1,760 feet of the subject site for constituents of concern impacts or 528 feet of the subject site for petroleum hydrocarbon impacts; 2) properties that are adjacent or in proximity to the subject site included within the EDR regulatory database report or noted during the site reconnaissance to possibly handle, store, or generate hazardous materials.

Fresno County Department of Community Health, Environmental Health System

The Fresno County Department of Community Health, Environmental Health System (FCEHS) is the lead regulatory agency or Certified Unified Program Agency (CUPA) for hazardous materials handling facilities in Fresno County. Krazan's review of the FCEHS CUPA and Solid Waste Programs Resource List (CUPA List) dated January 7, 2019, indicated that no records are on file with the FCEHS for the subject site. However, records are on file with the FCEHS for adjacent and vicinity properties which do not represent material evidence of the potential to represent environmental concern to the subject site. The factors and considerations utilized in deriving the above-referenced conclusion for each of the sites are summarized in the following Table VII.

TABLE VII
Proximate Property CUPA Listings

Site Name/Address	Orientation to Subject Site/ Groundwater Flow Direction	Regulatory Status/ Potential to Impact Subject Site
Wilson Development Property 4767 E. Shepherd Avenue	Adjacent to the south of subject site/ Southwest – Down/Cross-gradient of subject site	UST Removal/ Closure w/1 Tank/ Low
P-R Farms 4650 E. Shepherd Avenue	158 feet to the southwest of subject site / Southwest – Downgradient of subject site	Hazardous Materials Handler Farm Exemption/ Low
PG&E Shepherd Substation N. Sunnyside Avenue	1,089 feet to the north/ northwest of subject site / Southwest – Cross-gradient of subject site	Small Hazardous Materials Handler / Low

City of Clovis Fire Department

The City of Clovis Fire Department (CCFD) has jurisdiction for the fire protection for the subject site and the immediate vicinity. According to representatives of the CCFD, records of hazardous materials incidents are kept by the FCEHS. Additionally, hazardous/flammable incidents are filed according to the date of occurrence and by the location of occurrence with the FCEHS.

State of California Regional Water Quality Control Board – Geotracker

Krazan's January 9, 2019, review of the State of California Regional Water Quality Control Board (RWQCB) Geotracker database available via the RWQCB Internet Website indicated that no sites including LUST sites, cleanup program sites, land disposal sites, or military sites are listed for the subject site, the adjacent properties, or properties located within the subject site vicinity. Additionally, no permitted UST sites were determined to be located on or adjacent to the subject site.

State of California Department of Toxic Substances Control – Envirostor

Krazan's January 9, 2019, review of the State of California Department of Toxic Substances Control (DTSC) Envirostor database available via the DTSC's Internet Website indicated that no sites including State response sites, voluntary cleanup sites, school cleanup sites, or military or school evaluation sites are listed for the subject site, the adjacent properties, or properties located within 1,000 feet of the subject site. Additionally, no Federal Superfund – National Priorities List (NPL) sites were determined to be located within a one-mile radius of the subject site.

California Department of Conservation, Division of Oil, Gas & Geothermal Resources - DOMS

Krazan's January 9, 2019, review of the State of California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) Online Mapping System (DOMS) indicated that no plugged and abandoned or producing oil wells are located on or adjacent to the subject site.

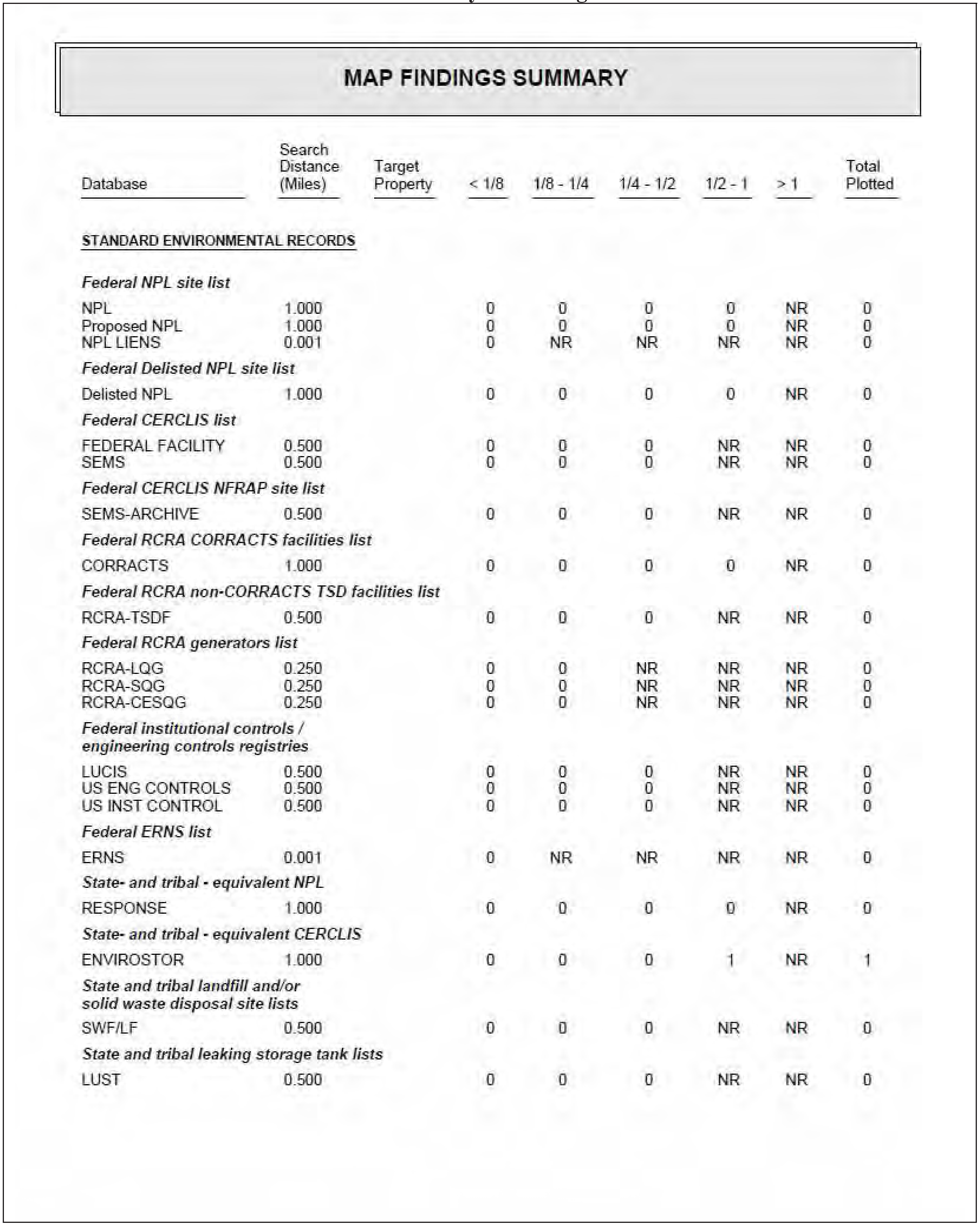
Local Area Tribal Records

No Indian reservations, USTs on Indian land, or LUSTs on Indian land were reported on the subject site, adjacent properties, or vicinity properties in the EDR-provided government database report.

6.5 Regulatory Agency Lists Review

Several agencies have published documents that list businesses or properties which have handled hazardous materials or waste or may have experienced site contamination. The lists consulted in the course of our assessment were compiled by EDR and Krazan and represent reasonably ascertainable current listings. Krazan did not verify the locations and distances of every property listed by EDR. Krazan verified the location and distances of the properties Krazan deemed as having the potential to adversely impact the subject site. The actual location of the listed properties may differ from the EDR listing. Refer to the following Table VIII for a summary of the listed properties considered to have the potential to impact the subject site located within the specified ASTM Search Radii. The actual distances of the listed properties (which are summarized below) are based on observations during Krazan's site reconnaissance. No EDR-listed unmapped (non geocoded) sites were determined to be located on or adjacent to the subject site. Please refer to Appendix D in the Table of Contents for a copy of the EDR Radius Map Report.

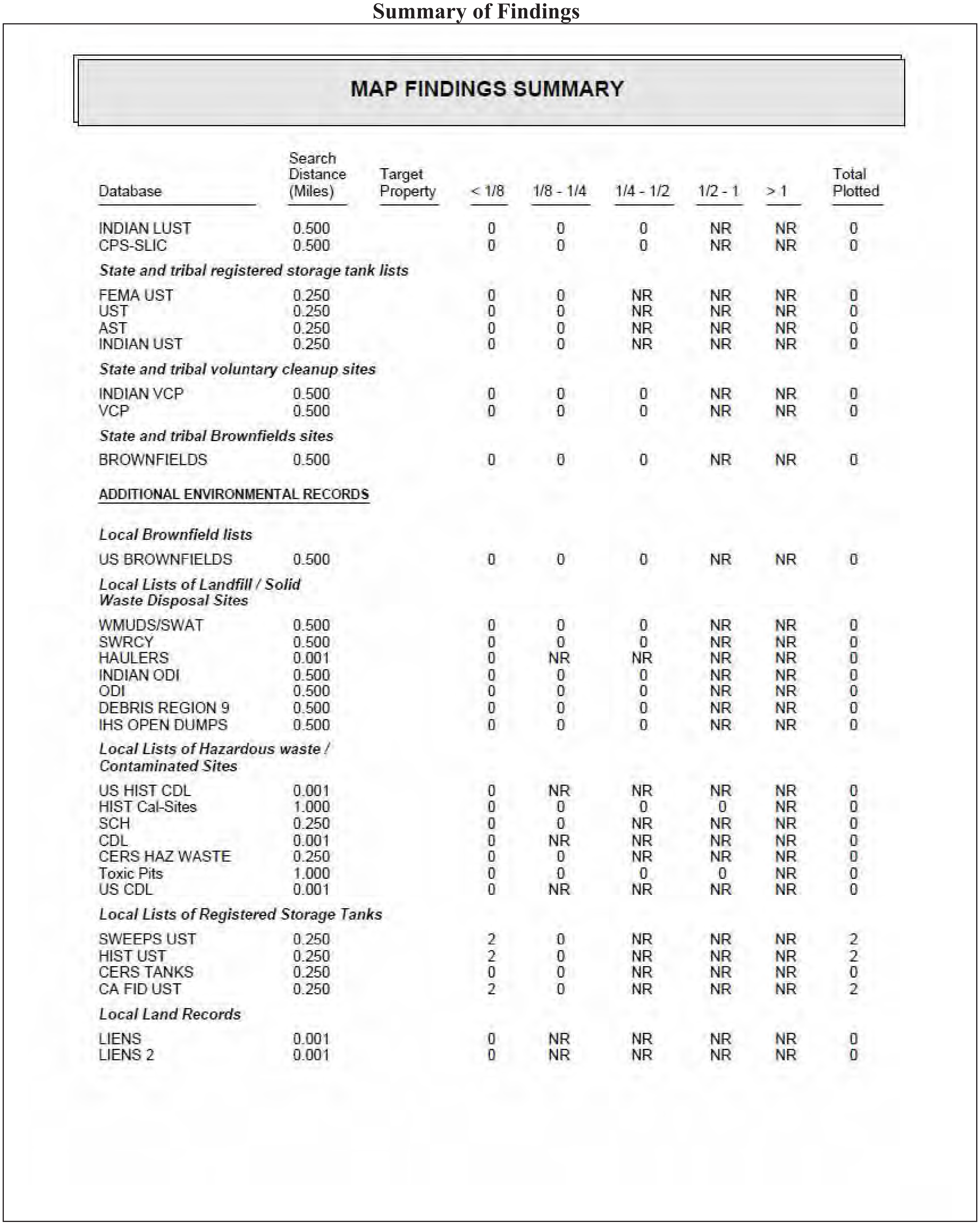
TABLE VIII
Summary of Findings



MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	1	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

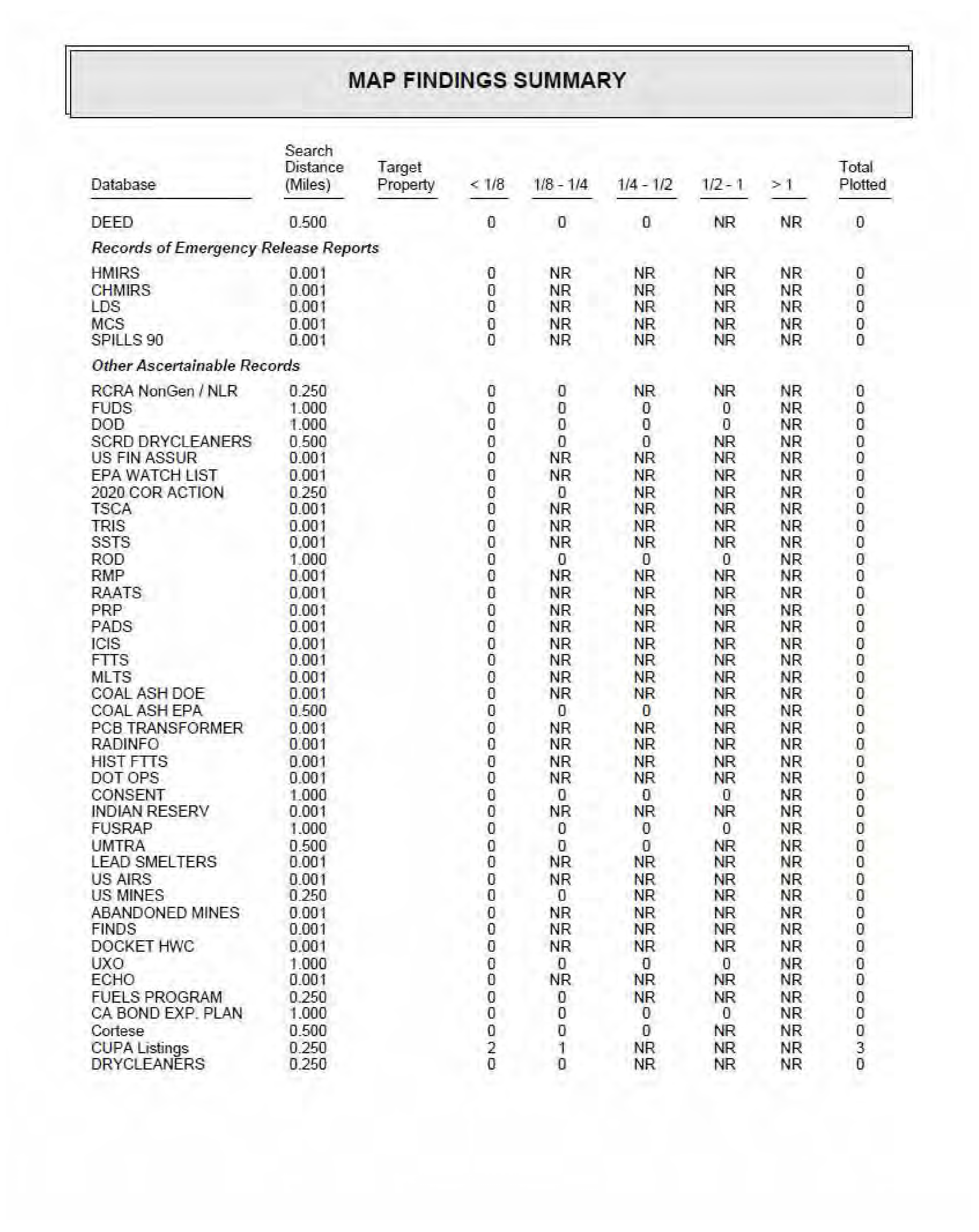
TABLE VIII (continued)
Summary of Findings



MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		2	0	NR	NR	NR	2
HIST UST	0.250		2	0	NR	NR	NR	2
CERS TANKS	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		2	0	NR	NR	NR	2
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0

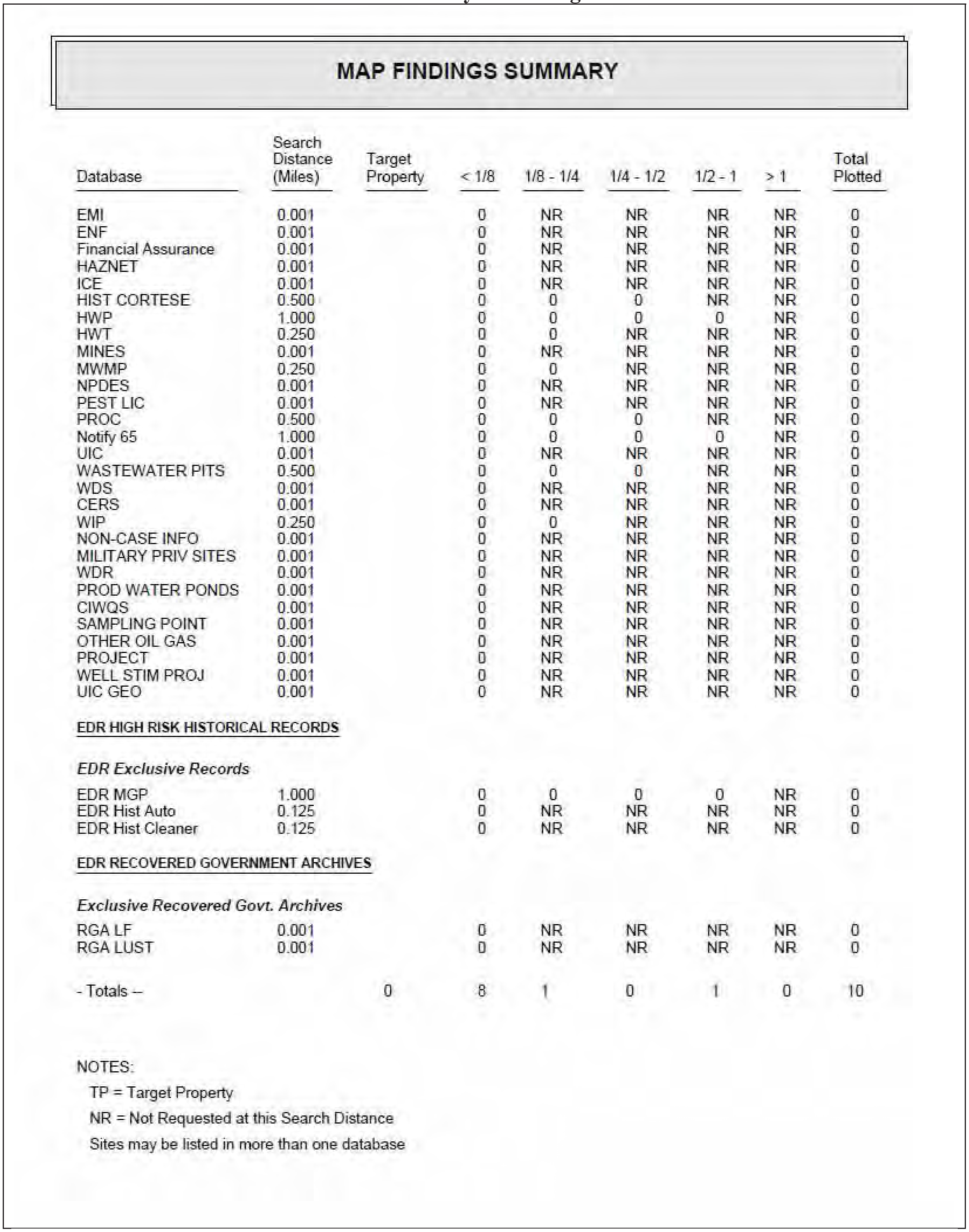
TABLE VIII (continued)
Summary of Findings



MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		2	1	NR	NR	NR	3
DRYCLEANERS	0.250		0	0	NR	NR	NR	0

TABLE VIII (continued)
Summary of Findings



MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	8	1	0	1	0	10

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

There were no listings for the subject site or adjacent properties.

The following property was listed in the vicinity of the subject site:

> P-R Farms, Inc. approximately 158-173 feet to the southwest
> 4648-4650 East Shepherd Avenue
> According to EDR, this facility is listed a CUPA Listings, SWEEPS UST, CA FID UST, and HIST UST site including a 500-gallon gasoline tank and a 2,000-gallon diesel tank on a farm property installed in at least 1985. No records for releases or removal were found on file with the FCEHS, RWQCB or DTSC. Based on Krazan's review of available regulatory records and its hydraulically cross-gradient location from the subject site, there is no evidence to suggest that this facility represents an environmental concern in connection with the subject site.

The remaining properties within the specified search radius of the subject site which appeared on local, state, or federally published lists of sites that use or have had releases of hazardous materials or petroleum products are of sufficient distance and/or situated hydraulically cross- or downgradient from the subject site such that impact to the subject site via groundwater migration is unlikely. In general, potentially hazardous materials released from facilities located approximately hydraulically upgradient within the subject site vicinity, or in a hydraulically cross-gradient direction in proximity to the site, may have a reasonable potential of migrating to the subject site via groundwater flow. This opinion is based on the assumption that non-vaporous hazardous materials generally do not migrate large distances laterally within the soil, but rather tend to migrate with groundwater in the general direction of groundwater flow. However, the potential for migration of volatile hazardous materials may include movement within soils, groundwater flow or potentially omni-directionally if present in a vaporous state.

Hazardous Materials Migration in Vapor

Hazardous materials or petroleum product vapors which may have the potential to migrate into the subsurface of the subject site may be caused by the release of vapors from contaminated soil or groundwater either on or in the vicinity of the subject site from current or historical uses of the subject site and/or adjacent or vicinity properties. Current or past land uses such as gasoline stations (using petroleum hydrocarbons), dry cleaning establishments (using chlorinated volatile organic compounds), former manufactured gas plant sites (using volatile and semi-volatile organic compounds), and former industrial sites such as those that had vapor degreasing or other parts-cleaning operations (using chlorinated volatile organic compounds) are of particular concern. Constituent of concern vapors are capable of migrating great distances omni-directionally along subsurface conduits such as pipelines, utility lines, sewer and stormwater lines, and building foundations.

Based on Krazan's observations and review of the EDR regulatory database report, no listings of concern were determined to be associated with the subject site, adjacent properties, or properties located within the subject site vicinity. However, the screening process for vapor migration in connection with the subject site is described in the ASTM E 2600-10 *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions,* an industry consensus methodology to assess vapor migration which is not included in the scope of work of this Phase I ESA.

No engineering control sites, sites with institutional controls, or sites with deed restrictions were listed for the subject site, adjacent sites or vicinity properties in the EDR Report.

7.0 DISCUSSION OF FINDINGS

TABLE IX
Summary of Conclusions

Apparent Evidence of RECs/PAOCs From:	Not Noted	Noted
Historical Uses		X
Current Uses		X
Adjacent or Vicinity Property Uses	X	

Historical Uses

Based on Krazan's review of historical aerial photographs, a site reconnaissance, and contacts with the local regulatory agencies, there is evidence that PAOCs exist in connection with the historical uses of the subject site.

Current Uses

Based on Krazan's site reconnaissance and contacts with local regulatory agencies, there is evidence that PAOCs exist in connection with the current uses of the subject site.

Adjacent or Vicinity Property Uses

Based on Krazan's review of historical research of the subject site, a site reconnaissance, contacts with the State and local regulatory agencies, and review of the EDR regulatory database report, there is no evidence that RECs or PAOCs exist in connection with the subject site from adjacent or vicinity properties.

7.1 Evaluation of Data Gaps/Data Failure

In accordance with ASTM E 1527-13 guidance, data gaps represent a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice. Data failure represents the failure to achieve the historical research objectives of this practice even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. The following is a summary of data gaps encountered in the process of preparing this report including an observation as to the presumed significance of that data gap to the conclusions of this assessment.

- <u>Inaccessibility (Section 4.1)</u>

  A small residential structure was observed to be located in the central-eastern portion of the subject site. Access was not granted to the structure at the time of the site reconnaissance because a trailer was parked up against the building, blocking the only entrance to the structure. Additionally, the three windows observed were all too frosted to allow observation of the interior. The absence of interior site inspection represents a data gap. However, given the apparent residential nature of the structure taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no material evidence that this data gap might alter the conclusions of this assessment. However, the contents and condition of the interior of the unobservable structure are unknown.

- <u>Absence of Final Title Report or Environmental Lien Search (Section 5.1)</u>

  A Final Title Report or Environmental Lien Search were not provided by the Phase I ESA user, therefore a data gap exists. Taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no evidence to suggest that this data gap might alter the conclusions of this assessment. However, the contents of a Final Title Report or Environmental Lien Search are unknown.

- <u>Absence of User Questionnaire (Section 5.2)</u>

  A completed User Questionnaire was not provided by the Phase I ESA user; therefore, a data gap exists. Taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no material evidence that this data gap might alter the conclusions of this assessment. However, the contents of a completed User Questionnaire are unknown.

- Unknown Date of First Development (Section 6.1)
  Site history prior to 1937 was not reasonably ascertainable based upon review of standard historical sources. Consequently, data failure was encountered relative to date of first development of the subject site. Taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no evidence to suggest that this data gap might alter the conclusions of this assessment. However, the date of first development of the subject site is unknown.

- Absence of Interview with Current or Previous Property Owners/Occupants (Section 6.2)
  A Phase I ESA interview with the current or previous owners/occupants of the subject site was not reasonably ascertainable. Consequently, information regarding the history and historical uses of the subject site obtained from an interview of a current or previous owner and/or occupant constitutes a data gap. Taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no material evidence that this data gap might alter the conclusions of this assessment. However, the contents of an interview with a current/previous property owner are unknown.

8.0 CONCLUSIONS/OPINIONS

We have conducted a Phase I ESA of the subject site in conformance with the scope and limitations of the ASTM E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* guidance documents. Any deviations from this practice were previously described in this report. During the course of this assessment, Krazan identified no evidence of recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) in conjunction with the subject site as defined by ASTM E 1527-13. However, the following potential areas of concern (PAOCs), non-scope issues and site development issues are presented:

PAOCs

- Adjacent to the north of the on-site warehouse and lined against its back wall, three approximately 250-gallon aboveground storage (AST) tanks were observed. Two ASTs contained diesel fuel and the third contained gasoline. Additionally, four 55-gallon drums containing motor oil were observed to be located to the west of the ASTs which exhibited *de* *minimis* staining. The site reconnaissance was completed a day following a heavy rain event and it was not clear if the ground surface below the ASTs and/or drums exhibited any significant petroleum product staining because the ground remained saturated with rainwater precluding visual observations. Consequently, the specific condition of the ground surface underlying the ASTs and drums is unknown.

- Krazan's review of aerial photographs indicates that the subject site was utilized for agricultural purposes from at least 1937 to the present and that residential structures and associated outbuildings occupied the property from at least 1937, 1979 and 1987 to the present. No records of USTs for the subject site are on file with the local regulatory agencies; however, USTs on rural or agricultural properties historically have been exempt from requirements for registration with regulatory agencies. Furthermore, Krazan's experience with such properties has shown that it was not uncommon for property owners/operators to install USTs for their convenience, especially in the vicinity of structures, which are undocumented and whose presence would remain unknown in spite of the standard data research conducted in the course of this Phase I ESA. It is therefore possible that subsurface features such as unregistered fuel USTs may exist within the structure-related portions of the subject site which remain unknown based on the absence of any regulatory, municipality, and/or interview data, or other evidence indicating their presence or location. Consequently, despite an absence of data suggesting their presence, the presence or absence of USTs associated with on-site structures in a historical agricultural setting on the subject site is unknown.

NON-SCOPE ISSUES

- The residential dwellings/structures located on the subject site appears to have been originally constructed in at least 1937, 1979 and 1987. It is unknown if the on-site dwellings/structures contain asbestos-containing materials (ACMs) or lead-based paint (LBP). An asbestos and/or LBP survey and sampling of the on-site dwellings/structures was not included within the scope of this assessment. However, based upon the approximate apparent dates of construction, ACMs and LBP may be present at the subject site. During Krazan's site reconnaissance, no damaged building materials which appeared to be posing a health hazard were noted within those areas of the on-site residential dwellings/structures observed. Prior to the disturbance of any of the suspect ACMs or LBP at the subject site via renovation or demolition, a comprehensive asbestos and LBP survey designed to determine if the suspect ACM and LBP are regulated materials is recommended. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor should be consulted.

SITE DEVELOPMENT ISSUES

- Based on Krazan's historical research and interviews, two domestic water wells and five agricultural water wells were observed to be associated with the subject site. If the on-site water wells are not to be used in the future, they should be properly abandoned/destroyed in accordance with state and local guidelines.

9.0 RELIANCE

This report was prepared solely for use by Client and should not be provided to any other person or entity without Krazan & Associates' prior written consent. No party other than Client may rely on this report without Krazan & Associates' express prior written consent. Reliance rights for third parties will only be in effect once requested by Client and authorized by Krazan & Associates with authorization granted by way of a Reliance Letter. The Reliance Letter will require that the relying party(ies) agree to be bound to the terms and conditions of the agreement between Client and Krazan & Associates as if originally issued to the relying party(ies), or as so stipulated in the Reliance Letter.

10.0 LIMITATIONS

The site reconnaissance and research of the subject site has been limited in scope. This type of assessment is undertaken with the calculated risk that the presence, full nature, and extent of contamination would not be revealed by visual observation alone. Although a thorough site reconnaissance was conducted in accordance with ASTM Guidelines and employing a professional standard of care, no warranty is given, either expressed or implied, that hazardous material contamination or buried structures, which would not have been disclosed through this investigation, do not exist at the subject site. Therefore, the data obtained are clear and accurate only to the degree implied by the sources and methods used.

The findings presented in this report were based upon field observations during a single property visit, review of available data, and discussions with local regulatory and advisory agencies. Observations describe only the conditions present at the time of this investigation. The data reviewed and observations made are limited to accessible areas and currently available records searched. Krazan cannot guarantee the completeness or accuracy of the regulatory agency records reviewed. Additionally, in evaluating the property, Krazan has relied in good faith upon representations and information provided by individuals noted in the report with respect to present operations and existing property conditions, and the historical uses of the property. It must also be understood that changing circumstances in the property usage, proposed property usage, subject site zoning, and changes in the environmental status of the other nearby properties can alter the validity of conclusions and information contained in this report. Therefore, the data obtained are clear and accurate only to the degree implied by the sources and methods used.

This report is provided for the exclusive use of the client noted on the cover page and shall be subject to the terms and conditions in the applicable contract between the client and Krazan. Any third party use of this report, including use by Client's lender, shall also be subject to the terms and conditions governing the work in the contract between the client and Krazan. The unauthorized use of, reliance on, or release of the information contained in this report without the express written consent of Krazan is strictly prohibited and will be without risk or liability to Krazan. Conclusions and recommendations contained in this report are based on the evaluation of information made available during the course of this assessment. It is not warranted that such data cannot be superseded by future environmental, legal, geotechnical or technical developments. Consequently, given the possibility for unanticipated hazardous conditions to exist on a subject site which may not have been discovered, this Phase I ESA is not intended as the basis for a buyer or developer of real property to waive their rights of recovery based upon environmental unknowns. Parties that choose to waive rights of recovery prior to site development do so at their own risk.

Parties who seek to rely upon Phase I Environmental Site Assessment reports dated more than 180 days prior to the date of reliance do so at their own risk. This limitation in reliance is based on the potential for physical changes at the site, changes in circumstances, technological and professional advances, and guidance related to the continued viability of Environmental Site Assessment reports, user's responsibilities, and requirements for updating of components of the inquiry as stated in the ASTM Standard E 1527-13.

11.0 QUALIFICATIONS

This Phase I ESA was conducted under the supervision or responsible charge of Krazan's undersigned environmental assessor with oversight from the undersigned environmental professional. The work was conducted in accordance with ASTM E 1527-13 guidance, generally accepted industry standards for environmental due diligence in place at the time of the preparation of this report, and Krazan's quality-control policies.

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in §312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property.

We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Respectfully submitted,
KRAZAN & ASSOCIATES, INC.

Michelle L. Phillips
Environmental Specialist

Arthur C. Farkas, REA
Environmental Professional

MLP/ACF/mlt

REFERENCES

Aerial photographs obtained from the Environmental Data Resources, Inc. (EDR).

American Society for Testing and Materials (ASTM), *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment (ESA) Process*, ASTM Designation: E 1527-13.

ASTM, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions,* ASTM Designation E 2600-10.

City of Clovis Planning and Development Department (CCPDD).

Environmental Data Resources, Inc. (EDR), City Directory Report.

Environmental Data Resources, Inc. (EDR), Sanborn Fire Insurance Map *Unmapped Property* Report.

Environmental Data Resources, Inc. (EDR), Regulatory Database Report.

Fresno County Department of Community Health, Environmental Health System, Environmental Health Document Portal Website: http://www.fresnohealthinspections.org

Fresno County Department of Community Health, Environmental Health System, Master Hazardous Materials Handling Facilities List, January 2019.

Fresno County Public Works and Development Department (FCPWDD)

Harris, Mr. Jeffrey, with Wilson Homes, the Phase I user and owner representative.

State of California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) Maps Website: http://www.conservation.ca.gov/dog/maps/Pages/index_map.aspx

State of California Department of Toxic Substances Control, Envirostor Website: http://www.envirostor.dtsc.ca.gov/public

State of California Regional Water Quality Control Board, Geotracker Website: http://geotracker.swrcb.ca.gov

State of California, Department of Water Resources, *Lines of Equal Elevation of Water in Wells Unconfined Aquifer, San Joaquin Valley, Spring 2010*.

U.S. Environmental Protection Agency (EPA) *Map of Radon Zones*.

U.S. Fish & Wildlife Service National Wetland Inventory *Wetlands Mapper:* http://www.fws.gov/wetlands/Data/Mapper.html

U.S. Geological Survey, 7.5 minute Clovis, California topographic quadrangle map, dated 1964, photorevised 1981.

GLOSSARY OF TERMS

Subject Site: The real property being investigated under this Phase I ESA.

Adjacent Properties: Properties which are contiguous with the subject site, or would be contiguous except for a street, road, or other public thoroughfare.

Subject Site Vicinity: Properties located within a 500-foot radius of the subject site.

Environmental Professional: A person meeting the education, training, and experience requirements as set forth in 40 CFR §312.10(b). The EP may be an independent contractor or an employee of the user.

User: The party seeking to use Practice E 1527 to complete an environmental site assessment of the subject site. A user may include, without limitation, a potential purchaser of the subject site, a potential tenant of the subject site, an owner of the subject site, a lender, or a property manager.

Recognized Environmental Condition (REC): In defining a standard of good commercial and customary practice for conducting an environmental site assessment of a parcel of property, the goal of the processes established by this practice is to identify recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions.

Controlled Recognized Environmental Condition (CREC): A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). For example, if a leaking underground storage tank has been cleaned up to a commercial use standard, but does not meet unrestricted residential cleanup criteria, this would be considered a CREC. The “control” is represented by the restriction that the property use remain commercial. A condition considered by the environmental professional to be a CREC shall be listed in the findings section of the Phase I ESA report and as an REC in the conclusions section. A condition identified as a CREC does not imply that the environmental professional has evaluated or confirmed the adequacy, implementation, or continued effectiveness of the required control that has been, or is intended to be, implemented.

Historical Recognized Environmental Condition (HREC): A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release an HREC, the environmental professional must determine whether the past release is an REC at the time the Phase I ESA is conducted (for example, if there has been change in the regulatory criteria). If the EP considers the past release to be an REC at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as an REC.

GLOSSARY OF TERMS (continued)

Potential Area of Concern (PAOC): A term adopted to provide an alternative designation to the REC and HREC for a range of environmental issues related to current subject site uses, historical subject site uses, or from adjacent and/or vicinity property uses. The PAOC is utilized to emphasize full disclosure and provide the User with conclusions and recommendations related to potential environmental issues in connection with the subject site based on Krazan's professional experience in cases where official documentation or other evidence may be absent in order to identify an REC or HREC, thereby aiding the User's considerations of environmental due diligence risk tolerance.

Migrate/migration: For the purposes of this practice, "migrate" and "migration" refer to the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface. Vapor migration in the subsurface is described in ASTM E 2600-10 guidance; however, nothing in the E 1527-13 practice should be construed to require application of the E 2600-10 standard to achieve compliance with AAI.

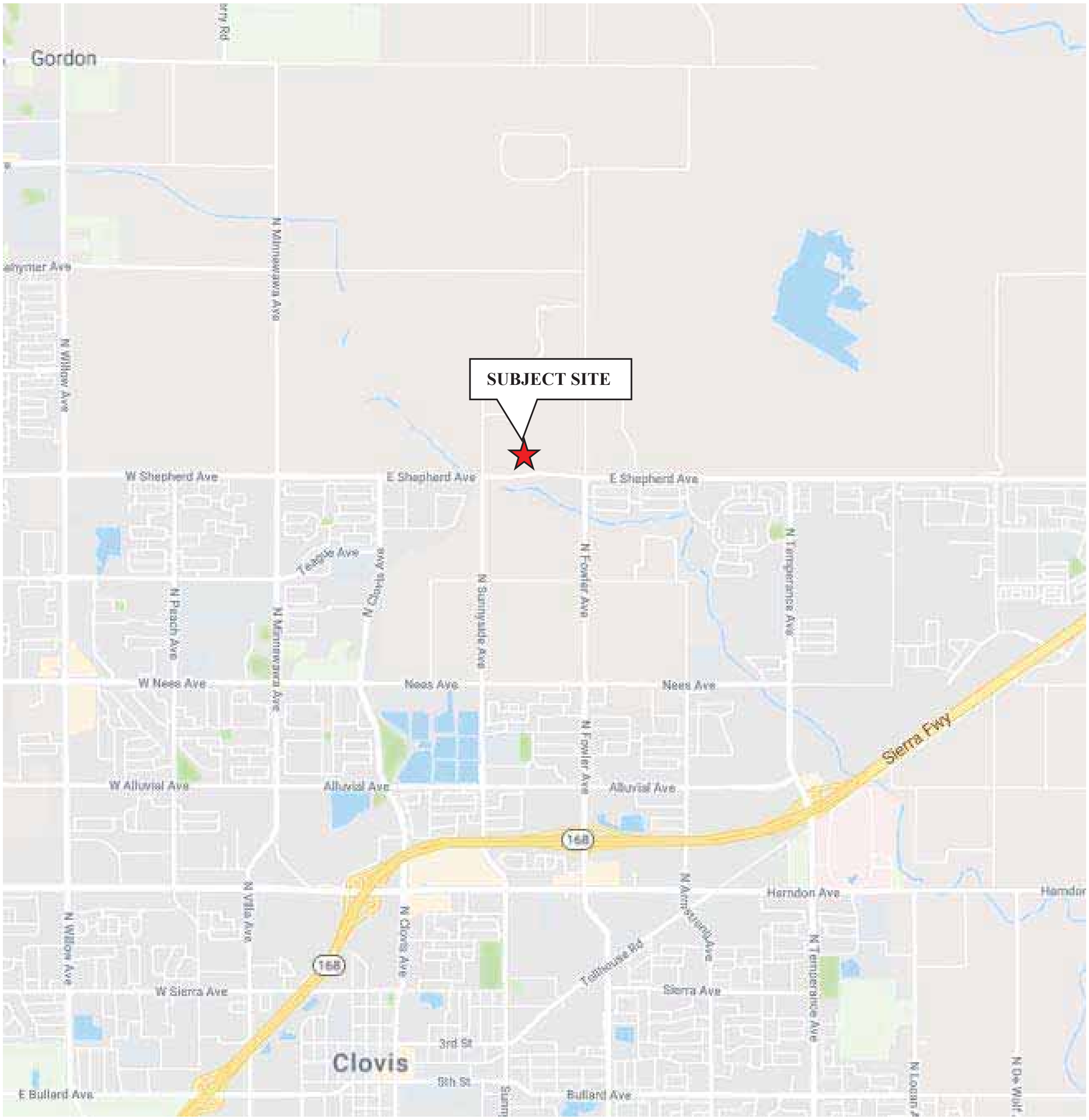
De minimis condition: A condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Condition determined to be *de minimis conditions* are not RECS or CRECs.

Data Gap: A lack of or inability to obtain information required by this practice despite good faith efforts by the Environmental Professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to the site reconnaissance and interviews.

Data Failure: A failure to achieve the historical research objectives even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap.

GLOSSARY OF TERMS (continued)

AAI	All Appropriate Inquiries
AC	Asphalt Concrete
ACM	Asbestos-Containing Materials
AOC	Area of Concern
APN	Assessor's Parcel Number
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
AS	Air Sparging
AUL	Activity & Use Limitations
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
CMU	Concrete Masonry Unit
COCs	Constituents of Concern
DEULs	Declaration of Environmental Use Restrictions
DOGGR	Division of Oil, Gas & Geothermal Resources (CA)
DTSC	Department of Toxic Substances Control (CA)
EC	Engineering Control
EDR	Environmental Data Resources, Inc.
EP	Environmental Professional
EPA	United States Environmental Protection Agency
ERP	Emergency Response Plan
ESA	Environmental Site Assessment
ESL	Environmental Screening Level
FOIA	Freedom of Information Act
GPR	Ground Penetrating Radar
HCCD	Haines Criss-Cross Directory
HFIM	Historical Fire Insurance Map
HMBP	Hazardous Materials Business Plan
HREC	Historical Recognized Environmental Condition
HVAC	Heating, Ventilation, Air Conditioning
IC	Institutional Control
LBP	Lead-Based Paint
LLP	Landowner Liability Protection
LQG	Large Quantity Generator
LUC	Land Use Control
LUST	Leaking Underground Storage Tank
MCL	Maximum Contaminant Level
µg/L	Micrograms Per Liter
mg/kg	Milligrams Per Kilogram
mg/L	Milligrams Per Liter
MSDS	Material Safety Data Sheet
MTBE	Methyl Tertiary Butyl Ether
MFR	Multi-Family Residential
ND	Nondetectable
NFA	No Further Action (letter)
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
O&M	Operations & Maintenance Plan
PAOC	Potential Area of Concern
PCB	Polychlorinated Biphenyl
PCC	Portland Cement Concrete
PCE	Perchloroethylene
PEC	Potential Environmental Concern (TS)
PGD	Polk Guide Directory
PG&E	Pacific Gas & Electric
PHCs	Petroleum Hydrocarbon Constituents
PID	Photoionization Detector
ppb	Parts Per Billion
ppm	Parts Per Million
PRG	Preliminary Remediation Goal
PRP	Potentially Responsible Party
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RP	Responsible Party
RWQCB	Regional Water Quality Control Board (CA)
SBA	Small Business Administration
SFR	Single-Family Residential
SPCC	Spill Prevention Control and Countermeasure Plan
SQG	Small Quantity Generator
SCE	Southern California Edison
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
SWRCB	State Water Resources Control Board
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
TPH-D	Total Petroleum Hydrocarbons as Diesel
TPH-G	Total Petroleum Hydrocarbons as Gasoline
TPH-MO	Total Petroleum Hydrocarbons as Motor Oil
TS	Transaction Screen
USGS	United States Geological Survey
USFWS	United States Fish & Wildlife Service
UST	Underground Storage Tank
VEC	Vapor Encroachment Condition
VES	Vapor Encroachment Screening
VOCs	Volatile Organic Compounds



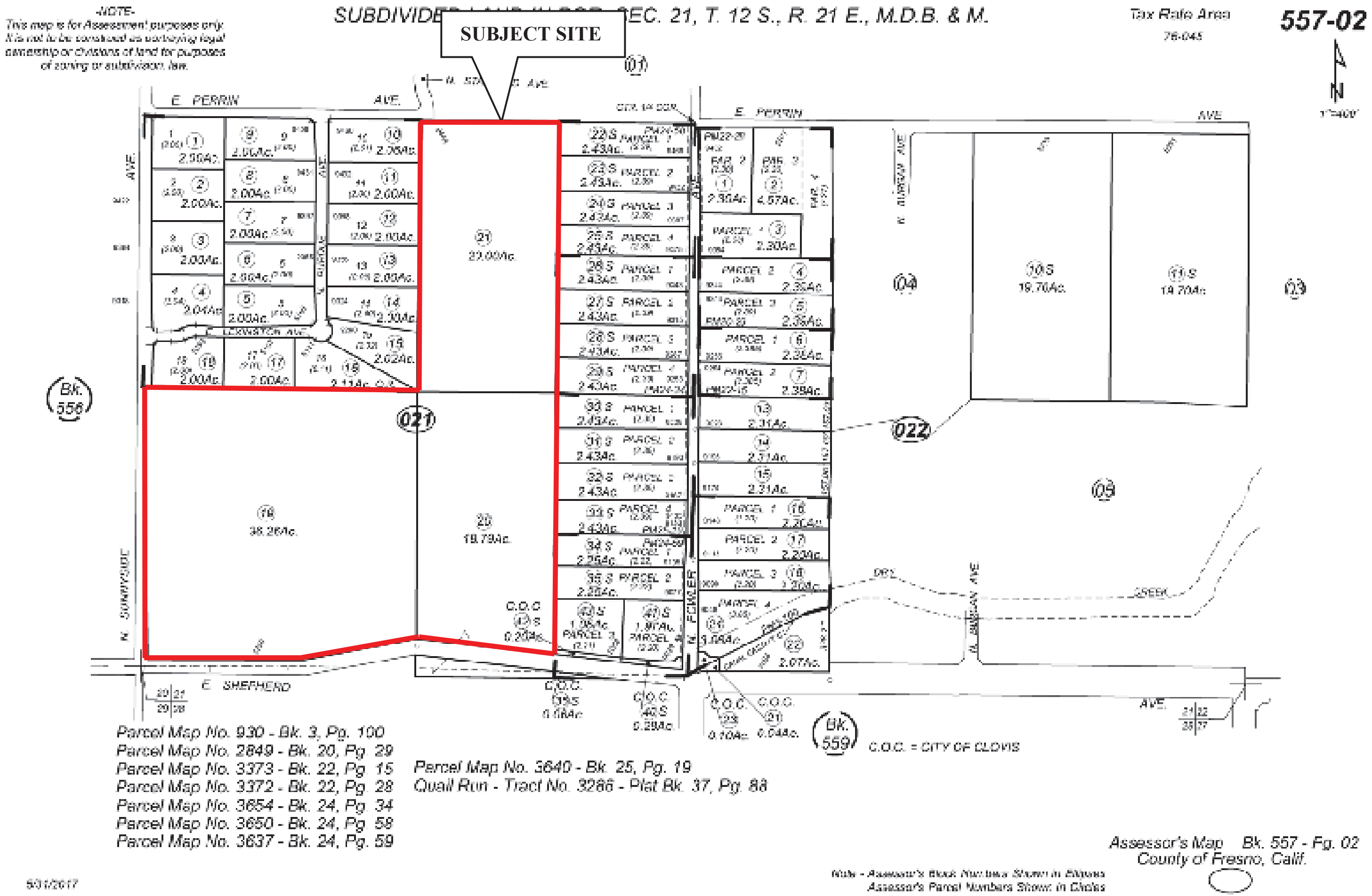
VICINITY MAP

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CA 93619

Scale: NTS	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Figure No.** 1

Krazan

SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Sta



PARCEL MAP	**Scale:** NTS	**Date:** January 2019
TRACT 6205 PROPERTY NEC OF N. SUNNYSIDE AND E. SHEPHERD AVENUES CLOVIS, CA 93619	**Drawn By:** MP	**Approved by:** AF
	Project No. 014-18235	**Figure No.** 2

Krazan

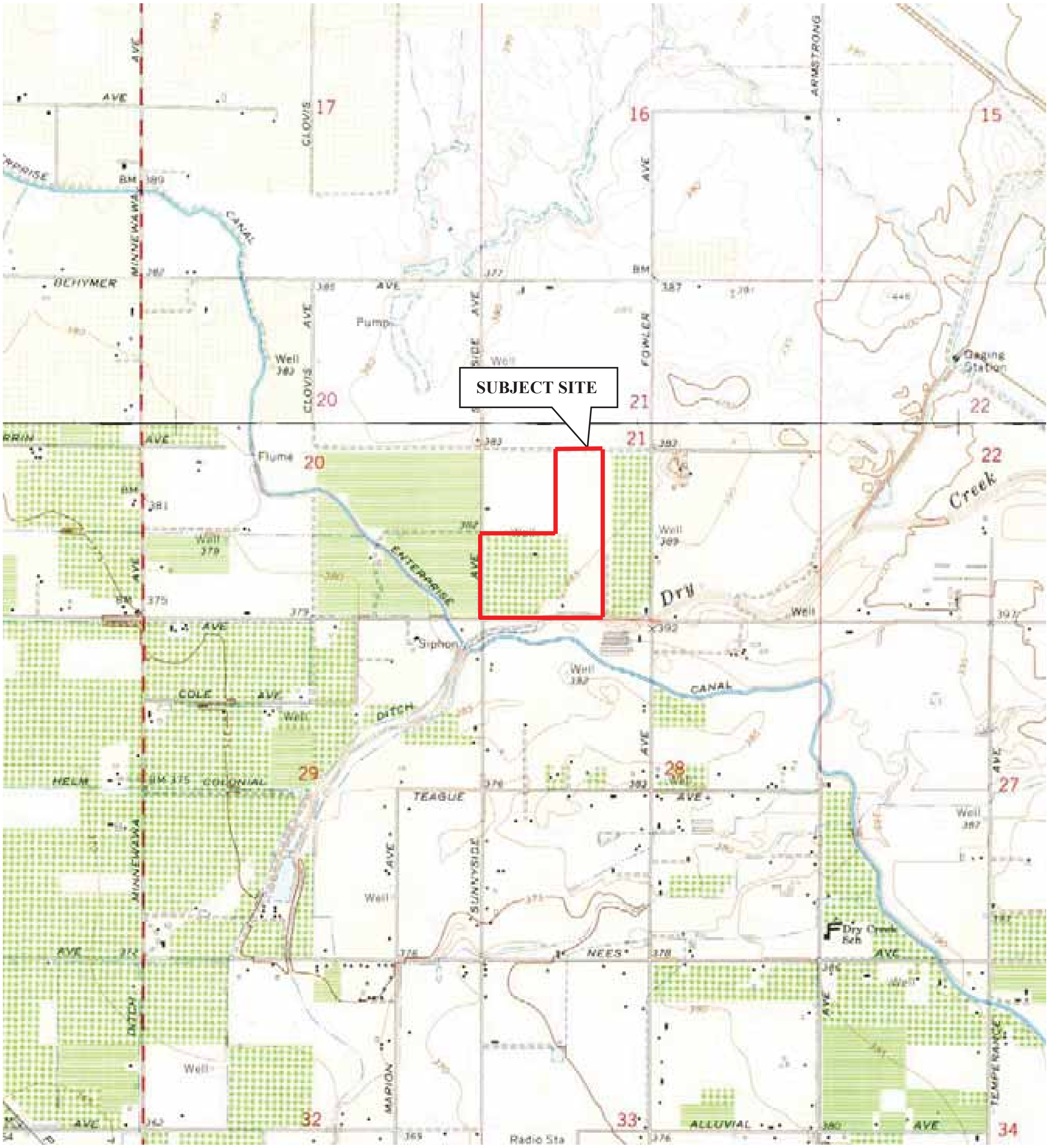
SITE DEVELOPMENT ENGINEERS

With Offices Serving the Western United States

— = SUBJECT SITE BOUNDARY
● = AGRICULTURAL WATER WELL
● = DOMESTIC WATER WELL
🟥 = POLE-MOUNTED TRANSFORMERS
● = ASTS
● = 55-GALLON DRUMS
🟨 = RESIDENTIAL DWELLING

🟦 = WAREHOUSE
🟩 = UTILITY VAULT

SITE MAP	**Scale:** NTS	**Date:** January 2019	Krazan
TRACT 6205 PROPERTY NEC OF N. SUNNYSIDE AND E. SHEPHERD AVENUES CLOVIS, CA 93619	**Drawn By:** MP	**Approved by:** AF	**SITE DEVELOPMENT ENGINEERS**
	Project No. 014-18235	**Figure No.** 3	***With Offices Serving the Western United Stat***



7.5-MINUTE SERIES
USGS TOPOGRAPHIC MAP
CLOVIS, CALIFORNIA
DATED 1964
PHOTOREVISED 1981

TOPOGRAPHIC MAP

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CA 93619

Scale: NTS	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Figure No.** 4

Krazan

SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Stat

Photo 1: Eastern-facing view of the southern boundary along E. Shepherd Avenue, from the southwestern corner of the subject site.

Photo 2: Northern-facing view of the western boundary along N. Sunnyside Avenue, from the southwestern corner of the subject site.

TRACT 6205 PROPERTY **NEC OF N. SUNNYSIDE AND** **E. SHEPHERD AVENUES** **CLOVIS, CA 93619**	**Project No.** 014-18235 **Date:** January 2019 **Approved by:** MP	Krazan **SITE DEVELOPMENT ENGINEERS** ***With Offices Serving the Western United States***

Photo 3: Southern-facing view of the western boundary along N. Sunnyside Avenue from the westernmost northwestern corner of the subject site.

Photo 4: Eastern-facing view of the northern boundary of the western portion, from the westernmost northwestern corner of the subject site.

Photo 5: Northern-facing view of the western boundary of the eastern portion of the subject site.

Photo 6: Eastern-facing view of the northern boundary of the eastern portion of the subject site from the northernmost northwestern corner. Visible are a domestic water well and associated tank.

Photo 7: Western-facing view of the northern boundary from the northeastern corner of the subject site.

Photo 8: Southern-facing view of the eastern boundary from the northeastern corner of the subject site.

Photo 9: Northern-facing view of the eastern boundary from the southeastern corner of the subject site. Visible are two pole-mounted transformers.

Photo 10: Western-facing view of the southern boundary along E. Shepherd Avenue, from the southeastern corner of the subject site.

Photo 11: Northeastern-facing view of the rural residential structure located along the southern boundary of the subject site. Visible is a water well and utility vault.

Photo 12: Close up view of the water well observed to be located adjacent to the west of the rural residential structure located along the southern boundary of the subject site.

Photo 13: Southern-facing view of the rural residential structure located along the southern boundary of the subject site.

Photo 14: Interior view of the kitchen observed to be located in the rural residential structure located along the southern boundary of the subject site.

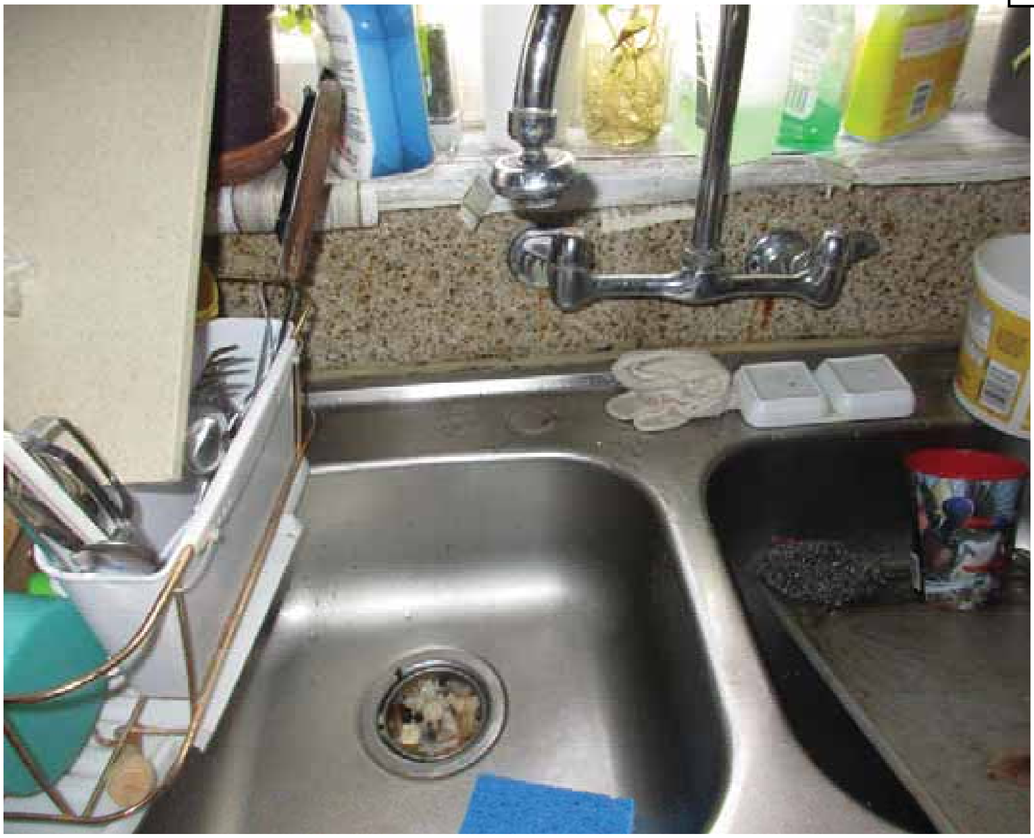


Photo 15: Close up view of the kitchen sink located in the rural residential structure located along the southern boundary of the subject site.

Photo 16: Interior view of the bathroom located in the rural residential structure located along the southern boundary of the subject site.

Photo 17: Interior view of the living room located in the rural residential structure located along the southern boundary of the subject site.

Photo 18: Interior view of the warehouse located adjacent to the north of the rural residential structure located in the southern portion of the subject site. Visible are pallets, a ladder and several refrigerators.

Photo 19: Interior view of the men's restroom observed to be located in the warehouse in the southern portion of the subject site.

Photo 20: Interior view of the warehouse located in the southern portion of the subject site. Visible are pallets of bagged product, a forklift, a large crack in the concrete foundation, and *de minimis* staining.

Photo 21: Interior view of a small storage room located inside the warehouse located in the southern portion of the subject site. Visible is a generator, Roundup herbicide, and Zinc Sulfate fertilizer.

Photo 22: Southern-facing view of three ASTs located adjacent to the north of the warehouse located in the southern portion of the subject site. Two ASTs contain diesel and the third AST contains gasoline.

Photo 23: Close up view of the two diesel ASTs observed adjacent to the warehouse. *De minimis* staining was observed on the bottoms of the tanks.

Photo 24: Close up view of the gasoline AST observed adjacent to the warehouse. *De minimis* staining was observed on the bottom of the tank.

Photo 25: Close up view of the ground below the ASTs, observed to be located adjacent to the north of the warehouse. Also visible are 55-gallon drums.

Photo 26: Northern-facing view of an electric-powered heater observed to be located in the bay of the warehouse located in the southern portion of the subject site. *De minimis* staining was observed around the motor.

Photo 27: Close up view of a subsurface concrete pit observed to be located in the bay of the warehouse located in the southern portion of the subject site. The pit is utilized for drying pecans.

Photo 28: Close up view of access panels to a subsurface concrete pit, observed to be located in the bay of the warehouse located in the southern portion of the subject site.

Photo 29: Interior view of a shop room observed to be located in the warehouse located in the southern portion of the subject site. Visible are compressed gas cylinders.

Photo 30: Close up southern-facing view of three 55-gallon drums containing motor oil observed to be located adjacent to the north of the warehouse. *De minimis* staining was observed on the drums. Also visible are trash bins.

Photo 31: Northern-facing view of a petroleum tank observed to be located adjacent to the north of the warehouse located in the southern portion of the subject site.

Photo 32: Southern-facing view of the warehouse observed to be located in the southern portion of the subject site. Visible are three ASTS and a petroleum tank.

Photo 33: Northeastern-facing view of a water well and standpipe observed to be located in the southwestern corner of the subject site.

Photo 34: Eastern-facing view of a small residential dwelling and water well observed to be located in the central-eastern portion of the subject site.

Photo 35: Eastern-facing view of a small residential dwelling observed to be located in the central-eastern portion of the subject site. Visible is concrete debris, a trailer, a satellite dish and farming equipment.

Photo 36: Northwestern-facing view of a small residential dwelling observed to be located in the central-eastern portion of the subject site. Visible are stacks of tires, a portable water tank and a trailer.

Photo 37: Close up western-facing view of a water well observed to be located adjacent to the east of the small residential dwelling.

Photo 38: Eastern-facing view of a water well and two pole-mounted transformers observed to be located in the central-eastern portion of the subject site.

Photo 39: Close up view of the water well observed to be located in the central-eastern portion of the subject site.

Photo 40: Close up view of the two pole-mounted transformers observed to be located in the central-eastern portion of the subject site.

Photo 41: Northwestern-facing view of a water well observed to be located in the northwestern portion of the subject site.

Photo 42: Western-facing view of a water well and associated water tank observed to be located in the northwestern portion of the subject site.

Photo 43: Eastern-facing view of a rural residential dwelling observed to be located in the northwestern portion of the subject site.

Photo 44: Interior view of the kitchen observed to be located in the rural residential structure located in the northwestern portion of the subject site.

Photo 45: Interior view of the living room located in the rural residential structure observed to be located in the northwestern portion of the subject site.

Photo 46: Interior view of the bathroom located in the rural residential structure observed to be located in the northwestern portion of the subject site.

Photo 47: Close up Interior view of the bathroom located in the rural residential structure observed to be located in the northwestern portion of the subject site.

Photo 48: Southern-facing view of the backyard of the rural residential structure observed to be located in the northwestern portion of the subject site.

Photo 49: Northern-facing view of the backyard of the rural residential structure observed to be located in the northwestern portion of the subject site.

Photo 50: Southwestern-facing view of the larger of two berms of tree branches and debris observed to be located along the eastern boundary of the subject site.

Photo 51: Southeastern-facing view of the larger of two berms of tree branches and debris observed to be located along the eastern boundary of the subject site.

Photo 52: Western-facing view of two utility vaults observed to be located on the southern boundary, along E. Shepherd Avenue, of the subject site.

Photo 53: Northwestern-facing view of a water well and stand pipe observed to be located in the eastern portion of the subject site.

Photo 54: Southeastern-facing view of the smaller of two berms of tree branches and debris observed to be located along the eastern boundary of the subject site.

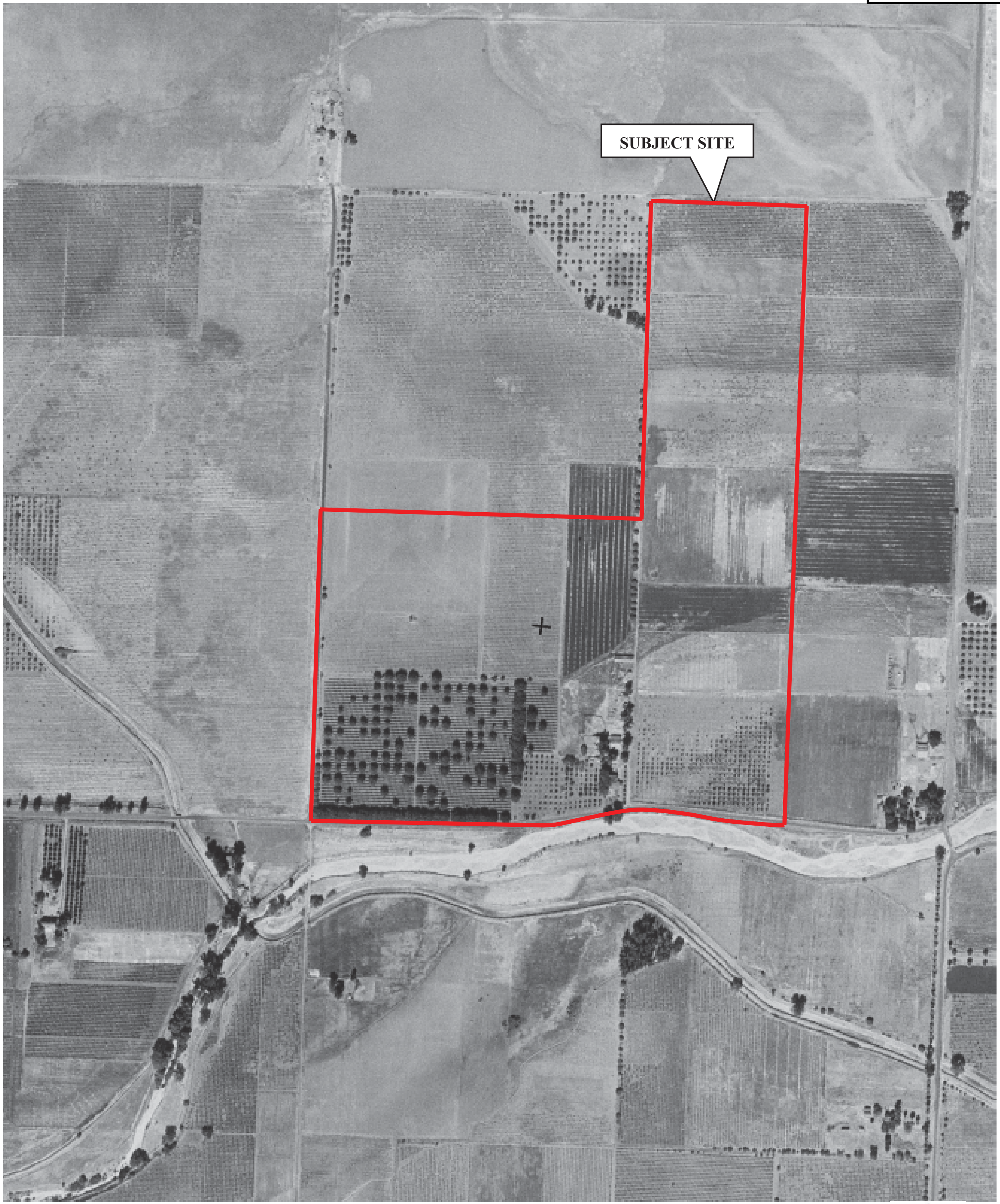
Photo 55: Northeastern-facing view of the larger of two berms of tree branches and debris observed to be located along the eastern boundary of the subject site.

Photo 56: Northwestern-facing view of the larger of two berms of tree branches and debris observed to be located along the eastern boundary of the subject site.

Photo 57: Northern-facing view of the smaller of two berms of tree branches and debris observed to be located along the eastern boundary of the subject site. Also visible are three trailers.

Photo 58: Northern-facing view of two pole-mounted transformers observed to be located on the eastern boundary of the subject site.

Appendix A



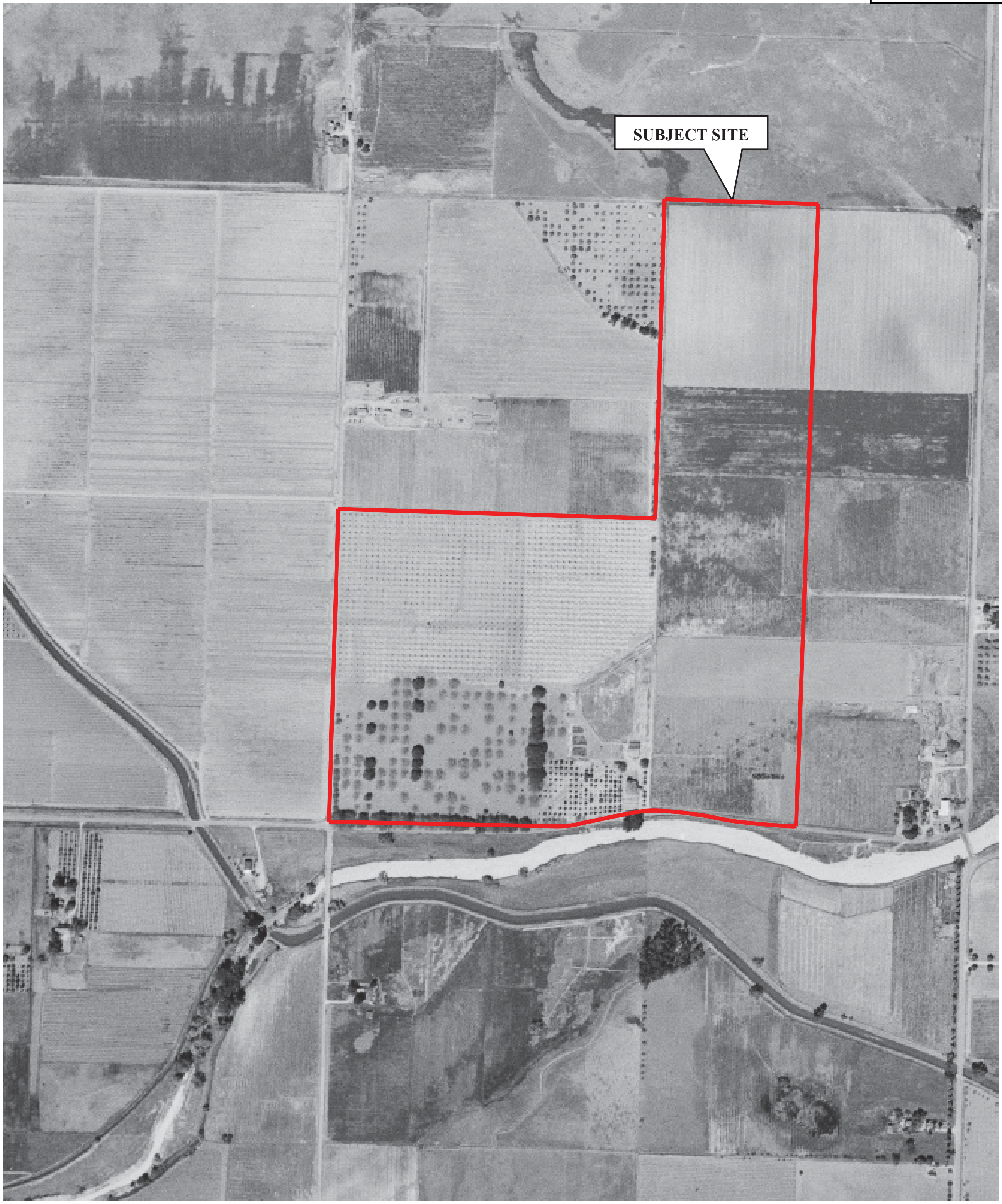
1937 AERIAL PHOTOGRAPH

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

Scale: 1" = 500'	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Source:** EDR

Krazan

SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Sta



1946 AERIAL PHOTOGRAPH

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

Scale: 1" = 500'	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Source:** EDR

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SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Sta

1950 AERIAL PHOTOGRAPH	**Scale:** 1" = 500'	**Date:** January 2019	Krazan
TRACT 6205 PROPERTY **NEC OF N. SUNNYSIDE AND** **E. SHEPHERD AVENUES** **CLOVIS, CALIFORNIA 93619**	**Drawn By:** MP	**Approved by:** AF	**SITE DEVELOPMENT ENGINEERS** ***With Offices Serving the Western United Stat***
	Project No. 014-18235	**Source:** EDR	

1957 AERIAL PHOTOGRAPH

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

Scale: 1" = 500'	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Source:** EDR

Krazan

SITE DEVELOPMENT ENGINEERS

With Offices Serving the Western United Sta

1962 AERIAL PHOTOGRAPH

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

Scale: 1" = 500'	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Source:** EDR

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SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Sta

1967 AERIAL PHOTOGRAPH

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

Scale: 1" = 500'	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Source:** EDR

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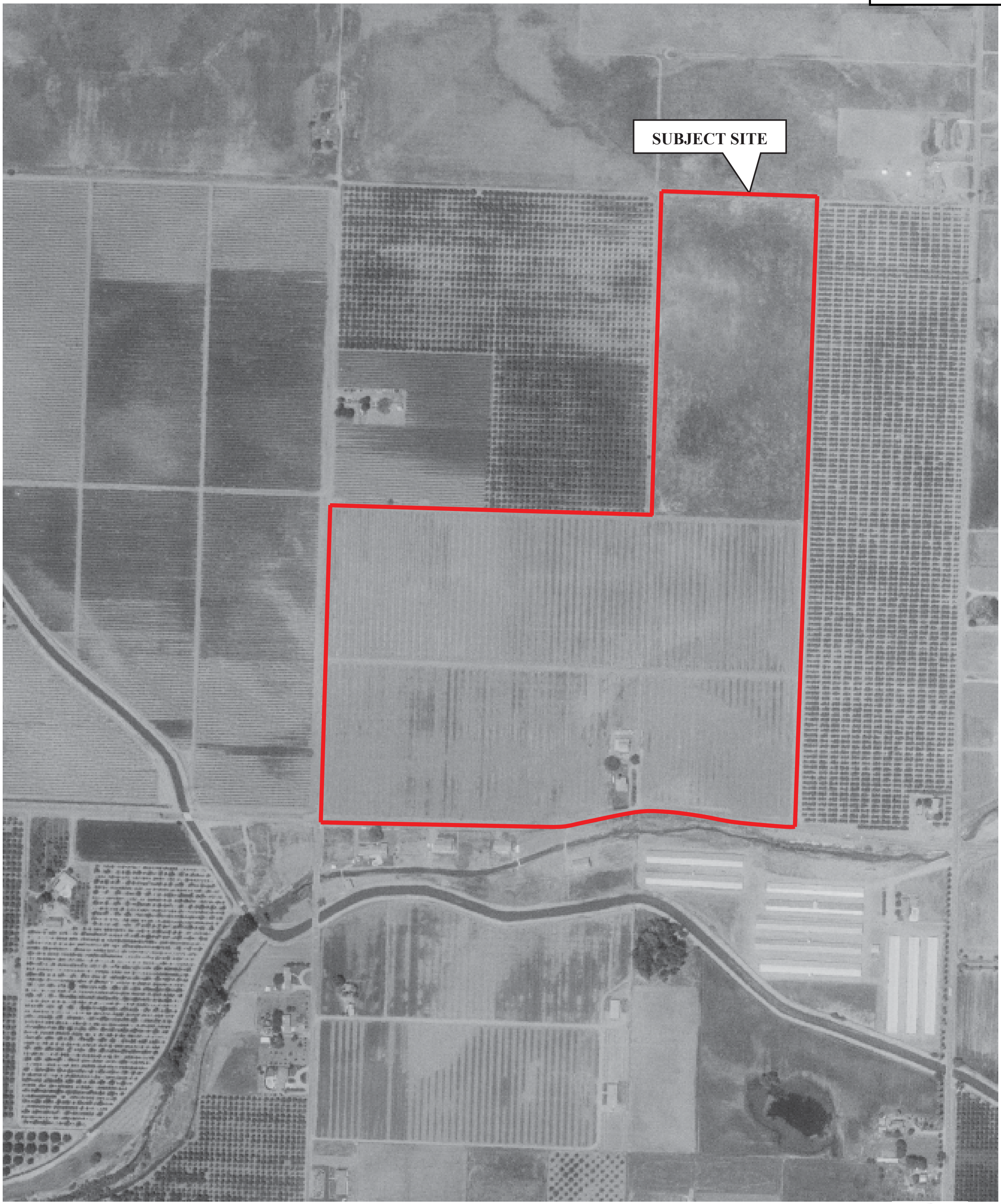
SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Sta



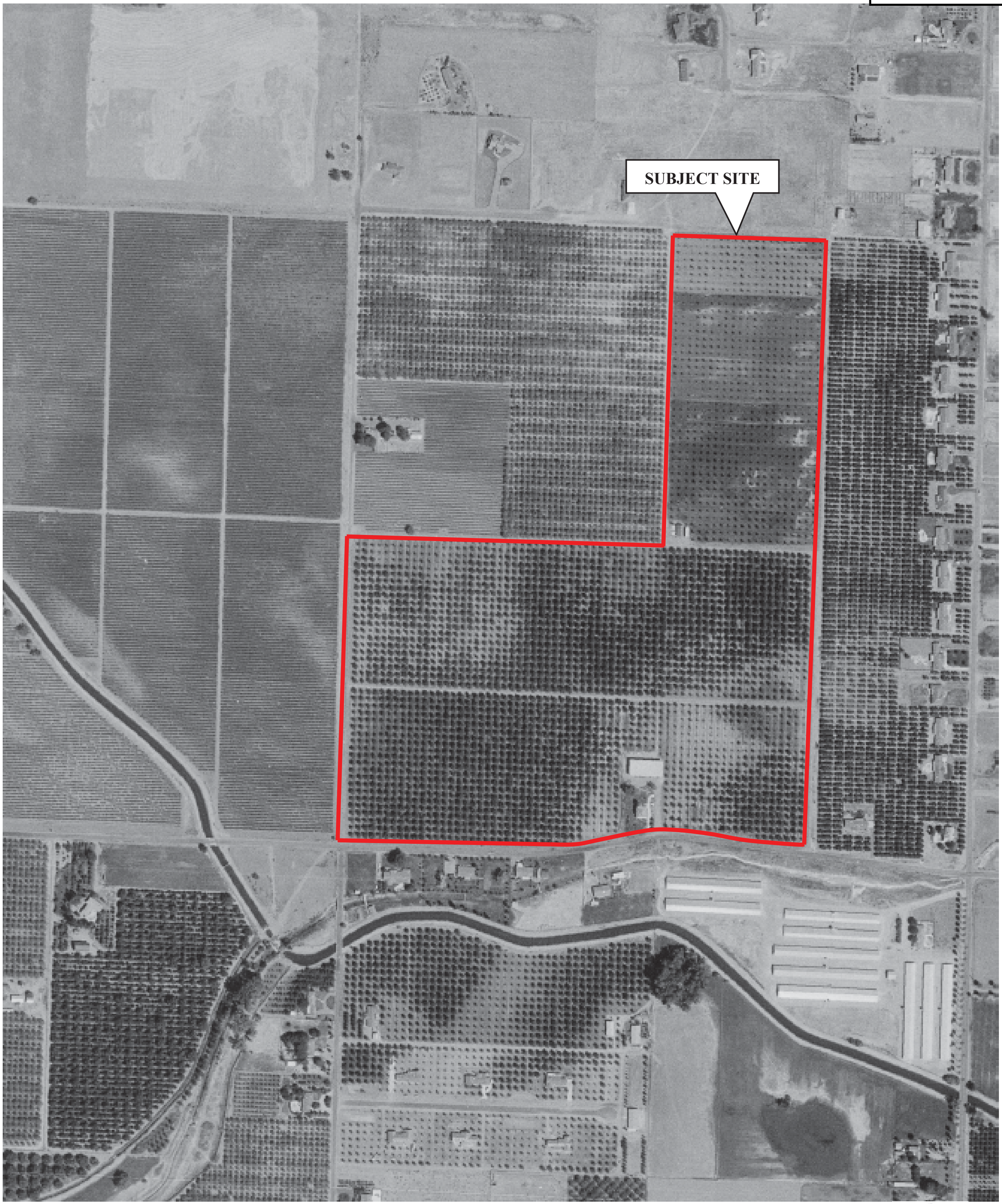
1973 AERIAL PHOTOGRAPH

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

Scale: 1" = 500'	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Source:** EDR

Krazan

SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Stat



1979 AERIAL PHOTOGRAPH

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

Scale: 1" = 500'	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Source:** EDR

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SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Sta

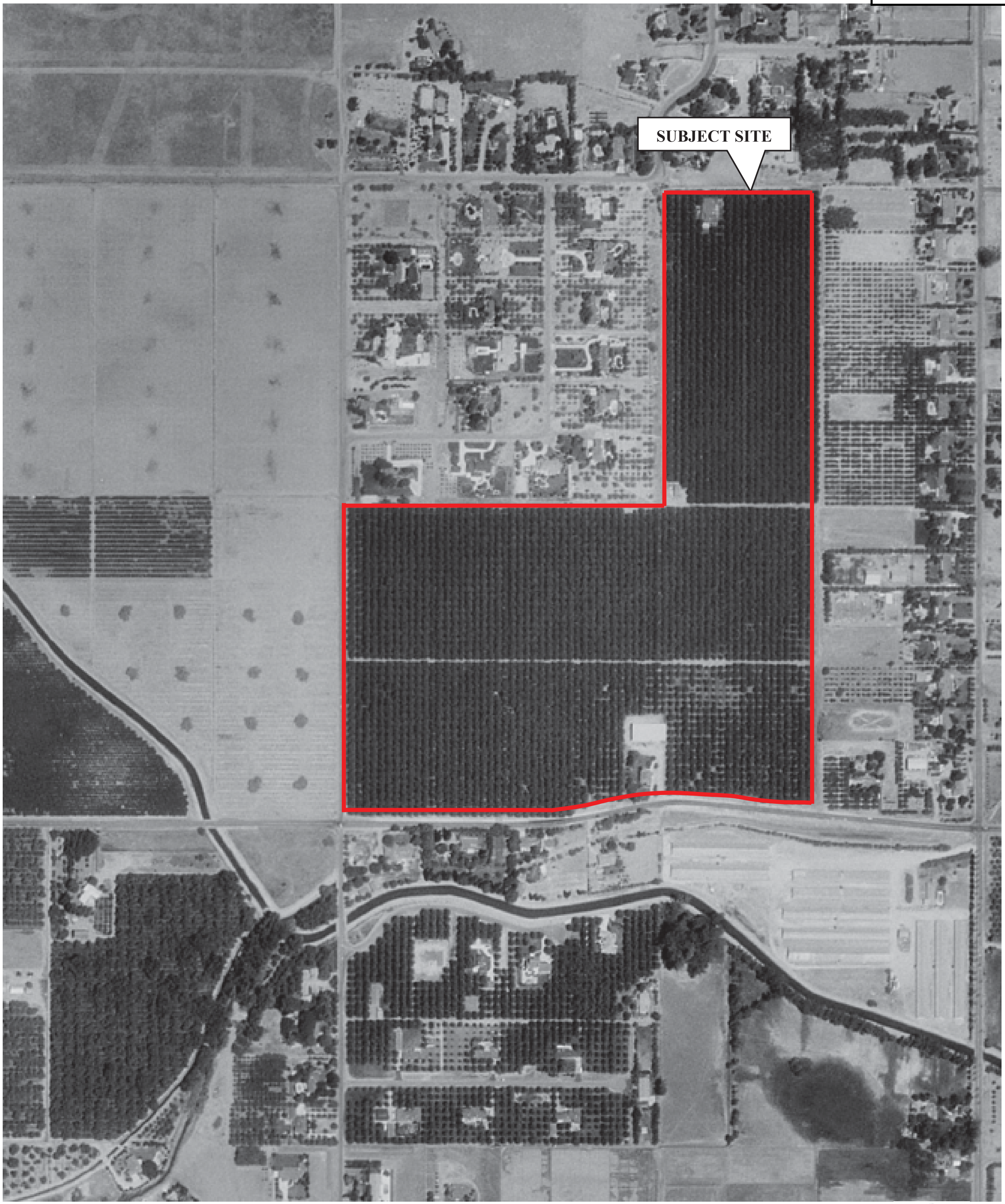
1984 AERIAL PHOTOGRAPH	**Scale:** 1" = 500'	**Date:** January 2019	Krazan
TRACT 6205 PROPERTY NEC OF N. SUNNYSIDE AND E. SHEPHERD AVENUES CLOVIS, CALIFORNIA 93619	**Drawn By:** MP	**Approved by:** AF	SITE DEVELOPMENT ENGINEERS *With Offices Serving the Western United Sta*
	Project No. 014-18235	**Source:** EDR	

1987 AERIAL PHOTOGRAPH	**Scale:** 1" = 500'	**Date:** January 2019
TRACT 6205 PROPERTY NEC OF N. SUNNYSIDE AND E. SHEPHERD AVENUES CLOVIS, CALIFORNIA 93619	**Drawn By:** MP	**Approved by:** AF
	Project No. 014-18235	**Source:** EDR

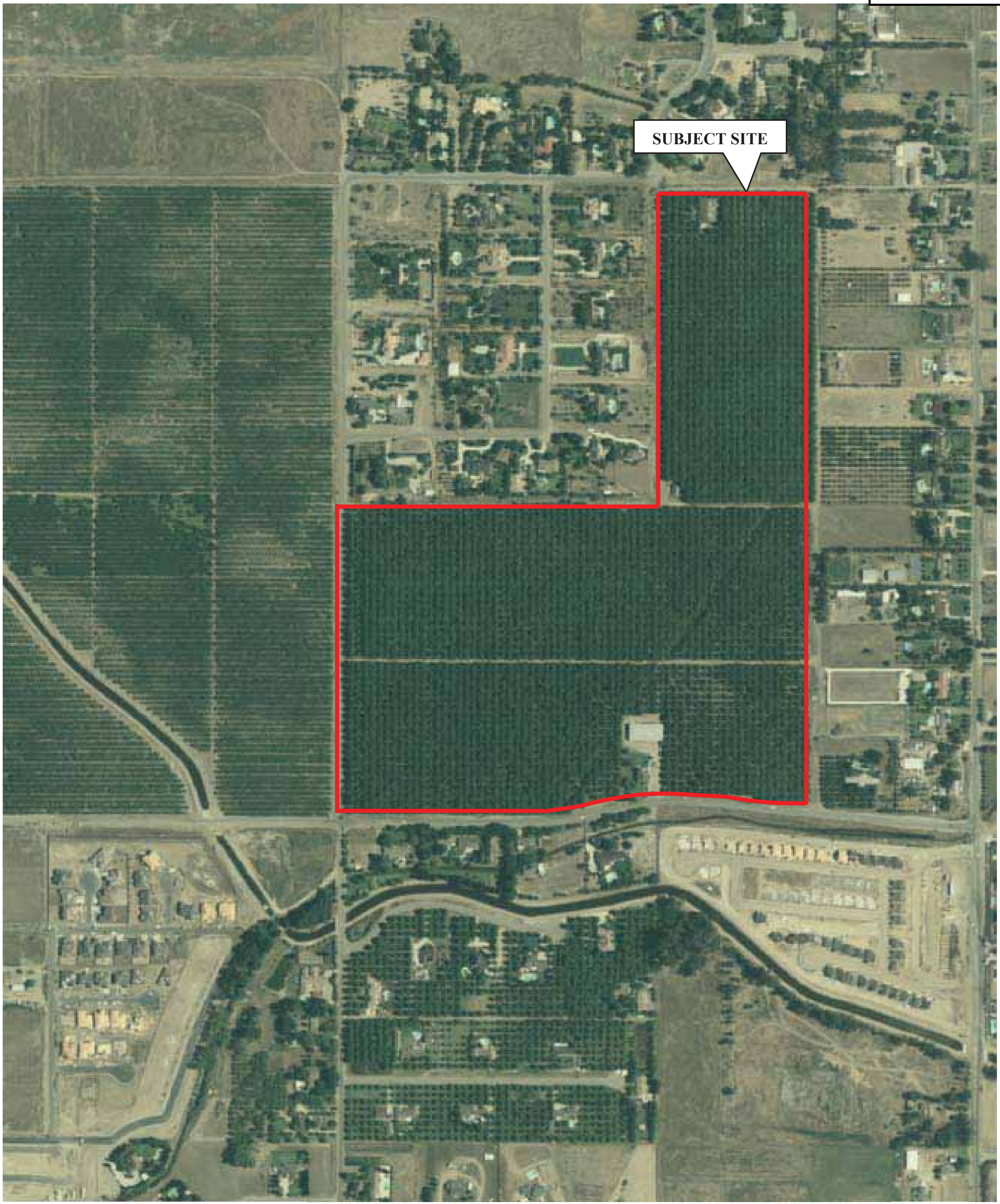
Krazan

SITE DEVELOPMENT ENGINEERS

With Offices Serving the Western United Sta



1998 AERIAL PHOTOGRAPH	**Scale:** 1" = 500'	**Date:** January 2019	Krazan
TRACT 6205 PROPERTY **NEC OF N. SUNNYSIDE AND** **E. SHEPHERD AVENUES** **CLOVIS, CALIFORNIA 93619**	**Drawn By:** MP	**Approved by:** AF	**SITE DEVELOPMENT ENGINEERS** ***With Offices Serving the Western United Sta***
	Project No. 014-18235	**Source:** EDR	



2005 AERIAL PHOTOGRAPH

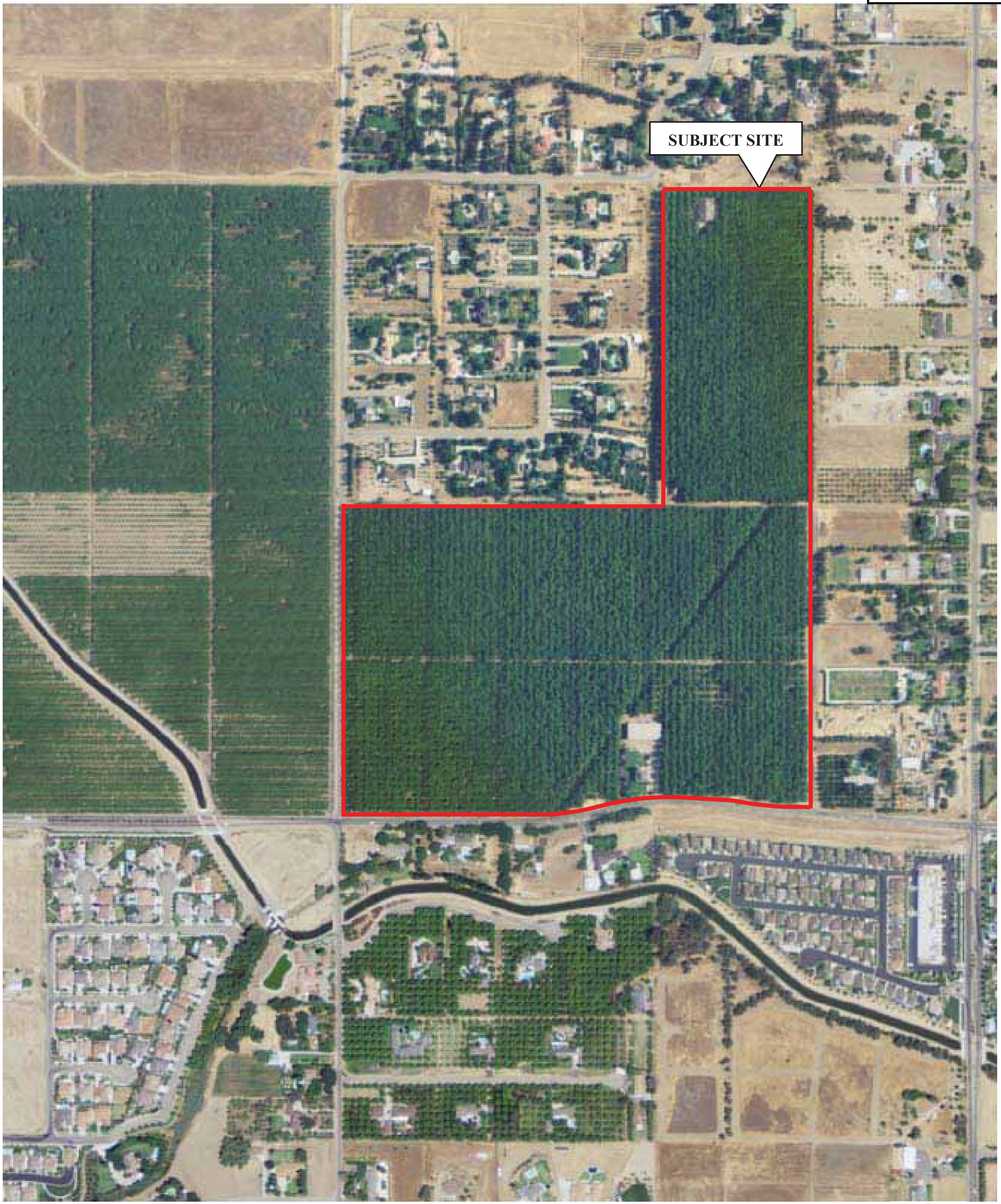
TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

Scale: 1" = 500'	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Source:** EDR

Krazan

SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Stat

2009 AERIAL PHOTOGRAPH	**Scale:** 1" = 500'	**Date:** January 2019	
TRACT 6205 PROPERTY NEC OF N. SUNNYSIDE AND E. SHEPHERD AVENUES CLOVIS, CALIFORNIA 93619	**Drawn By:** MP	**Approved by:** AF	Krazan **SITE DEVELOPMENT ENGINEERS** *With Offices Serving the Western United Sta*
	Project No. 014-18235	**Source:** EDR	



2012 AERIAL PHOTOGRAPH	Scale: 1" = 500'	Date: January 2019	Krazan
TRACT 6205 PROPERTY NEC OF N. SUNNYSIDE AND E. SHEPHERD AVENUES CLOVIS, CALIFORNIA 93619	Drawn By: MP	Approved by: AF	SITE DEVELOPMENT ENGINEERS *With Offices Serving the Western United Sta*
	Project No. 014-18235	Source: EDR	

2016 AERIAL PHOTOGRAPH

TRACT 6205 PROPERTY
NEC OF N. SUNNYSIDE AND
E. SHEPHERD AVENUES
CLOVIS, CALIFORNIA 93619

Scale: 1" = 500'	**Date:** January 2019
Drawn By: MP	**Approved by:** AF
Project No. 014-18235	**Source:** EDR

Krazan

SITE DEVELOPMENT ENGINEERS
With Offices Serving the Western United Sta

Appendix B

Tract No. 6205 Property
5230 E Shepherd Ave
Clovis, CA 93619

Inquiry Number: 5516721.5
December 19, 2018

The EDR-City Directory Abstract

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1922 through 2014. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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Data by
infoUSA®

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2014	EDR Digital Archive	-	-	-	-
2010	EDR Digital Archive	-	-	-	-
2005	EDR Digital Archive	-	-	-	-
2002	R.L. Polk & Co Publishers	-	X	X	-
	R.L. Polk & Co Publishers	X	X	X	-
1996	R.L. Polk & Co Publishers	-	X	X	-
	R.L. Polk & Co Publishers	X	X	X	-
1990	R.L. Polk & Co Publishers	-	-	-	-
1986	R.L. Polk & Co Publishers	-	-	-	-
1980	R.L. Polk & Co Publishers	-	-	-	-
1975	R.L. Polk & Co Publishers	-	-	-	-
1970	R.L. Polk & Co Publisher	-	-	-	-

EXECUTIVE SUMMARY

Year	***Source***	***TP***	***Adjoining***	***Text Abstract***	***Source Image***
1965	R.L. Polk & Co Publisher	-	-	-	-
1962	Pacific Telephone	-	-	-	-
1958	R.L. Polk & Co Publishers	-	-	-	-
1952	R.L. Polk & Co Publishers	-	-	-	-
1947	R.L. Polk & Co Publishers	-	-	-	-
1942	R.L. Polk & Co Publishers	-	-	-	-
1937	R.L. Polk & Co Publishers	-	-	-	-
1932	R.L. Polk & Co Publishers	-	-	-	-
1927	R.L. Polk & Co Publishers	-	-	-	-
1922	Polk: Husted Directory Co.	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

5230 E Shepherd Ave
Clovis, CA 93619

FINDINGS DETAIL

Target Property research detail.

E SHEPHERD AVE

5230 E SHEPHERD AVE

Year	*Uses*	*Source*
2002	CAL PECAN nuts edible	R.L. Polk & Co Publishers
1996	CAL PECAN 9526 R	R.L. Polk & Co Publishers

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

E SHEPHERD AVE

5157 E SHEPHERD AVE

Year	*Uses*	*Source*
2002	Turl Grace E	R.L. Polk & Co Publishers
	Turf Paul D B 3+ A	R.L. Polk & Co Publishers

5211 E SHEPHERD AVE

Year	*Uses*	*Source*
2002	Bogle Darren D 82 A	R.L. Polk & Co Publishers
	Bogle Aime L	R.L. Polk & Co Publishers
1996	Barry Marilyn 8861 R	R.L. Polk & Co Publishers
	Barry Wesley 8661 R	R.L. Polk & Co Publishers

N FOWLER AVE

8860 N FOWLER AVE

Year	*Uses*	*Source*
2002	N FOWLER AVE	R.L. Polk & Co Publishers
	FONTANA TRAINING STABLES horse training	R.L. Polk & Co Publishers

8870 N FOWLER AVE

Year	*Uses*	*Source*
2002	Hoffman Dale F & Janna 81 A	R.L. Polk & Co Publishers

8876 N FOWLER AVE

Year	*Uses*	*Source*
2002	Cotfman John E	R.L. Polk & Co Publishers

8878 N FOWLER AVE

Year	*Uses*	*Source*
2002	Not Verified	R.L. Polk & Co Publishers

8901 N FOWLER AVE

Year	*Uses*	*Source*
2002	Gallinetti Jake J & Kathryn 81+ A	R.L. Polk & Co Publishers

FINDINGS

Year	Uses	Source
1996	Gallinetli Jake 8652 R	R.L. Polk & Co Publishers

9029 N FOWLER AVE

Year	Uses	Source
2002	Nelson Daryl R	R.L. Polk & Co Publishers
	Nelson Yu G 11+ A	R.L. Polk & Co Publishers

9048 N FOWLER AVE

Year	Uses	Source
2002	Kenneth Roger L & Linda 81+ a	R.L. Polk & Co Publishers

9077 N FOWLER AVE

Year	Uses	Source
2002	Russell Dana S Eh 1 A	R.L. Polk & Co Publishers
	Russell Sydnee A	R.L. Polk & Co Publishers

9090 N FOWLER AVE

Year	Uses	Source
2002	Not Verified	R.L. Polk & Co Publishers

9105 N FOWLER AVE

Year	Uses	Source
2002	Aguilar Graciela E	R.L. Polk & Co Publishers
	Aguilar Luis E	R.L. Polk & Co Publishers
1996	Aguilar Luis 8826 R	R.L. Polk & Co Publishers

9118 N FOWLER AVE

Year	Uses	Source
2002	Garcia Rae S	R.L. Polk & Co Publishers
	Garcia Ted M 81 A	R.L. Polk & Co Publishers

FINDINGS

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	**Address Not Identified in Research Source**
5157 E SHEPHERD AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
5211 E SHEPHERD AVE	2014, 2010, 2005, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
8860 N FOWLER AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
8870 N FOWLER AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
8876 N FOWLER AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
8878 N FOWLER AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
8901 N FOWLER AVE	2014, 2010, 2005, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
9029 N FOWLER AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
9048 N FOWLER AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
9077 N FOWLER AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
9090 N FOWLER AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
9105 N FOWLER AVE	2014, 2010, 2005, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922
9118 N FOWLER AVE	2014, 2010, 2005, 1996, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
5230 E Shepherd Ave	2014, 2010, 2005, 1990, 1986, 1980, 1975, 1970, 1965, 1962, 1958, 1952, 1947, 1942, 1937, 1932, 1927, 1922

Appendix C

Tract No. 6205 Property
5230 E Shepherd Ave
Clovis, CA 93619

Inquiry Number: 5516721.3
December 19, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/19/18

Site Name:	**Client Name:**
Tract No. 6205 Property	Krazan & Associates, Inc.
5230 E Shepherd Ave	215 West Dakota
Clovis, CA 93619	Clovis, CA 93612
EDR Inquiry # 5516721.3	Contact: Michelle Phillips

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Krazan & Associates, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 3956-4D4B-8352

PO # 014-18235 MLP

Project Tract No. 6205 Property

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 3956-4D4B-8352

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Appendix D

Tract No. 6205 Property
5230 E Shepherd Ave
Clovis, CA 93619

Inquiry Number: 5516721.2s
December 19, 2018

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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SECTION **PAGE**

GEOCHECK ADDENDUM

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

5230 E SHEPHERD AVE
CLOVIS, CA 93619

COORDINATES

Latitude (North):	36.8685000 - 36° 52' 6.60''
Longitude (West):	119.6907520 - 119° 41' 26.70''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	260145.1
UTM Y (Meters):	4083462.5
Elevation:	388 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5603160 CLOVIS, CA
Version Date:	2012
North Map:	5603174 FRIANT, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140618, 20140619
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
5230 E SHEPHERD AVE
CLOVIS, CA 93619

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	WILSON DEVELOPMENT P	4767 E SHEPHERD	CUPA Listings	Higher	62, 0.012, SSW
A2	P-R FARMS	4650 E SHEPHERD AVE	CUPA Listings	Higher	158, 0.030, SW
A3	P-R FARMS INC.	4650 E SHEPHERD	SWEEPS UST, CA FID UST	Higher	158, 0.030, SW
A4	P-R FARMS INC	4650 E SHEPHERD	HIST UST	Higher	158, 0.030, SW
A5	P-R FARMS INC.	4648 E SHEPHERD	SWEEPS UST, CA FID UST	Higher	173, 0.033, SW
A6	P-R FARMS INC	4648 E SHEPHERD	HIST UST	Higher	173, 0.033, SW
7	PG&E SHEPHERD SUBSTA	N SUNNYSIDE AVE	CUPA Listings	Lower	1089, 0.206, NNW
8	NORTH CLOVIS AVENUE	CLOVIS AVENUE/TEAGUE	ENVIROSTOR, SCH	Lower	3349, 0.634, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
NPL LIENS	Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL	National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY	Federal Facility Site Information listing
SEMS	Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE	Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS	Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF	RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG	RCRA - Large Quantity Generators
RCRA-SQG	RCRA - Small Quantity Generators
RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS	Land Use Control Information System
US ENG CONTROLS	Engineering Controls Sites List

EXECUTIVE SUMMARY

US INST CONTROL	Sites with Institutional Controls

Federal ERNS list

ERNS	Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE	State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF	Solid Waste Information System

State and tribal leaking storage tank lists

LUST	Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land
CPS-SLIC	Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST	Underground Storage Tank Listing
UST	Active UST Facilities
AST	Aboveground Petroleum Storage Tank Facilities
INDIAN UST	Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP	Voluntary Cleanup Priority Listing
VCP	Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS	Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS	A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT	Waste Management Unit Database
SWRCY	Recycler Database
HAULERS	Registered Waste Tire Haulers Listing
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register

HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
CDL	Clandestine Drug Labs
CERS HAZ WASTE	CERS HAZ WASTE
Toxic Pits	Toxic Pits Cleanup Act Sites
US CDL	National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CERS TANKS	California Environmental Reporting System (CERS) Tanks

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program

EXECUTIVE SUMMARY

UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
ICE	ICE
HIST CORTESE	Hazardous Waste & Substance Site List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
CERS	CERS
WIP	Well Investigation Program Case List
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)
CIWQS	California Integrated Water Quality System
SAMPLING POINT	SAMPLING POINT (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)
UIC GEO	UIC GEO (GEOTRACKER)

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List

EXECUTIVE SUMMARY

RGA LUST - - - - - - - - - - - - - - - - - - Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control’s (DTSC’s) Site Mitigation and Brownfields Reuse Program’s (SMBRP’s) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 10/29/2018 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
NORTH CLOVIS AVENUE Facility Id: 10010017 Status: No Further Action	***CLOVIS AVENUE/TEAGUE***	***SW 1/2 - 1 (0.634 mi.)***	***8***	***12***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990’s. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are

2 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
P-R FARMS INC. Status: A Tank Status: A Comp Number: 31021	***4650 E SHEPHERD***	***SW 0 - 1/8 (0.030 mi.)***	***A3***	***8***
P-R FARMS INC. Status: A Tank Status: A Comp Number: 31016	***4648 E SHEPHERD***	***SW 0 - 1/8 (0.033 mi.)***	***A5***	***10***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 2 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
P-R FARMS INC Facility Id: 00000031021	4650 E SHEPHERD	SW 0 - 1/8 (0.030 mi.)	A4	9
P-R FARMS INC Facility Id: 00000031016	4648 E SHEPHERD	SW 0 - 1/8 (0.033 mi.)	A6	11

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 2 CA FID UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
P-R FARMS INC. Facility Id: 10006298 Status: A	***4650 E SHEPHERD***	***SW 0 - 1/8 (0.030 mi.)***	***A3***	***8***
P-R FARMS INC. Facility Id: 10006294 Status: A	***4648 E SHEPHERD***	***SW 0 - 1/8 (0.033 mi.)***	***A5***	***10***

Other Ascertainable Records

CUPA Listings: A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

A review of the CUPA Listings list, as provided by EDR, has revealed that there are 3 CUPA Listings sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WILSON DEVELOPMENT P Database: CUPA FRESNO, Date of Government Version: 10/16/2018	4767 E SHEPHERD	SSW 0 - 1/8 (0.012 mi.)	1	8

EXECUTIVE SUMMARY

Facility Id: FA0276751

P-R FARMS	4650 E SHEPHERD AVE	SW 0 - 1/8 (0.030 mi.)	A2	8

Database: CUPA FRESNO, Date of Government Version: 10/16/2018
Facility Id: FA0271888

Lower Elevation	Address	Direction / Distance	Map ID	Page
PG&E SHEPHERD SUBSTA	N SUNNYSIDE AVE	NNW 1/8 - 1/4 (0.206 mi.)	7	12

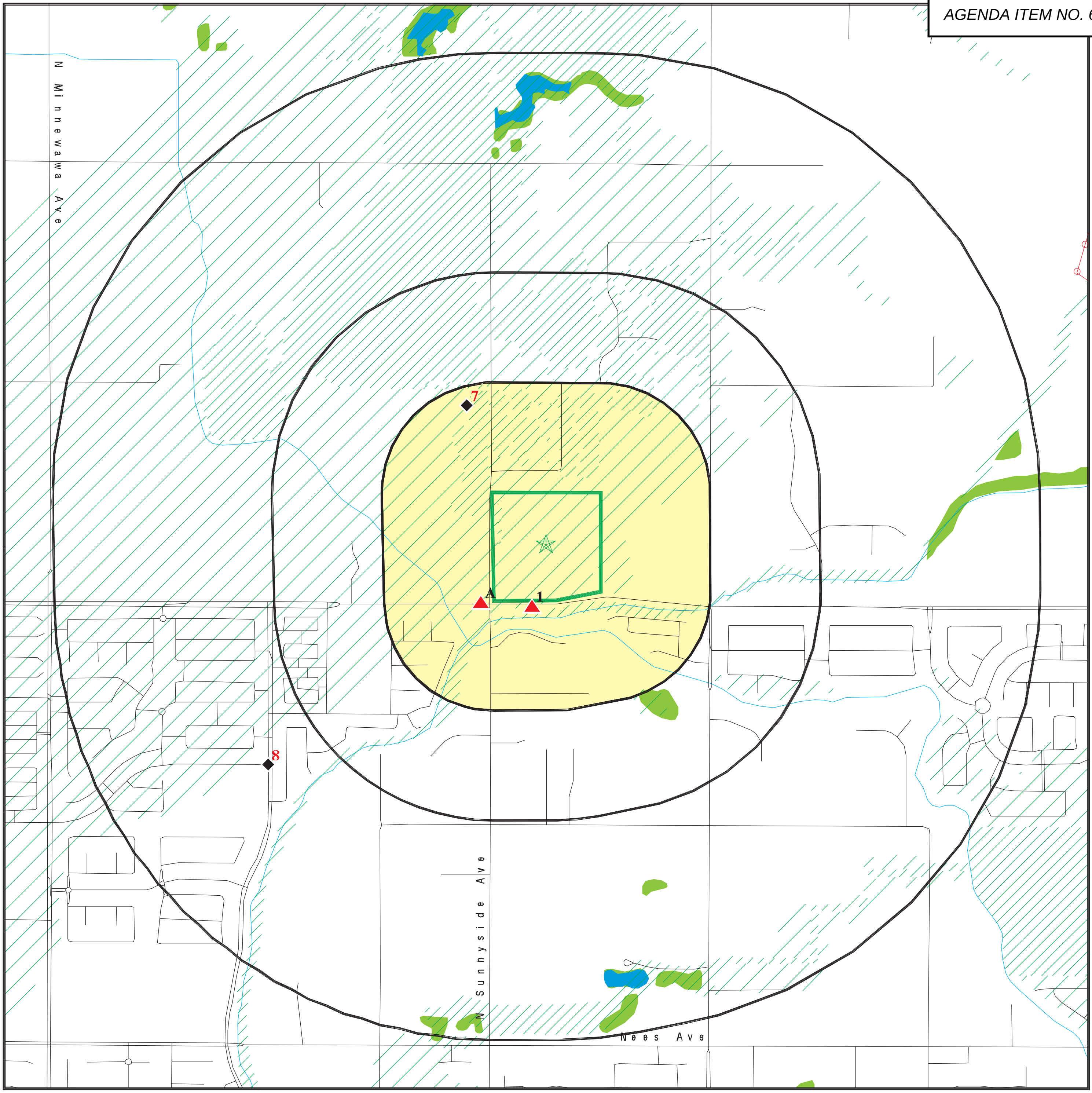
Database: CUPA FRESNO, Date of Government Version: 10/16/2018
Facility Id: FA0284459

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
TRACT NO 5045	CIWQS

OVERVIEW MAP - 5516721.2S



0 1/4 1/2 1 Miles

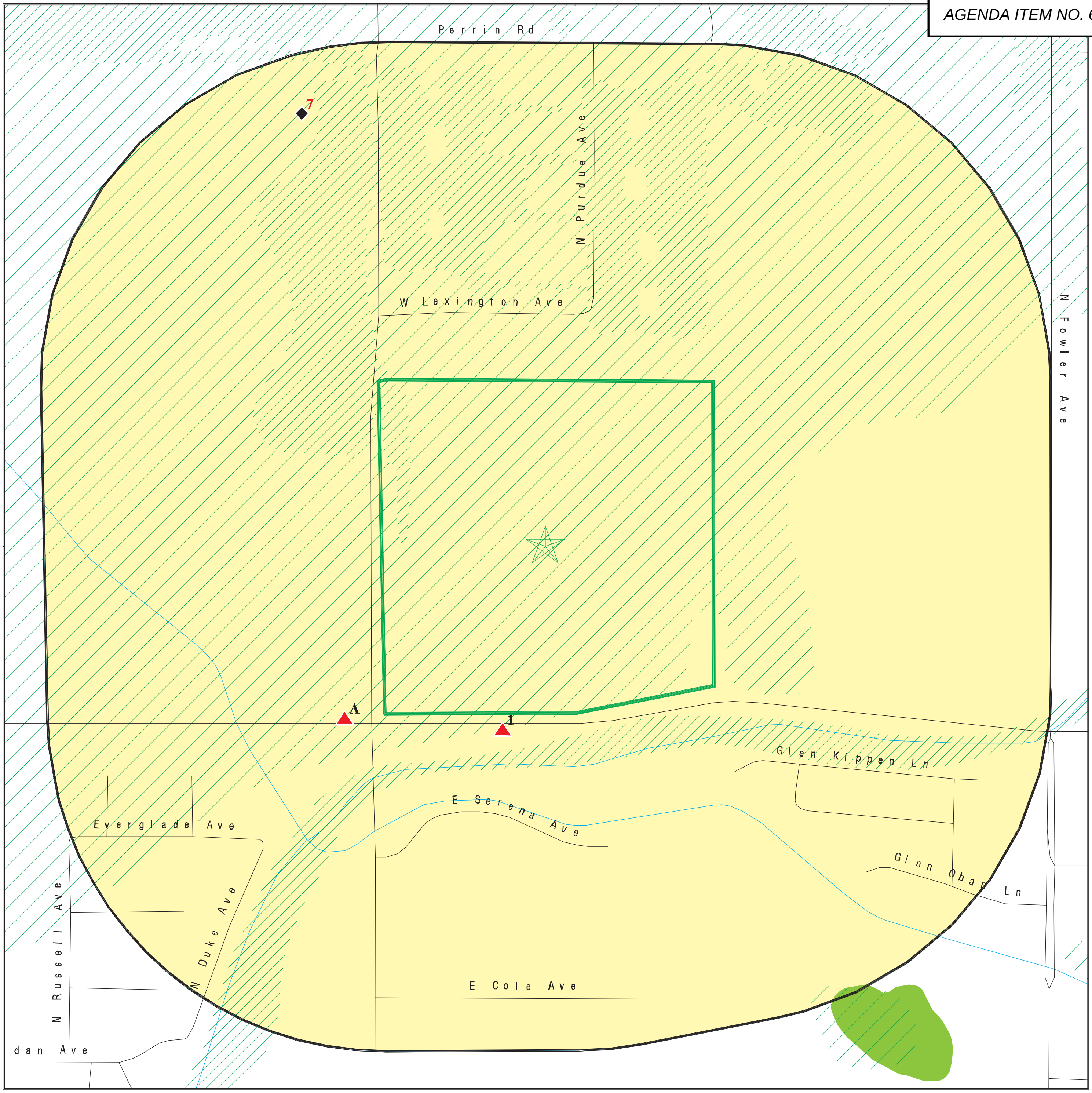
- Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- ▨ National Priority List Sites
- ▨ Dept. Defense Sites
- ▨ Indian Reservations BIA
- Power transmission lines
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- 🟩 National Wetland Inventory
- 🟩 State Wetlands
- ▦ Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Tract No. 6205 Property
ADDRESS: 5230 E Shepherd Ave
Clovis CA 93619
LAT/LONG: 36.8685 / 119.690752

CLIENT: Krazan & Associates, Inc.
CONTACT: Michelle Phillips
INQUIRY #: 5516721.2s
DATE: December 19, 2018 3:02 pm

DETAIL MAP - 5516721.2S



0 1/16 1/8 1/4 Miles

- /\/ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ♟ Manufactured Gas Plants
- ▪ Sensitive Receptors
- ▨ National Priority List Sites
- ▨ Dept. Defense Sites
- ▨ Indian Reservations BIA
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- 🟩 National Wetland Inventory
- 🟩 State Wetlands
- ▦ Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Tract No. 6205 Property
ADDRESS: 5230 E Shepherd Ave
Clovis CA 93619
LAT/LONG: 36.8685 / 119.690752

CLIENT: Krazan & Associates, Inc.
CONTACT: Michelle Phillips
INQUIRY #: 5516721.2s
DATE: December 19, 2018 3:05 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	1	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		2	0	NR	NR	NR	2
HIST UST	0.250		2	0	NR	NR	NR	2
CERS TANKS	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		2	0	NR	NR	NR	2
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		2	1	NR	NR	NR	3
DRYCLEANERS	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	8	1	0	1	0	10

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SSW
< 1/8
0.012 mi.
62 ft.

WILSON DEVELOPMENT PROPERTY **CUPA Listings** **S106112709**
4767 E SHEPHERD **N/A**
CLOVIS, CA 93611

Relative:
Higher
Actual:
388 ft.

CUPA FRESNO:
Facility ID: FA0276751
Cross Street: Not reported
APM Number: 56003109
CERS Id: Not reported
SWIS Number: Not reported
GIS Latitude: Not reported
GIS Longitude: Not reported
Program Element: UST REMOVAL/CLOSURE W/1 TANK

A2
SW
< 1/8
0.030 mi.
158 ft.

P-R FARMS **CUPA Listings** **S118671879**
4650 E SHEPHERD AVE **N/A**
CLOVIS, CA 93612

Site 1 of 5 in cluster A

Relative:
Higher
Actual:
388 ft.

CUPA FRESNO:
Facility ID: FA0271888
Cross Street: Not reported
APM Number: Not reported
CERS Id: 10701280
SWIS Number: Not reported
GIS Latitude: Not reported
GIS Longitude: Not reported
Program Element: HAZARDOUS MATERIALS HANDLER FARM EXEMPTION

A3
SW
< 1/8
0.030 mi.
158 ft.

P-R FARMS INC. **SWEEPS UST** **S101629488**
4650 E SHEPHERD **CA FID UST** **N/A**
CLOVIS, CA 93612

Site 2 of 5 in cluster A

Relative:
Higher
Actual:
388 ft.

SWEEPS UST:
Status: Active
Comp Number: 31021
Number: 9
Board Of Equalization: Not reported
Referral Date: 07-01-85
Action Date: Not reported
Created Date: 02-29-88
Owner Tank Id: 1
SWRCB Tank Id: 10-000-031021-000001
Tank Status: A
Capacity: 500
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 2

Status: Active
Comp Number: 31021

P-R FARMS INC. (Continued) **S101629488**

Number:	9
Board Of Equalization:	Not reported
Referral Date:	07-01-85
Action Date:	Not reported
Created Date:	02-29-88
Owner Tank Id:	2
SWRCB Tank Id:	10-000-031021-000002
Tank Status:	A
Capacity:	500
Active Date:	07-01-85
Tank Use:	M.V. FUEL
STG:	P
Content:	DIESEL
Number Of Tanks:	Not reported

CA FID UST:

Facility ID:	10006298
Regulated By:	UTNKA
Regulated ID:	00031021
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	2092990201
Mail To:	Not reported
Mailing Address:	2917 E SHEPHERD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	CLOVIS 93612
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

A4 **P-R FARMS INC** **HIST UST** **U001587651**
SW **4650 E SHEPHERD** **N/A**
< 1/8 **CLOVIS, CA 93612**
0.030 mi.
158 ft. **Site 3 of 5 in cluster A**

Relative:
Higher

Actual:
388 ft.

HIST UST:

File Number:	00024E9B
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00024E9B.pdf
Region:	STATE
Facility ID:	00000031021
Facility Type:	Other
Other Type:	FRM
Contact Name:	PAT RICCHIUTI
Telephone:	2092990201
Owner Name:	P-R FARMS INC.
Owner Address:	2917 E. SHEPHERD
Owner City,St,Zip:	CLOVIS, CA 93612
Total Tanks:	0002
Tank Num:	001
Container Num:	1
Year Installed:	Not reported

P-R FARMS INC (Continued) **U001587651**

Tank Capacity: 00000500
Tank Used for: Not reported
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00000500
Tank Used for: Not reported
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

Click here for Geo Tracker PDF:

A5
SW
< 1/8
0.033 mi.
173 ft.

P-R FARMS INC.
4648 E SHEPHERD
CLOVIS, CA 93612

SWEEPS UST **S101621112**
CA FID UST **N/A**

Site 4 of 5 in cluster A

Relative:
Higher

Actual:
388 ft.

SWEEPS UST:
Status: Active
Comp Number: 31016
Number: 9
Board Of Equalization: Not reported
Referral Date: 07-01-85
Action Date: Not reported
Created Date: 02-29-88
Owner Tank Id: 1
SWRCB Tank Id: 10-000-031016-000001
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 2

Status: Active
Comp Number: 31016
Number: 9
Board Of Equalization: Not reported
Referral Date: 07-01-85
Action Date: Not reported
Created Date: 02-29-88
Owner Tank Id: 1
SWRCB Tank Id: 10-000-031016-000002
Tank Status: A
Capacity: 500
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: Not reported

P-R FARMS INC. (Continued) **S101621112**

CA FID UST:
Facility ID: 10006294
Regulated By: UTNKA
Regulated ID: 00031016
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 2092990201
Mail To: Not reported
Mailing Address: 2917 E SHEPHERD
Mailing Address 2: Not reported
Mailing City,St,Zip: CLOVIS 93612
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

A6
SW
< 1/8
0.033 mi.
173 ft.

P-R FARMS INC
4648 E SHEPHERD
CLOVIS, CA 93612

HIST UST **U001587650**
N/A

Site 5 of 5 in cluster A

Relative:
Higher

Actual:
388 ft.

HIST UST:
File Number: 00024F10
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00024F10.pdf
Region: STATE
Facility ID: 00000031016
Facility Type: Other
Other Type: FARM
Contact Name: PAT RICCHIUTI
Telephone: 2092990201
Owner Name: PAT RICCHIUTI
Owner Address: 2917 E. SHEPHERD
Owner City,St,Zip: CLOVIS, CA 93612
Total Tanks: 0002

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

Tank Num: 002
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00000500
Tank Used for: Not reported
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor

P-R FARMS INC (Continued) **U001587650**

Click here for Geo Tracker PDF:

7
NNW
1/8-1/4
0.206 mi.
1089 ft.

PG&E SHEPHERD SUBSTATION
N SUNNYSIDE AVE
CLOVIS, CA 93619

CUPA Listings **S118191049**
N/A

Relative:
Lower

Actual:
387 ft.

CUPA FRESNO:
Facility ID: FA0284459
Cross Street: PERRIN
APM Number: 55605015SU
CERS Id: 10636330
SWIS Number: Not reported
GIS Latitude: 36.873118
GIS Longitude: -119.694008
Program Element: SMALL HAZARDOUS MATERIALS HANDLER

8
SW
1/2-1
0.634 mi.
3349 ft.

NORTH CLOVIS AVENUE SCHOOL
CLOVIS AVENUE/TEAGUE AVENUE
CLOVIS, CA 93611

ENVIROSTOR **S105840718**
SCH **N/A**

Relative:
Lower

Actual:
381 ft.

ENVIROSTOR:
Facility ID: 10010017
Status: No Further Action
Status Date: 12/11/2003
Site Code: 104331
Site Type: School Investigation
Site Type Detailed: School
Acres: 16.5
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: DTSC
Program Manager: Not reported
Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Assembly: 23
Senate: 08
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 36.8595
Longitude: -119.7072
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ORCHARD, AGRICULTURAL - ROW CROPS
Potential COC: Arsenic DDD DDE DDT Toxaphene
Confirmed COC: 30023-NO 30001-NO 30006-NO 30007-NO 30008-NO No Contaminants found
Potential Description: SOIL
Alias Name: CLOVIS UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: CLOVIS USD-PROPOSED CLOVIS STREET SCHOOL
Alias Type: Alternate Name
Alias Name: NORTH CLOVIS AVENUE SCHOOL

NORTH CLOVIS AVENUE SCHOOL (Continued) **S105840718**

Alias Type: Alternate Name
Alias Name: 104331
Alias Type: Project Code (Site Code)
Alias Name: 10010017
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 03/27/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 12/19/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 07/15/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 12/11/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Workplan
Completed Date: 07/22/2003
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Facility ID: 10010017
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 16.5
National Priorities List: NO
Cleanup Oversight Agencies: DTSC
Lead Agency: DTSC

NORTH CLOVIS AVENUE SCHOOL (Continued) **S105840718**

Lead Agency Description: * DTSC
Project Manager: Not reported
Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Site Code: 104331
Assembly: 23
Senate: 08
Special Program Status: Not reported
Status: No Further Action
Status Date: 12/11/2003
Restricted Use: NO
Funding: School District
Latitude: 36.8595
Longitude: -119.7072
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ORCHARD, AGRICULTURAL - ROW CROPS
Potential COC: Arsenic, Arsenic, DDD, DDE, DDT, Toxaphene
Confirmed COC: 30023-NO, 30001-NO, 30006-NO, 30007-NO, 30008-NO, No Contaminants found
Potential Description: SOIL
Alias Name: CLOVIS UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: CLOVIS USD-PROPOSED CLOVIS STREET SCHOOL
Alias Type: Alternate Name
Alias Name: NORTH CLOVIS AVENUE SCHOOL
Alias Type: Alternate Name
Alias Name: 104331
Alias Type: Project Code (Site Code)
Alias Name: 10010017
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 03/27/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 12/19/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 07/15/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 12/11/2003
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

NORTH CLOVIS AVENUE SCHOOL (Continued) **S105840718**

Completed Document Type: * Workplan
Completed Date: 07/22/2003
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CLOVIS	S121685278	TRACT NO 5045	SEC OF PEACH AND SHEPHERD		CIWQS

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA’s Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 11/14/2018	Source: EPA
Date Data Arrived at EDR: 11/27/2018	Telephone: N/A
Date Made Active in Reports: 12/07/2018	Last EDR Contact: 11/27/2018
Number of Days to Update: 10	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA’s Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 11/14/2018	Source: EPA
Date Data Arrived at EDR: 11/27/2018	Telephone: N/A
Date Made Active in Reports: 12/07/2018	Last EDR Contact: 11/27/2018
Number of Days to Update: 10	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 11/14/2018
Date Data Arrived at EDR: 11/27/2018
Date Made Active in Reports: 12/07/2018
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/06/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA’s Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 11/14/2018
Date Data Arrived at EDR: 11/27/2018
Date Made Active in Reports: 12/07/2018
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 11/14/2018	Source: EPA
Date Data Arrived at EDR: 11/28/2018	Telephone: 800-424-9346
Date Made Active in Reports: 12/07/2018	Last EDR Contact: 11/28/2018
Number of Days to Update: 9	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/2018	Source: EPA
Date Data Arrived at EDR: 03/28/2018	Telephone: 800-424-9346
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: (415) 495-8895
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: (415) 495-8895
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: (415) 495-8895
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: (415) 495-8895
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 10/17/2018	Source: Department of the Navy
Date Data Arrived at EDR: 10/25/2018	Telephone: 843-820-7326
Date Made Active in Reports: 12/07/2018	Last EDR Contact: 10/15/2018
Number of Days to Update: 43	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 07/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/28/2018	Telephone: 703-603-0695
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 11/28/2018
Number of Days to Update: 17	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 07/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/28/2018	Telephone: 703-603-0695
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 11/28/2018
Number of Days to Update: 17	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/24/2018	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 09/25/2018	Telephone: 202-267-2180
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 09/25/2018
Number of Days to Update: 45	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites
Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 10/29/2018	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 10/30/2018	Telephone: 916-323-3400
Date Made Active in Reports: 12/13/2018	Last EDR Contact: 10/30/2018
Number of Days to Update: 44	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database
The Department of Toxic Substances Control’s (DTSC’s) Site Mitigation and Brownfields Reuse Program’s (SMBRP’s) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 10/29/2018	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 10/30/2018	Telephone: 916-323-3400
Date Made Active in Reports: 12/13/2018	Last EDR Contact: 10/30/2018
Number of Days to Update: 44	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System
Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/12/2018	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 11/14/2018	Telephone: 916-341-6320
Date Made Active in Reports: 12/13/2018	Last EDR Contact: 11/14/2018
Number of Days to Update: 29	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-3769
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/10/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/12/2018	Telephone: see region list
Date Made Active in Reports: 10/08/2018	Last EDR Contact: 12/11/2018
Number of Days to Update: 26	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/09/2018
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/10/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/03/2018
Number of Days to Update: 21

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/11/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/03/2018
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/09/2018
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 04/01/2019
Data Release Frequency: Quarterly

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/13/2018	Source: EPA, Region 1
Date Data Arrived at EDR: 05/18/2018	Telephone: 617-918-1313
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/12/2018	Source: EPA Region 5
Date Data Arrived at EDR: 05/18/2018	Telephone: 312-886-6136
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/24/2018	Source: EPA Region 7
Date Data Arrived at EDR: 05/18/2018	Telephone: 913-551-7003
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/12/2018	Source: EPA Region 10
Date Data Arrived at EDR: 05/18/2018	Telephone: 206-553-2857
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/25/2018	Source: EPA Region 8
Date Data Arrived at EDR: 05/18/2018	Telephone: 303-312-6137
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/10/2018	Source: EPA Region 9
Date Data Arrived at EDR: 05/18/2018	Telephone: 415-972-3368
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 10/26/2018
Number of Days to Update: 63	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 10/29/2018
Date Data Arrived at EDR: 10/30/2018
Date Made Active in Reports: 12/13/2018
Number of Days to Update: 44

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/30/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/24/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 10/15/2018
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/18/2018
Date Data Arrived at EDR: 09/18/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/18/2018
Next Scheduled EDR Contact: 04/01/2019
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/10/2000	Telephone: 916-227-4448
Date Made Active in Reports: 05/10/2000	Last EDR Contact: 10/25/2018
Number of Days to Update: 30	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 09/10/2018	Source: Department of Conservation
Date Data Arrived at EDR: 09/12/2018	Telephone: 916-323-3836
Date Made Active in Reports: 10/15/2018	Last EDR Contact: 12/12/2018
Number of Days to Update: 33	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 09/26/2018	Source: Integrated Waste Management Board
Date Data Arrived at EDR: 09/28/2018	Telephone: 916-341-6422
Date Made Active in Reports: 11/01/2018	Last EDR Contact: 08/07/2018
Number of Days to Update: 34	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 10/25/2018
Number of Days to Update: 52	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/22/2018
Number of Days to Update: 137	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014	Source: Department of Health & Human Serivces, Indian Health Service
Date Data Arrived at EDR: 08/06/2014	Telephone: 301-443-1452
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 11/02/2018
Number of Days to Update: 176	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/21/2018	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 09/21/2018	Telephone: 202-307-1000
Date Made Active in Reports: 11/09/2018	Last EDR Contact: 11/26/2018
Number of Days to Update: 49	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 10/29/2018	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 10/30/2018	Telephone: 916-323-3400
Date Made Active in Reports: 12/13/2018	Last EDR Contact: 10/30/2018
Number of Days to Update: 44	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2017	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 06/12/2018	Telephone: 916-255-6504
Date Made Active in Reports: 08/06/2018	Last EDR Contact: 11/01/2018
Number of Days to Update: 55	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: Varies

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 10/22/2018
Date Data Arrived at EDR: 10/23/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 38

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 10/23/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/21/2018
Date Data Arrived at EDR: 09/21/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 49

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990’s. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/04/2018
Date Data Arrived at EDR: 12/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 09/11/2018	Source: San Francisco County Department of Public Health
Date Data Arrived at EDR: 09/12/2018	Telephone: 415-252-3896
Date Made Active in Reports: 10/11/2018	Last EDR Contact: 11/01/2018
Number of Days to Update: 29	Next Scheduled EDR Contact: 02/18/2019
	Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 10/22/2018	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 10/23/2018	Telephone: 916-323-2514
Date Made Active in Reports: 11/30/2018	Last EDR Contact: 10/23/2018
Number of Days to Update: 38	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/05/1995	Telephone: 916-341-5851
Date Made Active in Reports: 09/29/1995	Last EDR Contact: 12/28/1998
Number of Days to Update: 24	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/29/2018	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/30/2018	Telephone: 916-323-3400
Date Made Active in Reports: 10/01/2018	Last EDR Contact: 11/29/2018
Number of Days to Update: 32	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/13/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/04/2018	Telephone: 202-564-6023
Date Made Active in Reports: 11/16/2018	Last EDR Contact: 11/27/2018
Number of Days to Update: 43	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/04/2018	Source: DTSC and SWRCB
Date Data Arrived at EDR: 09/05/2018	Telephone: 916-323-3400
Date Made Active in Reports: 10/02/2018	Last EDR Contact: 12/05/2018
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 03/27/2018	Telephone: 202-366-4555
Date Made Active in Reports: 06/08/2018	Last EDR Contact: 09/25/2018
Number of Days to Update: 73	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 04/06/2018	Source: Office of Emergency Services
Date Data Arrived at EDR: 04/24/2018	Telephone: 916-845-8400
Date Made Active in Reports: 06/14/2018	Last EDR Contact: 07/27/2018
Number of Days to Update: 51	Next Scheduled EDR Contact: 11/05/2018
	Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/10/2018	Source: State Water Qualilty Control Board
Date Data Arrived at EDR: 09/12/2018	Telephone: 866-480-1028
Date Made Active in Reports: 10/08/2018	Last EDR Contact: 12/12/2018
Number of Days to Update: 26	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/10/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/12/2018	Telephone: 866-480-1028
Date Made Active in Reports: 10/09/2018	Last EDR Contact: 12/12/2018
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/28/2018	Telephone: (415) 495-8895
Date Made Active in Reports: 06/22/2018	Last EDR Contact: 12/03/2018
Number of Days to Update: 86	Next Scheduled EDR Contact: 01/07/2019
	Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 07/08/2015	Telephone: 202-528-4285
Date Made Active in Reports: 10/13/2015	Last EDR Contact: 11/19/2018
Number of Days to Update: 97	Next Scheduled EDR Contact: 03/04/2019
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/12/2018
Number of Days to Update: 62	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005	Source: U.S. Geological Survey
Date Data Arrived at EDR: 02/06/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/12/2018
Number of Days to Update: 339	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 08/31/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 11/05/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/09/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/21/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/24/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2018
Date Data Arrived at EDR: 08/22/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/23/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/04/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/14/2018
Date Data Arrived at EDR: 10/11/2018
Date Made Active in Reports: 12/07/2018
Number of Days to Update: 57

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/11/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/11/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 12/05/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2018
Date Data Arrived at EDR: 10/03/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/03/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/30/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 10/12/2018
Date Made Active in Reports: 12/07/2018
Number of Days to Update: 56

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 12/17/2018
Next Scheduled EDR Contact: 04/01/2019
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 12/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2018
Date Data Arrived at EDR: 08/29/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 37

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005	Source: USGS
Date Data Arrived at EDR: 02/29/2008	Telephone: 703-648-7709
Date Made Active in Reports: 04/18/2008	Last EDR Contact: 11/30/2018
Number of Days to Update: 49	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011	Source: USGS
Date Data Arrived at EDR: 06/08/2011	Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 11/30/2018
Number of Days to Update: 97	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2018	Source: Department of Interior
Date Data Arrived at EDR: 09/11/2018	Telephone: 202-208-2609
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 12/06/2018
Number of Days to Update: 3	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/07/2018	Source: EPA
Date Data Arrived at EDR: 09/05/2018	Telephone: (415) 947-8000
Date Made Active in Reports: 10/05/2018	Last EDR Contact: 12/05/2018
Number of Days to Update: 30	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2017	Source: Department of Defense
Date Data Arrived at EDR: 06/19/2018	Telephone: 703-704-1564
Date Made Active in Reports: 09/14/2018	Last EDR Contact: 10/15/2018
Number of Days to Update: 87	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/26/2018	Telephone: 202-564-0527
Date Made Active in Reports: 10/05/2018	Last EDR Contact: 11/30/2018
Number of Days to Update: 71	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2018
Date Data Arrived at EDR: 09/05/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 12/31/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 08/22/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 44

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 10/16/2018
Number of Days to Update: 21

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 08/28/2018
Date Data Arrived at EDR: 08/30/2018
Date Made Active in Reports: 11/01/2018
Number of Days to Update: 63

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 12/06/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 09/11/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 09/19/2018
Number of Days to Update: 7

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 10/15/2018
Date Data Arrived at EDR: 10/16/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 31

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 11/29/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner’s agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/30/2018
Date Data Arrived at EDR: 09/27/2018
Date Made Active in Reports: 11/01/2018
Number of Days to Update: 35

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 11/29/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 10/04/2018
Date Data Arrived at EDR: 10/05/2018
Date Made Active in Reports: 11/01/2018
Number of Days to Update: 27

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/20/2018
Date Made Active in Reports: 08/06/2018
Number of Days to Update: 47

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/21/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 11/02/2018
Date Made Active in Reports: 12/13/2018
Number of Days to Update: 41

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 10/19/2018
Date Data Arrived at EDR: 10/23/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/14/2018	Source: California Integrated Waste Management Board
Date Data Arrived at EDR: 08/16/2018	Telephone: 916-341-6066
Date Made Active in Reports: 09/10/2018	Last EDR Contact: 11/07/2018
Number of Days to Update: 25	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2017	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 10/10/2018	Telephone: 916-255-1136
Date Made Active in Reports: 11/16/2018	Last EDR Contact: 10/10/2018
Number of Days to Update: 37	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/20/2018	Source: Department of Toxic Subsances Control
Date Data Arrived at EDR: 08/21/2018	Telephone: 877-786-9427
Date Made Active in Reports: 09/10/2018	Last EDR Contact: 11/19/2018
Number of Days to Update: 20	Next Scheduled EDR Contact: 03/04/2019
	Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/22/2009	Telephone: 916-323-3400
Date Made Active in Reports: 04/08/2009	Last EDR Contact: 01/22/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/20/2018	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/21/2018	Telephone: 916-323-3400
Date Made Active in Reports: 09/10/2018	Last EDR Contact: 11/19/2018
Number of Days to Update: 20	Next Scheduled EDR Contact: 03/04/2019
	Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/09/2018	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 10/10/2018	Telephone: 916-440-7145
Date Made Active in Reports: 11/16/2018	Last EDR Contact: 10/10/2018
Number of Days to Update: 37	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/10/2018	Source: Department of Conservation
Date Data Arrived at EDR: 09/12/2018	Telephone: 916-322-1080
Date Made Active in Reports: 10/09/2018	Last EDR Contact: 12/12/2018
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 08/28/2018	Source: Department of Public Health
Date Data Arrived at EDR: 09/05/2018	Telephone: 916-558-1784
Date Made Active in Reports: 10/03/2018	Last EDR Contact: 12/05/2018
Number of Days to Update: 28	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 11/12/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 11/14/2018	Telephone: 916-445-9379
Date Made Active in Reports: 12/13/2018	Last EDR Contact: 11/14/2018
Number of Days to Update: 29	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 09/04/2018	Source: Department of Pesticide Regulation
Date Data Arrived at EDR: 09/05/2018	Telephone: 916-445-4038
Date Made Active in Reports: 10/03/2018	Last EDR Contact: 12/05/2018
Number of Days to Update: 28	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 09/10/2018	Source: Department of Conservation
Date Data Arrived at EDR: 09/12/2018	Telephone: 916-323-3836
Date Made Active in Reports: 10/15/2018	Last EDR Contact: 12/12/2018
Number of Days to Update: 33	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/19/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/20/2018	Telephone: 916-445-3846
Date Made Active in Reports: 10/19/2018	Last EDR Contact: 12/12/2018
Number of Days to Update: 29	Next Scheduled EDR Contact: 04/01/2019
	Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 04/27/2018
Date Data Arrived at EDR: 06/13/2018
Date Made Active in Reports: 07/17/2018
Number of Days to Update: 34

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 12/14/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region’s active disposal pits are operating without permission.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 09/13/2018
Number of Days to Update: 64

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 10/12/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Quarterly

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 10/22/2018
Date Data Arrived at EDR: 10/23/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 38

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/23/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/09/2018
Number of Days to Update: 27

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)
Other Oil & Gas Projects sites

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/09/2018
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

CIWQS: California Integrated Water Quality System
The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 09/04/2018
Date Data Arrived at EDR: 09/05/2018
Date Made Active in Reports: 10/02/2018
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 12/04/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/09/2018
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Quarterly

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/09/2018
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/09/2018
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/09/2018
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)
Non-Case Information sites

Date of Government Version: 09/10/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/12/2018	Telephone: 866-480-1028
Date Made Active in Reports: 10/09/2018	Last EDR Contact: 12/12/2018
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Varies

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 09/10/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/12/2018	Telephone: 866-480-1028
Date Made Active in Reports: 10/09/2018	Last EDR Contact: 12/12/2018
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 09/10/2018	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/12/2018	Telephone: 866-480-1028
Date Made Active in Reports: 10/09/2018	Last EDR Contact: 12/12/2018
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/13/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 196	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 12/30/2013	Last EDR Contact: 06/01/2012
Number of Days to Update: 182	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 10/05/2018	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 10/10/2018	Telephone: 510-567-6700
Date Made Active in Reports: 11/01/2018	Last EDR Contact: 10/05/2018
Number of Days to Update: 22	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/05/2018	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 10/10/2018	Telephone: 510-567-6700
Date Made Active in Reports: 11/02/2018	Last EDR Contact: 10/05/2018
Number of Days to Update: 23	Next Scheduled EDR Contact: 04/24/2047
	Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 07/01/2018
Date Data Arrived at EDR: 07/24/2018
Date Made Active in Reports: 08/20/2018
Number of Days to Update: 27

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 11/29/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 10/05/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 10/31/2018
Date Data Arrived at EDR: 12/04/2018
Date Made Active in Reports: 12/12/2018
Number of Days to Update: 8

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/24/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 05/23/2018
Date Data Arrived at EDR: 05/24/2018
Date Made Active in Reports: 07/13/2018
Number of Days to Update: 50

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/20/2018
Date Data Arrived at EDR: 08/21/2018
Date Made Active in Reports: 09/11/2018
Number of Days to Update: 21

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 08/16/2018	Source: Del Norte County Environmental Health Division
Date Data Arrived at EDR: 11/06/2018	Telephone: 707-465-0426
Date Made Active in Reports: 11/14/2018	Last EDR Contact: 10/25/2018
Number of Days to Update: 8	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 09/04/2018	Source: El Dorado County Environmental Management Department
Date Data Arrived at EDR: 09/05/2018	Telephone: 530-621-6623
Date Made Active in Reports: 09/18/2018	Last EDR Contact: 11/16/2018
Number of Days to Update: 13	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA’s are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/16/2018	Source: Dept. of Community Health
Date Data Arrived at EDR: 10/18/2018	Telephone: 559-445-3271
Date Made Active in Reports: 11/14/2018	Last EDR Contact: 10/15/2018
Number of Days to Update: 27	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018	Source: Glenn County Air Pollution Control District
Date Data Arrived at EDR: 01/24/2018	Telephone: 830-934-6500
Date Made Active in Reports: 03/14/2018	Last EDR Contact: 10/22/2018
Number of Days to Update: 49	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/11/2018	Source: Humboldt County Environmental Health
Date Data Arrived at EDR: 07/13/2018	Telephone: N/A
Date Made Active in Reports: 08/22/2018	Last EDR Contact: 11/19/2018
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/04/2019
	Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List

Cupa facility list.

Date of Government Version: 10/22/2018
Date Data Arrived at EDR: 10/25/2018
Date Made Active in Reports: 11/14/2018
Number of Days to Update: 20

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List

Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 11/02/2018
Date Data Arrived at EDR: 11/07/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 37

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 11/21/2018
Date Data Arrived at EDR: 11/27/2018
Date Made Active in Reports: 12/12/2018
Number of Days to Update: 15

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List

Cupa facility list

Date of Government Version: 11/07/2018
Date Data Arrived at EDR: 11/08/2018
Date Made Active in Reports: 11/14/2018
Number of Days to Update: 6

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 10/15/2018
Date Data Arrived at EDR: 10/23/2018
Date Made Active in Reports: 11/14/2018
Number of Days to Update: 22

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 04/01/2019
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/20/2018
Date Data Arrived at EDR: 10/12/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 35

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/05/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/15/2018
Date Data Arrived at EDR: 10/16/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 31

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/16/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2018
Date Data Arrived at EDR: 05/01/2018
Date Made Active in Reports: 05/14/2018
Number of Days to Update: 13

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/01/2018
Date Data Arrived at EDR: 10/16/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 31

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/16/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Semi-Annually

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Annually

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/02/2018
Date Data Arrived at EDR: 10/05/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 28

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/05/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county’s Certified Unified Program Agency database. California’s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 11/26/2018
Date Data Arrived at EDR: 11/27/2018
Date Made Active in Reports: 12/12/2018
Number of Days to Update: 15

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 10/01/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/29/2018
Date Data Arrived at EDR: 08/31/2018
Date Made Active in Reports: 09/19/2018
Number of Days to Update: 19

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 07/18/2018	Source: Mono County Health Department
Date Data Arrived at EDR: 09/04/2018	Telephone: 760-932-5580
Date Made Active in Reports: 09/19/2018	Last EDR Contact: 12/06/2018
Number of Days to Update: 15	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/29/2018	Source: Monterey County Health Department
Date Data Arrived at EDR: 11/01/2018	Telephone: 831-796-1297
Date Made Active in Reports: 11/16/2018	Last EDR Contact: 10/01/2018
Number of Days to Update: 15	Next Scheduled EDR Contact: 01/14/2019
	Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017	Source: Napa County Department of Environmental Management
Date Data Arrived at EDR: 01/11/2017	Telephone: 707-253-4269
Date Made Active in Reports: 03/02/2017	Last EDR Contact: 11/21/2018
Number of Days to Update: 50	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 11/28/2018	Source: Napa County Department of Environmental Management
Date Data Arrived at EDR: 11/30/2018	Telephone: 707-253-4269
Date Made Active in Reports: 12/14/2018	Last EDR Contact: 11/26/2018
Number of Days to Update: 14	Next Scheduled EDR Contact: 03/11/2019
	Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/06/2018	Source: Community Development Agency
Date Data Arrived at EDR: 11/08/2018	Telephone: 530-265-1467
Date Made Active in Reports: 11/14/2018	Last EDR Contact: 10/25/2018
Number of Days to Update: 6	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 10/04/2018	Source: Health Care Agency
Date Data Arrived at EDR: 11/14/2018	Telephone: 714-834-3446
Date Made Active in Reports: 12/13/2018	Last EDR Contact: 11/05/2018
Number of Days to Update: 29	Next Scheduled EDR Contact: 02/18/2019
	Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 10/04/2018	Source: Health Care Agency
Date Data Arrived at EDR: 11/14/2018	Telephone: 714-834-3446
Date Made Active in Reports: 12/13/2018	Last EDR Contact: 11/05/2018
Number of Days to Update: 29	Next Scheduled EDR Contact: 02/18/2019
	Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 10/04/2018	Source: Health Care Agency
Date Data Arrived at EDR: 11/06/2018	Telephone: 714-834-3446
Date Made Active in Reports: 12/14/2018	Last EDR Contact: 11/06/2018
Number of Days to Update: 38	Next Scheduled EDR Contact: 02/18/2019
	Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 09/04/2018	Source: Placer County Health and Human Services
Date Data Arrived at EDR: 09/06/2018	Telephone: 530-745-2363
Date Made Active in Reports: 10/03/2018	Last EDR Contact: 11/29/2018
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List

Plumas County CUPA Program facilities.

Date of Government Version: 07/19/2018	Source: Plumas County Environmental Health
Date Data Arrived at EDR: 07/25/2018	Telephone: 530-283-6355
Date Made Active in Reports: 09/05/2018	Last EDR Contact: 10/22/2018
Number of Days to Update: 42	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/10/2018	Source: Department of Environmental Health
Date Data Arrived at EDR: 10/12/2018	Telephone: 951-358-5055
Date Made Active in Reports: 10/16/2018	Last EDR Contact: 12/17/2018
Number of Days to Update: 4	Next Scheduled EDR Contact: 04/01/2019
	Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/10/2018
Date Data Arrived at EDR: 10/12/2018
Date Made Active in Reports: 11/05/2018
Number of Days to Update: 24

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/17/2018
Next Scheduled EDR Contact: 04/01/2019
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/03/2018
Date Data Arrived at EDR: 10/02/2018
Date Made Active in Reports: 11/01/2018
Number of Days to Update: 30

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/02/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/23/2018
Date Data Arrived at EDR: 10/02/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 31

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/02/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 11/15/2018
Date Data Arrived at EDR: 11/16/2018
Date Made Active in Reports: 12/13/2018
Number of Days to Update: 27

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 07/27/2018
Date Data Arrived at EDR: 07/31/2018
Date Made Active in Reports: 09/10/2018
Number of Days to Update: 41

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 11/05/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/04/2018	Source: Hazardous Materials Management Division
Date Data Arrived at EDR: 06/06/2018	Telephone: 619-338-2268
Date Made Active in Reports: 07/17/2018	Last EDR Contact: 12/05/2018
Number of Days to Update: 41	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018	Source: Department of Health Services
Date Data Arrived at EDR: 04/24/2018	Telephone: 619-338-2209
Date Made Active in Reports: 06/19/2018	Last EDR Contact: 10/22/2018
Number of Days to Update: 56	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 10/22/2018	Source: Department of Environmental Health
Date Data Arrived at EDR: 10/23/2018	Telephone: 858-505-6874
Date Made Active in Reports: 11/30/2018	Last EDR Contact: 10/22/2018
Number of Days to Update: 38	Next Scheduled EDR Contact: 02/04/2019
	Data Release Frequency: Varies

SAN DIEGO CO. SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010	Source: San Diego County Department of Environmental Health
Date Data Arrived at EDR: 06/15/2010	Telephone: 619-338-2371
Date Made Active in Reports: 07/09/2010	Last EDR Contact: 11/29/2018
Number of Days to Update: 24	Next Scheduled EDR Contact: 03/18/2019
	Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008	Source: Department Of Public Health San Francisco County
Date Data Arrived at EDR: 09/19/2008	Telephone: 415-252-3920
Date Made Active in Reports: 09/29/2008	Last EDR Contact: 11/01/2018
Number of Days to Update: 10	Next Scheduled EDR Contact: 02/18/2019
	Data Release Frequency: Quarterly

UST SAN FRANCISCO: Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/05/2018
Date Data Arrived at EDR: 11/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 38

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 04/01/2019
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/14/2018
Date Data Arrived at EDR: 11/15/2018
Date Made Active in Reports: 12/13/2018
Number of Days to Update: 28

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 09/18/2018
Date Data Arrived at EDR: 09/20/2018
Date Made Active in Reports: 11/01/2018
Number of Days to Update: 42

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 09/18/2018
Date Data Arrived at EDR: 09/20/2018
Date Made Active in Reports: 10/17/2018
Number of Days to Update: 27

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/10/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 11/16/2018
Date Data Arrived at EDR: 11/16/2018
Date Made Active in Reports: 12/13/2018
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Annually

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/01/2018
Date Data Arrived at EDR: 11/06/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 38

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 08/29/2018
Date Data Arrived at EDR: 09/04/2018
Date Made Active in Reports: 10/17/2018
Number of Days to Update: 43

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/29/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 11/29/2018
Date Data Arrived at EDR: 12/04/2018
Date Made Active in Reports: 12/14/2018
Number of Days to Update: 10

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/29/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 10/16/2018
Number of Days to Update: 21

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/24/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/02/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 10/25/2018
Number of Days to Update: 21

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/24/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 08/14/2018
Date Data Arrived at EDR: 08/16/2018
Date Made Active in Reports: 08/24/2018
Number of Days to Update: 8

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 09/18/2018
Date Data Arrived at EDR: 09/20/2018
Date Made Active in Reports: 10/25/2018
Number of Days to Update: 35

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 11/29/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 07/17/2018
Date Data Arrived at EDR: 08/02/2018
Date Made Active in Reports: 09/07/2018
Number of Days to Update: 36

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 10/22/2018
Date Data Arrived at EDR: 10/25/2018
Date Made Active in Reports: 11/14/2018
Number of Days to Update: 20

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 09/13/2018
Date Data Arrived at EDR: 09/14/2018
Date Made Active in Reports: 09/19/2018
Number of Days to Update: 5

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 11/29/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/25/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 36

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/01/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Annually

LUST VENTURA: Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/07/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Quarterly

MED WASTE VENTURA: Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 09/25/2018
Date Data Arrived at EDR: 10/25/2018
Date Made Active in Reports: 11/30/2018
Number of Days to Update: 36

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 09/04/2018
Date Data Arrived at EDR: 09/12/2018
Date Made Active in Reports: 10/04/2018
Number of Days to Update: 22

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 10/15/2018
Date Data Arrived at EDR: 10/19/2018
Date Made Active in Reports: 11/05/2018
Number of Days to Update: 17

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 11/05/2018
Date Data Arrived at EDR: 11/07/2018
Date Made Active in Reports: 11/14/2018
Number of Days to Update: 7

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 10/25/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/12/2018	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 11/14/2018	Telephone: 860-424-3375
Date Made Active in Reports: 12/04/2018	Last EDR Contact: 11/14/2018
Number of Days to Update: 20	Next Scheduled EDR Contact: 02/25/2019
	Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/13/2018	Telephone: N/A
Date Made Active in Reports: 08/01/2018	Last EDR Contact: 10/09/2018
Number of Days to Update: 19	Next Scheduled EDR Contact: 01/21/2019
	Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/01/2018	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 08/01/2018	Telephone: 518-402-8651
Date Made Active in Reports: 08/31/2018	Last EDR Contact: 10/31/2018
Number of Days to Update: 30	Next Scheduled EDR Contact: 02/11/2019
	Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017	Source: Department of Environmental Protection
Date Data Arrived at EDR: 10/23/2018	Telephone: 717-783-8990
Date Made Active in Reports: 11/27/2018	Last EDR Contact: 10/15/2018
Number of Days to Update: 35	Next Scheduled EDR Contact: 01/28/2019
	Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017	Source: Department of Environmental Management
Date Data Arrived at EDR: 02/23/2018	Telephone: 401-222-2797
Date Made Active in Reports: 04/09/2018	Last EDR Contact: 11/16/2018
Number of Days to Update: 45	Next Scheduled EDR Contact: 03/04/2019
	Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017	Source: Department of Natural Resources
Date Data Arrived at EDR: 06/15/2018	Telephone: N/A
Date Made Active in Reports: 07/09/2018	Last EDR Contact: 12/07/2018
Number of Days to Update: 24	Next Scheduled EDR Contact: 03/25/2019
	Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association’s annual survey of hospitals.
Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.
Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.
Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.
Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on private school locations in the United States.
Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

TRACT NO. 6205 PROPERTY
5230 E SHEPHERD AVE
CLOVIS, CA 93619

TARGET PROPERTY COORDINATES

Latitude (North):	36.8685 - 36° 52’ 6.60’’
Longitude (West):	119.690752 - 119° 41’ 26.71’’
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	260145.1
UTM Y (Meters):	4083462.5
Elevation:	388 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5603160 CLOVIS, CA
Version Date:	2012
North Map:	5603174 FRIANT, CA
Version Date:	2012

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

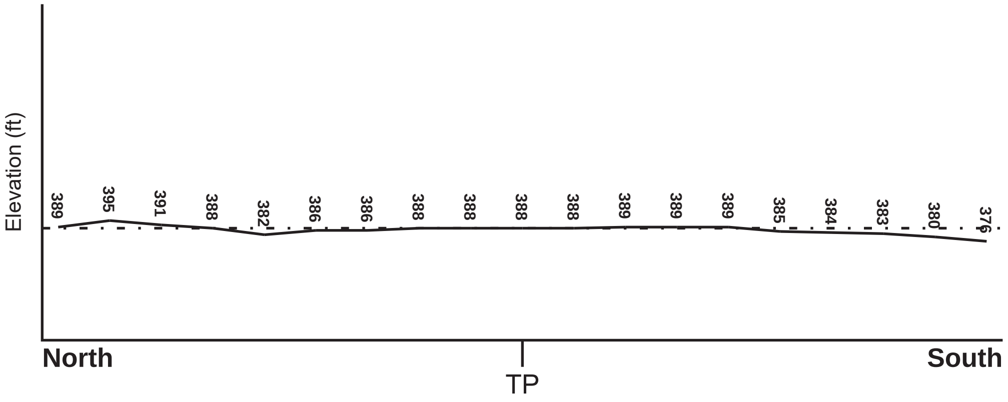
TOPOGRAPHIC INFORMATION

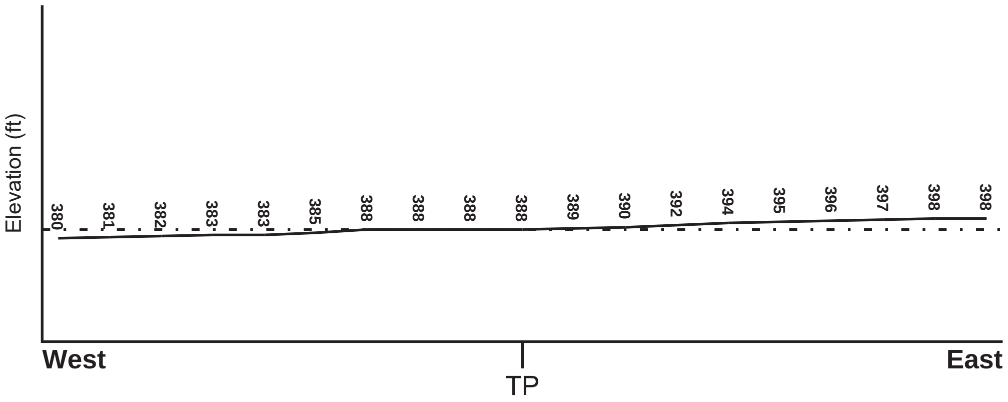
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 388 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06019C1580H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06019C1040H	FEMA FIRM Flood data
06019C1045H	FEMA FIRM Flood data
06019C1585H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
CLOVIS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

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* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: Cenozoic
System: Quaternary
Series: Quaternary
Code: Q *(decoded above as Era, System & Series)*

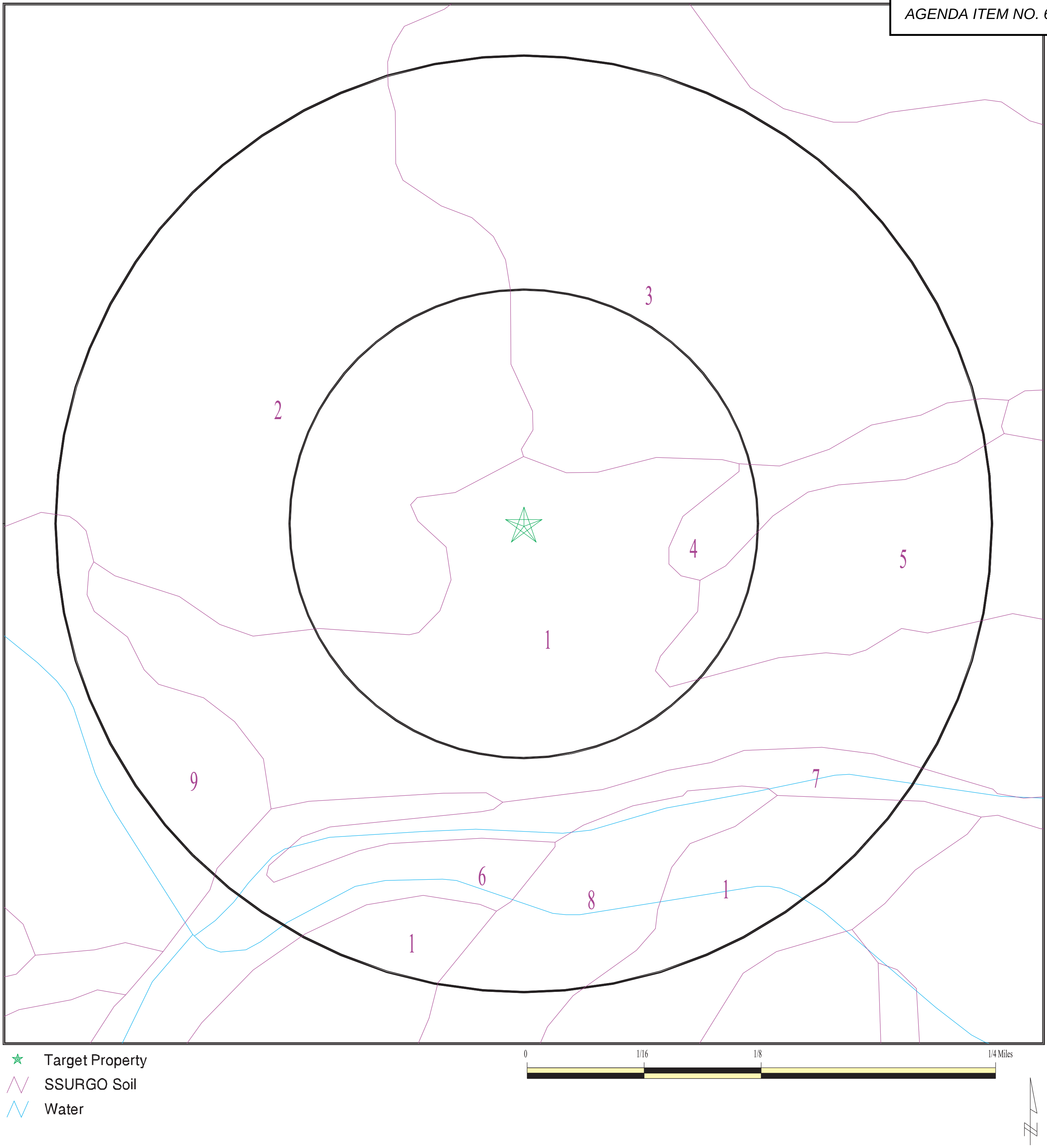
GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5516721.2s

AGENDA ITEM NO. 6.



☆ Target Property
/\/ SSURGO Soil
/\/ Water

SITE NAME:	Tract No. 6205 Property
ADDRESS:	5230 E Shepherd Ave Clovis CA 93619
LAT/LONG:	36.8685 / 119.690752

CLIENT:	Krazan & Associates, Inc.
CONTACT:	Michelle Phillips
INQUIRY #:	5516721.2s
DATE:	December 19, 2018 3:06 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name:	GRANGEVILLE
Soil Surface Texture:	fine sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat poorly drained
Hydric Status: Partially hydric	
Corrosion Potential - Uncoated Steel:	High
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 153 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**		**Soil Reaction (pH)**
1	0 inches	7 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	7 inches	59 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.6

Soil Map ID: 2

Soil Component Name:	ATWATER
Soil Surface Texture:	sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**		**Soil Reaction (pH)**
1	0 inches	24 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.6
2	24 inches	42 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.6
3	42 inches	59 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.6

Soil Map ID: 3

Soil Component Name: RAMONA

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
1	0 inches	11 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1 Min: 0.1	Max: Min:
2	11 inches	24 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1 Min: 0.1	Max: Min:
3	24 inches	40 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1 Min: 0.1	Max: Min:
4	40 inches	53 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1 Min: 0.1	Max: Min:

Soil Map ID: 4

Soil Component Name:	GRANGEVILLE
Soil Surface Texture:	fine sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Somewhat poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel:	High
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 153 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
1	0 inches	7 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 9 Min: 7.4
2	7 inches	59 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 9 Min: 7.4

Soil Map ID: 5

Soil Component Name:	VISALIA
Soil Surface Texture:	sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained
Hydric Status: Partially hydric	
Corrosion Potential - Uncoated Steel:	Moderate
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
1	0 inches	9 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	9 inches	48 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1
3	48 inches	59 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1

Soil Map ID: 6

Soil Component Name:	TUJUNGA
Soil Surface Texture:	stratified sand to loamy sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Somewhat excessively drained
Hydric Status: Partially hydric	
Corrosion Potential - Uncoated Steel:	Moderate
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	3 inches	59 inches	stratified sand to loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.1

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
2	0 inches	3 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.1

Soil Map ID: 7

Soil Component Name: RIVERWASH

Soil Surface Texture: coarse sand

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 31 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
1	0 inches	5 inches	coarse sand	Not reported	Not reported	Max: 141 Min: 42	Max: Min:
2	5 inches	59 inches	stratified coarse sand to sandy loam	Not reported	Not reported	Max: 141 Min: 42	Max: Min:

Soil Map ID: 8

Soil Component Name:	HANFORD
Soil Surface Texture:	coarse sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel:	Moderate
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**		**Soil Reaction (pH)**
1	0 inches	16 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.1
2	16 inches	72 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.1

Soil Map ID: 9

Soil Component Name:	HANFORD
Soil Surface Texture:	sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			**Classification**			
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**	**Saturated hydraulic conductivity micro m/sec**	**Soil Reaction (pH)**
1	0 inches	16 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.1
2	16 inches	72 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.1

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A3	USGS40000178885	1/4 - 1/2 Mile West
4	USGS40000178913	1/4 - 1/2 Mile ENE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
5	USGS40000178814	1/2 - 1 Mile SSW
6	USGS40000179005	1/2 - 1 Mile North
7	USGS40000178740	1/2 - 1 Mile South
8	USGS40000179599	1/2 - 1 Mile West

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

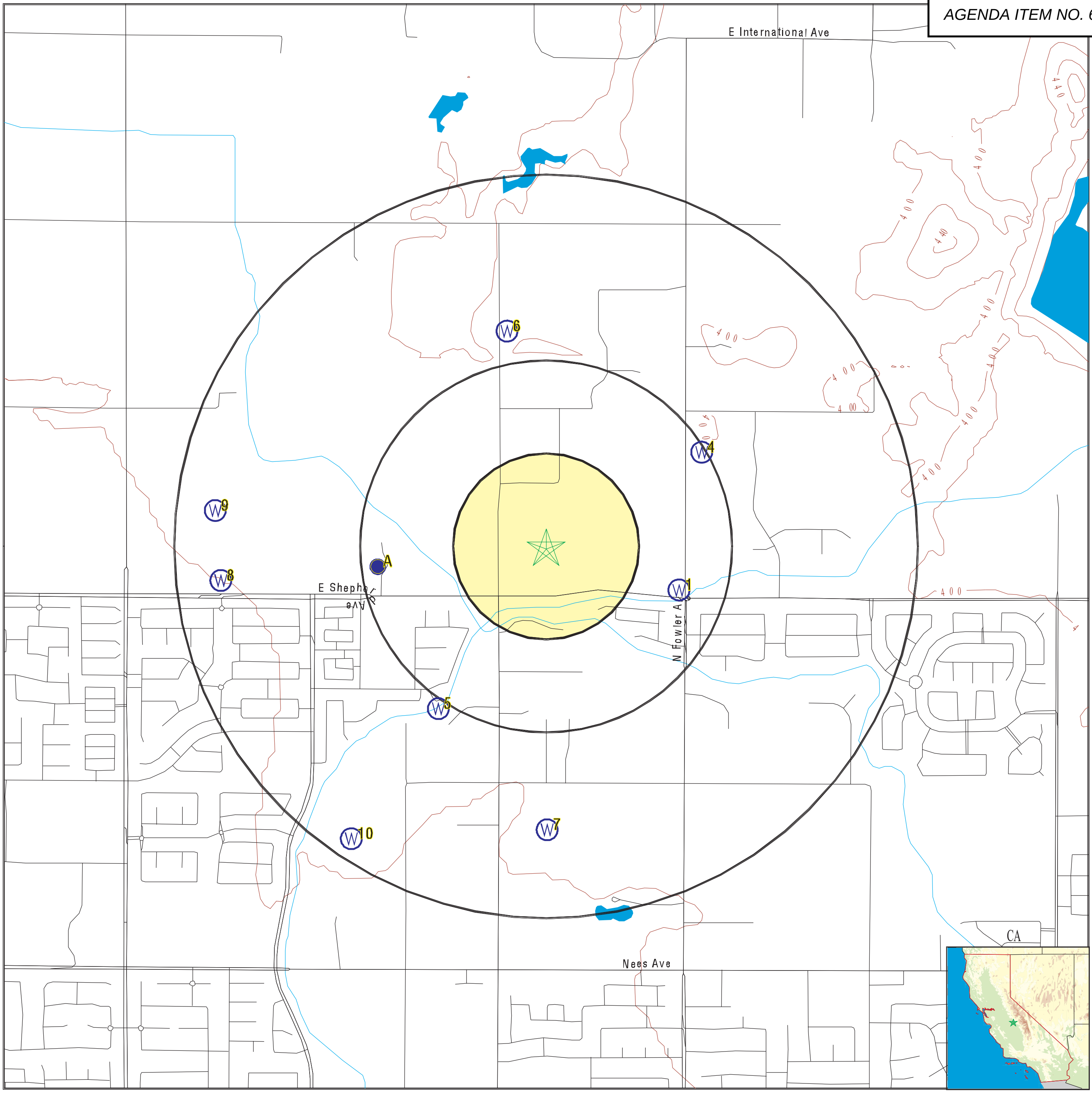
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CADW60000008582	1/4 - 1/2 Mile ESE
A2	CADW60000024897	1/4 - 1/2 Mile West
9	CADW60000008581	1/2 - 1 Mile West
10	CADW60000009556	1/2 - 1 Mile SSW

PHYSICAL SETTING SOURCE MAP - 5516721.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
● Oil, gas or related wells

SITE NAME: Tract No. 6205 Property
ADDRESS: 5230 E Shepherd Ave
Clovis CA 93619
LAT/LONG: 36.8685 / 119.690752

CLIENT: Krazan & Associates, Inc.
CONTACT: Michelle Phillips
INQUIRY #: 5516721.2s
DATE: December 19, 2018 3:06 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
1 **ESE** **1/4 - 1/2 Mile** **Higher**	**CA WELLS**	**CADW60000008582**

Objectid:	8582	Latitude:	36.8668
Longitude:	-119.6843	Site code:	368668N1196843W001
State well numbe:	12S21E21P001M	Local well name:	’’
Well use id:	6	Well use descrip:	Unknown
County id:	10	County name:	Fresno
Basin code:	’5-22.08’	Basin desc:	Kings
Dwr region id:	80237	Dwr region:	South Central Region Office
Site id:	CADW60000008582		

A2 **West** **1/4 - 1/2 Mile** **Lower**	**CA WELLS**	**CADW60000024897**

Objectid:	24897	Latitude:	36.8677
Longitude:	-119.6988	Site code:	368677N1196988W001
State well numbe:	12S21E20Q001M	Local well name:	’12S21E20Q001M’
Well use id:	6	Well use descrip:	Unknown
County id:	10	County name:	Fresno
Basin code:	’5-22.08’	Basin desc:	Kings
Dwr region id:	80237	Dwr region:	South Central Region Office
Site id:	CADW60000024897		

A3 **West** **1/4 - 1/2 Mile** **Lower**	**FED USGS**	**USGS40000178885**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	012S021E20Q002M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1947	Well Depth:	125
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1963-10-14
Feet below surface:	46.06	Feet to sea level:	Not Reported
Note:	Not Reported		

4 **ENE** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000178913**

Organization ID:	USGS-CA
Organization Name:	USGS California Water Science Center

Monitor Location:	012S021E21K001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	125
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1963-10-14
Feet below surface:	45.87	Feet to sea level:	Not Reported
Note:	Not Reported		

5
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS40000178814**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	012S021E29A001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

6
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000179005**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	012S021E21D001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1963-10-14
Feet below surface:	62.73	Feet to sea level:	Not Reported
Note:	Not Reported		

Map ID Direction Distance Elevation	Database	EDR ID Number
7 **South** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000178740**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	012S021E28M001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1963-10-14
Feet below surface:	38.55	Feet to sea level:	Not Reported
Note:	Not Reported		

---

8 **West** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000179599**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	011S021E32E001M	Type:	Well
Description:	Not Reported	HUC:	18040001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	104
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1963-10-14
Feet below surface:	24.86	Feet to sea level:	Not Reported
Note:	Not Reported		

---

9 **West** **1/2 - 1 Mile** **Lower**	**CA WELLS**	**CADW60000008581**

Objectid:	8581	Latitude:	36.8699
Longitude:	-119.7068	Site code:	368699N1197068W001
State well numbe:	12S21E20N001M	Local well name:	’’
Well use id:	6	Well use descrip:	Unknown
County id:	20	County name:	Madera
Basin code:	’5-22.08’	Basin desc:	Kings
Dwr region id:	80237	Dwr region:	South Central Region Office
Site id:	CADW60000008581		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
10 **SSW** **1/2 - 1 Mile** **Lower**	**CA WELLS**	**CADW60000009556**

Objectid:	9556	Latitude:	36.8571
Longitude:	-119.7002	Site code:	368571N1197002W001
State well numbe:	12S21E29K001M	Local well name:	’’
Well use id:	6	Well use descrip:	Unknown
County id:	10	County name:	Fresno
Basin code:	’5-22.08’	Basin desc:	Kings
Dwr region id:	80237	Dwr region:	South Central Region Office
Site id:	CADW60000009556		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
93619	5	2

Federal EPA Radon Zone for FRESNO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for FRESNO COUNTY, CA

Number of sites tested: 100

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.251 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.433 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5’ Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5’ Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR’s Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California’s Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR’s Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California’s Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

Appendix H

Noise

Shephard North Project
Noise Impact Study
City of Clovis, CA

Prepared for:

De Novo Planning Group
180 East Main St. #108
Tustin, CA 92780

Prepared by:

MD Acoustics, LLC
Claire Pincock, INCE_USA
1197 Los Angeles Avenue, Ste 256
Simi Valley, CA 93065

Date: 2/21/2023

MD ACOUSTICS
Sound Solutions for Planning and Design

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

The purpose of this noise impact study is to evaluate the potential noise impacts for the project study area and compare results to City and CEQA thresholds. The assessment was conducted and compared to the noise standards set forth by the Federal, State, and Local agencies. Consistent with the California Environmental Quality Act (CEQA) and CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable agencies.
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the Project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the Project.

The following is provided in this report:

- A description of the study area and the proposed Project
- Information regarding the fundamentals of noise
- A description of the local noise guidelines and standards
- An evaluation of the existing ambient noise environment
- An analysis of the traffic noise impacts to the project site
- An evaluation of the interior noise limit compliance
- Construction noise and vibration evaluation

1.2 Site Location and Study Area

The Project site is bounded by E Shepherd Ave. to the south, Sunnyside Ave. to the west, residential along Lexington and N Purdue Ave. to the northwest, residential along Perrin Rd. and N Stanford Ave. to the north, and residential along N Fowler Ave. to the south, as shown in Exhibit A. The City of Clovis General Plan classifies the site's land use designation as Rural Residential (RR).

1.3 Proposed Project Description

The Project would include a request to amend the City's 2014 General Plan to re-designate the Project site (approximately 75 acres) from the Rural Residential (1 DU/2 ac) land use designation to the Medium Density Residential (4.1 to 7.0 DU/ac) land use designation as well as include the sphere of influence (SOI) Expansion Area of 1,050 acres.

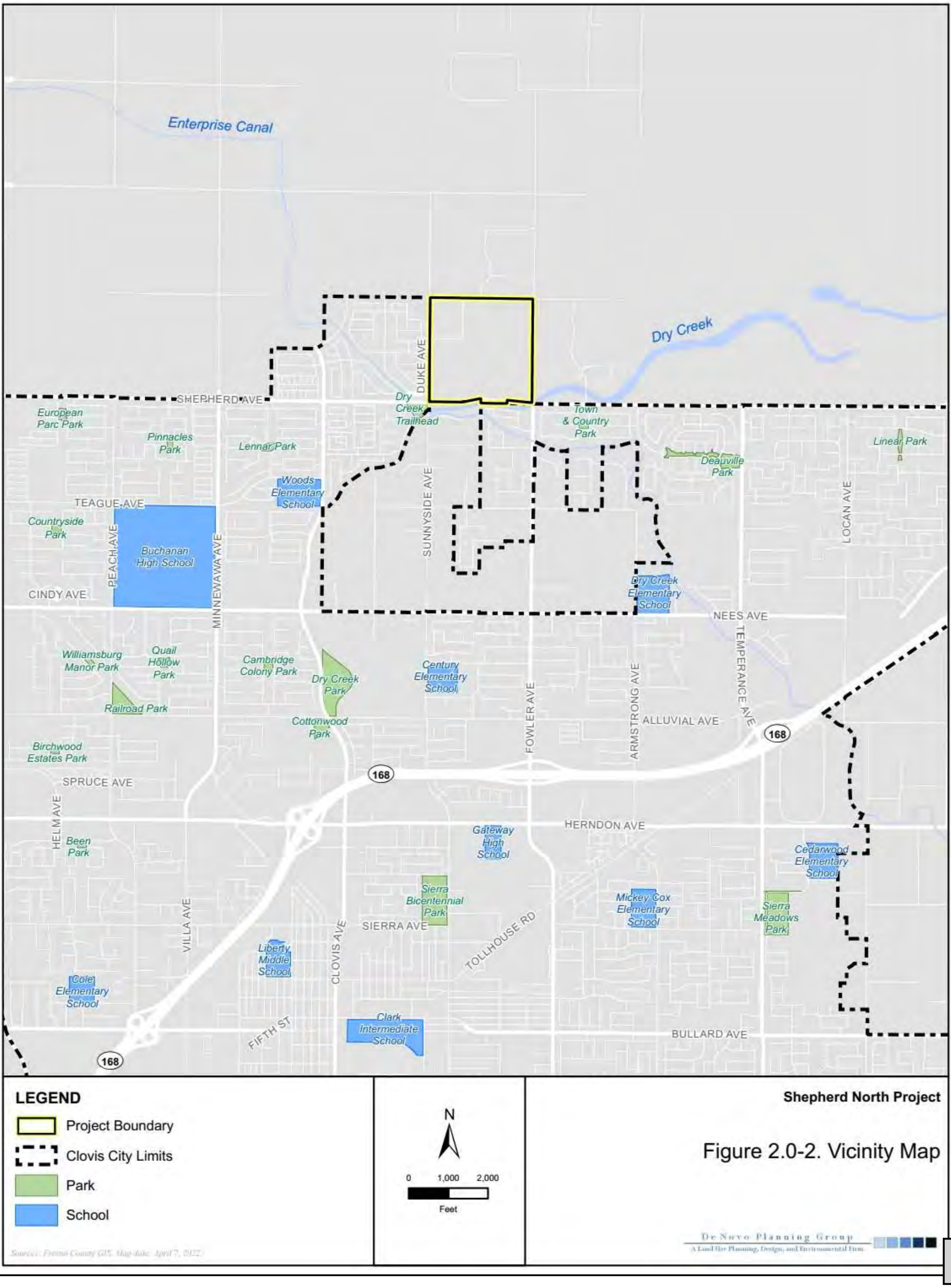
Although the number of residential units is not yet known, the Medium Density designation allows a density between 4.1 and 7.0 dwelling units per acre. Therefore, the environmental analysis should assume construction of up to a maximum of 525 residential units on the 75-acre Project site within the City of Clovis.

For this Project, a Project Level EIR would be prepared for the 75-acre project site, and a programmatic EIR Level of Analysis would be prepared for the remaining area. The general plan amendment would also include a request to allow for access to Shepherd Avenue, which is currently designated as an "expressway" in the Clovis General Plan. The site plan for the Project is shown in Exhibit B.

AGENDA ITEM NO. 6.

Exhibit A

Location Map



Sources: Fresno County GIS. Map date: April 7, 2022.

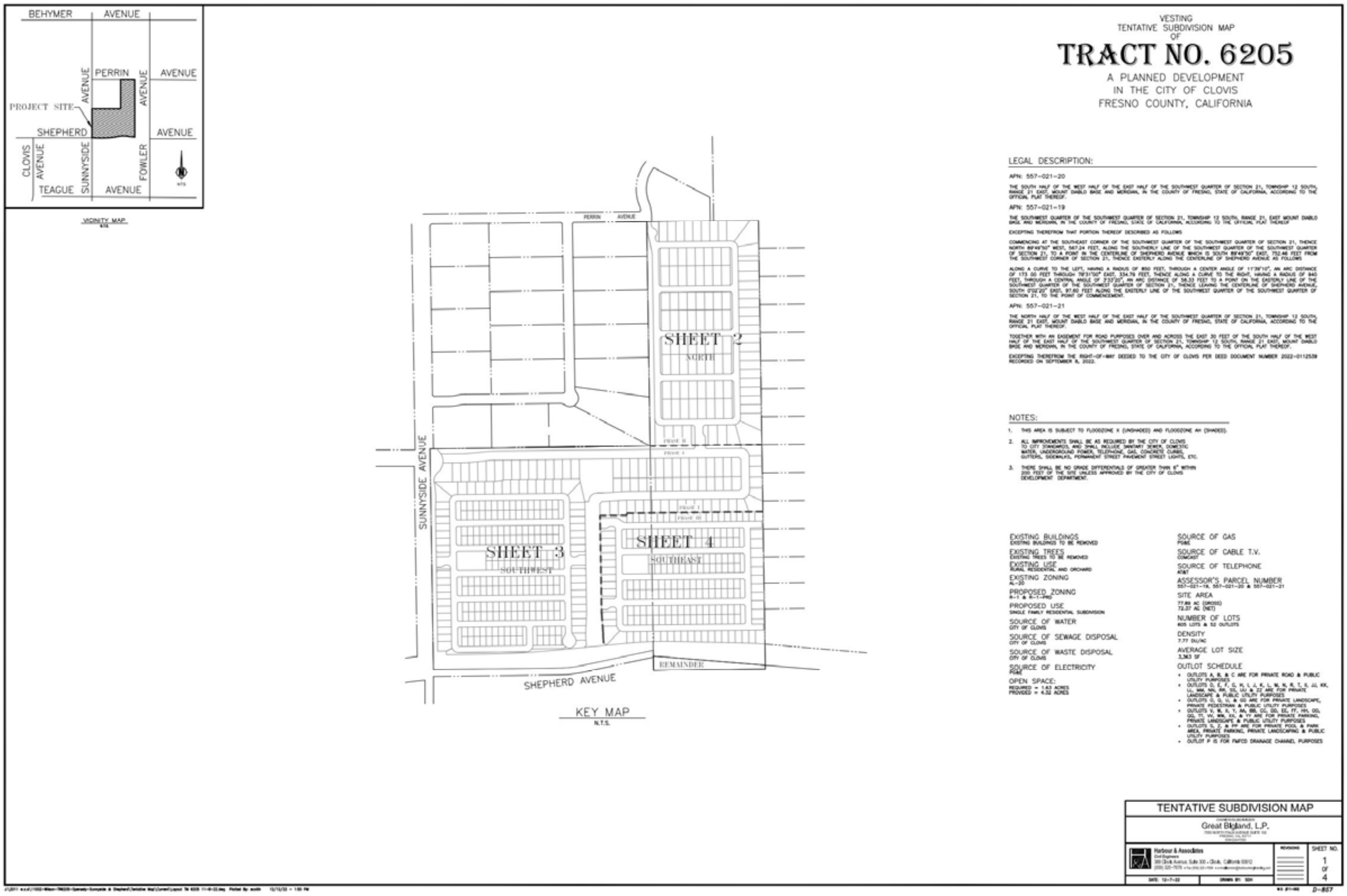
Shepherd North Project

Figure 2.0-2. Vicinity Map

AGENDA ITEM NO. 6.

Exhibit B

Site Plan



VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA

LEGAL DESCRIPTION:

APN: 557-021-20

THE SOUTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

APN: 557-021-19

THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21, EAST MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF

EXCEPTING THEREFROM THAT PORTION THEREOF DESCRIBED AS FOLLOWS

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, THENCE NORTH 89°49'50" WEST, 567.24 FEET, ALONG THE SOUTHERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TO A POINT IN THE CENTERLINE OF SHEPHERD AVENUE WHICH IS SOUTH 89°49'50" EAST, 752.46 FEET FROM THE SOUTHWEST CORNER OF SECTION 21, THENCE EASTERLY ALONG THE CENTERLINE OF SHEPHERD AVENUE AS FOLLOWS

ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 850 FEET, THROUGH A CENTER ANGLE OF 11°39'10", AN ARC DISTANCE OF 173.00 FEET THROUGH 78°31'00" EAST, 334.79 FEET, THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 940 FEET, THROUGH A CENTRAL ANGLE OF 3°33'20", AN ARC DISTANCE OF 58.33 FEET TO A POINT ON THE EASTERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, THENCE LEAVING THE CENTERLINE OF SHEPHERD AVENUE, SOUTH 0°02'20" EAST, 97.60 FEET ALONG THE EASTERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TO THE POINT OF COMMENCEMENT.

APN: 557-021-21

THE NORTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

TOGETHER WITH AN EASEMENT FOR ROAD PURPOSES OVER AND ACROSS THE EAST 30 FEET OF THE SOUTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE RIGHT-OF-WAY DEEDED TO THE CITY OF CLOVIS PER DEED DOCUMENT NUMBER 2022-0112539 RECORDED ON SEPTEMBER 8, 2022.

NOTES:

1. THIS AREA IS SUBJECT TO FLOODZONE X (UNSHADED) AND FLOODZONE AH (SHADED).
2. ALL IMPROVEMENTS SHALL BE AS REQUIRED BY THE CITY OF CLOVIS TO CITY STANDARDS, AND SHALL INCLUDE SANITARY SEWER, DOMESTIC WATER, UNDERGROUND POWER, TELEPHONE, GAS, CONCRETE CURBS, GUTTERS, SIDEWALKS, PERMANENT STREET PAVEMENT STREET LIGHTS, ETC.
3. THERE SHALL BE NO GRADE DIFFERENTIALS OF GREATER THAN 6" WITHIN 200 FEET OF THE SITE UNLESS APPROVED BY THE CITY OF CLOVIS DEVELOPMENT DEPARTMENT.

EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AL-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.63 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.89 AC (GROSS)
72.37 AC (NET)

NUMBER OF LOTS
605 LOTS & 52 OUTLOTS

DENSITY
7.77 DU/AC

AVERAGE LOT SIZE
3,363 SF

OUTLOT SCHEDULE

- OUTLOTS A, B, & C ARE FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES
- OUTLOTS D, E, F, G, H, I, J, K, L, M, N, R, T, II, JJ, KK, LL, MM, NN, RR, SS, UU & ZZ ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS O, Q, U, & OO ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN & PUBLIC UTILITY PURPOSES
- OUTLOTS V, W, X, Y, AA, BB, CC, DD, EE, FF, HH, GG, QQ, TT, VV, WW, XX, & YY ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS S, Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES
- OUTLOT P IS FOR FMFCD DRAINAGE CHANNEL PURPOSES

TENTATIVE SUBDIVISION MAP

Great Bigland, L.P.

Harbour & Associates
Civil Engineers
389 Clovis Avenue, Suite 300 • Clovis, California 93612

DATE: 12-7-22

DRAWN BY: SDH

SHEET NO. 1 of 4

D-857

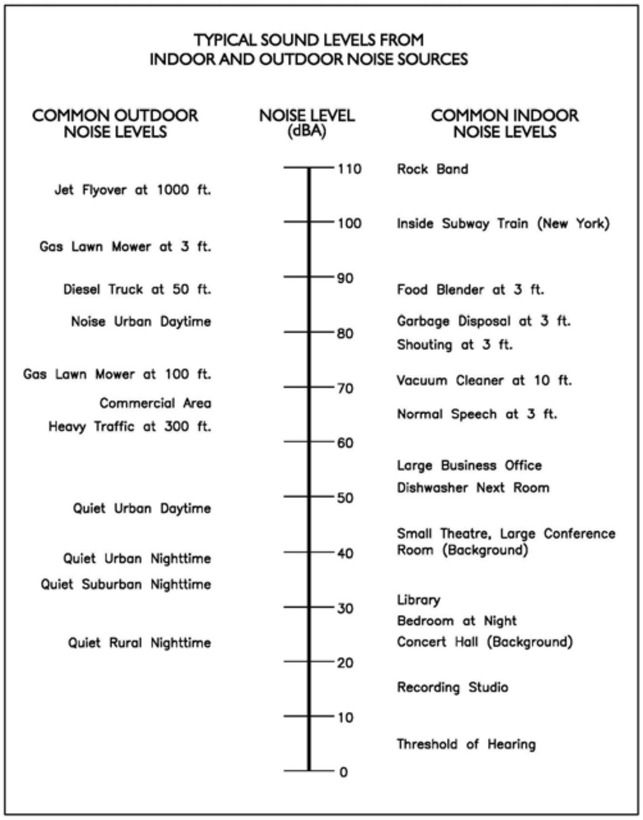
2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used in the report.

2.1 Sound, Noise and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

Exhibit C: Typical A-Weighted Noise Levels



2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz.

2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square inch meter ($\mu N/m^2$), also called micro-Pascal (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels, abbreviated dB. Exhibit C illustrates references sound levels for different noise sources.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

2.5 Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA), a scale designed to account for the frequency-dependent sensitivity of the ear. Typically, the human ear can barely perceive a change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns; others are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after the addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations, which is intended to be used for sleeping, living, cooking, or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly L50, L90, and L99, etc.

Noise: *A*ny unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area: Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL): The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

2.7 Traffic Noise Prediction

Noise levels associated with traffic depends on a variety of factors: (1) volume of traffic, (2) speed of traffic, (3) auto, medium truck (2–3 axle) and heavy truck percentage (4 axle and greater), and sound propagation. The greater the volume of traffic, higher speeds and truck percentages equate to a louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed in the sections above.

2.8 Sound Propagation

As sound propagates from a source, it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity, and turbulence can further impact have far sound can travel.

3.0 Ground-Borne Vibration Fundamentals

3.1 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors, where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV), which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans, whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

3.3 Vibration Propagation

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wavefront, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wavefront. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wavefront. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 Regulatory Setting

The proposed Project is located within the City of Clovis, California and noise regulations are addressed through the efforts of various federal, state and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The Federal Office of Noise Abatement and Control (ONAC) originally was tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) is responsible for regulating noise from aircraft and airports. The Federal Highway Administration (FHWA) is responsible for regulating noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers. The Housing and Urban Development (HUD) is responsible for establishing noise regulations as it relates to exterior/interior noise levels for new HUD-assisted housing developments near high noise areas.

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being constructed adjacent to a highway, or alternatively that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix." The matrix allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24, the California Building Code (CBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State mandates that the legislative body of each county and City adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services.

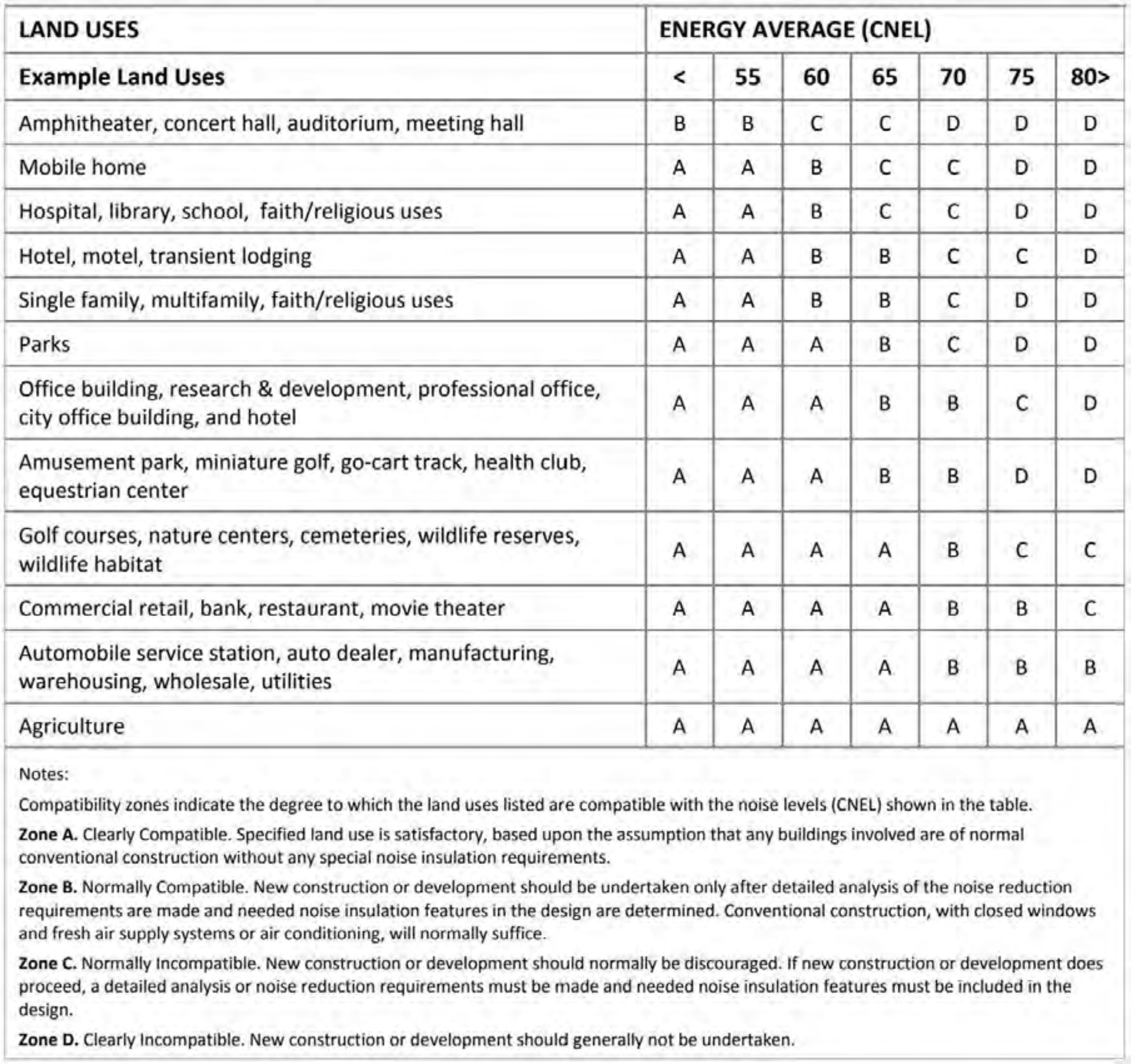
4.3 City of Clovis Noise Regulations

The City of Clovis outlines their noise regulations and standards within the General Plan Environmental Safety Element and the Noise Ordinance from the Municipal Code.

City of Clovis General Plan

Applicable policies and standards governing environmental noise in the City are set forth in the General Plan Environmental Safety Element. The guidelines rank noise land use compatibility in terms of clearly compatible, normally compatible, normally incompatible, and clearly incompatible as illustrated in Exhibit D.

Exhibit D: Land Use and Noise Compatibility Matrix



LAND USES	**ENERGY AVERAGE (CNEL)**						
Example Land Uses	**<**	**55**	**60**	**65**	**70**	**75**	**80>**
Amphitheater, concert hall, auditorium, meeting hall	B	B	C	C	D	D	D
Mobile home	A	A	B	C	C	D	D
Hospital, library, school, faith/religious uses	A	A	B	C	C	D	D
Hotel, motel, transient lodging	A	A	B	B	C	C	D
Single family, multifamily, faith/religious uses	A	A	B	B	C	D	D
Parks	A	A	A	B	C	D	D
Office building, research & development, professional office, city office building, and hotel	A	A	A	B	B	C	D
Amusement park, miniature golf, go-cart track, health club, equestrian center	A	A	A	B	B	D	D
Golf courses, nature centers, cemeteries, wildlife reserves, wildlife habitat	A	A	A	A	B	C	C
Commercial retail, bank, restaurant, movie theater	A	A	A	A	B	B	C
Automobile service station, auto dealer, manufacturing, warehousing, wholesale, utilities	A	A	A	A	B	B	B
Agriculture	A	A	A	A	A	A	A

Notes:

Compatibility zones indicate the degree to which the land uses listed are compatible with the noise levels (CNEL) shown in the table.

Zone A. Clearly Compatible. Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Zone B. Normally Compatible. New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Zone C. Normally Incompatible. New construction or development should normally be discouraged. If new construction or development does proceed, a detailed analysis or noise reduction requirements must be made and needed noise insulation features must be included in the design.

Zone D. Clearly Incompatible. New construction or development should generally not be undertaken.

The General Plan also outlines an acceptable exterior level of 65 dBA CNEL and an interior level of 45 dBA CNEL (windows closed) for residential uses. The City has outlined goals, policies, and implementation measures to reduce potential noise impacts which are presented below:

Goals, Policies, and Implementation Measures

Policies, goals, and implementation program measures from the Policy Plan that would mitigate potential impacts on noise include the following.

Goal 3: An environment in which minimized noise contributes to the public's health, safety, and welfare.

> Policy 3.1 Land use compatibility. Approve development and require mitigation measures to ensure existing and future land use compatibility as shown in the Noise Level Exposure and Land Use Compatibility Matrix and the City's noise ordinance.
>
> Policy 3.2 Land use and traffic patterns. Discourage land use and traffic patterns that would expose sensitive land uses or noise-sensitive areas to unacceptable noise levels.
>
> Policy 3.3 New residential. When new residential development is proposed adjacent to land designated for industrial or commercial uses, require the proposed development to assess potential noise impacts and fund feasible noise-related mitigation measures.
>
> Policy 3.4 Acoustical study. Require an acoustical study for proposed projects that have the potential to exceed acceptable noise thresholds or are exposed to existing or future noise levels in excess of the thresholds in the City's noise ordinance.
>
> Policy 3.5 Site and building design. Minimize noise impacts by requiring appropriate site, circulation, equipment, and building design, and sound walls, landscaping, and other buffers.
>
> Policy 3.6 Noise impacts. Minimize or eliminate persistent, periodic, or impulsive noise impacts of business operations.
>
> Policy 3.7 Mixed-use buildings. Require that mixed-use structures be designed to prevent transfer of noise and vibration between uses.
>
> Policy 3.8 Existing uses. Require the use of noise abatement devices for existing uses that exceed acceptable noise thresholds.
>
> Policy 3.9 Caltrans facilities. Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of new highway projects or improvements to existing facilities.
>
> Policy 3.10 Airport changes. Coordinate with the Fresno Yosemite International Airport to minimize noise impacts on properties in Clovis due to changes in flight patterns or airport expansion.
>
> Policy 3.11 Airport land use compatibility. Approve land uses in a manner that is consistent with the Fresno Yosemite International Airport Land Use Compatibility Plan.
>
> Policy 3.12 Truck traffic. Plan and maintain truck routes that avoid noise-sensitive land uses and areas. Encourage business delivery areas to be located away from residential properties and to mitigate associated noise impacts.

Policy 3.13 Small aircraft and helicopters. Minimize the noise impact of small aircraft and helicopters on residential neighborhoods.

Policy 3.14 Control sound at the source. Prioritize using noise mitigation measures to control sound at the source before buffers, soundwalls, and other perimeter measures.

City of Clovis– Noise Ordinance/Municipal Code

Chapter 9.22.080 and 9.22.100 General Performance Standards of the City's Municipal Code outlines the City's noise ordinance.

Section 9.22.080 –Noise

D. Noise standards. The following noise standards, unless otherwise specifically indicated, shall apply to all property with a designated noise zone:

MAXIMUM EXTERIOR NOISE STANDARDS

Noise Zone	**Type of Land Use**	**Allowable Exterior Noise Level (15-Minute Leq)**	
		7 a.m. to 10 p.m.	**10 p.m. to 7 a.m.**
I	Single-, two- or multiple-family residential	55 dBA	50 dBA
II	Commercial	65 dBA	60 dBA
III	Residential portions of mixed use properties	60 dBA	50 dBA
IV	Industrial or manufacturing	70 dBA	70 dBA

MAXIMUM INTERIOR NOISE STANDARDS

Noise Zone	**Type of Land Use**	**Allowable Exterior Noise Level (15-Minute Leq)**	
		7 a.m. to 10 p.m.	**10 p.m. to 7 a.m.**
I	Residential	45 dBA	40 dBA
II	Administrative/professional office	50 dBA	—
III	Residential portions of mixed use properties	45 dBA	40 dBA

1. If the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

2. It is unlawful for any person to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any property measured at the property line, to exceed either of the following within the incorporated area of the City:

   a. The noise standard for the applicable zone for any fifteen (15) minute period;

b. A maximum impulsive noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response). Impulsive noise which repeats four (4) or more times in any hour between 10:00 p.m. and 7:00 a.m. shall be measured as continuous sound and meet the noise standard for the applicable zone.

3. When properties of two (2) different noise zones abut one another, the maximum exterior noise level shall be the lower of the two (2) noise zones where one zone is residential, and in other contexts shall be the average of the two (2) zones.

4. Commercial, industrial, and recreational uses which create impulsive noise as part of their regular processes, such as through the use of pile drivers, forge hammers, punch presses, and gunshots, shall not be located in any zone district adjacent to a residential zone district unless a noise study is completed demonstrating the impulsive noise does not exceed the standards at the property line for the residential zone district. Impulse noise from these uses shall be measured as continuous sound. The noise study shall be subject to review and approval by the Director or his or her designee, and shall be completed as part of any discretionary permit process for the use or prior to obtaining a building permit. This provision shall not apply to uses existing on the effective date of the ordinance codified in this title.

5. Emergency electrical generators in residential zone districts shall comply with the California Building Code and California Residential Code, as amended, for the installation and operation of the emergency generator. Test cycle operation shall be limited to the hours between 10:00 a.m. and 4:00 p.m. Emergency electrical generators are intended to provide emergency power to run air conditioning, medical equipment and other household appliances in the event of a rolling blackout or other power grid failure.

E. Measurement of sound levels. Measurement of sound levels shall be as follows:

1. Sound level meter. Sound levels shall be measured on the A-weighting network of a sound level meter meeting the requirements of ASA Standards S14-1971 for General Purpose Sound Level Meters, or the latest revision published by the American National Standards Institute, Inc., using the slow meter response. The meter shall be calibrated and used according to the manufacturer's instructions.

2. Location of microphone. Measurements shall be taken with the microphone located at any point on the property line of the noise source, but no closer than three feet (3') from any wall and not less than three feet (3') above the ground.

3. Minimum of two (2) readings. A minimum of two (2) readings shall be taken for a period of ten (10) minutes each with ten (10) minute intervals between measurements. The sound level shall be the average of these readings.

F. Activities exempt from regulations. The following activities shall be exempt from the provisions of this section:

1. Emergency exemption. The emission of sound for the purpose of alerting persons to the existence of an emergency, or the emission of sound in the performance of emergency work.

2. Warning devices. Warning devices necessary for the protection of public safety, (e.g., ambulance, fire, and police sirens, and train horns).

3. Railroad activities. All locomotives and rail cars operated by a railroad that is regulated by the State Public Utilities Commission.

4. Federal or State pre-exempted activities. Any activity, to the extent regulation thereof has been pre-exempted by Federal or State law.

5. Pre-existing uses. Uses existing at the time of the effective date of the ordinance codified in this title, which are in compliance with all applicable standards in effect prior to adoption, and which are not otherwise operating as a nuisance in violation of Article 6 of Chapter 27 of Title 5.

6. Public health and safety activities. All transportation, flood control, and utility maintenance and construction operations conducted by government entities or utility companies at any time on public rights-of-way, and those situations that may occur on private property deemed necessary to serve the best interests of the public and to protect the public's health and well-being, including, but not limited to: debris and limb removal; removal of damaged poles and vehicles; removal of downed wires; restoring electrical service; repairing traffic signals; repair of water hydrants; repair of mains, gas lines, oil lines, and sewers; repair and maintenance of flood control and storm water facilities; repair and maintenance of streets and sidewalks.

7. Ordinary municipal activities. Ordinary municipal activities conducted by the City or other entity having jurisdiction in the City, including, but not limited to: solid waste collection; street sweeping; operation, maintenance, and repair of water production, treatment, and distribution facilities; operation, maintenance, and repair of sewage treatment, collection and distribution facilities; and vacuuming catch basins.

8. Public safety training activities. Training activities by fire, law enforcement, and public utility officials that cannot reasonably take place within the parameters of this section, including but not limited to training that involves: hydrant testing, pumping hose lays, running chain saws, operating power tools, demolition, vehicle noise, and use of generators.

9. Public celebrations. Public celebrations, holidays, or occasions generally celebrated, or public parades held under authorized permits; any sporting event or activity conducted under the direction and supervision of any public or private school.

G. Acts deemed violations of section. The following acts are a violation of this section:

1. Noise-related nuisances defined in Chapter 27 of Title 5. Violations of Article 6 of Chapter 27 of Title 5 pertaining to unlawful noise-related nuisances shall also be considered a violation of this section.

2. Construction noise. Construction activities shall be subject to the provisions of Section 5.27.604, which sets forth the permissible hours for construction activity. At all other times, no person shall operate, or cause to be operated, tools or equipment used in alteration, construction, demolition, drilling, or repair work so that the sound creates a noise disturbance across a residential property line, except for emergency work. Stationary equipment (e.g., generators) shall not be located adjacent to any existing residences unless enclosed in a noise attenuating structure, subject to the review and approval of the Director.

3. Places of public entertainment. Operating, playing, or allowing the operation or playing of a drum, musical instrument, phonograph, radio, sound amplifier, television, or similar device that produces, reproduces, or amplifies sound in a place of public entertainment at a sound level greater than ninety-five (95) dBA (read by the slow response on a sound level meter) at any point that is normally occupied by a customer is prohibited, unless conspicuous signs are located near each public entrance, stating "Warning: Sound Levels Within May Cause Hearing Impairment."

4. Stationary nonemergency signaling devices. Sounding or allowing the sounding of an electronically amplified signal from a stationary bell, chime, siren, whistle, or similar device intended primarily for nonemergency purposes, from any place, for more than ten (10) consecutive seconds in any hourly period is prohibited.

5. Compacting mechanisms. Operating or allowing the operation of the compacting mechanism of any motor vehicle that compacts refuse and that creates, during the compacting cycle, a sound level in excess of eighty-five (85) dBA when measured at fifty feet (50') from any point of the vehicle is prohibited between the hours of 9:00 p.m. and 5:00 a.m.

6. Vehicle or motorboat repairs and testing. Repairing, rebuilding, modifying, or testing any motor vehicle, motorcycle, or motorboat in a manner as to cause a noise disturbance across property lines or within a noise-sensitive zone is prohibited.

H. Responsibility to eliminate or reduce acts deemed violations of section. Improvements to eliminate or reduce negative impacts between uses deemed violations of this section shall be provided by the new use, rather than the existing use. (§ 2, Ord. 14-13, eff. October 8, 2014; § 1(2) (Atts. 1, 2), Ord. 20-18, eff. February 3, 2021)

9.22.100 Vibrations.

Uses that generate vibrations that may be considered a nuisance or hazard on any adjacent property shall be corrected, cushioned, or isolated to prevent the continued generation of vibrations. Uses shall be operated in compliance with the following provisions:

A. Not perceptible along property line. Uses shall not generate ground vibration that is perceptible without instruments by the average person at any point along or beyond the property line of the parcel containing the activities which generate the vibration.

B. No discomfort or annoyance. Uses, activities, and processes shall not generate ground vibration that causes discomfort or annoyance to reasonable persons of normal sensitivity or which endangers the comfort, health, or peace of residents whose property abuts the property lines of the subject parcel.

C. No interference. Uses shall not generate ground vibration that interferes with the operations of equipment and facilities on adjoining parcels.

D. Temporary construction exempt. Vibrations from temporary construction/demolition and vehicles that leave the subject parcel (e.g., trucks) are exempt from the provisions of this section. (§ 2, Ord. 14-13, eff. October 8, 2014)

5.0 Study Method and Procedure

The following section describes the noise modeling procedures and assumptions used for this assessment.

5.1 Noise Measurement Procedure and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent to the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

MD conducted the sound level measurements in accordance with the City's and Caltrans's (TeNS) technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5 feet above the ground for all measurements
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on "A" and slow response
- Results of the long-term noise measurements were recorded on field data sheets
- During any short-term noise measurements, any noise contaminations such as barking dogs, local traffic, lawnmowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

5.2 Noise Measurement Locations

Noise monitoring locations were selected based on the nearest sensitive receptors relative to the proposed onsite noise sources. Three (3) short-term 15-min noise measurement was conducted at or near the project site and are illustrated in Exhibit E. Appendix A includes photos, a field sheet, and measured noise data.

5.3 FHWA Traffic Noise Prediction Model

Traffic noise from vehicular traffic was projected using a computer program that replicates the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Roadway volumes correspond to the LSA Associates, Inc. segment projections. It's assumed that the peak hour is 10% of the ADT. The referenced traffic data was applied to the model and is in Appendix B. The following outlines the key adjustments made to the REMEL for the roadway inputs:

- Roadway classification – (e.g., freeway, major arterial, arterial, secondary, collector, etc.),
- Roadway Active Width – (distance between the center of the outermost travel lanes on each side of the roadway)
- Average Daily Traffic Volumes (ADT), Travel Speeds, Percentages of automobiles, medium trucks, and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g., soft vs. hard)
- Percentage of total ADT which flows each hour throughout a 24-hour period

Table 1 indicates the vehicle distribution utilized for this study.

Table 1: Roadway Vehicle Distribution (Truck Mix)

Motor-Vehicle Type	Daytime % (7AM to 7 PM)	Evening % (7 PM to 10 PM)	Night % (10 PM to 7 AM)	Total % of Traffic Flow
Automobiles	75.5	14.0	10.5	97.42
Medium Trucks	48.9	2.2	48.9	1.84
Heavy Trucks	47.3	5.4	47.3	0.74

Notes:
[1] Traffic count from LSA Associates, Inc.

MD utilized segment projections from LSA Associates, Inc. obtained January 2023.

The following outlines key adjustments to the REMEL for project site parameter inputs:

- Vertical and horizontal distances (Sensitive receptor distance from noise source)
- Noise barrier vertical and horizontal distances (Noise barrier distance from sound source and receptor).
- Traffic noise source spectra
- Topography

5.4 FHWA Roadway Construction Noise Model

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RNCM), together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, % usage factor, and baseline parameters for the project site.

The Project was analyzed based on the different construction phases. Construction noise is expected to be loudest during the grading, concrete, and building phases of construction. The construction noise calculation output worksheet is located in Appendix C.

Exhibit E

Noise Measurement Location Map

Figure 2.0-4. Accessor Parcel Map

X = Short-Term Measurement (15-MInute)

6.0 Existing Noise Environment

Three (3) 15-min ambient noise measurements were conducted at or near the property site. The noise measurements were taken to determine the existing ambient noise levels. Noise data indicates that traffic along Shepherd Avenue is the primary source of noise impacting the site and the adjacent uses. This assessment utilizes the ambient noise data as a basis and compares project operational levels to said data.

6.1 Short-Term Noise Measurement Results

The results of the short-term noise data are presented in Table 2.

Table 2: Short-Term Noise Measurement Data[1]

Date	Time	1-Hour dB(A)							
		L_{EQ}	L_{MAX}	L_{MIN}	L_2	L_8	L_{25}	L_{50}	L_{90}
12/20/2022	7:53AM-8:08AM	46.4	68.0	38.0	53.3	46.9	45.2	43.9	41.6
12/20/2022	8:27AM-8:42AM	69.1	82.2	55.7	77.4	72.0	68.7	66.4	62.6
12/20/2022	9:01AM-9:16AM	46.0	63.5	34.5	56.8	48.8	39.4	37.3	35.6

Notes:
[1] Short-term noise monitoring locations are illustrated in Exhibit E.

Noise data indicates the ambient noise level ranged from 46 to 69 dBA Leq at the project site. Maximum levels reached up to 82 dBA at location 2 as a result of traffic of heavy trucks along Shepherd Avenue. Additional field notes and photographs are provided in Appendix A.

6.2 Airport Noise Contours

The Project is outside the Fresno Yosemite International Airport Contours, as shown in Figure ES-5 of the 2014 Clovis General Plan.

7.0 Future Noise Environment Impacts

This assessment analyzes future noise impacts as a result of the Project. The analysis details the estimated exterior noise levels.

7.1 Future Exterior Noise

The following outlines the exterior noise levels associated with the proposed Project:

7.1.1 Noise Impacts to Off-Site Receptors Due to Project Generated Traffic

A worst-case project-generated traffic noise level was modeled utilizing the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108. Traffic noise levels were calculated 70 feet from the centerline of the analyzed roadway. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the levels are shown for comparative purposes only to show the difference between with and without project conditions. In addition, the noise contours for 55, 60, 65, and 70 dBA CNEL were calculated. The potential off-site noise impacts caused by an increase of traffic from operation of the proposed Project on the nearby roadways were calculated for existing, existing plus Project, cumulative 2046, and cumulative 2046 plus project scenarios.

Table 3 and 4 compare the without and with project scenario and shows the change in traffic noise levels as a result of the proposed Project. It takes a change of 3 dB or more to hear a perceptible difference.

Table 3: Existing Scenario - Noise Levels Along Roadways (dBA CNEL)

Roadway	Segment	Existing	Existing With Project	
		CNEL @ 50' dBA	CNEL @ 50' dBA	Change in Noise Level
Behymer Avenue	Willow Avenue to Minnewawa Avenue	60.4	60.5	0.1
Behymer Avenue	Minnewawa Avenue to Sunnyside Avenue	62.5	62.5	0.0
Behymer Avenue	Sunnyside Avenue to Fowler Avenue	62.4	62.4	0.0
Shepherd Avenue	Willow Avenue to Minnewawa Avenue	67.7	68.2	0.5
Shepherd Avenue	Minnewawa Avenue to Clovis Avenue	67.3	68.2	0.9
Shepherd Avenue	Clovis Avenue to Sunnyside Avenue	66.6	68.2	1.6
Shepherd Avenue	Sunnyside Avenue to Project Driveway 3	65.1	66.8	1.7
Shepherd Avenue	Project Driveway 3 to Fowler Avenue	65.1	65.8	0.7
Herndon Avenue	State Route 168 Eastbound Ramps to Clovis Avenue	69.4	69.6	0.2
Willow Avenue	Behymer Avenue to Shepherd Avenue	72.4	72.5	0.1
Minnewawa Avenue	Behymer Avenue to Shepherd Avenue	63.5	63.5	0.0
Clovis Avenue	Shepherd Avenue to Teague Avenue	64.1	65.3	1.2
Clovis Avenue	Teague Avenue to Nees Avenue	66.3	66.9	0.6
Clovis Avenue	Nees Avenue to Alluvial Avenue	67.9	68.4	0.5
Clovis Avenue	Alluvial Avenue to Herndon Avenue	69.9	70.2	0.3
Sunnyside Avenue	Project Driveway 1 to Shepherd Avenue	54.4	60.5	6.1

Roadway	Segment	Existing	Existing With Project	
		CNEL @ 50' dBA	CNEL @ 50' dBA	Change in Noise Level
Sunnyside Avenue	Shepherd Avenue to Teague Avenue	60.3	61.6	1.3
Sunnyside Avenue	Teague Avenue to Nees Avenue	60.6	61.8	1.2
Fowler Avenue	Behymer Avenue to Ticonderoga	63.4	63.5	0.1
Fowler Avenue	Ticonderoga to Shepherd Avenue	64.4	64.4	0.0
Fowler Avenue	Shepherd Avenue to Teague Avenue	65.1	65.7	0.6
Fowler Avenue	Teague Avenue to Nees Avenue	65.1	65.7	0.6
Fowler Avenue	Nees Avenue to State Route 168 Westbound Ramps	69.9	70.1	0.2

Notes:
1. Traffic volumes compiled LSA Associates, Inc. Jan 2023.
2. An impact would occur if the Project increased the roadway segment level by 3 dB or more (an audible difference) and resulting in a future level from clearly compatible to normally compatible or from normally compatible to normally incompatible.

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project Driveway 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB. The existing counts do not take into account the Project to the west of the project site, whose counts are included in the cumulative 2046 condition. As the existing land is considered vacant, there is no impact to the land use compatibility as a result of the Project. The potential impact to the future Project to the west will be considered in the 2046 condition.

Table 4: 2046 Scenario - Noise Levels Along Roadways (dBA CNEL)

Roadway	Segment	Existing	Existing With Project	
		CNEL @ 50' dBA	CNEL @ 50' dBA	Change in Noise Level
Behymer Avenue	Willow Avenue to Minnewawa Avenue	66.4	66.4	0.0
Behymer Avenue	Minnewawa Avenue to Sunnyside Avenue	67.0	67.0	0.0
Behymer Avenue	Sunnyside Avenue to Fowler Avenue	63.3	63.4	0.1
Shepherd Avenue	Willow Avenue to Minnewawa Avenue	71.9	72.1	0.2
Shepherd Avenue	Minnewawa Avenue to Clovis Avenue	71.2	71.6	0.4
Shepherd Avenue	Clovis Avenue to Sunnyside Avenue	70.8	71.5	0.7
Shepherd Avenue	Sunnyside Avenue to Project Driveway 3	69.0	69.8	0.8
Shepherd Avenue	Project Driveway 3 to Fowler Avenue	69.0	69.3	0.3
Herndon Avenue	State Route 168 Eastbound Ramps to Clovis Avenue	70.5	70.6	0.1
Willow Avenue	Behymer Avenue to Shepherd Avenue	76.3	76.3	0.1
Minnewawa Avenue	Behymer Avenue to Shepherd Avenue	68.6	68.6	0.0
Clovis Avenue	Shepherd Avenue to Teague Avenue	69.9	70.2	0.3
Clovis Avenue	Teague Avenue to Nees Avenue	69.9	70.2	0.3
Clovis Avenue	Nees Avenue to Alluvial Avenue	70.9	71.1	0.3
Clovis Avenue	Alluvial Avenue to Herndon Avenue	71.8	72.1	0.2
Sunnyside Avenue	Project Driveway 1 to Shepherd Avenue	68.7	69.2	0.5
Sunnyside Avenue	Shepherd Avenue to Teague Avenue	64.1	64.7	0.6

Roadway	Segment	Existing	Existing With Project	
		CNEL @ 50' dBA	CNEL @ 50' dBA	Change in Noise Level
Sunnyside Avenue	Teague Avenue to Nees Avenue	63.9	64.5	0.6
Fowler Avenue	Behymer Avenue to Ticonderoga	64.3	64.3	0.0
Fowler Avenue	Ticonderoga to Shepherd Avenue	67.9	67.9	0.0
Fowler Avenue	Shepherd Avenue to Teague Avenue	68.4	68.7	0.3
Fowler Avenue	Teague Avenue to Nees Avenue	67.9	68.2	0.3
Fowler Avenue	Nees Avenue to State Route 168 Westbound Ramps	71.4	71.6	0.1

Notes:
1. Traffic volumes compiled LSA Associates, Inc. Jan 2023.
2. An impact would occur if the Project increased the roadway segment level by 3 dB or more (an audible difference) and resulting in a future level from clearly compatible to normally compatible or from normally compatible to normally incompatible.

The Cumulative 2046 scenario has a maximum change in noise level of 0.7 dBA CNEL. Sunnyside Avenue from Project Driveway 1 to Shepherd Avenue has a 0.5 dBA CNEL change. Future residential uses will be in the normally compatible level along that segment.

7.1.2 Noise Impacts to On-Site Receptors Due to Project Generated Traffic

The Project's proposed residential properties are outside of Shepherd Avenue's and Sunnyside Avenue's 70 dBA CNEL contours. Residences along the first row of Sunnyside will experience levels up to 69.9 dBA CNEL at the property line. Residences along Shepherd Avenue will be exposed to levels up to 69.1 dBA CNEL at the property line. These are within the normally compatible levels for residential uses but above the exterior 65 dBA CNEL standard as outlined in Table ES-1 of the 2014 General Plan.

To meet the exterior residential standards, the unshielded residential private yards within 100 ft of the centerline of Shepherd Avenue and Sunnyside Avenue must be shielded by 6-foot sound walls. These walls must be at least 4.2 lbs/ft^2. Any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows which would not be shielded by the 6-foot sound walls.

8.0 Construction Noise Impact

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Noise levels associated with the construction will vary with the different phases of construction.

8.1 Construction Noise

The Environmental Protection Agency (EPA) has compiled data regarding the noise generated characteristics of typical construction activities. The data is presented in Table 5.

Table 5: Typical Construction Equipment Noise Levels[1]

Type	Lmax (dBA) at 50 Feet
Backhoe	80
Truck	88
Concrete Mixer	85
Pneumatic Tool	85
Pump	76
Saw, Electric	76
Air Compressor	81
Generator	81
Paver	89
Roller	74

Notes:
[1] Referenced Noise Levels from FTA noise and vibration manual.

Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the County's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the project vicinity. Furthermore, noise reduction policies are provided to further reduce construction noise. The impact is considered less than significant. However, construction noise level projections are provided.

Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences.

Unmitigated noise levels at 550 feet have the potential to reach 60 dBA L_{eq} and 92 dBA L_{max} at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA L_{eq} and 86 to 93 dBA L_{max}. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and Lexington.

8.2 Construction Vibration

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer. A large bulldozer has a vibration impact of 0.089 inches per second peak particle velocity (PPV) at 25 feet which is perceptible but below any risk to architectural damage.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref}\ (100/D_{rec})^{n}$$

Where: PPV_{ref} *= reference PPV at 100ft.*
D_{rec} *= distance from equipment to receiver in ft.*
$n = 1.1$ *(the value related to the attenuation rate through ground)*

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 6 (below) provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

Table 6: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Table 19, Transportation and Construction Vibration Guidance Manual, Caltrans, Sept. 2013.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 7 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

Table 7: Vibration Source Levels for Construction Equipment[1]

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

[1] Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

At a distance of 25 feet, a large bulldozer would yield a worst-case 0.089 PPV (in/sec) which means the vibration would be perceptible when close to the adjacent residential properties but is below any threshold of damage. Construction vibration is exempt from the vibration standards per 9.22.100(D) of the municipal code, so there is therefore no impact, and no mitigation is required.

8.3 Construction Noise Reduction Policies

Construction operations must follow the County's General Plan and the Noise Ordinance, which states that construction, repair or excavation work performed must occur within the permissible hours. To further ensure that construction activities do not disrupt the adjacent land uses, the following policies shall be taken:

1. Construction shall occur during the permissible hours as defined in Section 5.27.604.
2. During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices.
3. The contractor shall locate equipment staging areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.
4. Idling equipment shall be turned off when not in use.
5. Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.

9.0 References

State of California General Plan Guidelines: 1998. Governor's Office of Planning and Research

City of Clovis: General Plan. 2014.

City of Clovis: Municipal Code. Chapter 9.22.080 Noise. Chapter 9.22.100 Vibration.

LSA Associates, Inc. Project Traffic Projections.

Federal Highway Administration. Noise Barrier Design Handbook. June 2017.

Federal Transit Administration. Transit Noise and Vibration Impact Assessment Manual. September 2018

Appendix A:

Photographs and Field Measurement Data

15-Minute Continuous Noise Measurement Datasheet

Project Name:	North Shepherd SOI Expansion	
Project: #/Name:	0462-2020-025	
Site Address/Location:	Duke Ave & Shepherd Ave	
Date:	12/20/2022	
Field Tech/Engineer:	Dennis Jordan / Claire Pincock	
Sound Meter:	XL2, NTI	**SN:** A2A-05967-E0
Settings:	A-weighted, slow, 1-sec, 15-minute interval	
Site Id:	ST-1, ST-2, ST-3	

Site Observations:

39° to 43°, fog, no winds

Map data ©2023 Imagery ©2023 , CNES / Airbus, Maxar Technologies, U.S. Geological Survey, USDA

MD ACOUSTICS

15-Minute Continuous Noise Measurement Datasheet - Cont.

Project Name: North Shepherd SOI Expansion

Site Address/Location: Duke Ave & Shepherd Ave

Site Id: ST-1, ST-2, ST-3

Figure 1: ST-1 Perrin & Stanford

Figure 2: ST-2 Sunnyside & Shepherd

Figure 3: ST-3 Lexington & Purdue

Table 1: Baseline Noise Measurement Summary

Location	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
ST-1	7:53 AM	8:08 AM	46.4	68.0	38.0	53.3	46.9	45.2	43.9	41.6
ST-2	8:27 AM	8:42 AM	69.1	82.2	55.7	77.4	72	68.7	66.4	62.6
ST-3	9:01 AM	9:16 AM	46	63.5	34.5	56.8	48.8	39.4	37.3	35.6

MD ACOUSTICS

15-Minute Continuous Noise Measurement Datasheet - Cont.

Project Name: North Shepherd SOI Expansion

Site Address/Location: Duke Ave & Shepherd Ave

Site Id: ST-1

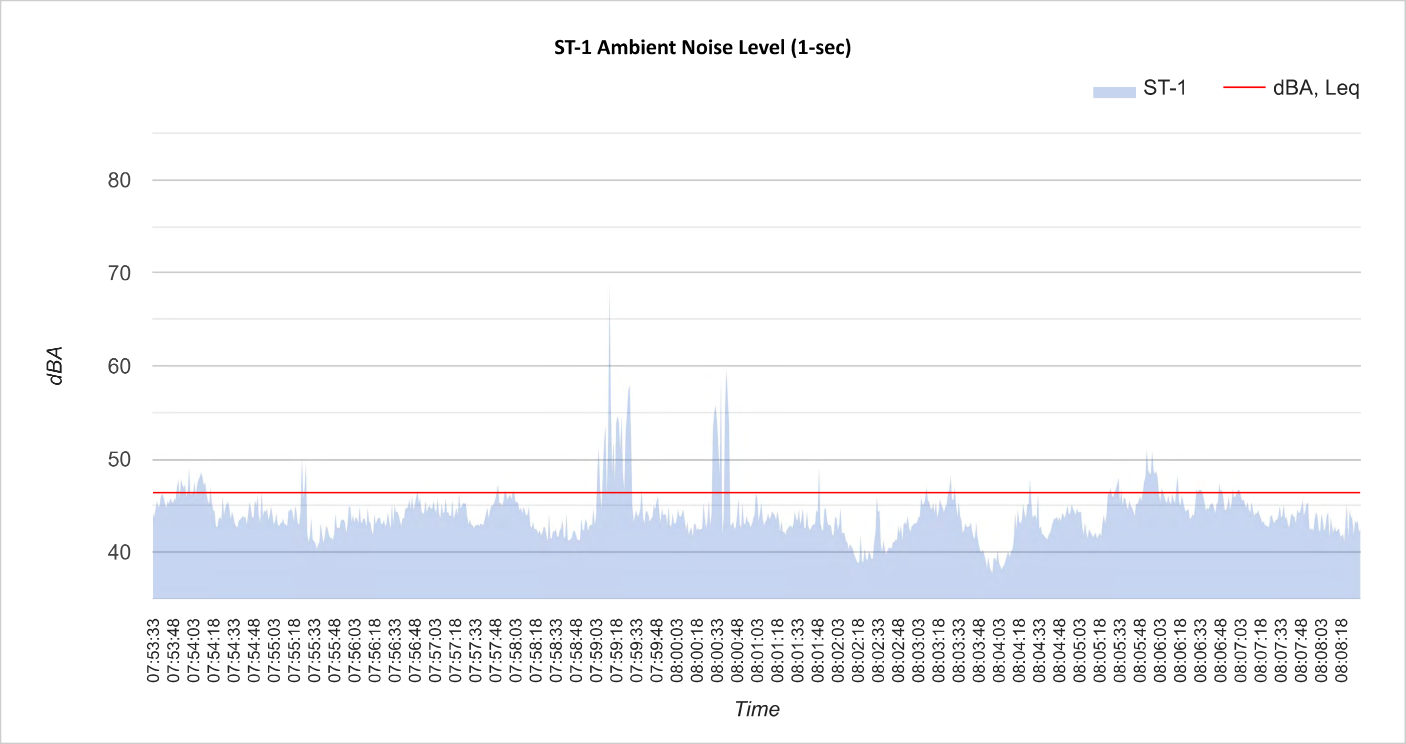
Site Topo: Single story housing

Meteorological Cond.: 37°, fog, no wind

Ground Type: Housing, Dirt and Vegetation

Noise Source(s) w/ Distance:

Road Noise / fowler ave



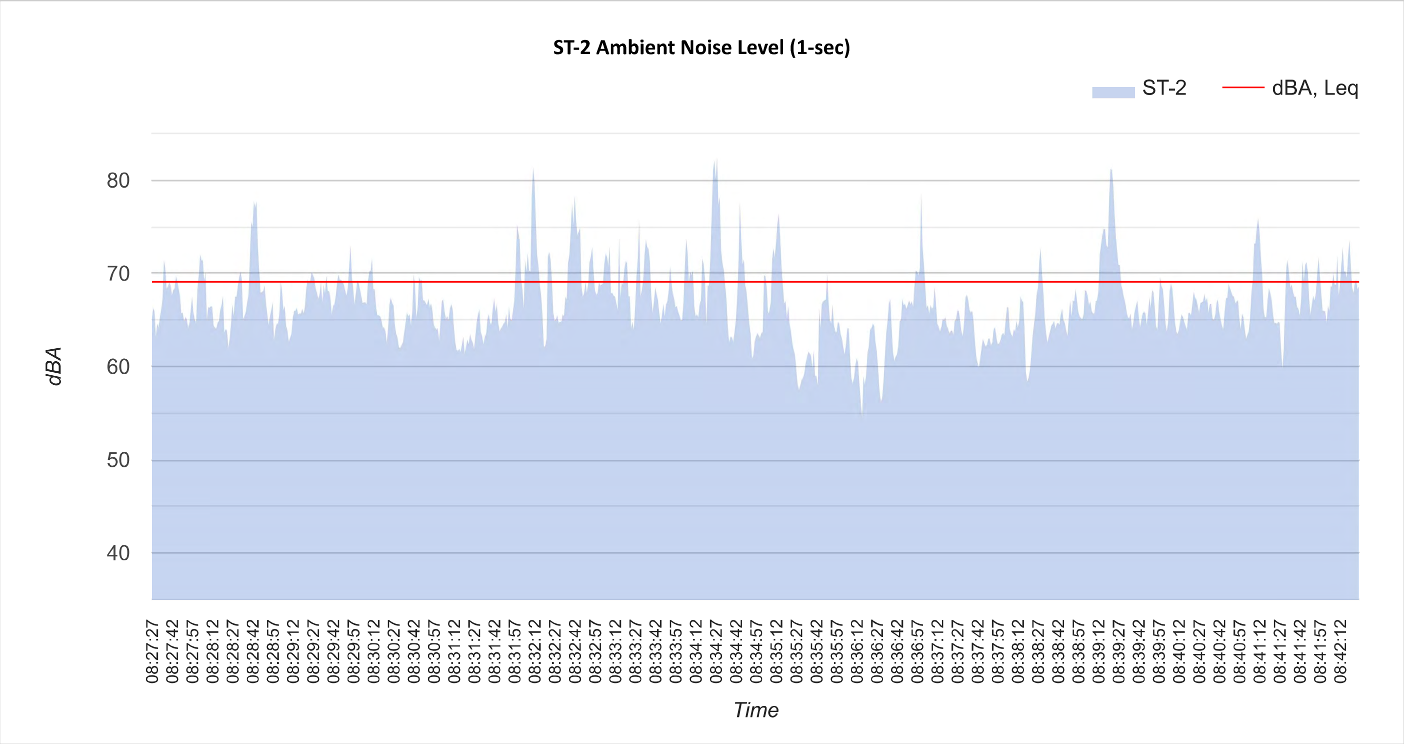
MD ACOUSTICS

15-Minute Continuous Noise Measurement Datasheet - Cont.

Project Name: North Shepherd SOI Expansion
Site Address/Location: Duke Ave & Shepherd Ave
Site Id: ST-2

Site Topo: Buildings 1 to 2 stories tall
Meteorological Cond.: 39°, fog, no wind
Ground Type: Buildings, Asphalt, Dirt and Vegetation

Noise Source(s) w/ Distance:
Road Noise / 4-way intersection

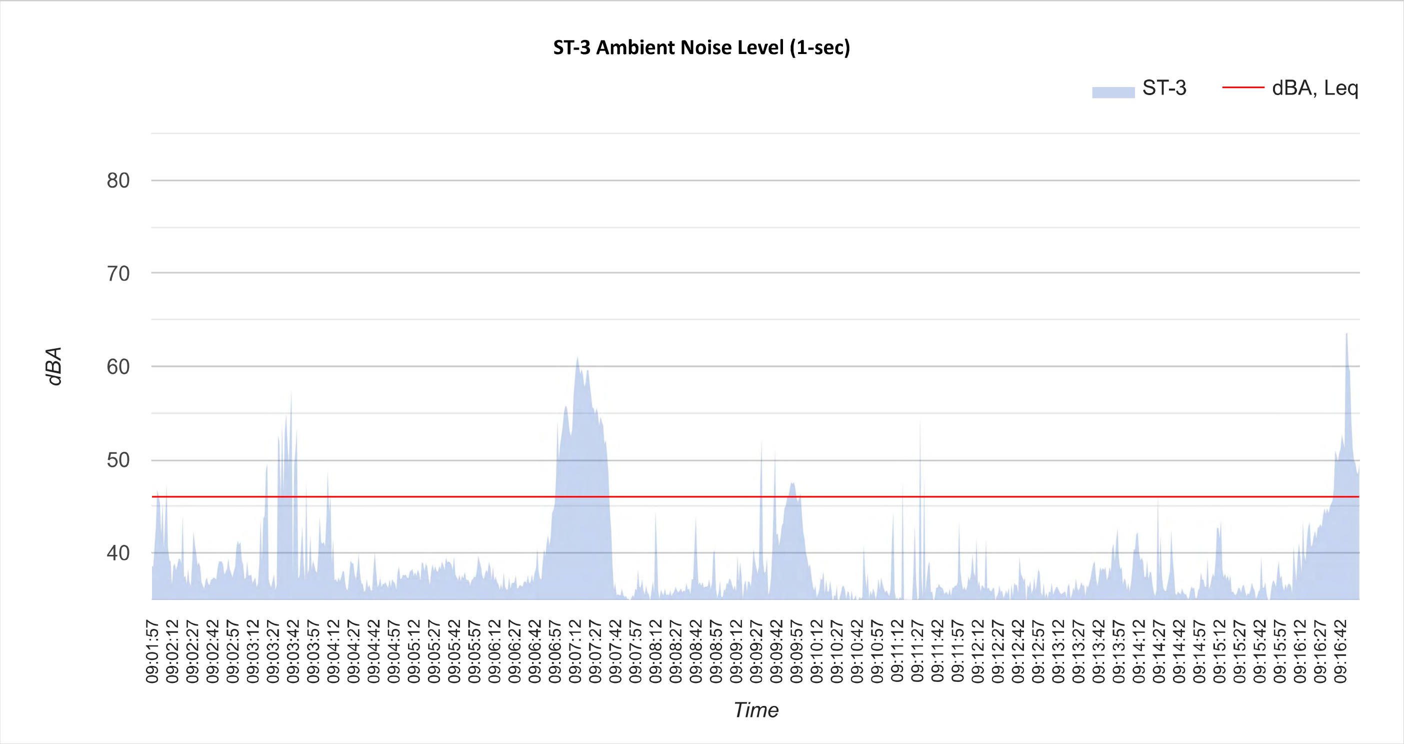


ST-2 Ambient Noise Level (1-sec)

MD ACOUSTICS

15-Minute Continuous Noise Measurement Datasheet - Cont.

Project Name:	North Shepherd SOI Expansion	**Site Topo:**	Single/Two story housing	**Noise Source(s) w/ Distance:**	
Site Address/Location:	Duke Ave & Shepherd Ave	**Meteorological Cond.:**	39°, fog, no wind	Road Noise / 2 vehicles drove during reading	
Site Id:	ST-3	**Ground Type:**	Housing, Cement, Asphalt, Dirt and Vegetation		



MD ACOUSTICS

Appendix B:

Traffic Noise Modeling Output

ROADWAY	SEGMENT LIMITS	CNEL	DISTANCES TO CONTOUR LINES: 70	65	60	55
Behymer Avenue	between Willow Avenue and Minnewawa Avenue	60.4	11	24	53	114
Behymer Avenue	between Minnewawa Avenue and Sunnyside Avenue	62.5	16	34	73	158
Behymer Avenue	between Sunnyside Avenue and Fowler Avenue	62.4	15	33	72	155
Shepherd Avenue	between Willow Avenue and Minnewawa Avenue	67.7	35	75	162	349
Shepherd Avenue	between Minnewawa Avenue and Clovis Avenue	67.3	33	71	152	328
Shepherd Avenue	between Clovis Avenue and Sunnyside Avenue	66.6	30	64	137	296
Shepherd Avenue	between Sunnyside Avenue and Project Driveway 3	65.1	24	51	109	236
Shepherd Avenue	between Project Driveway 3 and Fowler Avenue	65.1	24	51	109	236
Herndon Avenue	between State Route 168 Eastbound Ramps and Clovis Avenue	69.4	92	198	426	917
Willow Avenue	between Behymer Avenue and Shepherd Avenue	72.4	72	155	333	717
Minnewawa Avenue	between Behymer Avenue and Shepherd Avenue	63.5	18	39	85	183
Clovis Avenue	between Shepherd Avenue and Teague Avenue	64.1	20	44	94	203
Clovis Avenue	between Teague Avenue and Nees Avenue	66.3	28	61	131	283
Clovis Avenue	between Nees Avenue and Alluvial Avenue	67.9	36	78	168	361
Clovis Avenue	between Alluvial Avenue and Herndon Avenue	69.9	49	106	228	491
Sunnyside Avenue	between Project Driveway 1 and Shepherd Avenue	54.4	5	10	21	46
Sunnyside Avenue	between Shepherd Avenue and Teague Avenue	60.3	11	24	52	113
Sunnyside Avenue	between Teague Avenue and Nees Avenue	60.6	12	25	55	118
Fowler Avenue	between Behymer Avenue and Ticonderoga	63.4	18	39	84	181
Fowler Avenue	between Ticonderoga and Shepherd Avenue	64.4	21	45	98	211
Fowler Avenue	between Shepherd Avenue and Teague Avenue	65.1	24	51	110	237
Fowler Avenue	between Teague Avenue and Nees Avenue	65.1	24	51	110	237
Fowler Avenue	between Nees Avenue and State Route 168 Westbound Ramps	69.9	49	106	227	490

ROADWAY	SEGMENT LIMITS	DISTANCES TO CONTOUR LINES: CNEL	70	65	60	55
Behymer Avenue	between Willow Avenue and Minnewawa Avenue	60.5	12	25	54	116
Behymer Avenue	between Minnewawa Avenue and Sunnyside Avenue	62.5	16	34	74	159
Behymer Avenue	between Sunnyside Avenue and Fowler Avenue	62.4	16	34	72	156
Shepherd Avenue	between Willow Avenue and Minnewawa Avenue	68.2	38	82	177	380
Shepherd Avenue	between Minnewawa Avenue and Clovis Avenue	68.2	38	81	175	377
Shepherd Avenue	between Clovis Avenue and Sunnyside Avenue	68.2	38	81	175	378
Shepherd Avenue	between Sunnyside Avenue and Project Driveway 3	66.8	31	66	142	306
Shepherd Avenue	between Project Driveway 3 and Fowler Avenue	65.8	26	57	122	263
Herndon Avenue	between State Route 168 Eastbound Ramps and Clovis Avenue	69.6	93	201	434	934
Willow Avenue	between Behymer Avenue and Shepherd Avenue	72.5	74	159	342	736
Minnewawa Avenue	between Behymer Avenue and Shepherd Avenue	63.5	18	39	85	183
Clovis Avenue	between Shepherd Avenue and Teague Avenue	65.3	24	52	113	243
Clovis Avenue	between Teague Avenue and Nees Avenue	66.9	31	67	145	313
Clovis Avenue	between Nees Avenue and Alluvial Avenue	68.4	39	84	181	389
Clovis Avenue	between Alluvial Avenue and Herndon Avenue	70.2	52	111	239	516
Sunnyside Avenue	between Project Driveway 1 and Shepherd Avenue	60.5	12	25	54	116
Sunnyside Avenue	between Shepherd Avenue and Teague Avenue	61.6	14	30	64	137
Sunnyside Avenue	between Teague Avenue and Nees Avenue	61.8	14	31	66	142
Fowler Avenue	between Behymer Avenue and Ticonderoga	63.5	18	39	85	183
Fowler Avenue	between Ticonderoga and Shepherd Avenue	64.4	21	45	98	211
Fowler Avenue	between Shepherd Avenue and Teague Avenue	65.7	26	56	121	260
Fowler Avenue	between Teague Avenue and Nees Avenue	65.7	26	56	121	260
Fowler Avenue	between Nees Avenue and State Route 168 Westbound Ramps	70.1	50	109	234	505

ROADWAY	SEGMENT LIMITS	CNEL	DISTANCES TO CONTOUR LINES: 70	65	60	55
Behymer Avenue	between Willow Avenue and Minnewawa Avenue	66.4	29	62	133	287
Behymer Avenue	between Minnewawa Avenue and Sunnyside Avenue	67.0	32	68	147	316
Behymer Avenue	between Sunnyside Avenue and Fowler Avenue	63.3	18	39	83	179
Shepherd Avenue	between Willow Avenue and Minnewawa Avenue	71.9	67	144	310	669
Shepherd Avenue	between Minnewawa Avenue and Clovis Avenue	71.2	60	130	280	603
Shepherd Avenue	between Clovis Avenue and Sunnyside Avenue	70.8	56	122	262	565
Shepherd Avenue	between Sunnyside Avenue and Project Driveway 3	69.0	43	92	199	428
Shepherd Avenue	between Project Driveway 3 and Fowler Avenue	69.0	43	92	199	428
Herndon Avenue	between State Route 168 Eastbound Ramps and Clovis Avenue	70.5	108	232	501	1,078
Willow Avenue	between Behymer Avenue and Shepherd Avenue	76.3	131	281	606	1,306
Minnewawa Avenue	between Behymer Avenue and Shepherd Avenue	68.6	40	86	186	401
Clovis Avenue	between Shepherd Avenue and Teague Avenue	69.9	49	106	229	493
Clovis Avenue	between Teague Avenue and Nees Avenue	69.9	50	107	230	496
Clovis Avenue	between Nees Avenue and Alluvial Avenue	70.9	57	123	265	571
Clovis Avenue	between Alluvial Avenue and Herndon Avenue	71.8	66	143	308	664
Sunnyside Avenue	between Project Driveway 1 and Shepherd Avenue	68.7	41	88	190	409
Sunnyside Avenue	between Shepherd Avenue and Teague Avenue	64.1	20	43	94	202
Sunnyside Avenue	between Teague Avenue and Nees Avenue	63.9	20	42	91	197
Fowler Avenue	between Behymer Avenue and Ticonderoga	64.3	21	45	97	208
Fowler Avenue	between Ticonderoga and Shepherd Avenue	67.9	36	79	169	365
Fowler Avenue	between Shepherd Avenue and Teague Avenue	68.4	39	84	181	391
Fowler Avenue	between Teague Avenue and Nees Avenue	67.9	36	78	168	363
Fowler Avenue	between Nees Avenue and State Route 168 Westbound Ramps	71.4	62	135	290	624

ROADWAY	SEGMENT LIMITS	DISTANCES TO CONTOUR LINES: CNEL	70	65	60	55
Behymer Avenue	between Willow Avenue and Minnewawa Avenue	66.4	29	62	134	288
Behymer Avenue	between Minnewawa Avenue and Sunnyside Avenue	67.0	32	68	147	318
Behymer Avenue	between Sunnyside Avenue and Fowler Avenue	63.4	18	39	84	181
Shepherd Avenue	between Willow Avenue and Minnewawa Avenue	72.1	69	149	321	691
Shepherd Avenue	between Minnewawa Avenue and Clovis Avenue	71.6	64	138	297	640
Shepherd Avenue	between Clovis Avenue and Sunnyside Avenue	71.5	63	135	291	627
Shepherd Avenue	between Sunnyside Avenue and Project Driveway 3	69.8	48	104	224	482
Shepherd Avenue	between Project Driveway 3 and Fowler Avenue	69.3	45	97	208	449
Herndon Avenue	between State Route 168 Eastbound Ramps and Clovis Avenue	70.6	109	236	508	1,094
Willow Avenue	between Behymer Avenue and Shepherd Avenue	76.3	132	284	613	1,320
Minnewawa Avenue	between Behymer Avenue and Shepherd Avenue	68.6	40	86	186	401
Clovis Avenue	between Shepherd Avenue and Teague Avenue	70.2	52	112	241	519
Clovis Avenue	between Teague Avenue and Nees Avenue	70.2	52	112	240	518
Clovis Avenue	between Nees Avenue and Alluvial Avenue	71.1	59	128	276	594
Clovis Avenue	between Alluvial Avenue and Herndon Avenue	72.1	69	148	318	685
Sunnyside Avenue	between Project Driveway 1 and Shepherd Avenue	69.2	44	95	204	439
Sunnyside Avenue	between Shepherd Avenue and Teague Avenue	64.7	22	48	102	221
Sunnyside Avenue	between Teague Avenue and Nees Avenue	64.5	22	47	100	216
Fowler Avenue	between Behymer Avenue and Ticonderoga	64.3	21	45	97	210
Fowler Avenue	between Ticonderoga and Shepherd Avenue	67.9	36	79	169	365
Fowler Avenue	between Shepherd Avenue and Teague Avenue	68.7	41	88	190	409
Fowler Avenue	between Teague Avenue and Nees Avenue	68.2	38	82	177	382
Fowler Avenue	between Nees Avenue and State Route 168 Westbound Ramps	71.6	64	137	296	638

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: North Shepherd SOI Expansion
ROADWAY: Shepherd Avenue
LOCATION: Project Driveway 3 to Fowler Avenue

JOB #: 0462-2020-25
DATE: 21-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 18,500
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIS 40
ROAD ELEVATION = 0.0
GRADE = 1.0 %
PK HR VOL = 1,850

RECEIVER INPUT DATA

RECEIVER DISTANCE = 80
DIST C/L TO WALL = 70
RECEIVER HEIGHT = 5.0
WALL DISTANCE FROM RECEIVER 10
PAD ELEVATION = 0.5
ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
MEDIUM TRUCKS = 10
HEAVY TRUCKS = 10
(10 = HARD SITE, 15 = SOFT SITE)

WALL INFORMATION

HTH WALL 6.0
AMBIENT= 0.0
BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCK	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	77.28	- -
MEDIUM TRUCKS	4.0	77.18	- -
HEAVY TRUCKS	8.0	77.15	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.1	66.2	64.4	58.4	67.0	67.6
MEDIUM TRUCKS	59.2	57.6	51.3	49.7	58.2	58.4
HEAVY TRUCKS	59.7	58.3	49.3	50.5	58.9	59.0
NOISE LEVELS (dBA)	69.2	67.3	64.8	59.5	68.1	68.6

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	62.0	60.1	58.3	52.3	60.9	61.5
MEDIUM TRUCKS	53.4	51.9	45.6	44.0	52.5	52.7
HEAVY TRUCKS	54.5	53.1	44.1	45.3	53.7	53.8
NOISE LEVELS (dBA)	63.2	61.4	58.8	53.6	62.1	62.7

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	58	184	581	1837
LDN	52	163	516	1632

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: North Shepherd SOI Expansion
ROADWAY: Shepherd Avenue
LOCATION: Sunnyside Avenue to Project Driveway 3

JOB #: 0462-2020-25
DATE: 21-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 20,620
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIS 40
ROAD ELEVATION = 0.0
GRADE = 1.0 %
PK HR VOL = 2,062

RECEIVER INPUT DATA

RECEIVER DISTANCE = 80
DIST C/L TO WALL = 70
RECEIVER HEIGHT = 5.0
WALL DISTANCE FROM RECEIVER 10
PAD ELEVATION = 0.5
ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL 6.0
AMBIENT= 0.0
BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCK	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	77.28	- -
MEDIUM TRUCKS	4.0	77.18	- -
HEAVY TRUCKS	8.0	77.15	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.6	66.7	64.9	58.9	67.5	68.1
MEDIUM TRUCKS	59.6	58.1	51.8	50.2	58.7	58.9
HEAVY TRUCKS	60.2	58.8	49.7	51.0	59.3	59.5
NOISE LEVELS (dBA)	69.6	67.8	65.2	60.0	68.6	69.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	62.5	60.6	58.8	52.8	61.4	62.0
MEDIUM TRUCKS	53.9	52.4	46.0	44.5	53.0	53.2
HEAVY TRUCKS	55.0	53.6	44.5	45.8	54.1	54.3
NOISE LEVELS (dBA)	63.7	61.9	59.3	54.0	62.6	63.1

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	65	205	647	2047
LDN	58	182	575	1819

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: North Shepherd SOI Expansion
ROADWAY: Sunnyside Avenue
LOCATION: between Project Driveway 1 and Shepherd Avenue

JOB #: 0462-2020-25
DATE: 21-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 17,920
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIS 27
ROAD ELEVATION = 0.0
GRADE = 1.0 %
PK HR VOL = 1,792

RECEIVER INPUT DATA

RECEIVER DISTANCE = 57
DIST C/L TO WALL = 47
RECEIVER HEIGHT = 5.0
WALL DISTANCE FROM RECEIVER 10
PAD ELEVATION = 0.5
ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL 6.0
AMBIENT= 0.0
BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCK	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	55.29	- -
MEDIUM TRUCKS	4.0	55.14	- -
HEAVY TRUCKS	8.0	55.09	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.4	67.5	65.8	59.7	68.3	68.9
MEDIUM TRUCKS	60.5	59.0	52.6	51.1	59.5	59.8
HEAVY TRUCKS	61.0	59.6	50.6	51.8	60.2	60.3
NOISE LEVELS (dBA)	70.5	68.7	66.1	60.8	69.4	69.9

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.0	61.1	59.4	53.3	61.9	62.5
MEDIUM TRUCKS	54.6	53.1	46.7	45.2	53.6	53.9
HEAVY TRUCKS	55.9	54.5	45.5	46.7	55.1	55.2
NOISE LEVELS (dBA)	64.3	62.5	59.9	54.7	63.2	63.7

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	56	177	561	1773
LDN	50	157	498	1575

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Nees Avenue and State Route 168 Westbound Ramps
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 17,180
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,718

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.4	67.5	65.7	59.6	68.3	68.9
MEDIUM TRUCKS	60.4	58.9	52.5	51.0	59.5	59.7
HEAVY TRUCKS	61.0	59.5	50.5	51.8	60.1	60.2
VEHICULAR NOISE	70.4	68.6	66.0	60.8	69.4	**69.9**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	49	106	227	490
LDN	45	98	210	453

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Willow Avenue and Minnewawa Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 2,360
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 236

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	59.8	57.9	56.2	50.1	58.7	59.4
MEDIUM TRUCKS	50.9	49.4	43.0	41.5	49.9	50.2
HEAVY TRUCKS	51.4	50.0	41.0	42.2	50.6	50.7
VEHICULAR NOISE	60.9	59.1	56.5	51.3	59.8	**60.4**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	11	24	53	114
LDN	11	23	49	105

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 5,790
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 579

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	64.6	62.7	61.0	54.9	63.5	64.1
MEDIUM TRUCKS	55.7	54.2	47.8	46.3	54.7	55.0
HEAVY TRUCKS	56.2	54.8	45.8	47.0	55.4	55.5
VEHICULAR NOISE	65.7	63.9	61.3	56.1	64.6	**65.1**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	24	51	110	237
LDN	22	47	102	219

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Behymer Avenue and Ticonderoga
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,760
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 476

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	62.9	61.0	59.2	53.2	61.8	62.4
MEDIUM TRUCKS	53.9	52.4	46.1	44.5	53.0	53.2
HEAVY TRUCKS	54.5	53.1	44.0	45.3	53.6	53.8
VEHICULAR NOISE	63.9	62.1	59.6	54.3	62.9	**63.4**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	18	39	84	181
LDN	17	36	78	168

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 2,330
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 233

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	59.8	57.9	56.1	50.1	58.7	59.3
MEDIUM TRUCKS	50.8	49.3	43.0	41.4	49.9	50.1
HEAVY TRUCKS	51.4	50.0	40.9	42.2	50.5	50.7
VEHICULAR NOISE	60.8	59.0	56.5	51.2	59.8	**60.3**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	11	24	52	113
LDN	10	22	48	104

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Alluvial Avenue and Herndon Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 17,260
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,726

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	69.4	67.5	65.7	59.7	68.3	68.9
MEDIUM TRUCKS	60.4	58.9	52.6	51.0	59.5	59.7
HEAVY TRUCKS	61.0	59.6	50.5	51.8	60.1	60.3
VEHICULAR NOISE	70.4	68.6	66.0	60.8	69.4	**69.9**

NOISE CONTOUR (FT)

NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	49	106	228	491
LDN	45	98	211	454

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion	JOB #:	0462-2020-25
ROADWAY	Behymer Avenue	DATE:	7-Feb-23
SEGMENT	between Minnewawa Avenue and Sunnyside Avenue	ENGINEER:	C. Pincock
LOCATION:	City of Clovis, CA	SCENARIO:	Existing

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 3,850
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 385

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	62.0	60.1	58.3	52.3	60.9	61.5
MEDIUM TRUCKS	53.0	51.5	45.2	43.6	52.1	52.3
HEAVY TRUCKS	53.6	52.2	43.1	44.4	52.7	52.8
VEHICULAR NOISE	63.0	61.2	58.6	53.4	62.0	**62.5**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	16	34	73	158
LDN	15	31	68	146

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion	JOB #:	0462-2020-25
ROADWAY	Behymer Avenue	DATE:	7-Feb-23
SEGMENT	between Sunnyside Avenue and Fowler Avenue	ENGINEER:	C. Pincock
LOCATION:	City of Clovis, CA	SCENARIO:	Existing

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	3,740
SPEED =	45
PK HR % =	10
NEAR LANE/FAR LANE DIST =	11
ROAD ELEVATION =	0
GRADE =	0
PK HR VOL =	374

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5
WALL DISTANCE FROM RECEIVER =		50
PAD ELEVATION =		0
ROADWAY VIEW:	LF ANGLE	-90
	RT ANGLE	90
	DF ANGLE	180

SITE CONDITIONS

AUTOMOBILES	15
MED TRUCKS	15
HVY TRUCKS	15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL =	0	FT
AMBIENT =	0	
BARRIER =	0	(0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	61.8	59.9	58.2	52.1	60.7	61.4
MEDIUM TRUCKS	52.9	51.4	45.0	43.5	51.9	52.2
HEAVY TRUCKS	53.4	52.0	43.0	44.2	52.6	52.7
VEHICULAR NOISE	62.9	61.1	58.5	53.3	61.8	**62.4**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	15	33	72	155
LDN	14	31	66	143

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Willow Avenue and Minnewawa Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 10,330
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,033

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.2	65.3	63.5	57.4	66.1	66.7
MEDIUM TRUCKS	58.2	56.7	50.3	48.8	57.3	57.5
HEAVY TRUCKS	58.8	57.3	48.3	49.5	57.9	58.0
VEHICULAR NOISE	68.2	66.4	63.8	58.6	67.1	**67.7**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	35	75	162	349
LDN	32	69	150	322

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Minnewawa Avenue and Clovis Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 9,420
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 942

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	66.8	64.9	63.1	57.0	65.7	66.3
MEDIUM TRUCKS	57.8	56.3	49.9	48.4	56.9	57.1
HEAVY TRUCKS	58.4	56.9	47.9	49.1	57.5	57.6
VEHICULAR NOISE	67.8	66.0	63.4	58.2	66.7	**67.3**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	33	71	152	328
LDN	30	65	141	303

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Clovis Avenue and Sunnyside Avenue
LOCATION: City of Clovis, CA SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 8,060
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 806

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	66.1	64.2	62.4	56.4	65.0	65.6
MEDIUM TRUCKS	57.1	55.6	49.3	47.7	56.2	56.4
HEAVY TRUCKS	57.7	56.3	47.2	48.5	56.8	57.0
VEHICULAR NOISE	67.1	65.3	62.7	57.5	66.1	**66.6**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	30	64	137	296
LDN	27	59	127	273

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Sunnyside Avenue and Project Driveway 3
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 7,040
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 704

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES	15	
MED TRUCKS	15	(HARD SITE=10, SOFT SITE=15)
HVY TRUCKS	15	

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	64.6	62.7	60.9	54.9	63.5	64.1
MEDIUM TRUCKS	55.6	54.1	47.8	46.2	54.7	54.9
HEAVY TRUCKS	56.2	54.8	45.7	47.0	55.3	55.5
VEHICULAR NOISE	65.6	63.8	61.3	56.0	64.6	**65.1**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	24	51	109	236
LDN	22	47	101	218

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Project Driveway 3 and Fowler Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 7,040
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 704

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	64.6	62.7	60.9	54.9	63.5	64.1
MEDIUM TRUCKS	55.6	54.1	47.8	46.2	54.7	54.9
HEAVY TRUCKS	56.2	54.8	45.7	47.0	55.3	55.5
VEHICULAR NOISE	65.6	63.8	61.3	56.0	64.6	**65.1**

NOISE CONTOUR (FT)

NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	24	51	109	236
LDN	22	47	101	218

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Herndon Avenue
SEGMENT between State Route 168 Eastbound Ramps and Clovis Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 37,560
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 125
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 3,756

RECEIVER INPUT DATA

RECEIVER DISTANCE = 100
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 100
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	78.1	- -
MEDIUM TRUCKS=	4.00	78.1	- -
HEAVY TRUCKS =	8.01	78.1	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.9	67.0	65.3	59.2	67.8	68.4
MEDIUM TRUCKS	60.0	58.5	52.1	50.6	59.0	59.3
HEAVY TRUCKS	60.5	59.1	50.1	51.3	59.7	59.8
VEHICULAR NOISE	70.0	68.2	65.6	60.3	68.9	**69.4**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	92	198	426	917
LDN	85	183	393	847

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Willow Avenue
SEGMENT between Behymer Avenue and Shepherd Avenue
LOCATION: City of Clovis, CA SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 14,520
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 85
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,452

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	26.5	- -
MEDIUM TRUCKS=	4.00	26.4	- -
HEAVY TRUCKS =	8.01	26.5	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.8	69.9	68.2	62.1	70.7	71.4
MEDIUM TRUCKS	62.9	61.4	55.1	53.5	62.0	62.2
HEAVY TRUCKS	63.4	62.0	53.0	54.2	62.6	62.7
VEHICULAR NOISE	72.9	71.1	68.5	63.3	71.8	**72.4**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	72	155	333	717
LDN	66	143	308	663

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Minnewawa Avenue
SEGMENT between Behymer Avenue and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,830
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 483

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.0	61.1	59.3	53.2	61.9	62.5
MEDIUM TRUCKS	54.0	52.5	46.1	44.6	53.1	53.3
HEAVY TRUCKS	54.6	53.1	44.1	45.4	53.7	53.8
VEHICULAR NOISE	64.0	62.2	59.6	54.4	62.9	**63.5**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	18	39	85	183
LDN	17	36	79	169

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,570
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 457

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.6	61.7	59.9	53.9	62.5	63.1
MEDIUM TRUCKS	54.7	53.2	46.8	45.2	53.7	53.9
HEAVY TRUCKS	55.2	53.8	44.8	46.0	54.4	54.5
VEHICULAR NOISE	64.7	62.9	60.3	55.0	63.6	**64.1**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	20	44	94	203
LDN	19	40	87	187

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 8,220
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 40
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 822

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	45.9	- -
MEDIUM TRUCKS=	4.00	45.8	- -
HEAVY TRUCKS =	8.01	45.9	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	65.8	63.9	62.1	56.1	64.7	65.3
MEDIUM TRUCKS	56.8	55.3	49.0	47.4	55.9	56.1
HEAVY TRUCKS	57.4	56.0	46.9	48.2	56.5	56.7
VEHICULAR NOISE	66.8	65.0	62.5	57.2	65.8	**66.3**

NOISE CONTOUR (FT)

NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	28	61	131	283
LDN	26	56	121	262

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Nees Avenue and Alluvial Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 10,870
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,087

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.4	65.5	63.7	57.7	66.3	66.9
MEDIUM TRUCKS	58.4	56.9	50.6	49.0	57.5	57.7
HEAVY TRUCKS	59.0	57.6	48.5	49.8	58.1	58.3
VEHICULAR NOISE	68.4	66.6	64.0	58.8	67.4	**67.9**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	36	78	168	361
LDN	33	72	155	334

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Project Driveway 1 and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 600
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 60

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	53.9	52.0	50.2	44.2	52.8	53.4
MEDIUM TRUCKS	44.9	43.4	37.1	35.5	44.0	44.2
HEAVY TRUCKS	45.5	44.1	35.0	36.3	44.6	44.8
VEHICULAR NOISE	54.9	53.1	50.6	45.3	53.9	**54.4**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	5	10	21	46
LDN	4	9	20	42

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 2,500
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 250

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	60.1	58.2	56.4	50.4	59.0	59.6
MEDIUM TRUCKS	51.1	49.6	43.3	41.7	50.2	50.4
HEAVY TRUCKS	51.7	50.3	41.2	42.5	50.8	51.0
VEHICULAR NOISE	61.1	59.3	56.8	51.5	60.1	**60.6**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	12	25	55	118
LDN	11	24	51	109

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Ticonderoga and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,860
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 486

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.9	62.0	60.2	54.2	62.8	63.4
MEDIUM TRUCKS	54.9	53.4	47.1	45.5	54.0	54.2
HEAVY TRUCKS	55.5	54.1	45.0	46.3	54.6	54.8
VEHICULAR NOISE	64.9	63.1	60.5	55.3	63.9	**64.4**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	21	45	98	211
LDN	20	42	91	195

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 5,780
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 578

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	64.6	62.7	61.0	54.9	63.5	64.1
MEDIUM TRUCKS	55.7	54.2	47.8	46.3	54.7	55.0
HEAVY TRUCKS	56.2	54.8	45.8	47.0	55.4	55.5
VEHICULAR NOISE	65.7	63.9	61.3	56.0	64.6	**65.1**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	24	51	110	237
LDN	22	47	102	219

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Willow Avenue and Minnewawa Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 2,420
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 242

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	60.0	58.1	56.3	50.2	58.9	59.5
MEDIUM TRUCKS	51.0	49.5	43.1	41.6	50.1	50.3
HEAVY TRUCKS	51.6	50.1	41.1	42.4	50.7	50.8
VEHICULAR NOISE	61.0	59.2	56.6	51.4	59.9	**60.5**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	12	25	54	116
LDN	11	23	50	107

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY: Fowler Avenue
SEGMENT: between Ticonderoga and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,860
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 486

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.9	62.0	60.2	54.2	62.8	63.4
MEDIUM TRUCKS	54.9	53.4	47.1	45.5	54.0	54.2
HEAVY TRUCKS	55.5	54.1	45.0	46.3	54.6	54.8
VEHICULAR NOISE	64.9	63.1	60.5	55.3	63.9	**64.4**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	21	45	98	211
LDN	20	42	91	195

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 3,300
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 330

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	61.3	59.4	57.6	51.6	60.2	60.8
MEDIUM TRUCKS	52.4	50.8	44.5	42.9	51.4	51.6
HEAVY TRUCKS	52.9	51.5	42.4	43.7	52.1	52.2
VEHICULAR NOISE	62.3	60.5	58.0	52.7	61.3	**61.8**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	14	31	66	142
LDN	13	28	61	131

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 6,650
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 665

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	65.2	63.3	61.6	55.5	64.1	64.7
MEDIUM TRUCKS	56.3	54.8	48.4	46.9	55.3	55.6
HEAVY TRUCKS	56.8	55.4	46.4	47.6	56.0	56.1
VEHICULAR NOISE	66.3	64.5	61.9	56.7	65.2	**65.7**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	26	56	121	260
LDN	24	52	112	240

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 6,640
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 664

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	65.2	63.3	61.6	55.5	64.1	64.7
MEDIUM TRUCKS	56.3	54.8	48.4	46.9	55.3	55.6
HEAVY TRUCKS	56.8	55.4	46.4	47.6	56.0	56.1
VEHICULAR NOISE	66.3	64.5	61.9	56.7	65.2	**65.7**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	26	56	121	260
LDN	24	52	111	240

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Nees Avenue and State Route 168 Westbound Ramps
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 17,980
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,798

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.6	67.7	65.9	59.8	68.5	69.1
MEDIUM TRUCKS	60.6	59.1	52.7	51.2	59.7	59.9
HEAVY TRUCKS	61.2	59.7	50.7	52.0	60.3	60.4
VEHICULAR NOISE	70.6	68.8	66.2	61.0	69.6	**70.1**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	50	109	234	505
LDN	47	101	217	467

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Minnewawa Avenue and Sunnyside Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 3,910
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 391

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	62.0	60.1	58.4	52.3	60.9	61.5
MEDIUM TRUCKS	53.1	51.6	45.2	43.7	52.1	52.4
HEAVY TRUCKS	53.6	52.2	43.2	44.4	52.8	52.9
VEHICULAR NOISE	63.1	61.3	58.7	53.5	62.0	**62.5**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	16	34	74	159
LDN	15	32	68	147

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Sunnyside Avenue and Fowler Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 3,800
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 380

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	61.9	60.0	58.3	52.2	60.8	61.4
MEDIUM TRUCKS	53.0	51.5	45.1	43.6	52.0	52.2
HEAVY TRUCKS	53.5	52.1	43.1	44.3	52.7	52.8
VEHICULAR NOISE	63.0	61.2	58.6	53.3	61.9	**62.4**

NOISE CONTOUR (FT)

NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	16	34	72	156
LDN	14	31	67	144

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Willow Avenue and Minnewawa Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 11,750
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,175

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	67.7	65.8	64.0	58.0	66.6	67.2
MEDIUM TRUCKS	58.8	57.3	50.9	49.4	57.8	58.0
HEAVY TRUCKS	59.3	57.9	48.9	50.1	58.5	58.6
VEHICULAR NOISE	68.8	67.0	64.4	59.1	67.7	**68.2**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	38	82	177	380
LDN	35	76	163	351

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion			JOB #:	0462-2020-25
ROADWAY	Shepherd Avenue			DATE:	7-Feb-23
SEGMENT	between Minnewawa Avenue and Clovis Avenue			ENGINEER:	C. Pincock
LOCATION:	City of Clovis, CA	SCENARIO:	Existing Plus Project		

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 11,590
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,159

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	67.7	65.8	64.0	57.9	66.6	67.2
MEDIUM TRUCKS	58.7	57.2	50.8	49.3	57.8	58.0
HEAVY TRUCKS	59.3	57.8	48.8	50.0	58.4	58.5
VEHICULAR NOISE	68.7	66.9	64.3	59.1	67.6	**68.2**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	38	81	175	377
LDN	35	75	162	348

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Clovis Avenue and Sunnyside Avenue
LOCATION: City of Clovis, CA SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 11,650
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,165

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.7	65.8	64.0	58.0	66.6	67.2
MEDIUM TRUCKS	58.7	57.2	50.9	49.3	57.8	58.0
HEAVY TRUCKS	59.3	57.9	48.8	50.1	58.4	58.6
VEHICULAR NOISE	68.7	66.9	64.3	59.1	67.7	**68.2**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	38	81	175	378
LDN	35	75	162	349

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion	JOB #:	0462-2020-25
ROADWAY	Shepherd Avenue	DATE:	7-Feb-23
SEGMENT	between Sunnyside Avenue and Project Driveway 3	ENGINEER:	C. Pincock
LOCATION:	City of Clovis, CA	SCENARIO:	Existing Plus Project

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 10,400
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,040

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	66.3	64.4	62.6	56.6	65.2	65.8
MEDIUM TRUCKS	57.3	55.8	49.5	47.9	56.4	56.6
HEAVY TRUCKS	57.9	56.5	47.4	48.7	57.0	57.2
VEHICULAR NOISE	67.3	65.5	63.0	57.7	66.3	**66.8**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	31	66	142	306
LDN	28	61	131	282

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Project Driveway 3 and Fowler Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 8,300
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 830

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	65.3	63.4	61.6	55.6	64.2	64.8
MEDIUM TRUCKS	56.4	54.9	48.5	46.9	55.4	55.6
HEAVY TRUCKS	56.9	55.5	46.5	47.7	56.1	56.2
VEHICULAR NOISE	66.4	64.6	62.0	56.7	65.3	**65.8**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	26	57	122	263
LDN	24	52	113	243

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Herndon Avenue
SEGMENT between State Route 168 Eastbound Ramps and Clovis Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 38,640
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 125
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 3,864

RECEIVER INPUT DATA

RECEIVER DISTANCE = 100
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 100
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	78.1	- -
MEDIUM TRUCKS=	4.00	78.1	- -
HEAVY TRUCKS =	8.01	78.1	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.1	67.2	65.4	59.3	68.0	68.6
MEDIUM TRUCKS	60.1	58.6	52.2	50.7	59.1	59.4
HEAVY TRUCKS	60.7	59.2	50.2	51.4	59.8	59.9
VEHICULAR NOISE	70.1	68.3	65.7	60.5	69.0	**69.6**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	93	201	434	934
LDN	86	186	401	863

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY: Willow Avenue
SEGMENT: between Behymer Avenue and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 15,090
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 85
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,509

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	26.5	- -
MEDIUM TRUCKS=	4.00	26.4	- -
HEAVY TRUCKS =	8.01	26.5	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	72.0	70.1	68.3	62.3	70.9	71.5
MEDIUM TRUCKS	63.1	61.6	55.2	53.7	62.1	62.4
HEAVY TRUCKS	63.6	62.2	53.2	54.4	62.8	62.9
VEHICULAR NOISE	73.1	71.3	68.7	63.4	72.0	**72.5**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	74	159	342	736
LDN	68	147	316	680

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Minnewawa Avenue
SEGMENT between Behymer Avenue and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,830
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 483

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.0	61.1	59.3	53.2	61.9	62.5
MEDIUM TRUCKS	54.0	52.5	46.1	44.6	53.1	53.3
HEAVY TRUCKS	54.6	53.1	44.1	45.4	53.7	53.8
VEHICULAR NOISE	64.0	62.2	59.6	54.4	62.9	**63.5**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	18	39	85	183
LDN	17	36	79	169

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 5,990
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 599

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	64.8	62.9	61.1	55.1	63.7	64.3
MEDIUM TRUCKS	55.8	54.3	48.0	46.4	54.9	55.1
HEAVY TRUCKS	56.4	55.0	45.9	47.2	55.5	55.7
VEHICULAR NOISE	65.8	64.0	61.4	56.2	64.8	**65.3**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	24	52	113	243
LDN	22	48	104	224

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion		
ROADWAY	Clovis Avenue		
SEGMENT	between Teague Avenue and Nees Avenue		
LOCATION:	City of Clovis, CA	SCENARIO:	Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 9,530
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 40
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 953

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	45.9	- -
MEDIUM TRUCKS=	4.00	45.8	- -
HEAVY TRUCKS =	8.01	45.9	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	66.4	64.5	62.8	56.7	65.3	65.9
MEDIUM TRUCKS	57.5	56.0	49.6	48.1	56.5	56.8
HEAVY TRUCKS	58.0	56.6	47.6	48.8	57.2	57.3
VEHICULAR NOISE	67.5	65.7	63.1	57.9	66.4	**66.9**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	31	67	145	313
LDN	29	62	134	289

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Nees Avenue and Alluvial Avenue
LOCATION: City of Clovis, CA SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 12,180
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,218

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	67.9	66.0	64.2	58.1	66.8	67.4
MEDIUM TRUCKS	58.9	57.4	51.1	49.5	58.0	58.2
HEAVY TRUCKS	59.5	58.0	49.0	50.3	58.6	58.7
VEHICULAR NOISE	68.9	67.1	64.5	59.3	67.9	**68.4**

NOISE CONTOUR (FT)

NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	39	84	181	389
LDN	36	78	167	360

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion
ROADWAY	Clovis Avenue
SEGMENT	between Alluvial Avenue and Herndon Avenue
LOCATION:	City of Clovis, CA
SCENARIO:	Existing Plus Project

JOB #:	0462-2020-25
DATE:	7-Feb-23
ENGINEER:	C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	18,570
SPEED =	45
PK HR % =	10
NEAR LANE/FAR LANE DIST =	50
ROAD ELEVATION =	0
GRADE =	0
PK HR VOL =	1,857

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5
WALL DISTANCE FROM RECEIVER =		50
PAD ELEVATION =		0
ROADWAY VIEW:	LF ANGLE	-90
	RT ANGLE	90
	DF ANGLE	180

SITE CONDITIONS

AUTOMOBILES	15
MED TRUCKS	15
HVY TRUCKS	15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL =	0	FT
AMBIENT =	0	
BARRIER =	0	(0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.7	67.8	66.0	60.0	68.6	69.2
MEDIUM TRUCKS	60.8	59.2	52.9	51.3	59.8	60.0
HEAVY TRUCKS	61.3	59.9	50.8	52.1	60.4	60.6
VEHICULAR NOISE	70.7	68.9	66.4	61.1	69.7	**70.2**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	52	111	239	516
LDN	48	103	221	477

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Project Driveway 1 and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 2,430
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 243

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	60.0	58.1	56.3	50.3	58.9	59.5
MEDIUM TRUCKS	51.0	49.5	43.2	41.6	50.1	50.3
HEAVY TRUCKS	51.6	50.2	41.1	42.4	50.7	50.9
VEHICULAR NOISE	61.0	59.2	56.6	51.4	60.0	**60.5**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	12	25	54	116
LDN	11	23	50	107

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA
SCENARIO: Existing Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 3,130
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 313

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	61.1	59.2	57.4	51.4	60.0	60.6
MEDIUM TRUCKS	52.1	50.6	44.3	42.7	51.2	51.4
HEAVY TRUCKS	52.7	51.3	42.2	43.5	51.8	51.9
VEHICULAR NOISE	62.1	60.3	57.7	52.5	61.1	**61.6**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	14	30	64	137
LDN	13	27	59	127

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion	JOB #:	0462-2020-25
ROADWAY	Fowler Avenue	DATE:	7-Feb-23
SEGMENT	between Behymer Avenue and Ticonderoga	ENGINEER:	C. Pincock
LOCATION:	City of Clovis, CA	SCENARIO:	Existing Plus Project

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,820
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 482

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES	15	
MED TRUCKS	15	(HARD SITE=10, SOFT SITE=15)
HVY TRUCKS	15	

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	62.9	61.0	59.3	53.2	61.9	62.5
MEDIUM TRUCKS	54.0	52.5	46.1	44.6	53.0	53.3
HEAVY TRUCKS	54.6	53.1	44.1	45.3	53.7	53.8
VEHICULAR NOISE	64.0	62.2	59.6	54.4	62.9	**63.5**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	18	39	85	183
LDN	17	36	79	169

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Willow Avenue and Minnewawa Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 9,470
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 947

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	65.9	64.0	62.2	56.2	64.8	65.4
MEDIUM TRUCKS	56.9	55.4	49.1	47.5	56.0	56.2
HEAVY TRUCKS	57.5	56.1	47.0	48.3	56.6	56.8
VEHICULAR NOISE	66.9	65.1	62.5	57.3	65.9	**66.4**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	29	62	133	287
LDN	27	57	123	265

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Nees Avenue and State Route 168 Westbound Ramps
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 24,720
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,472

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	70.9	69.0	67.3	61.2	69.8	70.5
MEDIUM TRUCKS	62.0	60.5	54.1	52.6	61.0	61.3
HEAVY TRUCKS	62.5	61.1	52.1	53.3	61.7	61.8
VEHICULAR NOISE	72.0	70.2	67.6	62.4	70.9	**71.4**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	62	135	290	624
LDN	58	124	268	577

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion	JOB #:	0462-2020-25
ROADWAY	Fowler Avenue	DATE:	7-Feb-23
SEGMENT	between Shepherd Avenue and Teague Avenue	ENGINEER:	C. Pincock
LOCATION:	City of Clovis, CA	SCENARIO:	2046 No Project

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 12,250
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,225

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES	15	
MED TRUCKS	15	(HARD SITE=10, SOFT SITE=15)
HVY TRUCKS	15	

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.9	66.0	64.2	58.2	66.8	67.4
MEDIUM TRUCKS	58.9	57.4	51.1	49.5	58.0	58.2
HEAVY TRUCKS	59.5	58.1	49.0	50.3	58.6	58.8
VEHICULAR NOISE	68.9	67.1	64.6	59.3	67.9	**68.4**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	39	84	181	391
LDN	36	78	168	361

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Minnewawa Avenue and Sunnyside Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 10,960
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,096

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	66.5	64.6	62.9	56.8	65.4	66.0
MEDIUM TRUCKS	57.6	56.1	49.7	48.2	56.6	56.8
HEAVY TRUCKS	58.1	56.7	47.7	48.9	57.3	57.4
VEHICULAR NOISE	67.6	65.8	63.2	57.9	66.5	**67.0**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	32	68	147	316
LDN	29	63	136	292

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Sunnyside Avenue and Fowler Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,670
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 467

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	62.8	60.9	59.1	53.1	61.7	62.3
MEDIUM TRUCKS	53.9	52.4	46.0	44.4	52.9	53.1
HEAVY TRUCKS	54.4	53.0	44.0	45.2	53.6	53.7
VEHICULAR NOISE	63.9	62.1	59.5	54.2	62.8	**63.3**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	18	39	83	179
LDN	17	36	77	166

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Willow Avenue and Minnewawa Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 27,390
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,739

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.4	69.5	67.7	61.7	70.3	70.9
MEDIUM TRUCKS	62.4	60.9	54.6	53.0	61.5	61.7
HEAVY TRUCKS	63.0	61.6	52.5	53.8	62.1	62.3
VEHICULAR NOISE	72.4	70.6	68.1	62.8	71.4	**71.9**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	67	144	310	669
LDN	62	133	287	618

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Minnewawa Avenue and Clovis Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 23,480
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,348

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	70.7	68.8	67.1	61.0	69.6	70.2
MEDIUM TRUCKS	61.8	60.3	53.9	52.4	60.8	61.1
HEAVY TRUCKS	62.3	60.9	51.9	53.1	61.5	61.6
VEHICULAR NOISE	71.8	70.0	67.4	62.1	70.7	**71.2**

NOISE CONTOUR (FT)

NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	60	130	280	603
LDN	56	120	259	558

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Clovis Avenue and Sunnyside Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 21,260
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,126

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	70.3	68.4	66.6	60.6	69.2	69.8
MEDIUM TRUCKS	61.3	59.8	53.5	51.9	60.4	60.6
HEAVY TRUCKS	61.9	60.5	51.4	52.7	61.0	61.2
VEHICULAR NOISE	71.3	69.5	67.0	61.7	70.3	**70.8**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	56	122	262	565
LDN	52	112	242	522

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Sunnyside Avenue and Project Driveway 3
LOCATION: City of Clovis, CA SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 17,260
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,726

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.5	66.6	64.8	58.8	67.4	68.0
MEDIUM TRUCKS	59.5	58.0	51.7	50.1	58.6	58.8
HEAVY TRUCKS	60.1	58.7	49.6	50.9	59.2	59.4
VEHICULAR NOISE	69.5	67.7	65.2	59.9	68.5	**69.0**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	43	92	199	428
LDN	40	85	184	396

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Project Driveway 3 and Fowler Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 17,240
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,724

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.5	66.6	64.8	58.8	67.4	68.0
MEDIUM TRUCKS	59.5	58.0	51.7	50.1	58.6	58.8
HEAVY TRUCKS	60.1	58.7	49.6	50.9	59.2	59.4
VEHICULAR NOISE	69.5	67.7	65.1	59.9	68.5	**69.0**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	43	92	199	428
LDN	40	85	184	396

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Herndon Avenue
SEGMENT between State Route 168 Eastbound Ramps and Clovis Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 47,910
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 125
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 4,791

RECEIVER INPUT DATA

RECEIVER DISTANCE = 100
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 100
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	78.1	- -
MEDIUM TRUCKS=	4.00	78.1	- -
HEAVY TRUCKS =	8.01	78.1	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	70.0	68.1	66.3	60.3	68.9	69.5
MEDIUM TRUCKS	61.0	59.5	53.2	51.6	60.1	60.3
HEAVY TRUCKS	61.6	60.2	51.1	52.4	60.7	60.9
VEHICULAR NOISE	71.0	69.2	66.7	61.4	70.0	**70.5**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	108	232	501	1078
LDN	100	215	463	997

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Willow Avenue
SEGMENT between Behymer Avenue and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 35,690
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 85
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 3,569

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	26.5	- -
MEDIUM TRUCKS=	4.00	26.4	- -
HEAVY TRUCKS =	8.01	26.5	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	75.7	73.9	72.1	66.0	74.7	75.3
MEDIUM TRUCKS	66.8	65.3	59.0	57.4	65.9	66.1
HEAVY TRUCKS	67.4	65.9	56.9	58.1	66.5	66.6
VEHICULAR NOISE	76.8	75.0	72.4	67.2	75.7	**76.3**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	131	281	606	1306
LDN	121	260	560	1207

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Minnewawa Avenue
SEGMENT between Behymer Avenue and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 15,610
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,561

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.1	66.2	64.4	58.3	67.0	67.6
MEDIUM TRUCKS	59.1	57.6	51.2	49.7	58.1	58.4
HEAVY TRUCKS	59.7	58.2	49.2	50.4	58.8	58.9
VEHICULAR NOISE	69.1	67.3	64.7	59.5	68.0	**68.6**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	40	86	186	401
LDN	37	80	172	370

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 17,340
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,734

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.4	67.5	65.7	59.7	68.3	68.9
MEDIUM TRUCKS	60.5	58.9	52.6	51.0	59.5	59.7
HEAVY TRUCKS	61.0	59.6	50.5	51.8	60.2	60.3
VEHICULAR NOISE	70.4	68.6	66.1	60.8	69.4	**69.9**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	49	106	229	493
LDN	46	98	211	455

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 19,030
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 40
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,903

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	45.9	- -
MEDIUM TRUCKS=	4.00	45.8	- -
HEAVY TRUCKS =	8.01	45.9	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.4	67.5	65.8	59.7	68.3	68.9
MEDIUM TRUCKS	60.5	59.0	52.6	51.1	59.5	59.8
HEAVY TRUCKS	61.0	59.6	50.6	51.8	60.2	60.3
VEHICULAR NOISE	70.5	68.7	66.1	60.9	69.4	**69.9**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	50	107	230	496
LDN	46	99	213	458

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Nees Avenue and Alluvial Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 21,620
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,162

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	70.4	68.5	66.7	60.6	69.3	69.9
MEDIUM TRUCKS	61.4	59.9	53.5	52.0	60.5	60.7
HEAVY TRUCKS	62.0	60.5	51.5	52.8	61.1	61.2
VEHICULAR NOISE	71.4	69.6	67.0	61.8	70.4	**70.9**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	57	123	265	571
LDN	53	114	245	528

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Alluvial Avenue and Herndon Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 27,120
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,712

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.3	69.4	67.7	61.6	70.2	70.9
MEDIUM TRUCKS	62.4	60.9	54.5	53.0	61.4	61.7
HEAVY TRUCKS	62.9	61.5	52.5	53.7	62.1	62.2
VEHICULAR NOISE	72.4	70.6	68.0	62.8	71.3	**71.8**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	66	143	308	664
LDN	61	132	285	614

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Project Driveway 1 and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 16,090
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,609

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.2	66.3	64.5	58.5	67.1	67.7
MEDIUM TRUCKS	59.2	57.7	51.4	49.8	58.3	58.5
HEAVY TRUCKS	59.8	58.4	49.3	50.6	58.9	59.1
VEHICULAR NOISE	69.2	67.4	64.8	59.6	68.2	**68.7**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	41	88	190	409
LDN	38	81	175	378

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 5,580
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 558

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.6	61.7	59.9	53.9	62.5	63.1
MEDIUM TRUCKS	54.6	53.1	46.8	45.2	53.7	53.9
HEAVY TRUCKS	55.2	53.8	44.7	46.0	54.3	54.5
VEHICULAR NOISE	64.6	62.8	60.2	55.0	63.6	**64.1**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	20	43	94	202
LDN	19	40	87	186

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY: Sunnyside Avenue
SEGMENT: between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 5,380
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 538

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.4	61.5	59.8	53.7	62.3	62.9
MEDIUM TRUCKS	54.5	53.0	46.6	45.1	53.5	53.8
HEAVY TRUCKS	55.0	53.6	44.6	45.8	54.2	54.3
VEHICULAR NOISE	64.5	62.7	60.1	54.8	63.4	**63.9**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	20	42	91	197
LDN	18	39	84	182

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Behymer Avenue and Ticonderoga
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 5,860
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 586

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	63.8	61.9	60.1	54.1	62.7	63.3
MEDIUM TRUCKS	54.8	53.3	47.0	45.4	53.9	54.1
HEAVY TRUCKS	55.4	54.0	44.9	46.2	54.5	54.7
VEHICULAR NOISE	64.8	63.0	60.5	55.2	63.8	**64.3**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	21	45	97	208
LDN	19	42	89	193

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Ticonderoga and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 11,040
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,104

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.4	65.5	63.8	57.7	66.3	66.9
MEDIUM TRUCKS	58.5	57.0	50.6	49.1	57.5	57.8
HEAVY TRUCKS	59.0	57.6	48.6	49.8	58.2	58.3
VEHICULAR NOISE	68.5	66.7	64.1	58.9	67.4	**67.9**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	36	79	169	365
LDN	34	73	156	337

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 No Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 10,960
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,096

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.4	65.5	63.7	57.7	66.3	66.9
MEDIUM TRUCKS	58.5	57.0	50.6	49.0	57.5	57.7
HEAVY TRUCKS	59.0	57.6	48.6	49.8	58.2	58.3
VEHICULAR NOISE	68.5	66.7	64.1	58.8	67.4	**67.9**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	36	78	168	363
LDN	34	72	156	335

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Willow Avenue and Minnewawa Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 9,530
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 953

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	65.9	64.0	62.2	56.2	64.8	65.4
MEDIUM TRUCKS	57.0	55.5	49.1	47.5	56.0	56.2
HEAVY TRUCKS	57.5	56.1	47.1	48.3	56.7	56.8
VEHICULAR NOISE	67.0	65.2	62.6	57.3	65.9	**66.4**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	29	62	134	288
LDN	27	57	124	266

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Sunnyside Avenue and Fowler Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 4,730
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 473

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	62.9	61.0	59.2	53.1	61.8	62.4
MEDIUM TRUCKS	53.9	52.4	46.0	44.5	53.0	53.2
HEAVY TRUCKS	54.5	53.0	44.0	45.3	53.6	53.7
VEHICULAR NOISE	63.9	62.1	59.5	54.3	62.9	**63.4**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	18	39	84	181
LDN	17	36	78	167

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Behymer Avenue
SEGMENT between Minnewawa Avenue and Sunnyside Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 11,020
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,102

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	66.5	64.6	62.9	56.8	65.4	66.0
MEDIUM TRUCKS	57.6	56.1	49.7	48.2	56.6	56.9
HEAVY TRUCKS	58.1	56.7	47.7	48.9	57.3	57.4
VEHICULAR NOISE	67.6	65.8	63.2	58.0	66.5	**67.0**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	32	68	147	318
LDN	29	63	136	294

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY: Fowler Avenue
SEGMENT: between Nees Avenue and State Route 168 Westbound Ramps
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 25,520
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,552

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES	15	
MED TRUCKS	15	(HARD SITE=10, SOFT SITE=15)
HVY TRUCKS	15	

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.1	69.2	67.4	61.4	70.0	70.6
MEDIUM TRUCKS	62.1	60.6	54.3	52.7	61.2	61.4
HEAVY TRUCKS	62.7	61.3	52.2	53.5	61.8	62.0
VEHICULAR NOISE	72.1	70.3	67.7	62.5	71.1	**71.6**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	64	137	296	638
LDN	59	127	274	589

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Willow Avenue and Minnewawa Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 28,810
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,881

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.6	69.7	67.9	61.9	70.5	71.1
MEDIUM TRUCKS	62.7	61.2	54.8	53.2	61.7	61.9
HEAVY TRUCKS	63.2	61.8	52.8	54.0	62.4	62.5
VEHICULAR NOISE	72.7	70.9	68.3	63.0	71.6	**72.1**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	69	149	321	691
LDN	64	138	297	639

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Minnewawa Avenue and Clovis Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 25,650
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,565

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.1	69.2	67.4	61.4	70.0	70.6
MEDIUM TRUCKS	62.2	60.6	54.3	52.7	61.2	61.4
HEAVY TRUCKS	62.7	61.3	52.2	53.5	61.9	62.0
VEHICULAR NOISE	72.1	70.3	67.8	62.5	71.1	**71.6**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	64	138	297	640
LDN	59	127	274	591

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Clovis Avenue and Sunnyside Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 24,850
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,485

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.0	69.1	67.3	61.2	69.9	70.5
MEDIUM TRUCKS	62.0	60.5	54.1	52.6	61.1	61.3
HEAVY TRUCKS	62.6	61.1	52.1	53.4	61.7	61.8
VEHICULAR NOISE	72.0	70.2	67.6	62.4	71.0	**71.5**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	63	135	291	627
LDN	58	125	269	579

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY: Shepherd Avenue
SEGMENT: between Sunnyside Avenue and Project Driveway 3
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 20,620
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,062

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.3	67.4	65.6	59.5	68.2	68.8
MEDIUM TRUCKS	60.3	58.8	52.4	50.9	59.4	59.6
HEAVY TRUCKS	60.9	59.4	50.4	51.7	60.0	60.1
VEHICULAR NOISE	70.3	68.5	65.9	60.7	69.3	**69.8**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	48	104	224	482
LDN	45	96	207	446

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Shepherd Avenue
SEGMENT between Project Driveway 3 and Fowler Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 18,500
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,850

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.8	66.9	65.1	59.1	67.7	68.3
MEDIUM TRUCKS	59.8	58.3	52.0	50.4	58.9	59.1
HEAVY TRUCKS	60.4	59.0	49.9	51.2	59.5	59.7
VEHICULAR NOISE	69.8	68.0	65.5	60.2	68.8	**69.3**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	45	97	208	449
LDN	41	89	192	415

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Herndon Avenue
SEGMENT between State Route 168 Eastbound Ramps and Clovis Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 48,990
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 125
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 4,899

RECEIVER INPUT DATA

RECEIVER DISTANCE = 100
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 100
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	78.1	- -
MEDIUM TRUCKS=	4.00	78.1	- -
HEAVY TRUCKS =	8.01	78.1	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	70.1	68.2	66.4	60.4	69.0	69.6
MEDIUM TRUCKS	61.1	59.6	53.3	51.7	60.2	60.4
HEAVY TRUCKS	61.7	60.3	51.2	52.5	60.8	61.0
VEHICULAR NOISE	71.1	69.3	66.7	61.5	70.1	**70.6**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	109	236	508	1094
LDN	101	218	469	1011

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Willow Avenue
SEGMENT between Behymer Avenue and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 36,260
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 85
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 3,626

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	**DAY**	**EVE**	**NIGHT**	**DAILY**
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	**HEIGHT**	**SLE DISTANCE**	**GRADE ADJUSTMENT**
AUTOMOBILES =	2.00	26.5	- -
MEDIUM TRUCKS=	4.00	26.4	- -
HEAVY TRUCKS =	8.01	26.5	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	**PK HR LEQ**	**DAY LEQ**	**EVEN LEQ**	**NIGHT LEQ**	**LDN**	**CNEL**
AUTOMOBILES	75.8	73.9	72.2	66.1	74.7	75.3
MEDIUM TRUCKS	66.9	65.4	59.0	57.5	65.9	66.2
HEAVY TRUCKS	67.4	66.0	57.0	58.2	66.6	66.7
VEHICULAR NOISE	76.9	75.1	72.5	67.2	75.8	**76.3**

NOISE CONTOUR (FT)

NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	132	284	613	1320
LDN	122	263	566	1220

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Minnewawa Avenue
SEGMENT between Behymer Avenue and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 15,610
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,561

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.1	66.2	64.4	58.3	67.0	67.6
MEDIUM TRUCKS	59.1	57.6	51.2	49.7	58.1	58.4
HEAVY TRUCKS	59.7	58.2	49.2	50.4	58.8	58.9
VEHICULAR NOISE	69.1	67.3	64.7	59.5	68.0	**68.6**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	40	86	186	401
LDN	37	80	172	370

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 18,760
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,876

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.7	67.8	66.1	60.0	68.6	69.3
MEDIUM TRUCKS	60.8	59.3	52.9	51.4	59.8	60.1
HEAVY TRUCKS	61.3	59.9	50.9	52.1	60.5	60.6
VEHICULAR NOISE	70.8	69.0	66.4	61.2	69.7	**70.2**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	52	112	241	519
LDN	48	103	223	480

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 20,340
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 40
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,034

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	45.9	- -
MEDIUM TRUCKS=	4.00	45.8	- -
HEAVY TRUCKS =	8.01	45.9	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.7	67.8	66.1	60.0	68.6	69.2
MEDIUM TRUCKS	60.8	59.3	52.9	51.4	59.8	60.1
HEAVY TRUCKS	61.3	59.9	50.9	52.1	60.5	60.6
VEHICULAR NOISE	70.8	69.0	66.4	61.1	69.7	**70.2**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	52	112	240	518
LDN	48	103	222	479

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion	JOB #:	0462-2020-25
ROADWAY	Clovis Avenue	DATE:	7-Feb-23
SEGMENT	between Nees Avenue and Alluvial Avenue	ENGINEER:	C. Pincock
LOCATION:	City of Clovis, CA	SCENARIO:	2046 Plus Project

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	22,930
SPEED =	45
PK HR % =	10
NEAR LANE/FAR LANE DIST =	50
ROAD ELEVATION =	0
GRADE =	0
PK HR VOL =	2,293

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5
WALL DISTANCE FROM RECEIVER =		50
PAD ELEVATION =		0
ROADWAY VIEW:	LF ANGLE	-90
	RT ANGLE	90
	DF ANGLE	180

SITE CONDITIONS

AUTOMOBILES	15
MED TRUCKS	15
HVY TRUCKS	15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	70.6	68.7	67.0	60.9	69.5	70.1
MEDIUM TRUCKS	61.7	60.2	53.8	52.3	60.7	60.9
HEAVY TRUCKS	62.2	60.8	51.8	53.0	61.4	61.5
VEHICULAR NOISE	71.7	69.9	67.3	62.0	70.6	**71.1**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	59	128	276	594
LDN	55	118	255	549

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Clovis Avenue
SEGMENT between Alluvial Avenue and Herndon Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 28,430
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 2,843

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	71.5	69.7	67.9	61.8	70.5	71.1
MEDIUM TRUCKS	62.6	61.1	54.7	53.2	61.6	61.9
HEAVY TRUCKS	63.2	61.7	52.7	53.9	62.3	62.4
VEHICULAR NOISE	72.6	70.8	68.2	63.0	71.5	**72.1**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	69	148	318	685
LDN	63	136	294	633

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Project Driveway 1 and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 17,920
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,792

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.7	66.8	65.0	58.9	67.6	68.2
MEDIUM TRUCKS	59.7	58.2	51.8	50.3	58.7	59.0
HEAVY TRUCKS	60.3	58.8	49.8	51.0	59.4	59.5
VEHICULAR NOISE	69.7	67.9	65.3	60.1	68.6	**69.2**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	44	95	204	439
LDN	41	87	188	406

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Shepherd Avenue and Teague Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 6,380
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 638

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	64.2	62.3	60.5	54.4	63.1	63.7
MEDIUM TRUCKS	55.2	53.7	47.3	45.8	54.3	54.5
HEAVY TRUCKS	55.8	54.3	45.3	46.6	54.9	55.0
VEHICULAR NOISE	65.2	63.4	60.8	55.6	64.2	**64.7**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	22	48	102	221
LDN	20	44	95	204

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Sunnyside Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 6,180
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 618

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15 (HARD SITE=10, SOFT SITE=15)
HVY TRUCKS 15

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	64.0	62.1	60.4	54.3	62.9	63.5
MEDIUM TRUCKS	55.1	53.6	47.2	45.7	54.1	54.4
HEAVY TRUCKS	55.6	54.2	45.2	46.4	54.8	54.9
VEHICULAR NOISE	65.1	63.3	60.7	55.4	64.0	**64.5**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	22	47	100	216
LDN	20	43	93	200

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Behymer Avenue and Ticonderoga
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 5,920
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 11
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 592

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	49.8	- -
MEDIUM TRUCKS=	4.00	49.7	- -
HEAVY TRUCKS =	8.01	49.8	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	63.8	61.9	60.2	54.1	62.7	63.3
MEDIUM TRUCKS	54.9	53.4	47.0	45.5	53.9	54.2
HEAVY TRUCKS	55.4	54.0	45.0	46.2	54.6	54.7
VEHICULAR NOISE	64.9	63.1	60.5	55.3	63.8	**64.3**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	21	45	97	210
LDN	19	42	90	194

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Ticonderoga and Shepherd Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 11,040
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,104

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.4	65.5	63.8	57.7	66.3	66.9
MEDIUM TRUCKS	58.5	57.0	50.6	49.1	57.5	57.8
HEAVY TRUCKS	59.0	57.6	48.6	49.8	58.2	58.3
VEHICULAR NOISE	68.5	66.7	64.1	58.9	67.4	**67.9**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	36	79	169	365
LDN	34	73	156	337

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT:	North Shepherd SOI Expansion	JOB #:	0462-2020-25
ROADWAY	Fowler Avenue	DATE:	7-Feb-23
SEGMENT	between Shepherd Avenue and Teague Avenue	ENGINEER:	C. Pincock
LOCATION:	City of Clovis, CA	SCENARIO:	2046 Plus Project

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	13,110
SPEED =	45
PK HR % =	10
NEAR LANE/FAR LANE DIST =	50
ROAD ELEVATION =	0
GRADE =	0
PK HR VOL =	1,311

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5
WALL DISTANCE FROM RECEIVER =		50
PAD ELEVATION =		0
ROADWAY VIEW:	LF ANGLE	-90
	RT ANGLE	90
	DF ANGLE	180

SITE CONDITIONS

AUTOMOBILES	15
MED TRUCKS	15
HVY TRUCKS	15

(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL =	0	FT
AMBIENT =	0	
BARRIER =	0	(0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	68.2	66.3	64.5	58.5	67.1	67.7
MEDIUM TRUCKS	59.2	57.7	51.4	49.8	58.3	58.5
HEAVY TRUCKS	59.8	58.4	49.3	50.6	58.9	59.1
VEHICULAR NOISE	69.2	67.4	64.9	59.6	68.2	**68.7**

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	41	88	190	409
LDN	38	81	175	378

FHWA-RD-77-108 ROADWAY TRAFFIC NOISE PREDICTION MODEL (CNEL) - CALVENO

PROJECT: North Shepherd SOI Expansion
ROADWAY Fowler Avenue
SEGMENT between Teague Avenue and Nees Avenue
LOCATION: City of Clovis, CA
SCENARIO: 2046 Plus Project

JOB #: 0462-2020-25
DATE: 7-Feb-23
ENGINEER: C. Pincock

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT = 11,820
SPEED = 45
PK HR % = 10
NEAR LANE/FAR LANE DIST = 50
ROAD ELEVATION = 0
GRADE = 0
PK HR VOL = 1,182

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 0
RECEIVER HEIGHT = 5
WALL DISTANCE FROM RECEIVER = 50
PAD ELEVATION = 0
ROADWAY VIEW: LF ANGLE -90
RT ANGLE 90
DF ANGLE 180

SITE CONDITIONS

AUTOMOBILES 15
MED TRUCKS 15
HVY TRUCKS 15
(HARD SITE=10, SOFT SITE=15)

WALL INFORMATION

HTH WALL = 0 FT
AMBIENT = 0
BARRIER = 0 (0=WALL,1=BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVE	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.974
MEDIUM TRUCKS	0.848	0.049	0.103	0.018
HEAVY TRUCKS	0.865	0.027	0.108	0.007

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES =	2.00	43.4	- -
MEDIUM TRUCKS=	4.00	43.3	- -
HEAVY TRUCKS =	8.01	43.4	0.0

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.7	65.8	64.1	58.0	66.6	67.2
MEDIUM TRUCKS	58.8	57.3	50.9	49.4	57.8	58.1
HEAVY TRUCKS	59.3	57.9	48.9	50.1	58.5	58.6
VEHICULAR NOISE	68.8	67.0	64.4	59.2	67.7	**68.2**

NOISE CONTOUR (FT)				
NOISE LEVELS	**70 dBA**	**65 dBA**	**60 dBA**	**55 dBA**
CNEL	38	82	177	382
LDN	35	76	164	353

Appendix C:

Construction Noise Modeling Output

Receptor - Residences to the north, west, and east

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Edge of Site to Receptor, feet	Center of Site to Receptor, feet	Item Usage Percent[1]	Ground Factor[2]	Usage Factor	Receptor Item Lmax, dBA	Recptor. Item Leq, dBA
SITE PREP									
Tractor	4	84	25	550	40	0.66	0.40	92.0	52.3
Dozer	3	82	25	550	40	0.66	0.40	90.0	50.3
							Log Sum	92.0	60.0
GRADE									
Excavator	1	81	25	550	40	0.66	0.40	89.0	49.3
Grader	1	85	25	550	40	0.66	0.40	93.0	53.3
Dozer	1	82	25	550	40	0.66	0.40	90.0	50.3
Crane	3	81	25	550	16	0.66	0.16	89.0	45.3
Dozer	2	82	25	550	40	0.66	0.40	90.0	50.3
								93.0	58.6
BUILD									
Crane	1	81	25	550	16	0.66	0.16	89.0	45.3
Man lift	3	75	25	550	20	0.66	0.20	83.0	40.3
Generator	1	81	25	550	50	0.66	0.50	89.0	50.3
Tractor	3	84	25	550	40	0.66	0.40	92.0	52.3
Welder/Torch	1	74	25	550	40	0.66	0.40	82.0	42.3
								92.0	58.5
PAVE									
Paver	2	77	25	550	50	0.66	0.50	85.0	46.3
Compactor (ground)	2	83	25	550	20	0.66	0.20	91.0	48.3
Roller	2	80	25	550	20	0.66	0.20	88.0	45.3
								91.0	54.6
ARCH COAT									
Compressor (air)	1	78	25	550	40	0.66	0.40	86.0	46.3
								86.0	46.3

[1] FHWA Construction Noise Handbook: Table 9.1 RCNM Default Noise Emission Reference Levels and Usage Factors

Appendix I

Traffic

TRANSPORTATION IMPACT ANALYSIS

SHEPHERD NORTH PROJECT

CLOVIS, FRESNO COUNTY, CALIFORNIA

LSA

July 2023

TRANSPORTATION IMPACT ANALYSIS

SHEPHERD NORTH PROJECT

CLOVIS, FRESNO COUNTY, CALIFORNIA

Prepared for:

De Novo Planning Group
180 East Main Street #108
Tustin, California 92780

Prepared by:

LSA
1500 Iowa Avenue, Suite 200
Riverside, California 92507
951.781.9310

Project No. DNV2201

July 2023

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FIGURES

TABLES

APPENDICES

LIST OF ABBREVIATIONS AND ACRONYMS

ABM	Activity Based Model
ADA	Americans with Disabilities Act
ATP	Active Transportation Plan
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Clovis
CUSD	Clovis Unified School District
FAX	Fresno Area Express
Fresno COG	Fresno Council of Governments
FTIP	Federal Transportation Improvement Program
HCM	*Highway Capacity Manual*
HCM 6	*Highway Capacity Manual 6th Edition*
HCS	Highway Capacity Software
HDM	*Highway Design Manual*
HQTA	High-Quality Transit Area
ITE	Institute of Transportation Engineers
LOS	level of service
LTA	Local Transportation Analysis
mph	miles per hour
NCHRP	National Cooperative Highway Research Program
project	Shepherd North Project
RTP	Regional Transportation Plan
SR-168	State Route 168
STIP	State Transportation Improvement Program
TAZ	traffic analysis zone
TIA	Traffic Impact Analysis
TIA Guidelines	Interim Transportation Impact Analysis Guidelines
TIZ	Traffic Impact Zone
TWLTL	two-way-left-turn lane
VMT	vehicle miles traveled

1.0 INTRODUCTION

This Transportation Impact Analysis (TIA) has been prepared to assess the potential circulation impacts associated with the proposed Shepherd North Project (project) in Clovis, Fresno County, California. The approximately 155-acre project site is located at the northeast corner of the intersection of Sunnyside Avenue and Shepherd Avenue. The project site is currently vacant. Figure 1-1 illustrates the regional and project location. (Figures and tables are provided at the end of each chapter.)

This report has been prepared based on the City of Clovis (City) *Transportation Impact Analysis Guidelines* (TIA Guidelines), adopted October 17, 2022, as well as the requirements established by the City of Fresno and the California Department of Transportation (Caltrans).

While level of service (LOS) analysis is no longer a determinant of California Environmental Quality Act (CEQA) impacts, consistency with the City's General Plan goals and policies is still required. Therefore, this TIA includes a Vehicle Miles Traveled (VMT) Analysis for a CEQA Transportation Impact evaluation, and a Local Transportation Analysis (LTA) to satisfy the City's General Plan transportation goals and policies. The scope of work for this TIA, including scope for the CEQA VMT Analysis and LTA with trip generation, trip distribution, study area, and analysis methodologies, has been approved by City staff as well as the City of Fresno, County of Fresno, and Caltrans via the Scoping Agreement process. A copy of the Scoping Agreement is included as Appendix A.

1.1 PROJECT DESCRIPTION

The proposed project will consist of 605 single-family homes on approximately 77 acres of the site. It should be noted that the remaining 78 acres of the site will be used for roads, utilities, greenspace, landscaping, and pedestrian paths. For purposes of this TIA, the entire buildout condition of this project has been considered under all 'plus project' conditions. It is anticipated that the project buildout will occur in year 2028. Figure 1-2 illustrates the tentative subdivision map for the project.

As illustrated in Figure 1-2, access to the project will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road, and one on Shepherd Avenue. Except for the driveway on Shepherd Avenue, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway.

Additionally, the project proposes to add one westbound through lane along the project frontage on Shepherd Avenue, and a dedicated eastbound left-turn lane at the project driveway on Shepherd Avenue.

1.2 CEQA VEHICLE MILES TRAVELED ANALYSIS

As per the City's TIA Guidelines, the project cannot be considered small because it exceeds 53 dwelling units (City's threshold for screening out single-family home projects from a VMT analysis). Therefore, a detailed VMT analysis has been conducted for the project. For purposes of this analysis, the project-generated VMT per capita has been obtained from the Fresno Council of Governments (Fresno COG) Activity Based Model (ABM). As per the City's TIA Guidelines, a significant project-generated VMT impact would occur if the project's VMT per capita exceeds a level of 13 percent below the existing County average VMT per capita provided in the guidelines. The detailed VMT analysis, including the screening criteria evaluation, VMT analysis methodology, results, and appropriate mitigation measures for the proposed project are discussed in Chapter 2.0.

1.3 LOCAL TRANSPORTATION ANALYSIS STUDY AREA

The LTA for the project examines traffic operations in the vicinity of the proposed project under the following five scenarios:

- Existing Conditions
- Existing Plus Project Conditions
- Near-Term Plus Project Conditions
- Cumulative without Project Conditions
- Cumulative Plus Project Conditions

Traffic conditions at study intersections and roadway segments were examined for weekday a.m. and p.m. peak-hour conditions. The a.m. peak hour is defined as the 1 hour of highest traffic volumes occurring between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is the 1 hour of highest traffic volumes occurring between 4:00 p.m. and 6:00 p.m. Additionally, since the project is estimated to be completed in 2028, the Near-Term condition was evaluated for the year 2028.

As per the City's TIA Guidelines, the extent of the study area should include the following:

- Pedestrian, bicycle, and transit facilities within 0.5 mile from the project site boundary

- All intersections of major streets that would provide direct access to the project

- All signalized intersections within 0.5 mile of the project site boundary where the project would add 50 or more peak-hour trips, and signalized intersections beyond 0.5 mile where the project would add 100 or more peak-hour trips

- All unsignalized intersections within a 0.5 mile of the project site boundary where the project would add more than 50 peak-hour trips

Based on the aforementioned criteria and as per discussion with the City and adjacent jurisdictions during the scoping agreement process, the following intersections and roadway segments have been included in the LTA.

1.3.1 Study Intersections

Per the Scoping Agreement (Appendix A), intersections analyzed in the LTA and their jurisdictions are as follows:

1. Willow Avenue/Behymer Avenue (Clovis/Fresno)
2. Willow Avenue/Shepherd Avenue (Clovis/ Fresno)
3. Minnewawa Avenue/Behymer Avenue (Clovis)

4. Minnewawa Avenue/Shepherd Avenue (Clovis)
5. Clovis Avenue/Shepherd Avenue (Clovis)
6. Clovis Avenue/Teague Avenue (Clovis)
7. Clovis Avenue/Nees Avenue (Clovis)
8. Clovis Avenue/Alluvial Avenue (Clovis)
9. State Route 168 (SR-168) Westbound Ramps/Herndon Avenue (Caltrans)
10. SR-168 Eastbound Ramps/Herndon Avenue (Caltrans)
11. Clovis Avenue/Herndon Avenue (Clovis)
12. Sunnyside Avenue/Behymer Avenue (Clovis)
13. Sunnyside Avenue/Shepherd Avenue (Clovis)
14. Sunnyside Avenue/Teague Avenue (Clovis)
15. Sunnyside Avenue/Nees Avenue (Clovis)
16. Fowler Avenue/Behymer Avenue (Clovis)
17. Fowler Avenue/Ticonderoga (Clovis)
18. Fowler Avenue/Shepherd Avenue (Clovis)
19. Fowler Avenue/Teague Avenue (Clovis)
20. Fowler Avenue/Nees Avenue (Clovis)
21. Fowler Avenue/SR-168 Westbound Ramps (Caltrans)
22. Fowler Avenue/SR-168 Eastbound Ramps (Caltrans)
23. Sunnyside Avenue/Project Driveway 1 (Clovis)
24. Sunnyside Avenue/Project Driveway 2 (Clovis)
25. Project Driveway 3/Shepherd Avenue (Clovis)
26. Project Driveway 4-Stanford Avenue/Perrin Road (Clovis)

Figure 1-3 illustrates the study area intersections.

1.3.2 Roadway Segments

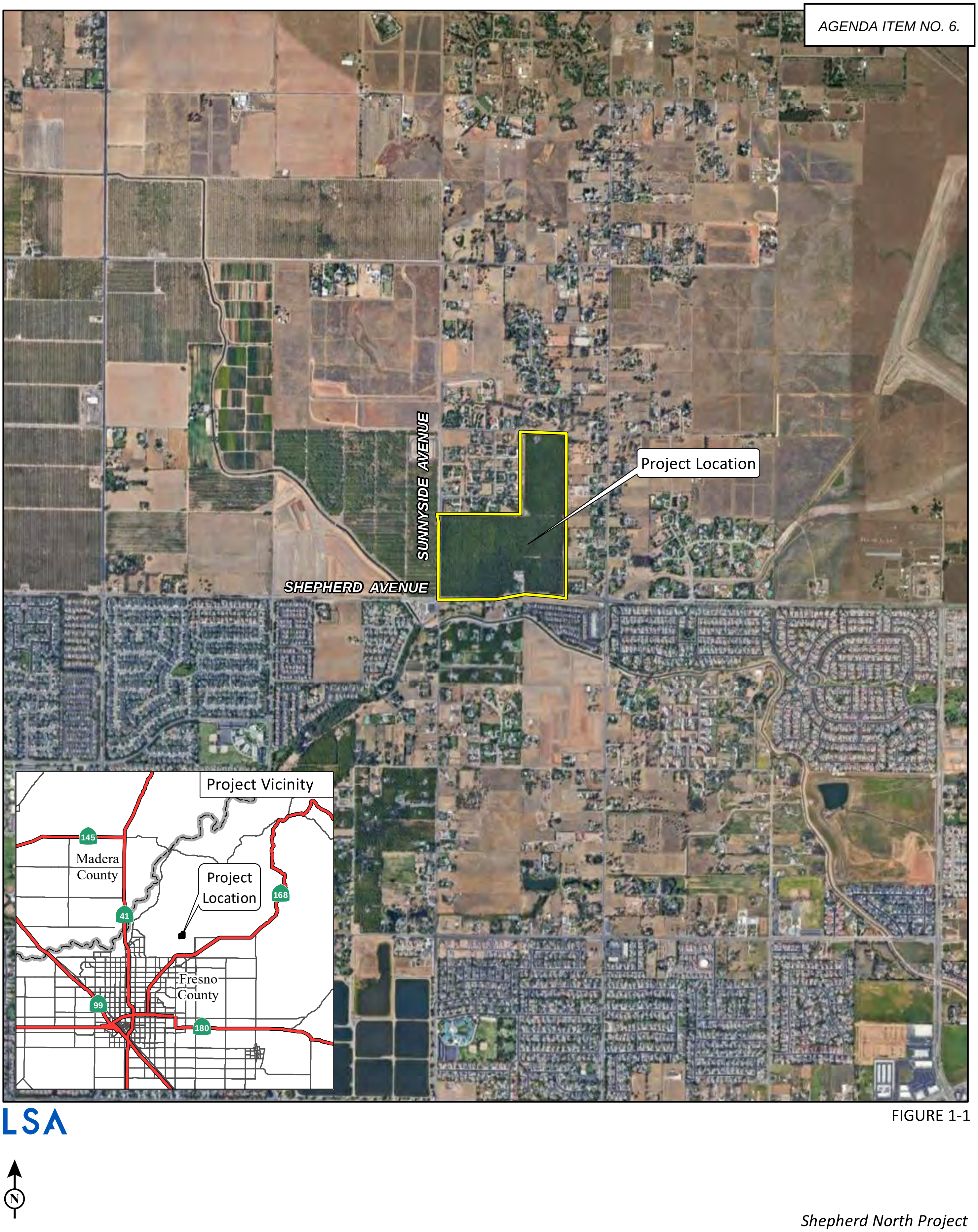
Per the Scoping Agreement (Appendix A), roadway segments analyzed in the LTA are as follows:

1. Behymer Avenue, between Willow Avenue and Minnewawa Avenue (Clovis)
2. Behymer Avenue, between Minnewawa Avenue and Sunnyside Avenue (Clovis)
3. Behymer Avenue, between Sunnyside Avenue and Fowler Avenue (Clovis)
4. Shepherd Avenue, between Willow Avenue and Minnewawa Avenue (Clovis)
5. Shepherd Avenue, between Minnewawa Avenue and Clovis Avenue (Clovis)
6. Shepherd Avenue, between Clovis Avenue and Sunnyside Avenue (Clovis)
7. Shepherd Avenue, between Sunnyside Avenue and Project Driveway 3 (Clovis)
8. Shepherd Avenue, between Project Driveway 3 and Fowler Avenue (Clovis)
9. Herndon Avenue, between State Route 168 Eastbound Ramps and Clovis Avenue (Clovis)
10. Willow Avenue, between Behymer Avenue and Shepherd Avenue (Clovis/Fresno)
11. Minnewawa Avenue, between Behymer Avenue and Shepherd Avenue (Clovis)
12. Clovis Avenue, between Shepherd Avenue and Teague Avenue (Clovis)
13. Clovis Avenue, between Teague Avenue and Nees Avenue (Clovis)
14. Clovis Avenue, between Nees Avenue and Alluvial Avenue (Clovis)
15. Clovis Avenue, between Alluvial Avenue and Herndon Avenue (Clovis)
16. Sunnyside Avenue, between Project Driveway 1 and Shepherd Avenue (Clovis)

17. Sunnyside Avenue, between Shepherd Avenue and Teague Avenue (Clovis)
18. Sunnyside Avenue, between Teague Avenue and Nees Avenue (Clovis)
19. Fowler Avenue, between Behymer Avenue and Ticonderoga (Clovis)
20. Fowler Avenue, between Ticonderoga and Shepherd Avenue (Clovis)
21. Fowler Avenue, between Shepherd Avenue and Teague Avenue (Clovis)
22. Fowler Avenue, between Teague Avenue and Nees Avenue (Clovis)
23. Fowler Avenue, between Nees Avenue and State Route 168 Westbound Ramps (Clovis)

For each roadway segment, the highest volume on any part of the segment has been considered as the analysis volume for the entire segment.

1.4 LIST OF CHAPTER 1.0 FIGURES



LSA

FIGURE 1-1

Shepherd North Project
Transportation Impact Analysis

Regional and Project Location

SOURCE: Google Earth (2018)

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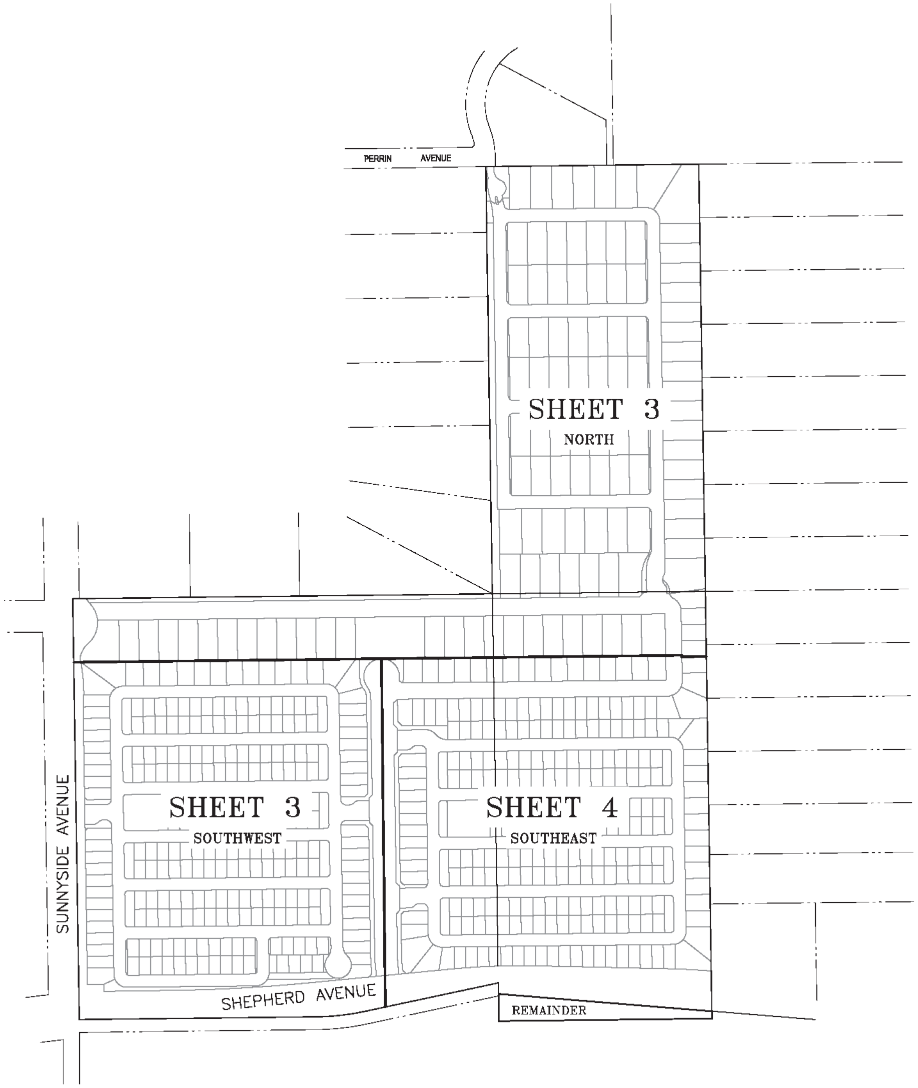
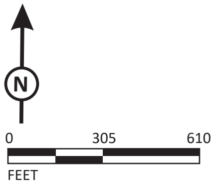


FIGURE 1-2



Shepherd North Project
Transportation Impact Analysis

Tenative Subdivision

SOURCE: Harbour & Associates, March 2022.

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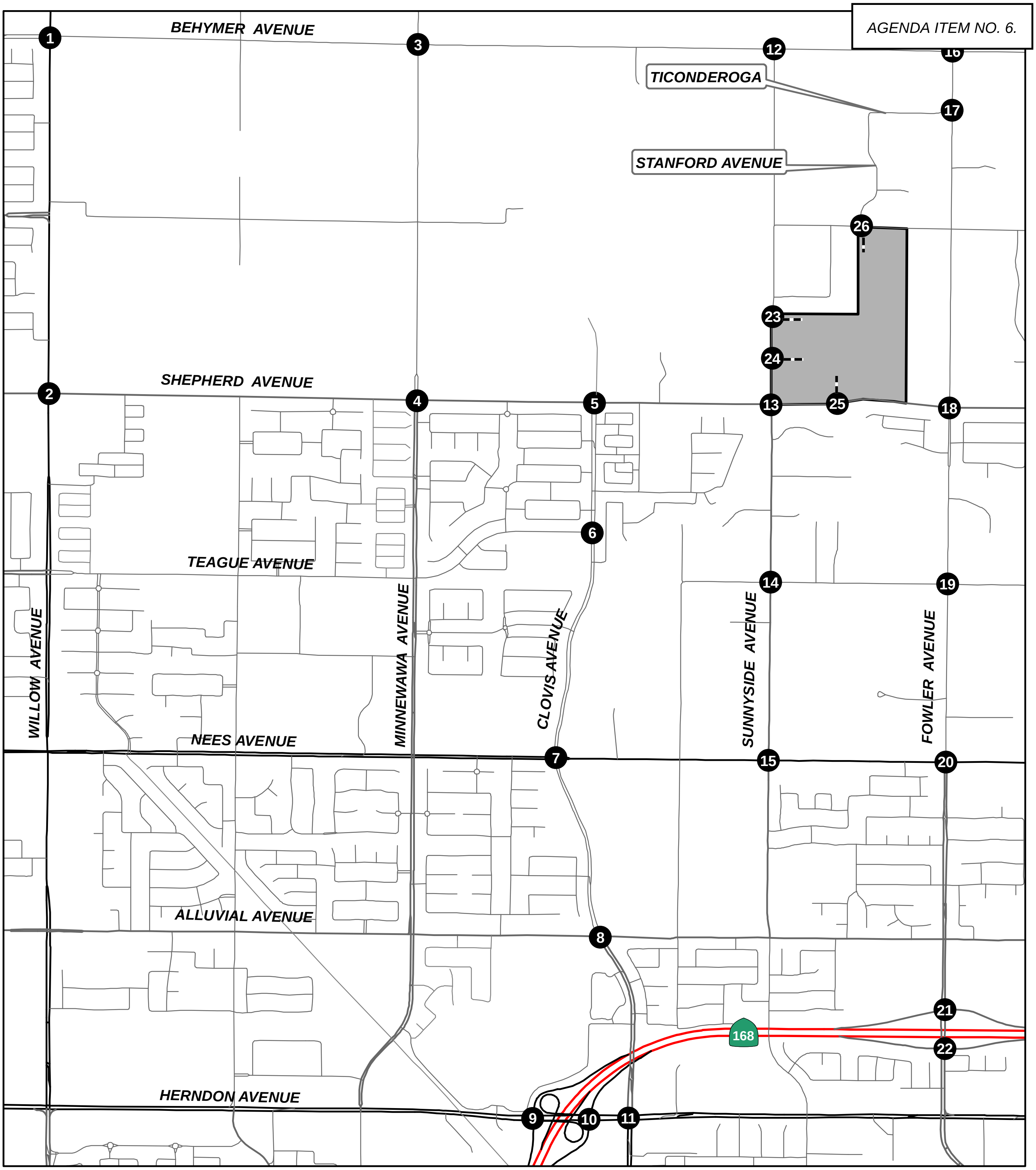

LSA

LEGEND

▨ Project Site

● Study Intersection

- - - - Project Driveway

N

0 1000 2000
FEET

SOURCE: ESRI Streetmap (2013)

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FIGURE 1-3

Shepherd North Project
Transportation Impact Analysis

Study Area Intersections

2.0 VEHICLE MILES TRAVELED ANALYSIS

On December 28, 2018, the California Office of Administrative Law cleared the revised CEQA Guidelines for use. Among the changes to the CEQA Guidelines was the removal of vehicle delay and LOS from consideration under CEQA. With the adopted CEQA Guidelines, transportation impacts are to be evaluated based on a project's effect on VMT.

The City's TIA Guidelines includes screening criteria, VMT analysis methodology, VMT impact thresholds, and VMT mitigation measures. Therefore, the City's TIA Guidelines were used in the evaluation of the project's VMT analysis.

2.1 METHODOLOGY

The TIA Guidelines provide multiple project types and thresholds for land use projects. The project was compared with the screening criteria established in the "Project Screening" section of the TIA Guidelines to check if the project can be screened out. The following is a brief description of the project in relation with the project screening criteria:

- **Small Project:** The TIA Guidelines states that projects generating less than 500 daily trips could be screened out of a detailed VMT analysis. As discussed in Section 6.1, Project Trip Generation, the project is estimated to generate 5,705 daily trips. Therefore, the project does not satisfy this screening criteria.

- **Provision of Affordable Housing:** The project proposes to develop market-rate, single-family dwelling units. Therefore, this screening criteria does not apply to the project.

- **Local-Serving Retail:** The project consists of residential land use only; therefore, this screening criteria does not apply to the project.

- **Project Located in a High-Quality Transit Area (HQTA):** The project is not located within an HQTA; therefore, this screening criteria does not apply to the project.

- **Project Located in Low VMT Area:** The project is not located in a low VMT area; therefore, this criteria does not apply to the project.

As shown above, the project could not be screened out from a detailed VMT analysis. As such, pursuant to the TIA Guidelines, a detailed VMT analysis was conducted to assess the project's VMT impact.

2.1.1 Thresholds of Significance

The project consists of residential land use. The TIA Guidelines established VMT per capita as the appropriate metric to evaluate residential land use projects while defining Fresno County as the "region" for determining VMT thresholds. The project would have a significant VMT impact if the baseline project VMT per capita is greater than 87 percent of the baseline Fresno County VMT per capita. Based on the TIA Guidelines, baseline Fresno County VMT per capita is 16.1 and the corresponding threshold is 14.1 (which is 87 percent of 16.1). Therefore, the project will have a significant VMT impact if the project VMT per capita is greater than 14.1.

As recommended in the TIA Guidelines, the Fresno COG ABM was used for the project VMT analysis. The model inputs were updated with the project land uses to calculate project VMT. The project VMT was calculated from a Fresno COG ABM model run as described in the following sections.

2.1.2 Project Traffic Analysis Zone Update

The first step in preparation of this analysis was to update the traffic analysis zones (TAZs) in the model that include the project area. The Fresno COG ABM includes the ability to add or split zones. In order to isolate the project VMT, a new zone was created in the model. The project households were included in the newly created zone for modeling purposes. No project-specific network modifications were required for the model run. A model run was conducted for the existing/base scenario with updated model inputs. The outputs from this updated model run were used to calculate the project VMT per capita.

2.1.3 Model Runs and Project Vehicle Miles Traveled Estimation

A model run was conducted for this updated model upon completion of the socioeconomic data update. The outputs from this updated model run were used to calculate the project VMT per capita.

2.2 PROJECT VEHICLE MILES TRAVELED ANALYSIS

Table 2-A summarizes the regional threshold and project VMT per capita. As shown in Table 2-A, the project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact.

Detailed VMT calculation for the project is included in Appendix B.

2.3 VMT REDUCTION MEASURES – PROJECT DESIGN FEATURES AND MITIGATION MEASURES

When a lead agency identifies a significant CEQA impact, the agency must identify feasible mitigation measures in order to avoid or substantially reduce that impact. VMT impacts can be mitigated through more behavioral changes. Enforcement of mitigation measures will be subject to the mitigation monitoring requirements under CEQA, as well as the regular police powers of the agency. These measures can also be incorporated as a part of plans, policies, regulations, or project designs. Project design features that encourage mode shift from automobiles to transit or non-motorized modes can therefore help reduce project VMT as well. Typically, VMT reduction and benefits from these project design features are not accounted in the project VMT calculations conducted using the regional travel demand model (Fresno COG ABM). Therefore, VMT reduction credit can be accounted for these design features similar to VMT mitigation measures to help reduce the project's VMT impact.

Evaluation of VMT reductions should be evaluated using state-of-the-practice methodologies recognizing that many of the VMT mitigation strategies/project design features are dependent on building tenant performance over time. Following is a detailed description of both and the corresponding potential reduction that could be achieved with implementation of these measures.

2.3.1 Project Design Features

As per information provided by the applicant, the project intends to implement the following project design features that will help reduce project VMT. VMT reduction that can be achieved by the project design features have been estimated using the most California Air Pollution Control Officers Association's (CAPCOA) "*Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity – Designed for Local Governments, Communities, and Project Developers*" dated December 2021.

- **Pedestrian Infrastructure:** The project proposes to provide pedestrian improvements/sidewalks both internal to the project site and along the project frontage. Providing sidewalk/pedestrian improvements encourage people to walk instead of drive and thus reduces VMT. CAPCOA transportation measure **T-18: Provide Pedestrian Network Improvement** was used to estimate the VMT reduction due to project related enhancements in pedestrian access and connectivity. The CAPCOA methodology requires existing sidewalk length in the project study area in addition to the length of sidewalk being provided by the project. In order to estimate the existing sidewalk length, a survey was conducted along the proposed project frontage. Based on the survey, the project study area includes approximately 10 miles of sidewalk. The project proposes to add approximately another 2.3 miles of sidewalk/pedestrian access. Therefore, this mitigation measure may reduce the project's VMT by approximately 1.17 percent.

- **Improve Street Connectivity:** The project proposes to provide an internal circulation network. Projects with higher density of intersections would help increase street connectivity, reduce trip lengths, and promote use of alternative transportation modes of travel. CAPCOA handbook, identifies measure **T-17: Improve Street Connectivity** to evaluate project street network. The measure is recommended as an appropriate design feature for plans within urban or suburban areas. The project is located in suburban/rural area type setting, so this measure was explored as a potential VMT reduction design feature.

  Measure T-17 estimates that an increased density of vehicular intersections improves street connectivity and helps in reduction in GHG emissions and corresponding VMT. As included in the CAPCOA handbook, this measure could be applied to a project for:

  > *'Projects that increase intersection density would be building a new street network in a subdivision or retrofitting an existing street network to improve connectivity (e.g., converting cul-de-sacs or dead-end streets to grid streets)'.*

  The measure establishes the following numerical formula of VMT reduction due to increased intersection density and improved street connectivity:

$$A = \frac{B - C}{C} * D$$

Where,

A = Percent Reduction in GHG/VMT emission from vehicle Travel

B = Intersection Density in project site with measure

C = Average Intersection Density for Typical developments (36)

D = Elasticity of VMT with respect to intersection density (-0.14)

The CAPCOA handbook establishes the variable C using an average density of intersections within a square mile in a typical development as included in the *Proposed Trip Generation, Distribution, and Transit Mode Split Forecasts for the Bayview Waterfront Project Transportation Study*, Fehr & Peers. 2009. This establishes the average suburban intersection density for the entire United States.

The CAPCOA handbook adapts the variable D, Elasticity of VMT with respect to intersection density from the report '*Does Compact Development Make People Drive Less*?' published in the *Journal of the American Planning Association*, 2016, authored by Mark R. Stevens. The elasticity was determined from a meta-regression analysis from data of fifteen studies, having studied in different urban/suburban geographic regions within the Country.

While the increased intersection density helps facilitate greater number of short trips, the project consists of only single land use type (residential) and the amount of internal capture (trips that can be fulfilled within the project; with both origin and destinations within the project site) would be minimal. Also, CAPCOA suggests application of different VMT mitigation measures at different scales – project/site scale or community/plan scale. Based on CAPCOA handbook, this mitigation measure is applicable at a plan/community scale. However, this measure was explored as a VMT reduction design feature at a project scale with appropriate limitations as described below.

While all the internal intersections can be considered to estimate the VMT reduction due to increased street connectivity, given the above limitations (project location area type, single land use type, and CAPCOA applicability scale), only project driveways were reviewed for applicability for this measure. As indicated in section "1.1 – Project Description", the project has four driveways (two on Sunnyside Avenue, one of Perrin Road, and one on Shepherd Avenue) for project access. Except for the driveway on Shepherd Avenue, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out Left-In (RIROLI) driveway. However, all 4 project driveways were considered as project intersections for the mitigation purposes. The proposed project site is approximately 77 acres. Therefore, the intersection density of the project would be approximately 33.25 intersections per square mile.

Since project intersection density is lower than the countrywide average intersection density of 36 intersections per square mile as identified in the CAPCOA handbook, no direct VMT reduction has been accounted for this project design feature.

- **Bicycle Infrastructure/Improvements:** The project proposes to provide 8-feet wide bike lanes (Class II Bike Lane) on Shepherd Avenue and N. Sunnyside Avenue. Additionally, the project will install a 12-foot trail (Class I Bike Path) adjacent to the Project along Shepherd Avenue. The project proposes to construct a total of 0.67 miles of bike lanes along Shepherd Avenue and Sunnyside Avenue. Similar to pedestrian facilities, these bicycle design features included in the project can encourage increase active transportation mode share in the area. The CAPCOA manual was utilized to estimate the reduction of project VMT due to proposed bicycle improvements. Specifically, CAPCOA transportation measure "T-19A: Construct or Improve Bike Facility" was deemed applicable to estimate the VMT reduction due to project bicycle features. According to the measure, providing bicycle infrastructure helps to improve biking conditions within an area. This encourages a mode shift on the roadway parallel to the bicycle facility from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. Based on CAPCOA estimates, the project bicycle design features have a potential to reduce up to 0.01 percent of the project VMT.

- **Provide Electric Vehicle (EV) Parking and EV Charging Infrastructure:** Accessible EV parking and provision of charging for electric vehicles in the residential units will encourage the use of EVs. The latest California Green Building Standards (CALGreen), California Building Code, requires provision of infrastructure to accommodate electric vehicle chargers for new single family and attached dwelling units/town houses. For new construction projects such as apartments, condos, hotels, and motels, CALGreen code requires the project to provide EV charging stations as a percentage of the total project parking. While it is understood that provision of electric charging infrastructure/stations might not reduce VMT, it will reduce GHG which can be considered equivalent to reduction in VMT. According to CAPCOA, provision of additional electric charging stations, in addition to CALGreen requirements, can be considered as a GHG/VMT mitigation. Provision of EV charging infrastructure has a potential to achieve a maximum VMT reduction of up to 11.9 percent. However, the project is a single-family residential development and as such doesn't propose to provide electric charging stations beyond the CALGreen code requirements. Additionally, there is no guarantee that residents would be using electric vehicles even if charging stations are available. As such, while this project design feature has the potential to reduce GHG emissions, no direct VMT reduction has been accounted for this project design feature.

Table 2-B provides methodology, assumptions, and parameters used in the estimation/calculation of VMT reduction for the project along with the potential amount of VMT reduction that can be achieved.

In conclusion, project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of the above project design features may possibly reduce the project's VMT by approximately up to 1.18 percent. The proposed measures and strategies should be monitored for their usage and effectiveness. A combination of measures from several VMT reduction strategies were incorporated into the Project design to achieve this VMT reduction as outlined above. This included strategies that are aimed at reducing the number of automobile trips generated by the Project, shift more trips from automobile to non-automobile modes, and/or reduce the distances that people drive. Ultimately, however, the City of Clovis is a suburban community with land use characteristics that are more spread out when compared to dense urban communities. The land use and transportation characteristics of suburban communities such as Clovis, can make it difficult, or impossible to achieve VMT reductions to levels that the City has established as a goal, and ultimately, as a threshold of significance for CEQA analysis. The project design features are estimated to offset some of the VMT impacts of the project by reducing VMT by up to 1.18 percent, but this reduction will not reduce the impact to a less than significant level. Therefore, the project will have a significant and unavoidable transportation impact under CEQA.

2.4 LIST OF CHAPTER 2.0 TABLES

Table 2-A: Existing (2019) Regional and Project VMT per Capita

Region (Fresno County)[1]	Project	Difference	Percentage Difference
14.1	17.0	2.9	20.7%

Source: Fresno Council of Governments' Activity-Based Model.

[1] The Fresno County VMT per capita was obtained from the Interim Transportation Impact Guidelines, City of Clovis (July 14, 2020).

VMT = vehicle miles traveled

Table 2-B: Calculated VMT Reduction with Project Mitigation

Mitigation Measure (Number corresponds to the 2021 CAPCOA Handbook)	Formula	Comments	Calculated Reduction in VMT (%)
Land Use (Maximum Reduction 30%)			
T-17: Improve Street Connectivity	A = ((B-C)/C) * D, Where B = Intersection density in project site with measure, C =Average intersection density (36 U.S. average), and D = Elasticity of VMT with respect to intersection density (-0.14 constant)	Based on the limitations described in detail above, four project driveways were considered to estimate the project intersection density. The project site is approximately 77 acres. Therefore, the intersection density of the project would be approximately 33.25 intersections per square mile which is less than countrywide average intersection density of 36 intersections per square mile. Therefore, no VMT mitigation was estimated for this measure.	N/A
Neighborhood Design (Maximum Reduction 10%)			
T-18: Provide Pedestrian Network Improvement	A = ((C/B)-1) * D, Where B = Existing sidewalk length in study area, C =Sidewalk length in study area with measure, and D = Elasticity of household VMT with respect to the ratio of sidewalks-to-streets (-0.05 constant)	Based on the survey, the project study area includes approximately 10 miles of sidewalk. The project proposes to add approximately another 2.3 miles of sidewalk/pedestrian access. A = (((10.25+2.39)/10.25)-1)*0.05 A = ((12.64/10.25)-1)*0.05 A = 0.23*0.05 = 1.17%	1.17%
T-19-A: Construct or Improve Bike Facility	A = (B*(F/I)*(C+D)*E*G)/H, Where B = Percent of plan/community VMT on parallel roadway, C = Active transportation adjustment factor, D = Credits for key destinations near project, E = Growth factor adjustment for facility type, F = Annual days of use of new facility, G = Existing regional average one-way bicycle trip length, H = Existing regional average one-way vehicle trip length, and I = Days per year (365)	Variables C, D, E, F, G, and H were obtained from appropriate tables listed in CAPCOA handbook. It was assumed that 20% of VMT on the parallel roadway is from the community. A = (0.2*(320/365)*(0.0029+0.0005)*1*2.2)/11.7 A = (0.2*0.88*0.0034*1*2.2)/11.7 A = 0.01%	0.01%
Total VMT Reduction from All Subsectors			**1.18%**

Source: Handbook for Analyzing Greenhouse Gas Emission Reduction, Assessing Climate Vulnerabilities, and Advancing Health and Equity, California Air Pollution Control Officers Association (CAPCOA), December 2021.

[1] Per CAPCOA total VMT reduction for multiple strategies within same subsector is calculated using the equation: 1-(1-A)*(1-B)*(1-C)... where A, B, C are equal to individual mitigation strategy reduction percentages.
When applied to the project, the calculation would be 1 - (1 – 0.0117)* (1 – 0.0001) = 0.0118, or 1.18%.

3.0 LOCAL TRANSPORTATION ANALYSIS METHODOLOGY

3.1 LEVEL OF SERVICE DEFINITIONS

A complete description of the meaning of LOS can be found in Transportation Research Board Special Report 209, *Highway Capacity Manual* (HCM). The HCM establishes LOS A through F for intersections. A description of LOS for signalized and unsignalized intersections is summarized in Table 3-A. A description of LOS for roadway segments is summarized in Table 3-B.

Table 3-C shows the LOS criteria for unsignalized and signalized intersections. For all study area intersections, the *Highway Capacity Manual 6th Edition* (HCM 6) analysis methodologies were used to determine intersection LOS. Intersection LOS was calculated using the Synchro 11 software, which uses the HCM 6 methodologies.

Peak-hour traffic operations were analyzed at roadway segments based on the peak-hour LOS thresholds obtained from Chapter 5.16, *Transportation and Traffic,* of the City's *General Plan and Development Code Update Draft Program Environmental Impact Report (EIR),* dated June 2014. Table 3-D summarizes the LOS criteria used to evaluate roadway segments based on the City's General Plan EIR. The peak-hour traffic volumes at roadway segments represent the total vehicles (both directions) traveling on the segments during the a.m. and p.m. peak hours.

3.2 LEVEL OF SERVICE PROCEDURES AND STANDARDS

Study intersections and roadway segments analyzed in this report are completely under the jurisdiction of the City of Clovis or lie at the borders of Clovis and Fresno. However, intersections located at freeway on-ramps and off-ramps are under the jurisdiction of Caltrans.

The City of Clovis considers LOS D as the LOS standard for study intersections and roadway segments under near-term conditions, unless a finding of overriding consideration was adopted in the City's General Plan EIR. The same criterion holds for long-term conditions, except for roadway segments that are adopted in the City's General Plan EIR to operate at LOS E or F. The City's TIA Guidelines do not define an LOS standard under Existing Plus Project conditions. For the purpose of this analysis, an LOS standard of D has been considered for intersections and roadway segments under Existing Plus Project conditions. The City considers the following operational deficiency criteria for study intersections:

- **Signalized Intersections**
    - If the project triggers a signalized intersection operating at an acceptable LOS to operate at an unacceptable LOS; OR
    - If the project increases the average delay for average delay for a signalized intersection that is already operating at an unacceptable LOS.

- **Unsignalized Intersections**
  - If the project triggers an unsignalized intersection operating at acceptable LOS to operate at unacceptable LOS (from E or better to F) and meet the signal warrants criteria; OR
  - If the project increases the applicable delay for an unsignalized study intersection that is already operating at unacceptable LOS and meets the signal warrant criteria.

The City's TIA Guidelines do not define an operational deficiency criterion for roadway segments. For purposes of this analysis, at roadway segments under the jurisdiction of the City of Clovis, an operational deficiency has been considered when the project causes an unsatisfactory condition (deterioration from LOS A through D to E or F) or when the project contributes to an existing or forecast deficiency.

Per the City of Fresno *Traffic Impact Study Report Guidelines,* updated February 2009, LOS D is considered the LOS standard for study intersections and roadway segments under near-term conditions. The same criterion holds for long-term conditions, except for roadway segments that are adopted in the City's Master General Plan to operate at LOS E or F. The City's TIA Guidelines do not define an LOS standard under Existing Plus Project conditions.

It should be noted that all City of Fresno study intersections and roadway segments are located within the City of Fresno Traffic Impact Zone (TIZ) III. Per the City of Fresno's General Plan, all intersections and roadway segments within TIZ III should maintain a peak-hour LOS standard of D or better. Therefore, an LOS standard of D has been considered for intersections and roadway segments within Fresno for all analysis conditions. The City of Fresno considers the following operational deficiency criteria for study intersections:

- An operational deficiency is created if the addition of the project traffic results in any one of the following:
  - Causes the intersection LOS to change from acceptable to unacceptable levels; OR
  - Causes the intersection LOS to change from an unacceptable LOS (LOS E) to LOS F; OR
  - Increases the average delay at a study intersection that is already operating at an unacceptable LOS.

City of Fresno's Traffic Impact Study guidelines do not define an operational deficiency criterion for roadway segments. Therefore, for purposes of this analysis, at intersections under City of Fresno jurisdiction, an operational deficiency has been considered when the project causes an unsatisfactory condition (deterioration from LOS A through D to E or F) or when the project contributes to an existing or forecast deficiency.

Caltrans considers an acceptable LOS to be between LOS C and D at all intersections under its jurisdiction (delay of 45 seconds at signalized intersections). Caltrans does not have any operational deficiency criteria for study intersections. Therefore, an operational deficiency occurs when the project causes an unsatisfactory condition (deterioration from LOS A through D to E or F) for intersections or when the project contributes to an existing or forecast deficiency. The project needs to identify improvements to improve the intersection LOS to an acceptable level.

3.3 LIST OF CHAPTER 3.0 TABLES

Table 3-A: Intersection Level of Service Definitions

LOS	Description
A	Traffic operations with a control delay of 10 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	Traffic operations with control delay between 10 seconds per vehicle and 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
C	Traffic operations with control delay between 20 and 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	Traffic operations with control delay between 35 and 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	Traffic operations with control delay between 55 and 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
F	Traffic operations with control delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: Highway Capacity Manual (6th Edition).
LOS = level of service

Table 3-B: Roadway Segment Level of Service Definitions

LOS	Description
A	Describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control Delay at the boundary intersection is minimal. The travel speed exceeds 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
B	Describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted, and control delay at the boundary is not significant. The travel speed is between 67% and 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
C	Describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersection may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
D	Indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
E	Characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
F	Characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is between 30% or less of the base free-flow speed, and the volume-to-capacity ratio is greater than 1.0.

Source: Highway Capacity Manual (6th Edition).
LOS = level of service

Table 3-C: Level of Service Criteria for Unsignalized and Signalized Intersections

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec)	Signalized Intersection Average Delay per Vehicle (sec)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Source: Highway Capacity Manual (6th Edition).
sec = seconds

Table 3-D: Roadway Segment Capacity and Levels of Service

Classification	Median Type	Number of Lanes	Peak-Hour LOS Volume Thresholds				
			LOS A	LOS B	LOS C	LOS D	LOS E
Freeway	N/A	4	2,720	4,460	6,630	7,720	8,630
		3+Aux	2,360	3,860	5,640	6,730	7,530
		3	2,000	3,270	4,660	5,740	6,430
		2+Aux	1,650	2,700	3,850	4,760	5,340
		2	1,300	2,130	3,050	3,790	4,260
Expressway (Caltrans)	Divided	6	2,280	3,750	5,400	7,030	7,980
		4	1,510	2,500	3,600	4,680	5,310
Expressway (City)	Raised Median	6	-	-	3,290	6,120	6,400
		5	-	-	2,685	5,090	5,330
		4	-	-	2,080	4,060	4,260
		3	-	-	1,475	3,030	3,190
Arterial	Raised-Median	8	-	-	4,180	7,210	7,580
		6	-	-	3,060	5,390	5,680
		5	-	-	2,500	4,480	4,730
		4	-	-	1,950	3,580	3,780
		3	-	-	1,400	2,670	2,830
		2	-	-	860	1,770	1,880
	TWLTL	4	-	-	1,840	3,400	3,590
		2	-	-	810	1,680	1,790
	Undivided	4	-	-	1,320	2,500	2,640
		2	-	-	570	1,230	1,310
Collector	TWLTL	4	-	-	1,840	3,400	3,590
		3	-	-	1,325	2,540	2,690
		2	-	-	810	1,680	1,790
	Undivided	4	-	-	1,320	2,500	2,640
		2	-	-	570	1,230	1,310
State Highway	Undivided	2	310	570	1,020	1,730	2,470
Rural Arterial	Divided	4	-	-	1,950	3,580	3,780
	Undivided	2	-	-	570	1,230	1,310
Rural Collector/Local	Undivided	2	-	-	570	930	1,000

Source: City of Clovis General Plan and Development Code Update Draft Program Environmental Impact Report (EIR), dated June 2014

Aux = Auxiliary Lane
Caltrans = California Department of Transportation
City = City of Clovis
LOS = level of service
TWLTL= two-way-left-turn-lane median
N/A= not applicable

4.0 CIRCULATION NETWORK SETTING

4.1 EXISTING CIRCULATION NETWORK

The project study area includes the following major roadways as classified based on the roadway classification provided in the Circulation Element of the City's General Plan. Figure 4-1 summarizes the classifications of major roadways within the study area. Following is a brief description of these roadways:

- **Willow Avenue:** Willow Avenue is designated as an Arterial in the City's General Plan. Between Behymer Avenue and Shepherd Avenue, Willow Avenue is a six-lane, divided Arterial with a raised median. There are bicycle lanes along both directions of this segment. However, there is no provision for on-street parking.

- **Minnewawa Avenue:** Within the study area, Minnewawa Avenue is designated as an Arterial in the City's General Plan. Between Behymer Avenue and Shepherd Avenue, Minnewawa Avenue is a two-lane, undivided Arterial. There are bicycle lanes along both directions of this segment. However, there is no provision for on-street parking.

- **Clovis Avenue:** Clovis Avenue is designated as an Arterial in the City's General Plan. Between Shepherd Avenue and Herndon Avenue, Clovis Avenue is mostly a four-lane, divided Arterial with a raised median or a two-way-left-turn lane (TWLTL) median. There are bicycle lanes along some portions of this segment. However, there is no provision for on-street parking.

- **Sunnyside Avenue:** Sunnyside Avenue is designated as a Collector in the City's General Plan. Between Perrin Road and Nees Avenue, Sunnyside Avenue is a two-lane, undivided Collector. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **Fowler Avenue:** Fowler Avenue is designated as a Rural Collector between Behymer Avenue and Shepherd Avenue, and as an Arterial between Shepherd Avenue and the State Route 168 (SR-168) Westbound Ramps in the City's General Plan. Currently, between Behymer Avenue and Shepherd Avenue, Fowler Avenue is a two-lane undivided roadway with no designated bike lane or provision for on-street parking. Between Shepherd Avenue and Enterprise Canal, Fowler Avenue is a three-lane divided roadway, with two northbound lanes and one southbound lane. There is no provision for on-street parking but a dedicated bicycle lane exists in the southbound direction along this segment. Between Enterprise Canal and Teague Avenue, Fowler Avenue is a three-lane divided roadway, with one northbound lane and two southbound lanes. There is a dedicated southbound bike lane for most of the segment. Between Teague Avenue and Nees Avenue, it is a two-lane undivided road. There is no provision for on-street parking. Between Nees Avenue and Goshen Avenue, Fowler Avenue is a three-lane divided road with a raised median. There is a bicycle lane only along the northbound direction of this segment. There is no provision for on-street parking. Between Goshen Avenue and the SR-168 Westbound Ramps, Fowler Avenue is a four-lane divided road with a raised median. There are bicycle lanes along both directions of this segment. There is no provision for on-street parking.

- **Behymer Avenue:** Within the study area, Behymer Avenue is designated as an Arterial between Willow Avenue and Clovis Avenue, as a Collector between Clovis Avenue and Sunnyside Avenue, and as a Rural Collector between Sunnyside Avenue and Fowler Avenue in the City’s General Plan. Between Willow Avenue and Fowler Avenue, Behymer Avenue is a two-lane, undivided road. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **Ticonderoga:** Ticonderoga is designated as a Local Street in the City’s General Plan. Within the study area, Ticonderoga is a two-lane, undivided Local Street. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **Shepherd Avenue:** Within the study area, Shepherd Avenue is designated as an Arterial between Willow Avenue and Clovis Avenue, and as an Expressway between Clovis Avenue and Fowler Avenue in the City’s General Plan. Between Willow Avenue and Sunnyside Avenue, Shepherd Avenue is a three-lane, divided road with a raised median, while between Sunnyside Avenue and Fowler Avenue, it is a two-lane, partly undivided and partly divided road. There are bicycle lanes along both directions of the segment between Willow Avenue and Sunnyside Avenue. There are no bicycle facilities along any direction of the segment between Sunnyside Avenue and Fowler Avenue. There is no provision for on-street parking along any of these segments.

- **Teague Avenue:** Teague Avenue is designated as a Collector in the City’s General Plan. Between Sunnyside Avenue and Fowler Avenue, Teague Avenue is a two-lane, undivided Arterial. There are no bicycle facilities along both directions of this segment. There is also no provision for on-street parking.

- **Nees Avenue:** Within the study area, Nees Avenue is designated as an Arterial in the City’s General Plan. Between Clovis Avenue and Sunnyside Avenue, Nees Avenue is a mostly two-lane undivided road. There is a bicycle lane in the eastbound direction only along a small portion of this segment near the intersection with Sunnyside Avenue. However, there is no provision for on-street parking. Between Sunnyside Avenue and Fowler Avenue, Nees Avenue is a three-lane divided arterial with a raised median or a TWLTL median. There are bicycle lanes along some portions of this segment. However, there is no provision for on-street parking.

- **Alluvial Avenue:** Within the study area, Alluvial Avenue is designated as a Collector in the City’s General Plan. Between Clovis Avenue and Sunnyside Avenue, Alluvial Avenue is a two-lane, divided Collector with a TWLTL median. However, between Sunnyside Avenue and Fowler Avenue, Alluvial Avenue is a partly three-lane and partly four-lane undivided Collector. There are bicycle lanes along both directions of these segments. However, there is no provision for on-street parking.

- **Herndon Avenue:** Within the study area, Herndon Avenue is designated as an Arterial in the City’s General Plan. Between the SR-168 Eastbound Ramps and Clovis Avenue, Herndon Avenue is a 10-lane, divided Arterial with a raised median. There are no bicycle facilities along any direction of this segment. There is also no provision for on-street parking.

Figure 4-2 illustrates existing plus project study intersection geometrics and traffic control.

It is to be noted that the project will be widening Shepherd Avenue along its frontage from one lane to two lanes in the westbound direction. Therefore, Shepherd Avenue has been considered as a three-lane road under all ‘plus project’ scenarios in the TIA, with one lane in the eastbound direction and two lanes in the westbound direction. Figure 4-3 illustrates study intersection geometrics and traffic control under ‘plus project’ scenarios.

4.2 TRANSIT, BICYCLES, AND PEDESTRIANS

4.2.1 Transit Network

Clovis Transit Stageline Routes 10 and 80 operate within the study area. Route 10 operates from Monday through Saturday, while Route 80 operates only on school days, based on the Clovis Unified School District schedule. Route 10 provide access to Fresno State University and, and Route 80 provides access to Buchanan Education Complex.

Fresno Area Express (FAX) operates within the study area along Willow Avenue 7 days a week. The route connects communities in Fresno to the different campuses of Clovis Community College.

In addition to fixed route services, Round Up is the Clovis paratransit service for disabled City residents. Round Up transit vehicles are all accessible in accordance with the Americans with Disabilities Act (ADA) standards.

4.2.2 Bicycle Network

The vision of the City of Clovis *Active Transportation Plan (ATP)*, updated January 2022, is a “city with a complete and connected network of trails, walkways, and bikeways that provides convenient and intuitive connections to key destinations and supports travel within and between neighborhoods. The network improves quality of life by encouraging walking and bicycling for transportation and recreation.” The ATP identifies different strategies to improve safety and accessibility for active modes of transportation such as walking and biking. There are four different types of bicycle facilities in the City:

- Class I (Trails)
- Class II (Bicycle Lanes)
- Class II (Buffered Bicycle Lanes)
- Class III (Bicycle Routes)

One of the long-term visions of the City includes upgrading existing or recommended Class II Bicycle Lanes and Buffered Bicycle Lanes to Class IV Separated Bicycle Lanes.

Figures 4-4 and 4-5 illustrate the existing and proposed bicycle facilities within the City. At present, Class II bicycle lanes exist along Clovis Avenue, Willow Avenue, and some segments of Shepherd Avenue and Fowler Avenue within the study area. However, as shown in Figure 4-5, different bicycle facilities are proposed along other roadways within the study area, such as Sunnyside Avenue, Teague Avenue, Nees Avenue, and Alluvial Avenue.

4.2.3 Pedestrian Network

The City has an extensive pedestrian network, with sidewalks along most of the major roads. However, since a portion of the study area falls within recently incorporated areas of the City, sidewalks are not present because they were previously developed as per unincorporated Fresno County design guidelines. Figure 4-6 illustrates the existing sidewalk facilities within Clovis.

The City's ATP has identified improvements to the pedestrian network based on a citywide sidewalk network gap analysis. Additionally, several potential locations have been identified to install mid-block crossings to improve trail connectivity throughout Clovis. Figure 4-7 illustrates the existing and proposed trails in Clovis and the potential locations of the mid-block trail crossings. As shown on Figure 4-7, two trails (i.e., the Dry Creek Trail and the Enterprise Trail) currently exist within the study area. However, additional trails are being proposed in the study area with potential mid-block crossings.

4.3 LIST OF CHAPTER 4.0 FIGURES

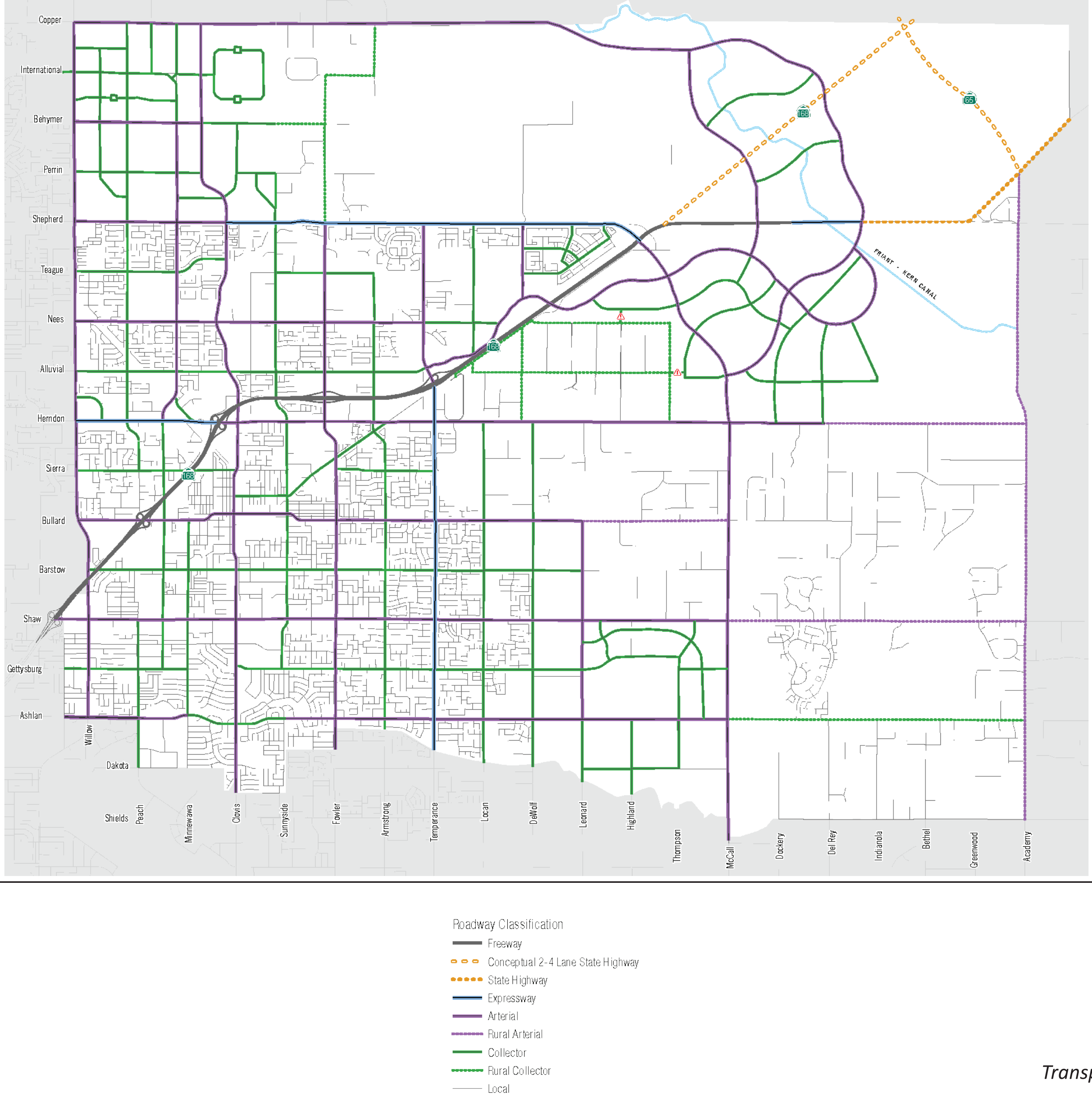

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FIGURE 4-1

Shepherd North Project
Transportation Impact Analysis

City of Clovis Roadway Classific

SOURCE: Clovis General Plan, August 2014
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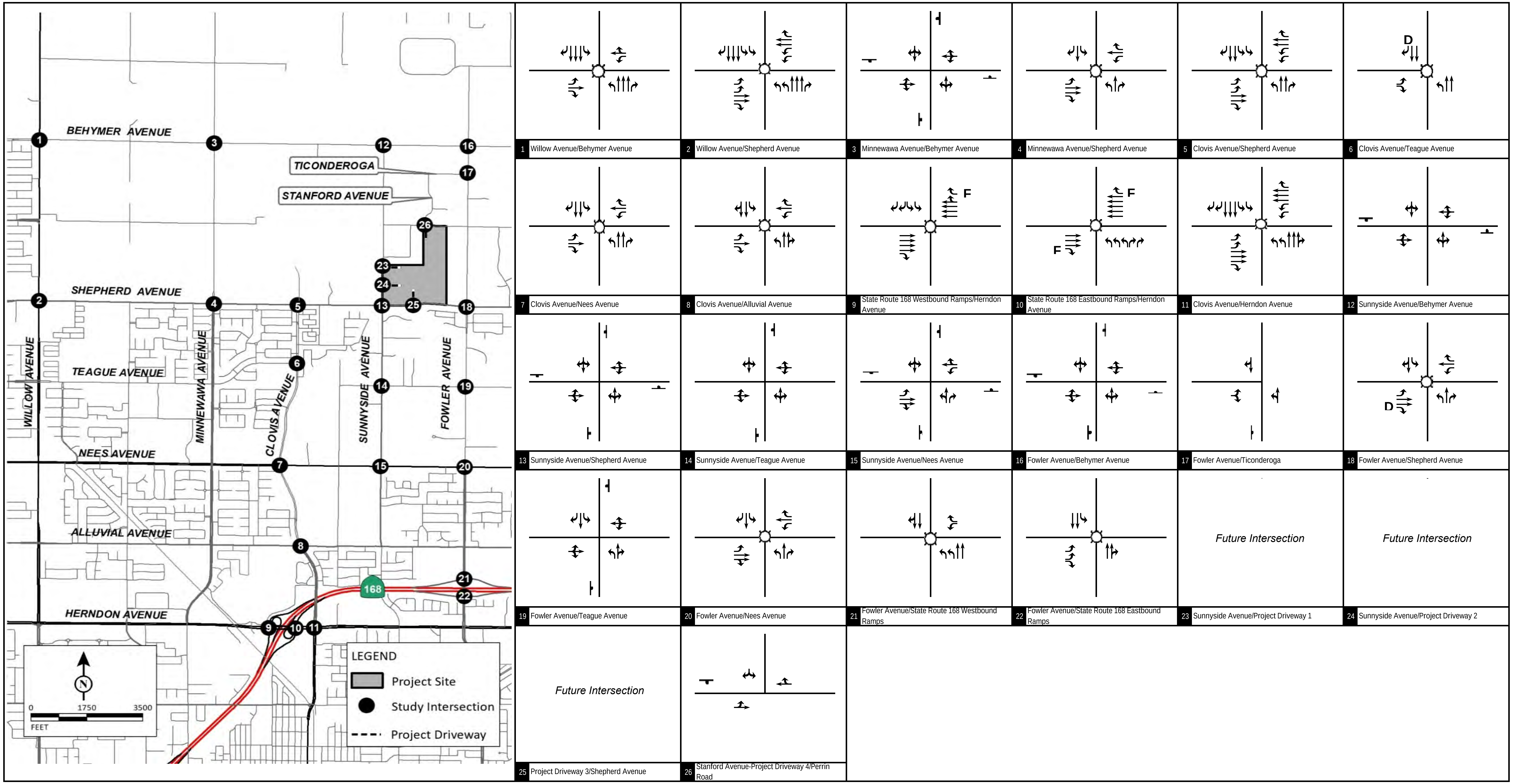

LSA

FIGURE 4-2

Legend

Signal
Stop Sign
D Defacto right turn
F Free right-turn
O Right-turn overlap
Y Yield
----- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Existing Study Intersection Geometrics and Traffic Control

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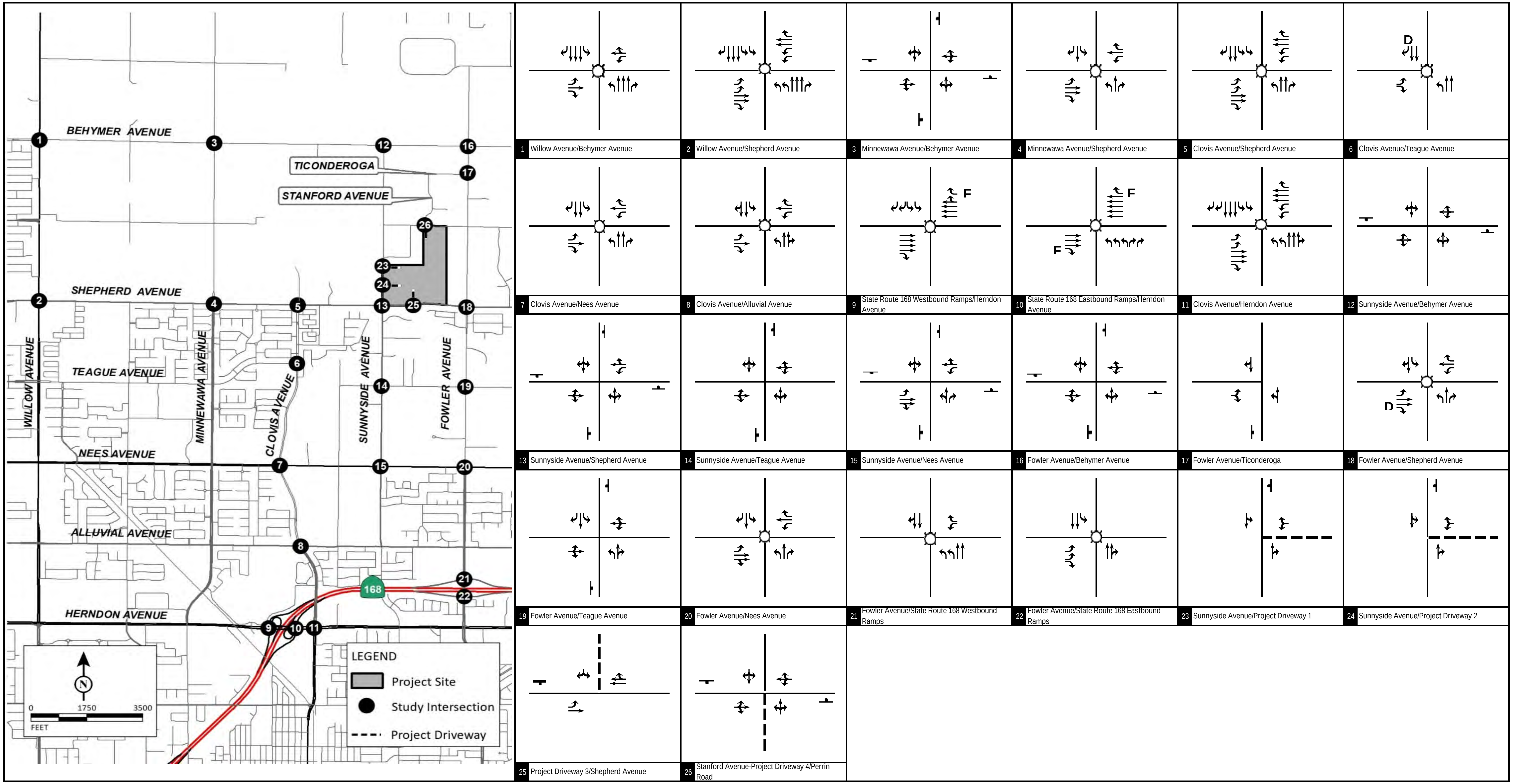

LSA

FIGURE 4-3

Legend

☼	Signal	**F**	Free right-turn	----- Project Driveway
⊥	Stop Sign	**O**	Right-turn overlap	
D	Defacto right turn	**Y**	Yield	

Shepherd North Project
Transportation Impact Analysis
Study Intersection Geometrics and Traffic Control under "Plus Project" Scenarios

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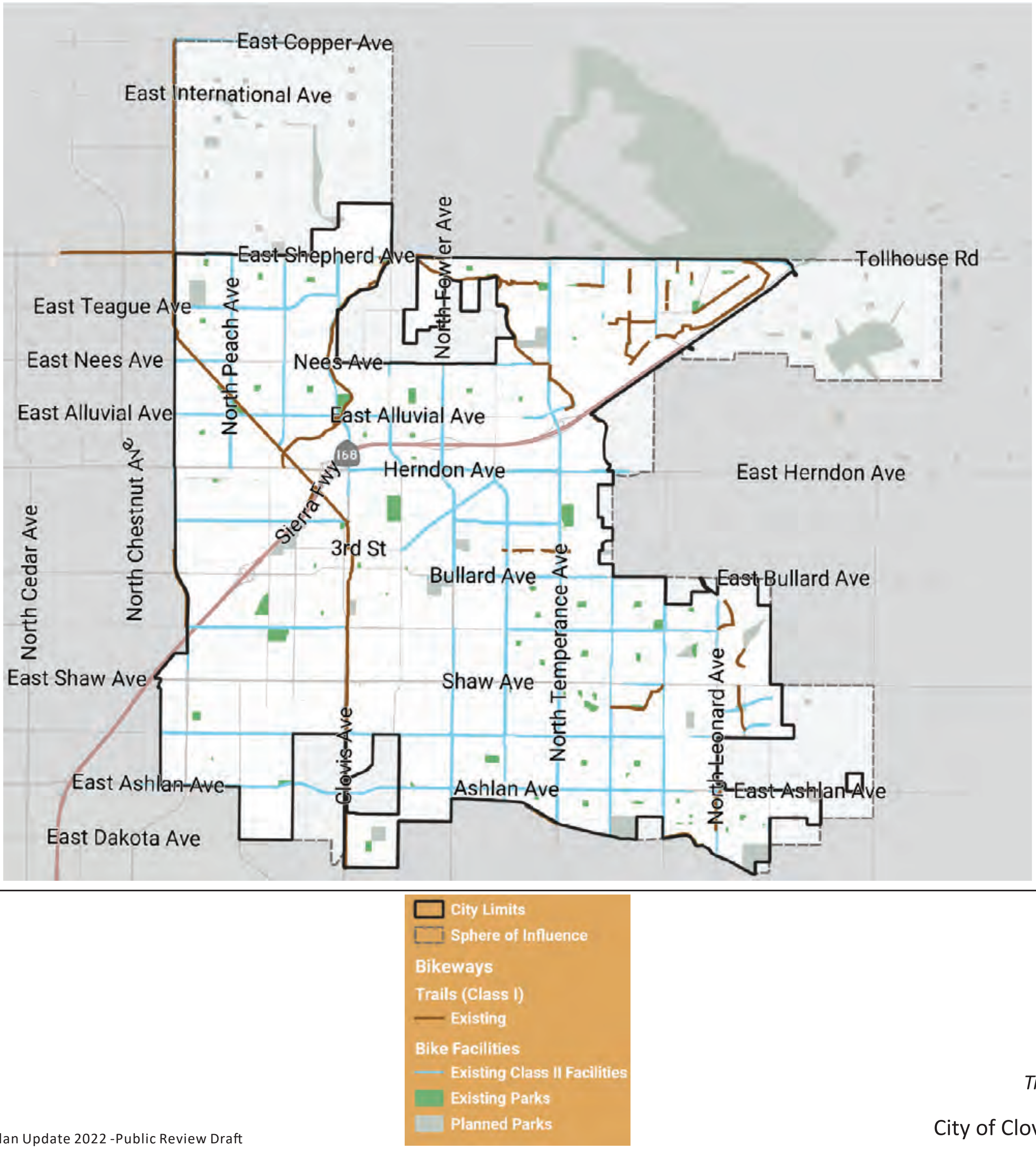

FIGURE 4-4

Shepherd North Project
Transportation Impact Analysis

City of Clovis Existing Bicycle Fac

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft
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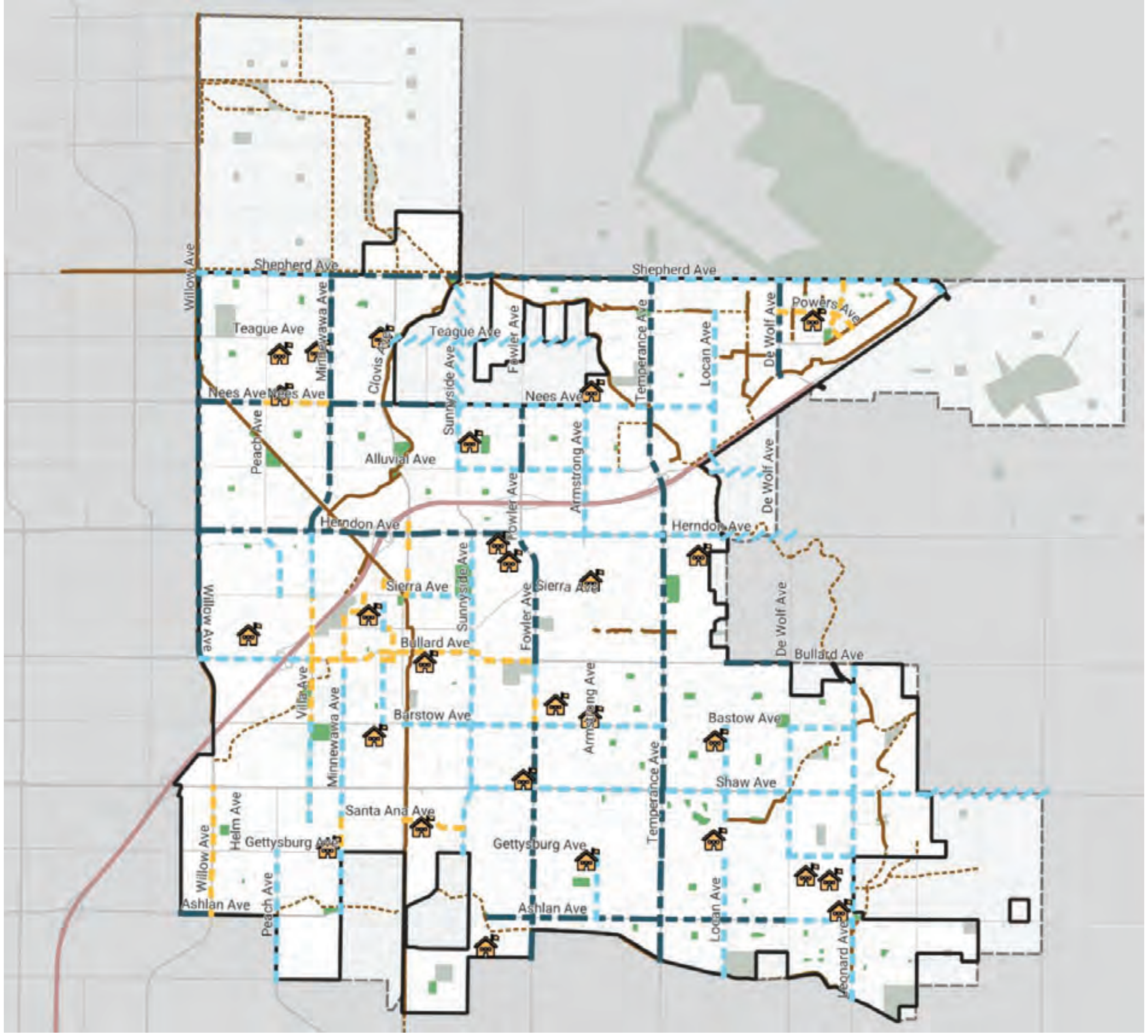

LSA

FIGURE 4-5

Shepherd North Project
Transportation Impact Analysis

City of Clovis Proposed Bicycle Fac

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft
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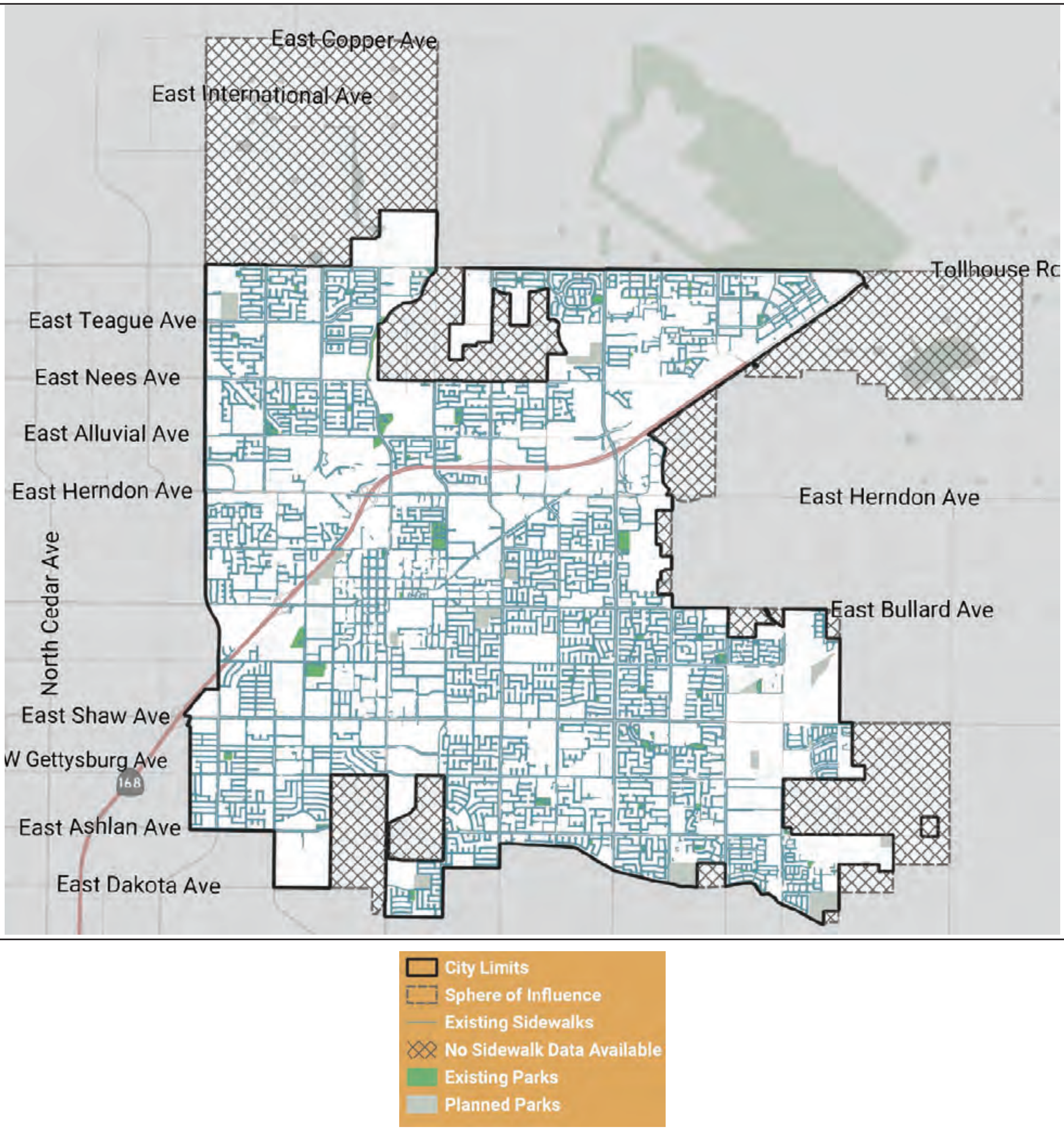

LSA

FIGURE 4-6

Shepherd North Project
Transportation Impact Analysis

City of Clovis Existing Sidewalks Fac

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft
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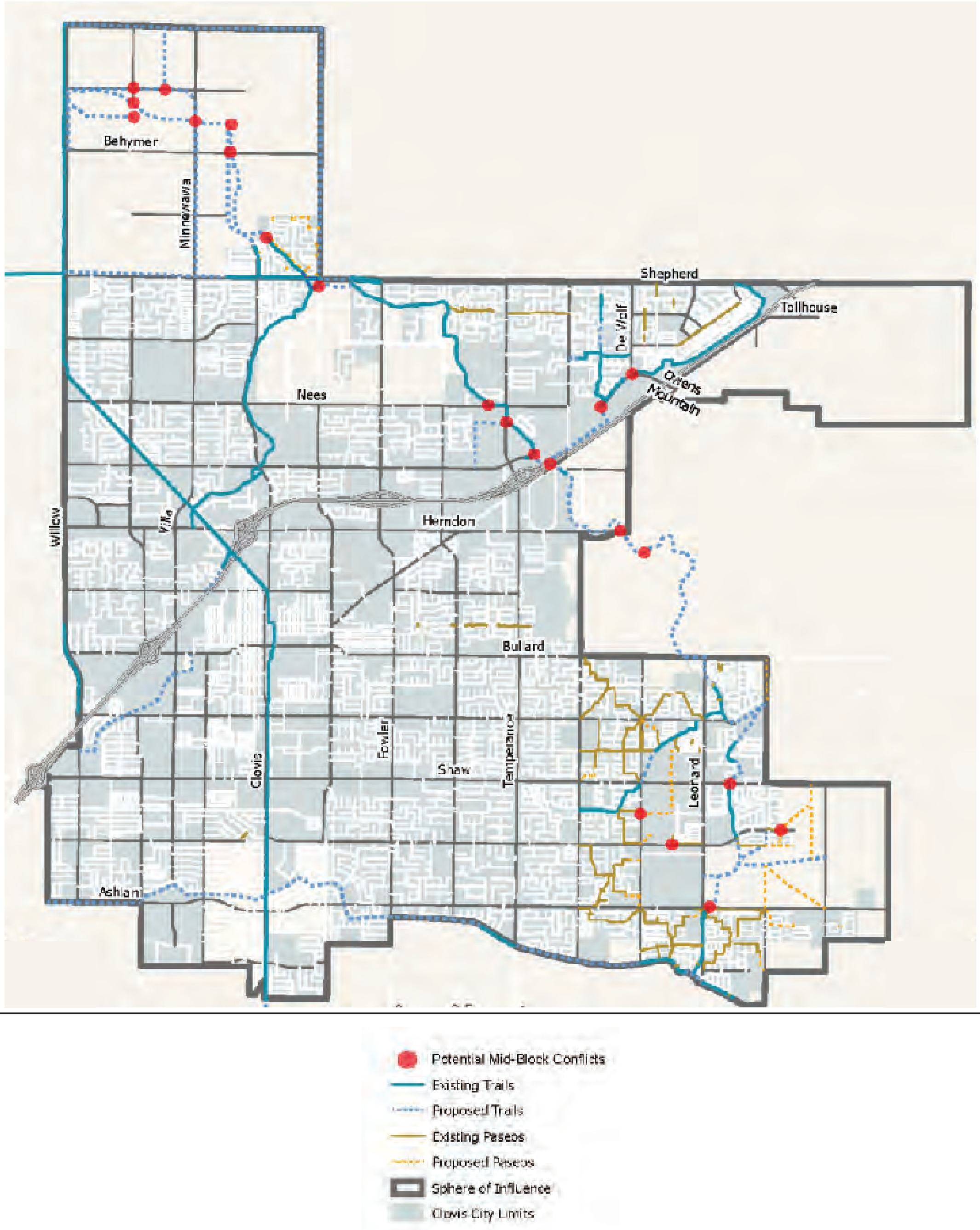

FIGURE 4-7

Shepherd North Project
Transportation Impact Analysis

City of Clovis Existing and Proposed Trails and Potential Mid Block Cro

SOURCE: Clovis Active Transportation Plan Update 2022 -Public Review Draft

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5.0 TRAFFIC VOLUMES FOR WITHOUT PROJECT SCENARIOS

5.1 EXISTING TRAFFIC VOLUMES

Traffic volumes for existing conditions were developed using existing count data collected by Counts Unlimited at study intersections and roadway segments. Daily tube counts were collected for roadway segments while a.m. and p.m. peak-hour turning movement counts were collected at study intersections. Detailed count sheets are included in Appendix C. It is to be noted that counts at most intersections and roadway segments were collected in May 2022, when schools were in session. However, counts at the intersection of Sunnyside Avenue/Behymer Avenue and the segments of Behymer Avenue between Minnewawa Avenue and Sunnyside Avenue, and between Sunnyside Avenue and Fowler Avenue were collected in June 2022, when schools were not in session. The volumes at these intersections and segments were developed as follows:

- **Intersection of Sunnyside Avenue/Behymer Avenue:** In June 2022, counts were collected both at this intersection and at the adjacent intersection of Minnewawa Avenue/Behymer Avenue. An adjustment factor was applied to the counts at this intersection using the percentage difference between May 2022 and June 2022 traffic counts at the adjacent intersection of Minnewawa Avenue/Behymer Avenue.

- **Segment of Behymer Avenue Between Minnewawa Avenue and Sunnyside Avenue:** In June 2022, counts were collected both at this segment and at the adjacent segment of Behymer Avenue between Willow Avenue and Minnewawa Avenue. An adjustment factor was applied to the counts at this segment using the percentage difference between May 2022 and June 2022 traffic counts at the adjacent segment of Behymer Avenue between Willow Avenue and Minnewawa Avenue.

- **Segment of Behymer Avenue Between Sunnyside Avenue and Fowler Avenue:** In June 2022, counts were collected both at this segment and at the nearby segment of Behymer Avenue between Willow Avenue and Minnewawa Avenue. An adjustment factor was applied to the counts at this segment using the percentage difference between May 2022 and June 2022 traffic counts at the nearby segment of Behymer Avenue between Willow Avenue and Minnewawa Avenue.

Vehicle classification counts were collected at selected study area intersections. Truck percentages for every approach at these intersections were obtained from the classification counts. As for the remaining study intersections without classification counts, truck percentages for the various approaches were obtained based on the truck percentages at the adjacent intersections.

Figure 5-1 illustrates peak-hour traffic volumes at study intersections under existing conditions. Table 5-A shows peak-hour traffic volumes at roadway segments under existing conditions.

5.2 NEAR-TERM (2028) WITHOUT PROJECT TRAFFIC VOLUMES

As approved during the City's scoping agreement process (Appendix A), traffic volumes for near-term conditions were developed by adding trips from cumulative projects in the area to existing traffic volumes.

Information concerning cumulative projects in the vicinity of the proposed project was obtained from City staff and from the adjacent jurisdictions of City of Fresno and County of Fresno. Figure 5-2 illustrates the cumulative project locations.

Trip generations for cumulative projects were either obtained from the respective traffic studies prepared for the projects or developed using trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition). Table 5-B summarizes the cumulative project trip generation. As shown in Table 5-B, the cumulative projects are expected to generate 9,604 net a.m. peak-hour trips, 13,848 net p.m. peak-hour trips, and 150,662 net daily trips.

Cumulative project trips were assigned to the roadway network based on either the distributions provided in the respective traffic studies for these projects or their locations in relation to surrounding land uses and regional arterials. Figure 5-3 illustrates the peak-hour cumulative project trip assignment at study area intersections. Figure 5-4 illustrates the peak-hour traffic volumes at study intersections under near-term conditions. Table 5-C shows the peak-hour traffic volumes at roadway segments under near-term conditions.

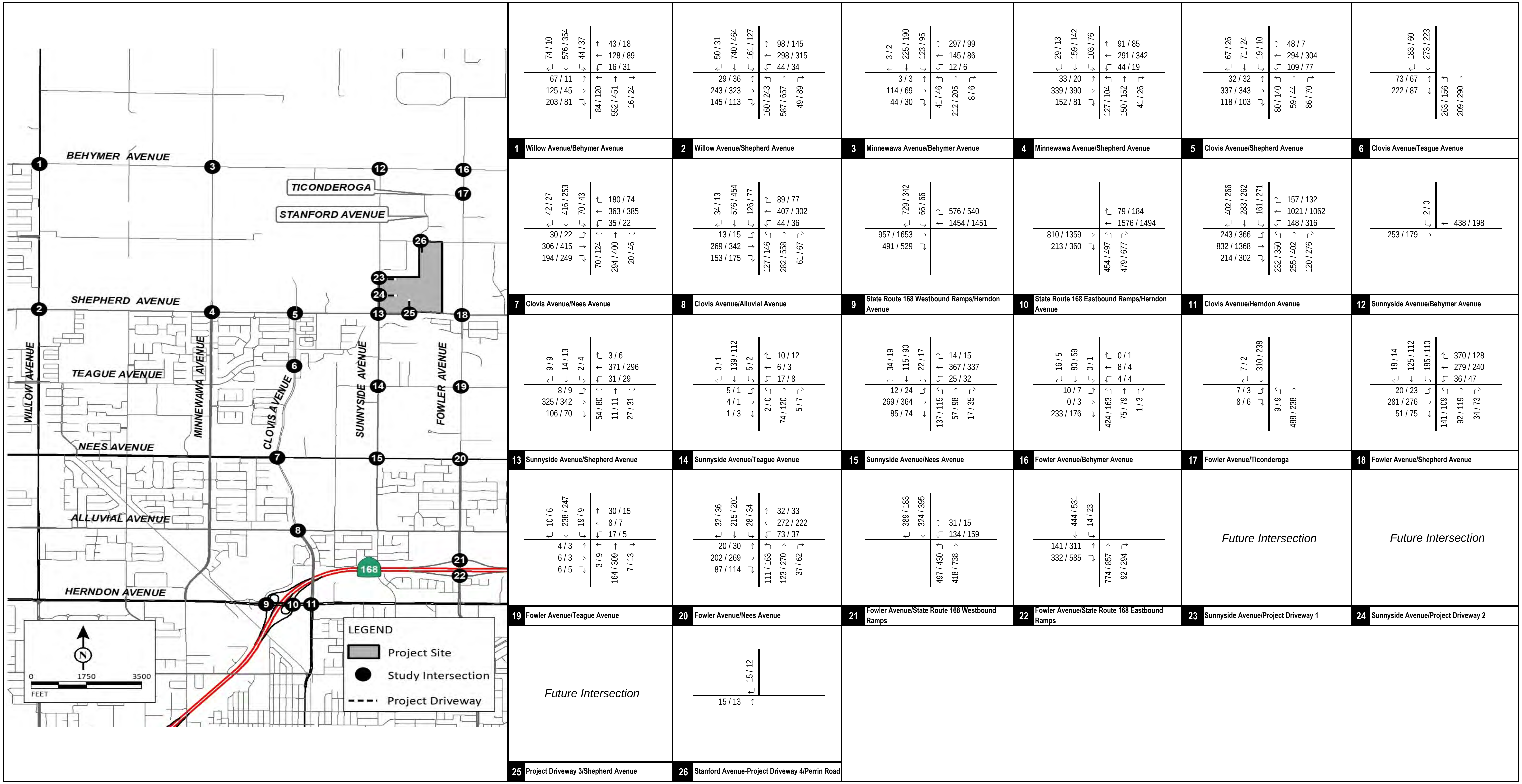
It should be noted that volume development for this scenario have been conducted as an intermediate step for the development of traffic volumes for the Near-Term Plus Project Conditions. As such, as recommended in the City's TIA Guidelines and approved during the scoping agreement process, this scenario has not been analyzed in the LTA.

5.3 CUMULATIVE (2046) WITHOUT PROJECT TRAFFIC VOLUMES

Traffic volumes for cumulative conditions were developed using the Fresno COG ABM. The methodology used to develop cumulative traffic volumes at all study intersections is consistent with the National Cooperative Highway Research Program (NCHRP) and Fresno COG's procedures for post-processing of modeled traffic volumes. Figure 5-5 illustrates the peak-hour traffic volumes at study intersections under cumulative conditions. Table 5-D shows the peak-hour traffic volumes at roadway segments under cumulative conditions.

Detailed volume development worksheets are included in Appendix D.

5.4 LIST OF CHAPTER 5.0 FIGURES AND TABLES



LSA

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes
- - - Project Driveway

FIGURE 5-1

Shepherd North Project
Transportation Impact Analysis
Existing Peak Hour Traffic Volumes

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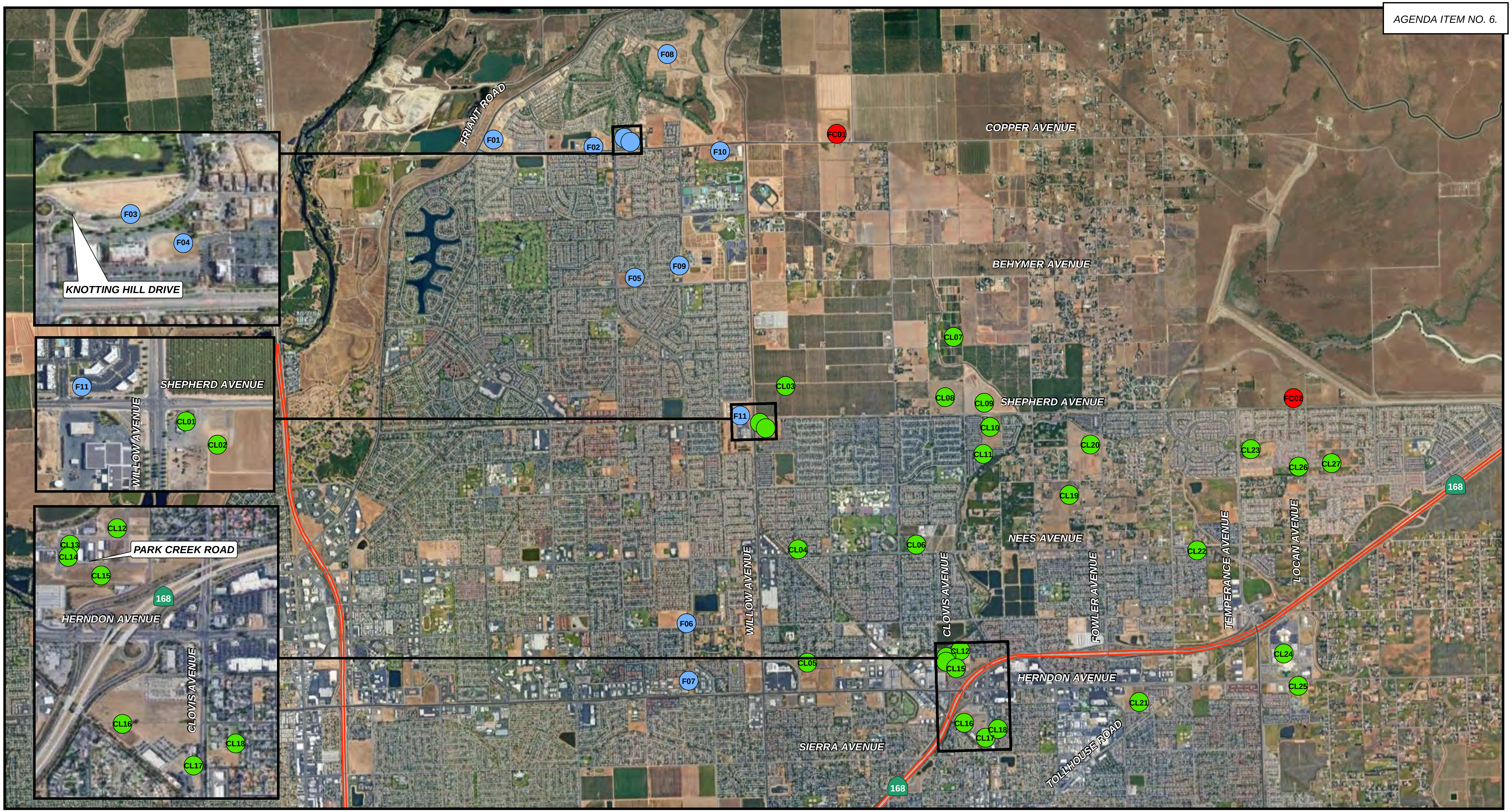

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LEGEND

🔵 City of Fresno Cumulative Projects

🔴 County of Fresno Cumulative Projects

🟢 City of Clovis Cumulative Projects

0 1800 3600
FEET

SOURCE: County of Fresno Streets Data 2021, Google Earth 2019

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FIGURE 5-2

Shepherd North Project
Transportation Impact Analysis

Cumulative Project Lo

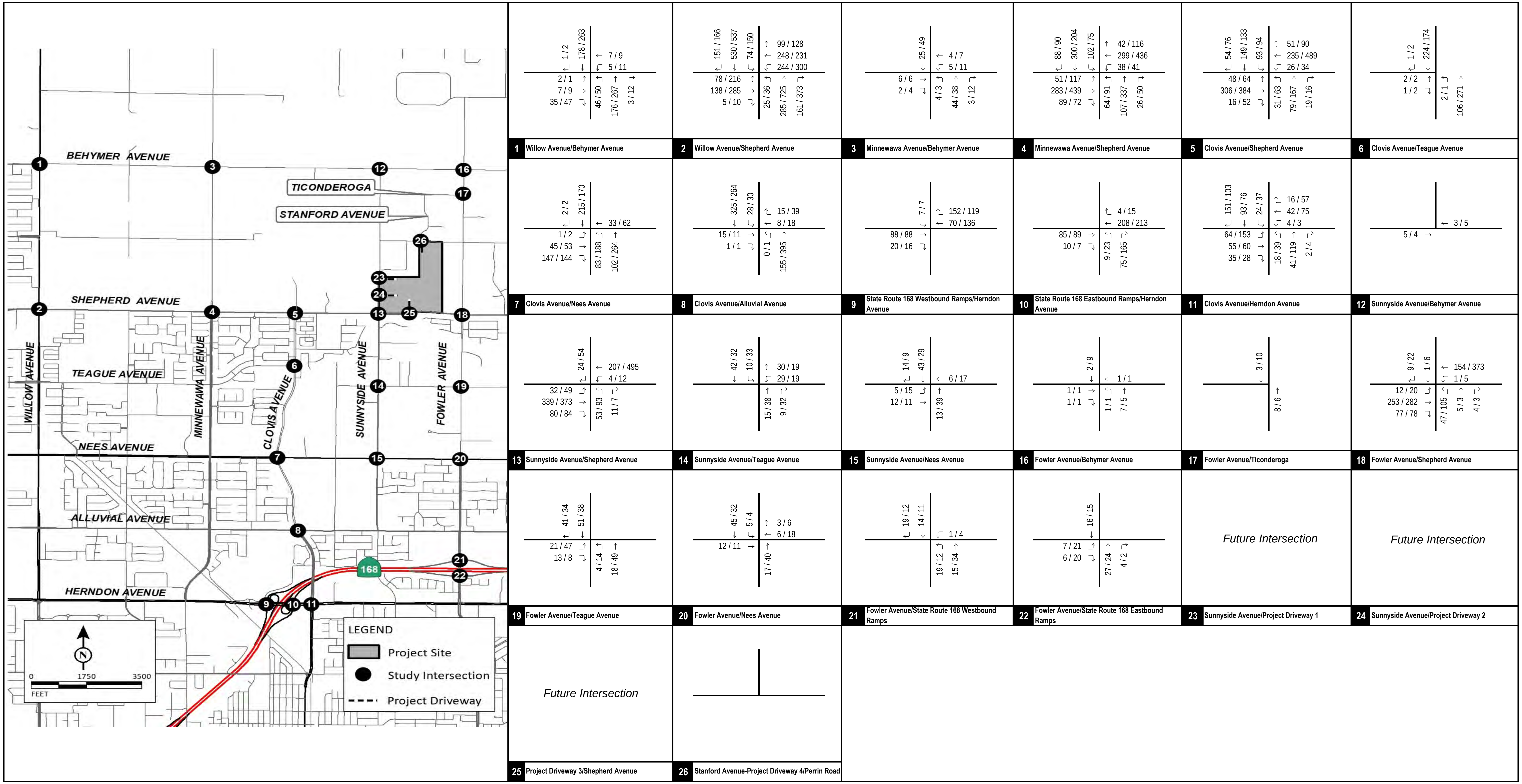

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FIGURE 5-3

XXX / YYY
AM / PM Peak Hour Traffic Volumes
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis
Cumulative Projects Trip Assignment

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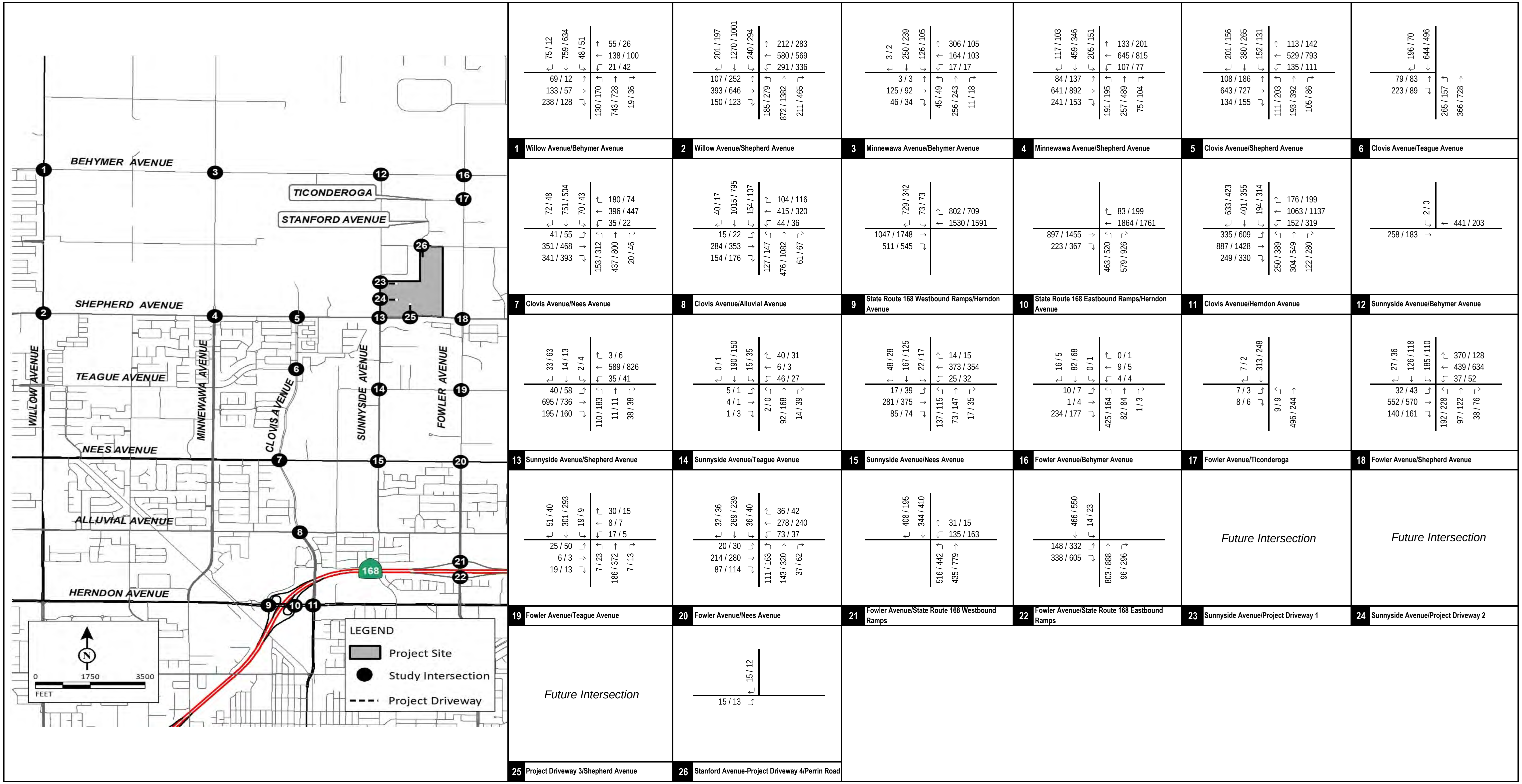

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FIGURE 5-4

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Near-Term (2028) without Project Peak Hour Traffic Volumes

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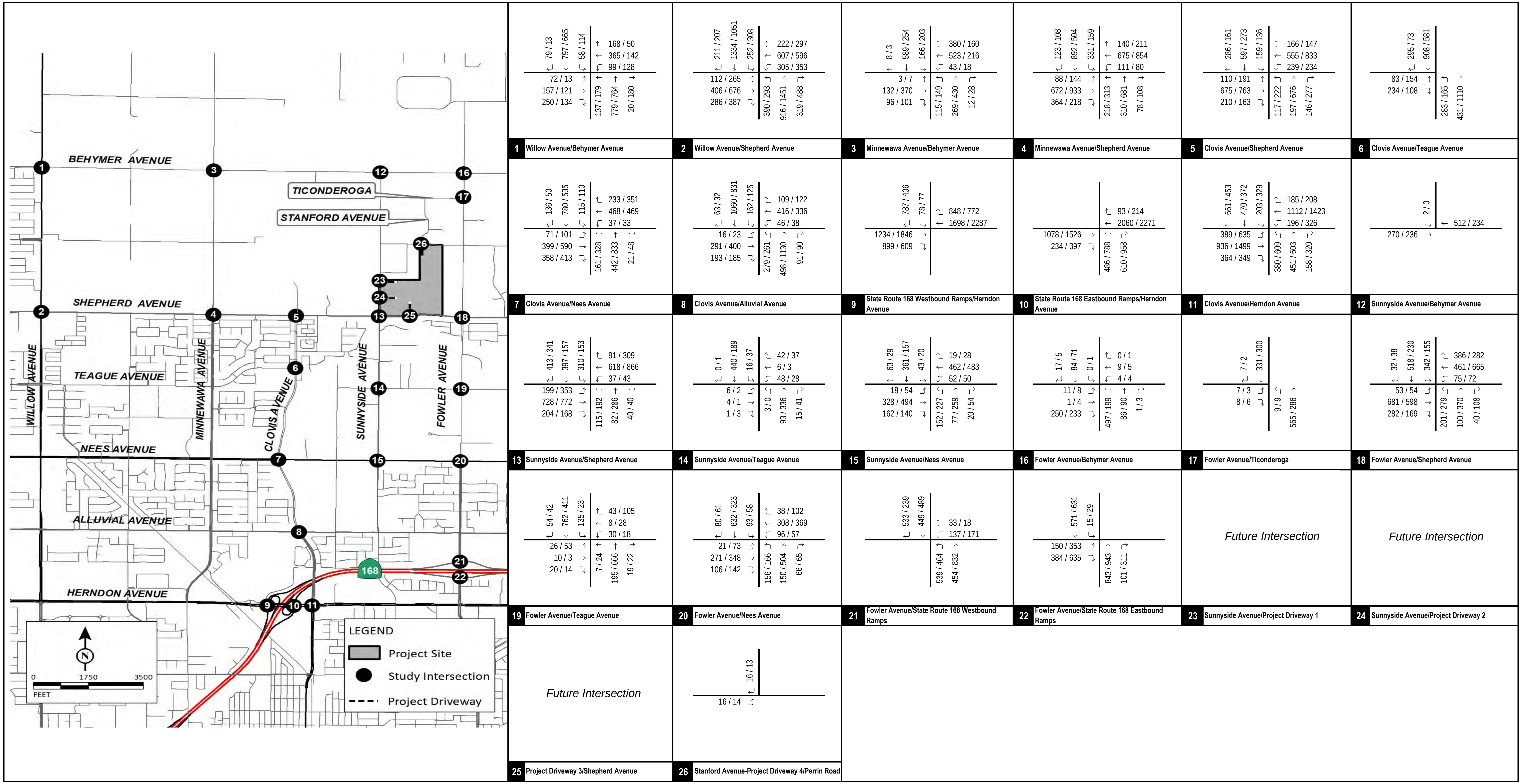

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FIGURE 5-5

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Cumulative (2046) without Project Peak Hour Traffic Volumes

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Table 5-A - Existing Roadway Segment Weekday Peak Hour Traffic Volumes

Roadway	#	Segment	A.M. Peak Hour			P.M. Peak Hour		
			Adjusted Existing (2022)	Project Trips	Existing (2022) Plus Project	Adjusted Existing (2022)	Project Trips	Existing (2022) Plus Project
Behymer Avenue	1	between Willow Avenue and Minnewawa Avenue	364	4	368	236	6	242
	2	between Minnewawa Avenue and Sunnyside Avenue	699	4	703	385	6	391
	3	between Sunnyside Avenue and Fowler Avenue	629	4	633	374	6	380
Shepherd Avenue	4	between Willow Avenue and Minnewawa Avenue	884	106	990	1,033	142	1,175
	5	between Minnewawa Avenue and Clovis Avenue	906	161	1,067	942	217	1,159
	6	between Clovis Avenue and Sunnyside Avenue	870	267	1,137	806	359	1,165
	7	between Sunnyside Avenue and Project Driveway 3	749	251	1,000	704	336	1,040
	8	between Project Driveway 3 and Fowler Avenue	749	93	842	704	126	830
Herndon Avenue	9	between State Route 168 Eastbound Ramps and Clovis Avenue	2,914	81	2,995	3,756	108	3,864
Willow Avenue	10	between Behymer Avenue and Shepherd Avenue	1,632	43	1,675	1,452	57	1,509
Minnewawa Avenue	11	between Behymer Avenue and Shepherd Avenue	542	0	542	483	0	483
Clovis Avenue	12	between Shepherd Avenue and Teague Avenue	503	106	609	457	142	599
	13	between Teague Avenue and Nees Avenue	1,014	97	1,111	822	131	953
	14	between Nees Avenue and Alluvial Avenue	1,007	97	1,104	1,087	131	1,218
	15	between Alluvial Avenue and Herndon Avenue	1,476	97	1,573	1,726	131	1,857
Sunnyside Avenue	16	between Project Driveway 1 and Shepherd Avenue	58	136	194	60	183	243
	17	between Shepherd Avenue and Teague Avenue	233	60	293	233	80	313
	18	between Teague Avenue and Nees Avenue	238	59	297	250	80	330
Fowler Avenue	19	between Behymer Avenue and Ticonderoga	791	4	795	476	6	482
	20	between Ticonderoga and Shepherd Avenue	792	0	792	486	0	486
	21	between Shepherd Avenue and Teague Avenue	457	63	520	579	86	665
	22	between Teague Avenue and Nees Avenue	427	63	490	578	86	664
	23	between Nees Avenue and State Route 168 Westbound Ramps	1,361	60	1,421	1,718	80	1,798

Notes:

[1] Counts at segments 2 and 3 were collected when schools were not in session. Therefore, counts were collected at the adjacent segment 1 at the same time and compared with segment 1 counts prior to school closure. For the a.m. peak hour, segment 1 counts were higher during school session. Therefore, the counts for segments 2 and 3 were adjusted accordingly. However, for the p.m. peak hour, segment 1 counts were lower during school session. Therefore, no adjustment was made to the counts for segments 2 and 3.

Table 5-B - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
			In	Out	Total	In	Out	Total	
CL01 .	**Enzon's Table Commercial**								
	1958 N Willow Avenue								
	Strip Retail Plaza (<40k)[1]	24.287 TSF							
	Trips/Unit		1.42	0.94	2.36	3.30	3.29	6.59	54.45
	Trip Generation		34	23	57	80	80	160	1,322
	Pass-by Trips[2]		0	0	0	(32)	(32)	(64)	(529)
	Net New Trips		34	23	57	48	48	96	793
CL02 .	**Enzon's Table Residential**								
	1959 N Willow Avenue								
	Single-Family Detached Housing[3]	258 DU							
	Trips/Unit		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		46	134	180	152	90	242	2,433
CL03 .	**Heritage Grove[4]**								
	Planning Areas 1-5								
	Single-Family Detached Housing[3]	646 DU							
	Trips/Unit		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		116	336	452	381	226	607	6,092
	Single-Family Attached Housing[5]	56 DU							
	Trips/Unit		0.15	0.33	0.48	0.32	0.25	0.57	7.20
	Trip Generation		8	18	26	18	14	32	403
	Multifamily Housing (Low-Rise) Not Close to Rail Transit[6]	2,108 DU							
	Trips/Unit		0.10	0.30	0.40	0.32	0.19	0.51	6.74
	Trip Generation		211	632	843	675	401	1,076	14,208
	Shopping Center (>150)[7]	918.724 TSF							
	Trips/Unit		0.52	0.32	0.84	1.63	1.77	3.40	37.01
	Trip Generation		478	294	772	1,498	1,626	3,124	34,002
	Pass-by Trips[8]		0	0	0	(434)	(472)	(906)	(9,861)
	Net New Trips		478	294	772	1,064	1,154	2,218	24,141
	Planning Areas 6,7,8,10,11,12								
	Single-Family Detached Housing[3]	1,923 DU							
	Trips/Unit		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		346	1,000	1,346	1,135	673	1,808	18,134
	Single-Family Attached Housing[5]	339 DU							
	Trips/Unit		0.15	0.33	0.48	0.32	0.25	0.57	7.20
	Trip Generation		51	112	163	108	85	193	2,441
	Planning Area 9								
	Elementary School[9]	750 STU							
	Trips/Unit		0.40	0.34	0.74	0.07	0.09	0.16	2.27
	Trip Generation		300	255	555	53	68	121	1,703
	Planning Areas 13-17								
	Single-Family Detached Housing[3]	545 DU							
	Trips/Unit		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		98	283	381	322	191	513	5,139
	Shopping Plaza (40-150k) -Supermarket -Yes[10]	77.467 TSF							
	Trips/Unit		2.19	1.34	3.53	4.33	4.70	9.03	94.49
	Trip Generation		170	104	274	335	364	699	7,320
	Pass-by Trips[11]		0	0	0	(134)	(146)	(280)	(2,928)
	Net New Trips		170	104	274	201	218	419	4,392
		Total Gross Trip Generation	1,778	3,034	4,812	4,525	3,648	8,173	89,442
		Total Pass-By Trips	0	0	0	(568)	(617)	(1,186)	(12,789)
		Total Net Trip Generation	1,778	3,034	4,812	3,957	3,031	6,987	76,653
CL04 .	**TM 6348**								
	Northeast of Timmy Avenue and Ness Avenue								
	Single-Family Detached Housing[3]	10 DU							
	Trips/Unit		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		2	5	7	6	4	10	94
CL05 .	**TM 6262[12]**								
	Trip Generation	185 DU	20	66	86	66	38	104	1,356
CL06 .	**The Well Church[13]**								
	Trip Generation	80.000 TSF	16	11	27	18	22	40	556
CL07 .	**Tract Map 6343[14]**								
	Trip Generation	590 DU	106	307	413	348	207	555	5,564

Table 5-B - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
CL08 .	**TM 6050[15]**									
	Trip Generation	255	DU	47	142	189	159	93	252	2,407
CL09 .	**Lennar - Tract no. 6200 -Phase 1[16]**									
	Trip Generation	176	DU	32	98	130	110	64	174	1,661
CL10 .	**Tract 6263[17]**									
	Trip Generation	137	DU	25	76	101	86	50	136	1,293
CL11 .	**TM 6268**									
	Southwest of Clovis Avenue and Riordan Avenue									
	Single-Family Detached Housing[3]	10	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			2	5	7	6	4	10	94
CL12 .	**SPR 2021-004**									
	622 N Pollasky Avenue									
	Warehousing[18,19]	15.100	TSF							
	Auto Trips			1	1	2	1	1	2	18
	Total Truck Trips			0	0	0	0	1	1	8
	Total Trip Generation			1	1	2	1	2	3	26
CL13 .	**SPR 2020-002**									
	466 Spruce Avenue									
	Warehousing[18,19]	11.470	TSF							
	Auto Trips			1	0	1	0	1	1	14
	Total Truck Trips			0	0	0	0	0	0	6
	Total Trip Generation			1	0	1	0	1	1	20
CL14 .	**SPR 2020-007**									
	541 DeWitt Avenue									
	Warehousing[18,19]	7.800	TSF							
	Auto Trips			1	0	1	0	1	1	9
	Total Truck Trips			0	0	0	0	0	0	4
	Total Trip Generation			1	0	1	0	1	1	13
CL15 .	**SPR 2021-014**									
	520 Park Creek									
	Warehousing[18,19]	9.897	TSF							
	Auto Trips			1	0	1	0	1	1	12
	Total Truck Trips			0	0	0	0	0	0	5
	Total Trip Generation			1	0	1	0	1	1	17
CL16 .	**Tru Hotel Site**									
	West of Clovis Avenue and Palo Alto Avenue									
	Hotel[20]	86	RM							
	Trips/Unit			0.26	0.20	0.46	0.30	0.29	0.59	7.99
	Trip Generation			22	17	39	26	25	51	687
CL17 .	**SPR 2021-005**									
	100 N Clovis Avenue									
	Medical-Dental Office Building - Stand-Alone[21]	4.406	TSF							
	Trips/Unit			2.45	0.65	3.10	1.18	2.75	3.93	36.00
	Trip Generation			11	3	14	5	12	17	159
CL18 .	**SPR 2005-037A**									
	153 N Clovis Avenue									
	General Office Building[22]	3.298	TSF							
	Trips/Unit			1.34	0.18	1.52	0.24	1.20	1.44	10.84
	Trip Generation			4	1	5	1	4	5	36
CL19 .	**TM 6284[23]**									
	Trip Generation	74	DU	14	42	56	47	27	74	700
CL20 .	**Tract 6154[24]**									
	Trip Generation	95	DU	18	54	72	60	35	95	906
CL21 .	**TM 5807**									
	Southwest of Herndon Avenue and Armstrong Avenue									
	Multifamily Housing (Low-Rise) Not Close to Rail Transit[6]	252	DU							
	Trips/Unit			0.10	0.30	0.40	0.32	0.19	0.51	6.74
	Trip Generation			25	76	101	81	48	129	1,698
CL22 .	**TM 6367**									
	West of Temperance Avenue and Ness Avenue									
	Single-Family Detached Housing[3]	8	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			1	4	5	5	3	8	75
CL23 .	**TM6309**									
	East of Temperance Avenue and South of Shepherd Avenue									
	Single-Family Detached Housing[3]	101	DU							
	Trips/Unit			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			18	53	71	60	35	95	952

Table 5-B - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
CL24 .	**SPR 90-088A12**[25]									
	Trip Generation	150	Occupied Beds Hotel	1,153	469	1,622	978	1,674	2,652	30,008
		220.000	TSF Retail							
		468.844	TSF Hospital							
		354.392	TSF MOB							
		100	Occupied Beds Assisted Living							
CL25 .	**SPR 2018-020**									
	West of Temperance Avenue and Herndon Avenue									
	Assisted Living[26]	150	Beds							
	Trips/Unit			0.11	0.07	0.18	0.09	0.15	0.24	2.60
	Trip Generation			17	11	28	14	23	37	390
CL26 .	**Tract 6339**[27]									
	Trip Generation	37	DU	7	20	27	23	14	37	349
CL27 .	**TM 6239**[27]									
	Trip Generation	162	DU	30	90	120	101	59	160	1,529
FC01 .	**CUP 3588**									
	Northwest of Cooper Avenue and Auberry Road									
	Campground/Recreational Vehicle Park[22]	38.030	AC							
	Trips/Unit			0.20	0.28	0.48	0.68	0.30	0.98	7.30
	Trip Generation			8	11	19	26	11	37	278
FC02 .	**CUP 3526**									
	Northwest of Cooper Avenue and Lucan Avenue									
	Campground/Recreational Vehicle Park[28]	38.910	AC							
	Trips/Unit			0.20	0.28	0.48	0.68	0.30	0.98	7.30
	Trip Generation			8	11	19	26	12	38	284
F01 .	**Copper River Apartments**									
	1000 E Copper Avenue									
	Multifamily Housing (Low-Rise) Not Close to Rail Transit[6]	501	DU							
	Trips/Unit			0.10	0.30	0.40	0.32	0.19	0.51	6.74
	Trip Generation			50	150	200	160	95	255	3,377
F02 .	**P21-05249**									
	1880 E Copper Avenue									
	Convenience Store/Gas Station - GFA (2-4k)[29]	4	VFP							
	Trips/Unit			8.03	8.03	16.06	9.21	9.21	18.42	265.12
	Trip Generation			32	32	64	37	37	74	1,060
	Pass-by Trips[30]			(19)	(19)	(38)	(21)	(21)	(41)	(615)
	Net New Trips			13	13	26	16	16	33	445
	Strip Retail Plaza (<40k)[1]	23.400	TSF							
	Trips/Unit			1.42	0.94	2.36	3.30	3.29	6.59	54.45
	Trip Generation			33	22	55	77	77	154	1,274
	Pass-by Trips[2]			0	0	0	(31)	(31)	(62)	(510)
	Net New Trips			33	22	55	46	46	92	764
			Total Gross Trip Generation	65	54	119	114	114	228	2,334
			Total Pass-By Trips	(19)	(19)	(38)	(52)	(52)	(103)	(1,124)
			Total Net Trip Generation	46	35	81	62	62	125	1,210
F03 .	**P20-02040**									
	11075 N Knotting Hill Drive									
	General Office Building[22]	28.000	TSF							
	Trips/Unit			1.34	0.18	1.52	0.24	1.20	1.44	10.84
	Trip Generation			38	5	43	7	34	41	304
F04 .	**P21-05913**									
	2066 E Copper Avenue									
	Medical-Dental Office Building - Stand-Alone[21]	43.560	TSF							
	Trips/Unit			2.45	0.65	3.10	1.18	2.75	3.93	36.00
	Trip Generation			107	28	135	51	120	171	1,568

Table 5-B - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
F05 .	**P21-01385- Maple & Behymer Commercial and Self-Storage Project**								
	10061 N Maple Avenue								
	Convenience Store/Gas Station - GFA (2-4k)[29]	16 VFP							
	Trips/Unit		8.03	8.03	16.06	9.21	9.21	18.42	265.12
	Trip Generation		128	128	256	147	147	294	4,242
	Pass-by Trips[30]		(97)	(97)	(195)	(110)	(110)	(221)	(3,203)
	Net New Trips		31	31	61	37	37	74	1,039
	Strip Retail Plaza (<40k)[1]	6.900 TSF							
	Trips/Unit		1.42	0.94	2.36	3.30	3.29	6.59	54.45
	Trip Generation		10	6	16	23	23	46	376
	Pass-by Trips[2]		0	0	0	(9)	(9)	(18)	(150)
	Net New Trips		10	6	16	14	14	28	226
	Fast-Food Restaurant without Drive-Though Window[31]	1.892 TSF							
	Trips/Unit		25.04	18.14	43.18	16.61	16.60	33.21	450.49
	Trip Generation		47	34	81	31	31	62	852
	Pass-by Trips[32]		(24)	(17)	(41)	(17)	(17)	(34)	(447)
	Net New Trips		24	17	41	14	14	28	405
	Fast-Food Restaurant with Drive-Through Window[33]	2.695 TSF							
	Trips/Unit		22.75	21.86	44.61	17.18	15.85	33.03	467.48
	Trip Generation		61	59	120	46	43	89	1,260
	Pass-by Trips[34]		(31)	(30)	(60)	(25)	(24)	(49)	(662)
	Net New Trips		31	30	60	21	19	40	599
	Mini Warehouse[35]	164.611 TSF							
	Trips/Unit		0.05	0.04	0.09	0.07	0.08	0.15	1.45
	Trip Generation		8	7	15	12	13	25	239
	Automated Car Wash[36]	2.420 TSF							
	Trips/Unit		5.66	3.32	8.98	7.10	7.10	14.20	163.09
	Trip Generation		14	8	22	17	17	34	395
		Total Gross Trip Generation	268	242	510	276	274	550	7,364
		Total Pass-By Trips	(151)	(144)	(295)	(162)	(160)	(322)	(4,462)
		Total Net Trip Generation	117	98	215	114	114	228	2,902
F06 .	**P21-02506**								
	7521 N Chesnut Avenue								
	Multifamily Housing (Low-Rise) Not Close to Rail Transit[6]	105 DU							
	Trips/Unit		0.10	0.30	0.40	0.32	0.19	0.51	6.74
	Trip Generation		11	32	43	34	20	54	708
F07 .	**P20-03299**								
	2471 E Fir Avenue								
	General Office Building[22]	18.175 TSF							
	Trips/Unit		1.34	0.18	1.52	0.24	1.20	1.44	10.84
	Trip Generation		24	3	27	4	22	26	197
F08 .	**P21-01875**								
	11479 N Willow Avenue								
	Single-Family Detached Housing[3]	518 DU							
	Trips/Unit		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		93	269	362	306	181	487	4,885
F09 .	**P20-00213**								
	10047 N Chestnut Avenue								
	Multifamily Housing (Low-Rise) Not Close to Rail Transit[6]	106 DU							
	Trips/Unit		0.10	0.30	0.40	0.32	0.19	0.51	6.74
	Trip Generation		11	32	43	34	20	54	714
F10 .	**T-6249[37]**								
	Trip Generation	274 DU 28.000 TSF Retail	62	158	220	205	138	343	3,537
F11 .	**P22-00358**								
	2884 East Shepherd Avenue								
	Fast-Food Restaurant without Drive-Though Window[31]	1.070 TSF							
	Trips/Unit		25.04	18.14	43.18	16.61	16.60	33.21	450.49
	Trip Generation		27	19	46	18	18	36	482
	Pass-by Trips[32]		(14)	(10)	(23)	(10)	(10)	(20)	(253)
	Net New Trips		14	10	23	8	8	16	229
		Gross Trip Generation	**4,204**	**5,756**	**9,960**	**8,219**	**7,323**	**15,542**	**169,819**
		Pass-By Trips Reduction	**(184)**	**(172)**	**(356)**	**(824)**	**(871)**	**(1,694)**	**(19,157)**
		Total Net Trip Generation	**4,020**	**5,584**	**9,604**	**7,395**	**6,452**	**13,848**	**150,662**

Table 5-B - Cumulative Projects Trip Generation

Project			A.M. Peak Hour			P.M. Peak Hour			Daily
No.	Land Use/Builder/Applicant/Project Name	Units	In	Out	Total	In	Out	Total	

Notes:

DU = Dwelling Units; TSF = Thousand Square Feet; RM = Rooms; VFP = Vehicle Fueling Positions; MOB=Medical Office Building; STU = Students; AC =Acre.

[1] Rates from Institute of Transportation Engineers (ITE) Trip Generation Manual , (11th Edition) Land Use 822 - "Strip Retail Plaza (<40k)" , Setting/Location - 'General Urban/Suburban'.

[2] Since pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 822 - 'Strip Retail Plaza (<40k)' do not exist. Pass-by rates were taken from Land Use 821 - 'Shopping Plaza (40-150k).' A pass-by rate of 40% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the p.m. pass-by rate was used as the daily pass-by rate.

[3] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 210 - "Single-Family Detached Housing " , Setting/Location - 'General Urban/Suburban'.

[4] Based on the information obtained from the City, only Phase 1 of the Heritage Grove Specific Plan (between Shepherd to Perrin) is estimated to be completed by 2028. Therefore, trip generation for only Phase 1 of the Heritage Grove have been considered. Trip generation rates from ITE *Trip Generation Manual* , (11th Edition)for various land uses have been used to estimate the trip generation for this project. Trip distribution for this project heve been developed using the Fresno COG ABM select zone model run for these areas.

[5] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 215 - "Single-Family Attached Housing " , Setting/Location - 'General Urban/Suburban'.

[6] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 220 - "Multifamily Housing (Low Rise) Not Close to Rail Transit " , Setting/Location - 'General Urban/Suburban'.

[7] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 820 - "Shopping Center (>150k)" , Setting/Location - 'General Urban/Suburban'.

[8] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 820 - 'Shopping Center (>150k).' A pass-by rate of 29% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE*Trip Generation Manual* , the p.m. pass-by rate was used as the daily pass-by rate.

[9] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 520 - "Elementary School " , Setting/Location - 'General Urban/Suburban'.

[10] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 821 - "Shopping Plaza (40-150k)- Supermarket - Yes " , Setting/Location - 'General Urban/Suburban'.

[11] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 821 - 'Shopping Plaza (40-150k)- Supermarket - Yes.' A pass-by rate of 40% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE*Trip Generation Manual* , the p.m. pass-by rate was used as the daily pass-by rate.

[12] Trip generation taken from "Proposed Multifamily Residential Development Tentative Tract No. 6262" traffic study by Peters Engineering Group (May 2019).

[13] Trip generation taken from "Proposed Church" traffic study by Peters Engineering Group (March 2021).

[14] Trip generation taken from "Tract Map 6343" scoping agreement by LSA (July 2022).

[15] Trip generation taken from "Tentative Tract 6050 (Single-Family Housing" traffic study by JLB Traffic Engineering, Inc. (April 2020).

[16] Trip generation taken from "Shepherd Avenue" traffic study by JLB Traffic Engineering, Inc. (June 2018).

[17] Trip generation taken from "TT 6263" traffic study by JLB Traffic Engineering, Inc. (August 2019).

[18] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 150 - "Warehousing" , Setting/Location - 'General Urban/Suburban'.

[19] The truck mix percentages were obtained from South Coast Air Quality Management District (SCAQMD) recommendations for warehousing projects. As such, The truck mix was considered as 6.8% 2-axle trucks, 5.5% 3-axle trucks, and 18.7% 4 or more axle trucks.

[20] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 310 - "Hotel " , Setting/Location - 'General Urban/Suburban'.

[21] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 720 - "Medical-Dental Office Building - Stand Alone" , Setting/Location - 'General Urban/Suburban'.

[22] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 710 - "General Office Building" , Setting/Location - 'General Urban/Suburban'.

[23] Trip generation taken from "Proposed McKenney Assemblage - Tract 6284" traffic study by Peters Engineering Group (March 2020).

[24] Trip generation taken from "Proposed Dry Creek Preserve Master Plan" traffic study by Peters Engineering Group (February 2018).

[25] Trip generation taken from "Master Plan Expansion of the Clovis Community Medical Center" traffic study by JLB Traffic Engineering, Inc. (November 2017).

[26] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 254 - "Assisted Living " , Setting/Location - 'General Urban/Suburban'.

[27] Trip generation taken from "Locan 35" traffic study by JLB Traffic Engineering, Inc. (October 2019).

[28] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 416 - "Campground/Recreational Vehicle Park " , Setting/Location - 'General Urban/Suburban'.

[29] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 945 - "Convenience Store/Gas Station - GFA (2-4K)" , Setting/Location - 'General Urban/Suburban'.

[30] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 945 - 'Convenience Store/Gas Station - GFA (2-4K).' A pass-by rate of 60% was used for the a.m. peak hour and a pass-by rate of 56% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the average of a.m and p.m. pass-by rate was used as the daily pass-by rate.

[31] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 933 - "Fast-Food Restaurant without Drive-Through Window" , Setting/Location - 'General Urban/Suburban'.

[32] Since pass-by rates from the *ITE Trip Generation Manual* (11th Edition) for Land Use 933 - 'Fast-Food Restaurant without Drive-Through Window' do not exist. Pass-by rates were taken from Land Use 934 - 'Fast-Food Restaurant with Drive-Through Window.' A pass-by rate of 50% was used for the a.m. peak hour and a pass-by rate of 55% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the average of a.m and p.m. pass-by rate was used as the daily pass-by rate.

[33] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 934 - "Fast-Food Restaurant with Drive-Through Window" , Setting/Location - 'General Urban/Suburban'.

[34] Pass-by rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 934 - 'Fast-Food Restaurant with Drive-Through Window.' A pass-by rate of 50% was used for the a.m. peak hour and a pass-by rate of 55% was used for the p.m. peak hour. Since daily pass-by rates are not available for this land use in the ITE *Trip Generation Manual* , the average of a.m and p.m. pass-by rate was used as the daily pass-by rate.

[35] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 151 - "Mini Warehouse" , Setting/Location - 'General Urban/Suburban'.

[36] Rates from ITE *Trip Generation Manual* , (11th Edition), Land Use 948 - "Automated Car Wash" , Setting/Location - 'General Urban/Suburban'.

[37] Trip generation taken from "Tract 6249" traffic study by KD Anderson & Associates, Inc. (June 2019).

Table 5-C - Near-Term (2028) Roadway Segment Weekday Peak Hour Traffic Volumes

Roadway	#	Segment	A.M. Peak Hour			P.M. Peak Hour		
			Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
Behymer Avenue	1	between Willow Avenue and Minnewawa Avenue	406	4	410	304	6	310
	2	between Minnewawa Avenue and Sunnyside Avenue	750	4	754	466	6	472
	3	between Sunnyside Avenue and Fowler Avenue	637	4	641	383	6	389
Shepherd Avenue	4	between Willow Avenue and Minnewawa Avenue	1,932	106	2,038	2,614	142	2,756
	5	between Minnewawa Avenue and Clovis Avenue	1,804	161	1,965	2,244	217	2,461
	6	between Clovis Avenue and Sunnyside Avenue	1,722	267	1,989	2,029	359	2,388
	7	between Sunnyside Avenue and Project Driveway 3	1,352	251	1,603	1,647	336	1,983
	8	between Project Driveway 3 and Fowler Avenue	1,346	93	1,439	1,645	126	1,771
Herndon Avenue	9	between State Route 168 Eastbound Ramps and Clovis Avenue	3,394	81	3,475	4,383	108	4,491
Willow Avenue	10	between Behymer Avenue and Shepherd Avenue	2,869	43	2,912	3,401	57	3,458
Minnewawa Avenue	11	between Behymer Avenue and Shepherd Avenue	1,232	0	1,232	1,422	0	1,422
Clovis Avenue	12	between Shepherd Avenue and Teague Avenue	1,051	106	1,157	1,211	142	1,353
	13	between Teague Avenue and Nees Avenue	1,546	97	1,643	1,537	131	1,668
	14	between Nees Avenue and Alluvial Avenue	1,715	97	1,812	2,070	131	2,201
	15	between Alluvial Avenue and Herndon Avenue	2,110	97	2,207	2,593	131	2,724
Sunnyside Avenue	16	between Project Driveway 1 and Shepherd Avenue	114	136	250	163	183	346
	17	between Shepherd Avenue and Teague Avenue	393	60	453	445	80	525
	18	between Teague Avenue and Nees Avenue	345	59	404	387	80	467
Fowler Avenue	19	between Behymer Avenue and Ticonderoga	802	4	806	492	6	498
	20	between Ticonderoga and Shepherd Avenue	819	0	819	537	0	537
	21	between Shepherd Avenue and Teague Avenue	608	63	671	801	86	887
	22	between Teague Avenue and Nees Avenue	529	63	592	709	86	795
	23	between Nees Avenue and State Route 168 Westbound Ramps	1,435	60	1,495	1,806	80	1,886

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Table 5-D - Cumulative (2046) Roadway Segment Weekday Peak Hour Traffic Volumes

			A.M. Peak Hour			P.M. Peak Hour		
Roadway	#	Segment	Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
Behymer Avenue	1	between Willow Avenue and Minnewawa Avenue	949	4	953	947	6	953
	2	between Minnewawa Avenue and Sunnyside Avenue	1,457	4	1,461	1,097	6	1,103
	3	between Sunnyside Avenue and Fowler Avenue	720	4	724	467	6	473
Shepherd Avenue	4	between Willow Avenue and Minnewawa Avenue	2,025	106	2,131	2,740	142	2,882
	5	between Minnewawa Avenue and Clovis Avenue	1,889	161	2,050	2,349	217	2,566
	6	between Clovis Avenue and Sunnyside Avenue	1,805	267	2,072	2,127	359	2,486
	7	between Sunnyside Avenue and Project Driveway 3	1,398	251	1,649	1,727	336	2,063
	8	between Project Driveway 3 and Fowler Avenue	1,398	93	1,491	1,724	126	1,850
Herndon Avenue	9	between State Route 168 Eastbound Ramps and Clovis Avenue	3,753	81	3,834	4,792	108	4,900
Willow Avenue	10	between Behymer Avenue and Shepherd Avenue	3,011	43	3,054	3,570	57	3,627
Minnewawa Avenue	11	between Behymer Avenue and Shepherd Avenue	1,791	0	1,791	1,561	0	1,561
Clovis Avenue	12	between Shepherd Avenue and Teague Avenue	1,434	106	1,540	1,734	142	1,876
	13	between Teague Avenue and Nees Avenue	1,767	97	1,864	1,903	131	2,034
	14	between Nees Avenue and Alluvial Avenue	1,793	97	1,890	2,163	131	2,294
	15	between Alluvial Avenue and Herndon Avenue	2,246	97	2,343	2,712	131	2,843
Sunnyside Avenue	16	between Project Driveway 1 and Shepherd Avenue	1,507	136	1,643	1,609	183	1,792
	17	between Shepherd Avenue and Teague Avenue	560	60	620	558	80	638
	18	between Teague Avenue and Nees Avenue	551	59	610	538	80	618
Fowler Avenue	19	between Behymer Avenue and Ticonderoga	890	4	894	586	6	592
	20	between Ticonderoga and Shepherd Avenue	1,410	0	1,410	1,105	0	1,105
	21	between Shepherd Avenue and Teague Avenue	1,105	63	1,168	1,225	86	1,311
	22	between Teague Avenue and Nees Avenue	966	63	1,029	1,097	86	1,183
	23	between Nees Avenue and State Route 168 Westbound Ramps	1,653	60	1,713	2,473	80	2,553

6.0 PROJECT TRAFFIC

6.1 PROJECT TRIP GENERATION

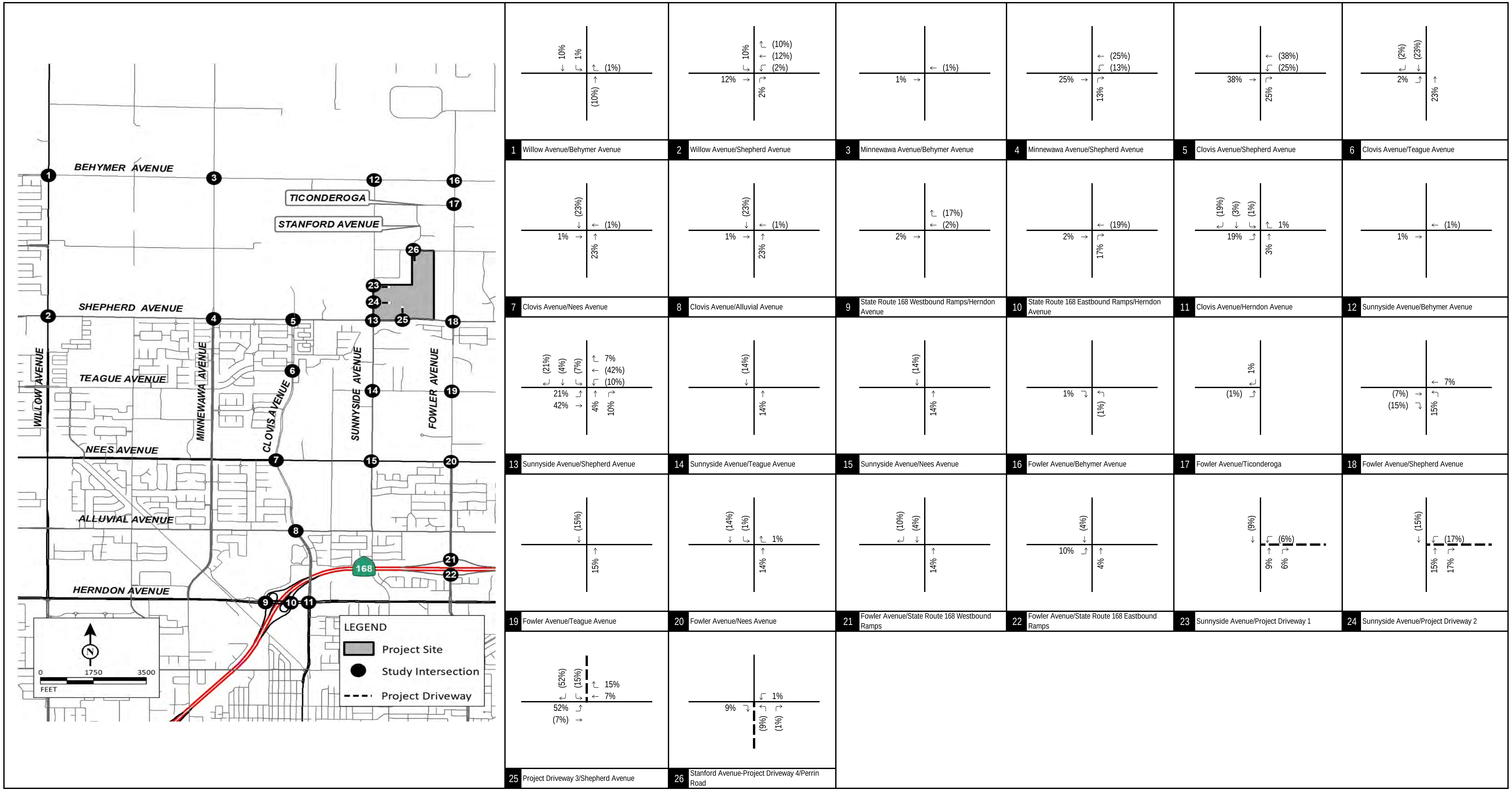
The trip generation for the proposed project was developed using rates from the ITE *Trip Generation Manual* (11th Edition) for Land Use 210 – "Single-Family Detached Housing." Table 6-A summarizes the project trip generation. As shown in Table 6-A, the project is anticipated to generate 424 trips in the a.m. peak hour, 569 trips in the p.m. peak hour, and 5,705 daily trips.

6.2 PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The project trip distribution was developed using select zone model runs obtained from the Fresno COG ABM. Appendix A includes the select zone model plots for the proposed project. Figure 6-1 illustrates the project trip distribution. The project trip generation was applied to the corresponding trip distribution pattern to develop the project trip assignment. Figure 6-2 illustrates the project trip assignment.

6.3 LIST OF CHAPTER 6.0 FIGURES AND TABLES

- Figure 6-1: Project Trip Distribution
- Figure 6-2: Project Trip Assignment
- Table 6-A: Project Trip Generation



LSA

FIGURE 6-1

XX% (YY%)
Inbound (Outbound) Distribution
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Project Trip Distribution

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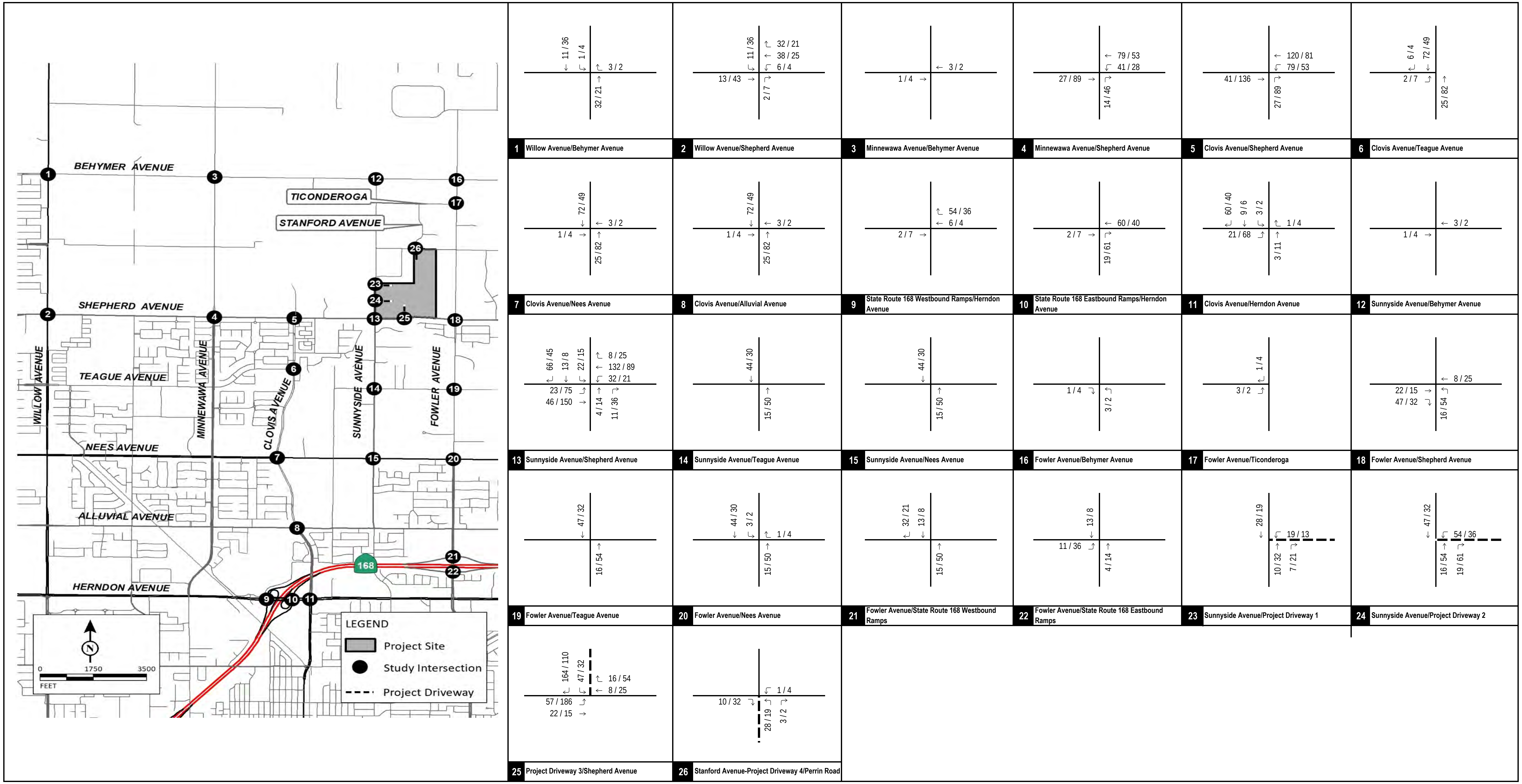

LSA

FIGURE 6-2

XXX / YYY
AM / PM Peak Hour Traffic Volumes
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Project Trip Assignment

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Table 6-A - Project Trip Generation

Land Use	Units		A.M. Peak Hour			P.M. Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Single-Family Detached Housing	605	DU							
Trips/Unit[1]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
Trip Generation			109	315	424	357	212	569	5,705

Notes:

DU = Dwelling Units

[1] Rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition), Land Use 210 - "Single-Family Detached Housing", Setting/Location - "General Urban/Suburban."

7.0 TRAFFIC VOLUMES FOR PLUS PROJECT SCENARIOS

Existing, near-term, and cumulative plus project traffic volumes were developed by adding project traffic to the traffic for the corresponding without project scenarios. Figures 7-1, 7-2 and 7-3 illustrate "plus project" peak-hour traffic volumes at study intersections under existing, near-term, and cumulative conditions, respectively.

Detailed volume development worksheets are included in Appendix D.

7.1 LIST OF CHAPTER 7.0 FIGURES

- Figure 7-1: Existing Plus Project Peak-Hour Traffic Volumes
- Figure 7-2: Near-Term (2028) Plus Project Peak-Hour Traffic Volumes
- Figure 7-3: Cumulative (2046) Plus Project Peak-Hour Traffic Volumes

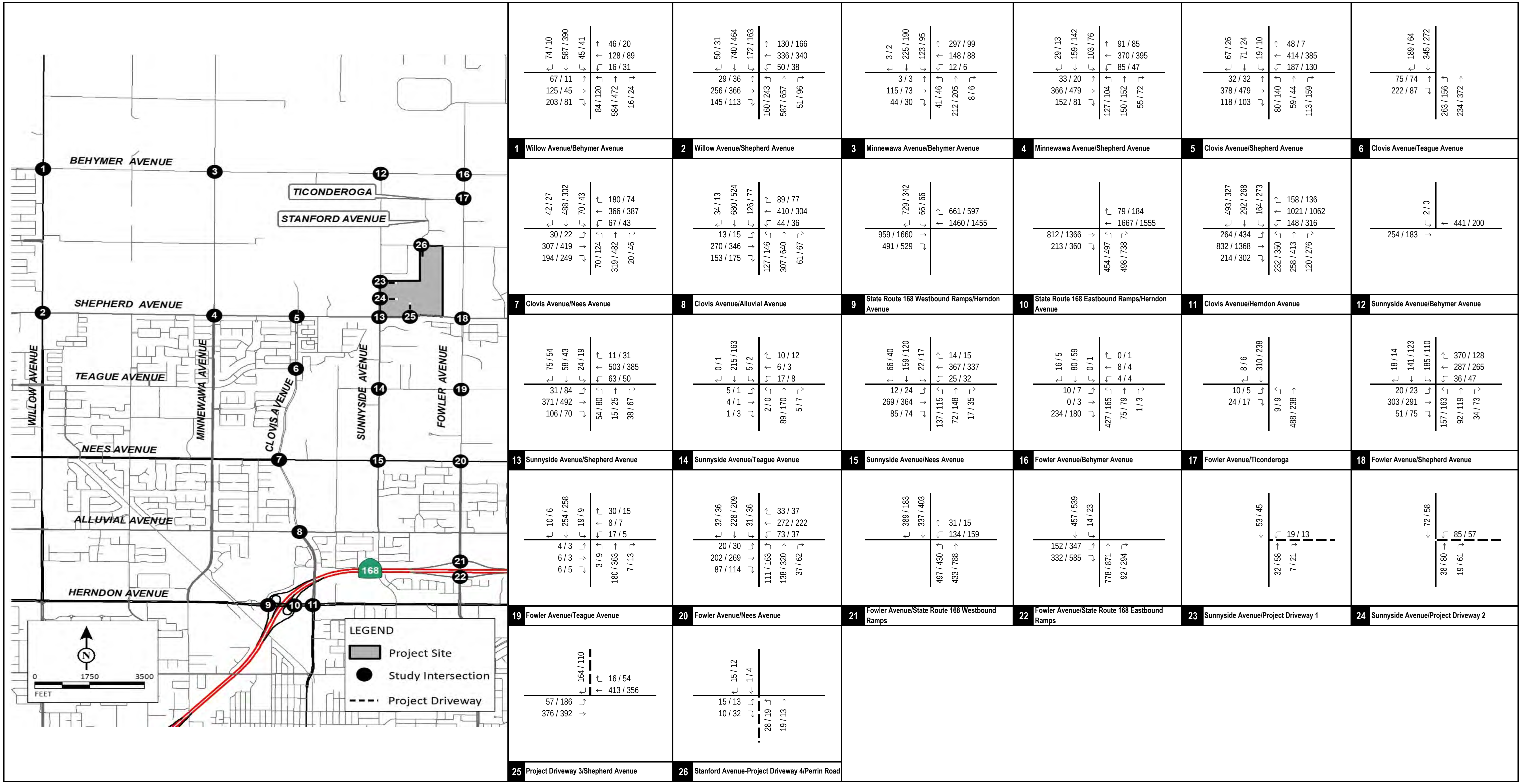
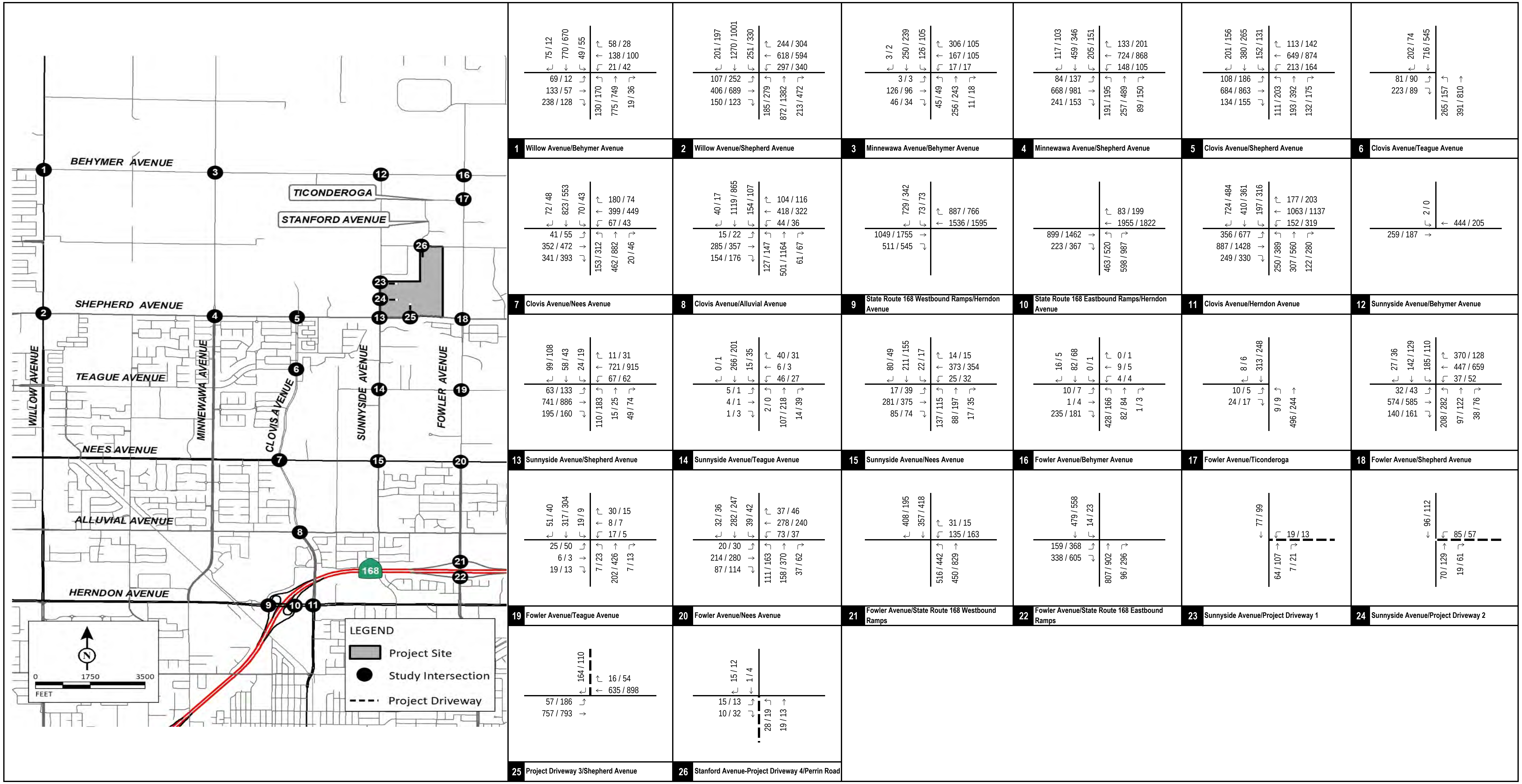


FIGURE 7-1

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis
Existing Plus Project Peak Hour Traffic Volumes



XXXX / YYYY

AM / PM Peak Hour Traffic Volumes

--- Project Driveway

FIGURE 7-2

Shepherd North Project
Transportation Impact Analysis

Near-Term (2028) Plus Project Peak Hour Traffic Volumes

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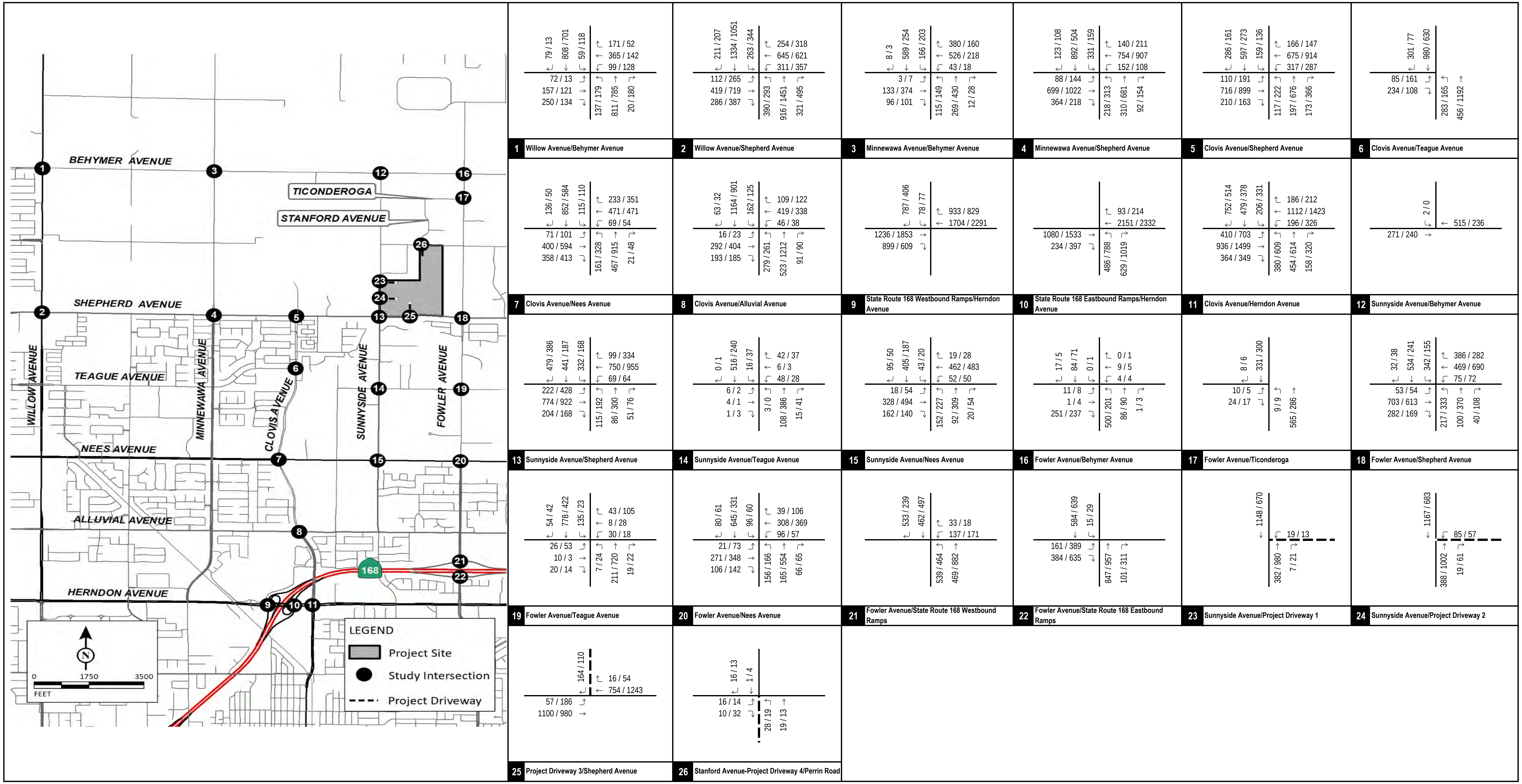

LSA

FIGURE 7-3

XXXX / YYYY
AM / PM Peak Hour Traffic Volumes
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Cumulative (2046) Plus Project Peak Hour Traffic Volumes

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8.0 INTERSECTION LEVELS OF SERVICE

8.1 EXISTING LEVELS OF SERVICE

Figure 4-1 illustrates existing study intersection geometrics and traffic control.

8.1.1 Study Intersections

An intersection LOS analysis was conducted for existing conditions using the methodologies previously discussed. Existing Signal timing Sheets were obtained from the City and Caltrans for all signalized analysis intersections. The signal timing sheets are included in Appendix C. It should be noted that the existing signal timings were utilized to analyze traffic operations under near-term and cumulative (2046) scenarios as a conservative approach. Table 8-A summarizes the results of this analysis and shows that the following intersections operate at an unsatisfactory LOS under existing conditions:

- Minnewawa Avenue/Behymer Avenue (a.m. peak hour only)
- Fowler Avenue/Shepherd Avenue (a.m. peak hour only)
- Fowler Avenue/State Route 168 Eastbound Ramps (p.m. peak hour only)

All other study intersections operate at a satisfactory LOS under existing conditions.

8.1.2 Roadway Segments

A roadway segment LOS analysis was conducted for existing conditions using the methodologies previously discussed. Table 8-B summarizes the results of this analysis and shows that all the study roadway segments currently operate at a satisfactory LOS under existing conditions.

8.2 EXISTING PLUS PROJECT LEVELS OF SERVICE

Analysis of the existing with project scenario is provided to identify direct project-related operational deficiency if the project were to be built and in operation today. This scenario eliminates the effects of ambient growth and other cumulative projects and deals specifically with operational deficiencies only due to the project traffic. Figure 4-2 illustrates the study intersection geometrics and traffic control under all ‘plus project’ scenarios.

8.2.1 Study Intersections

An intersection LOS analysis was conducted for existing plus project conditions using the methodologies previously discussed. Table 8-A summarizes the results of this analysis and shows that the following intersection is forecasted to operate at an unsatisfactory LOS under existing plus project conditions:

- Minnewawa Avenue/Behymer Avenue (a.m. peak hour only)
- Sunnyside Avenue/Shepherd Avenue (p.m. peak hour only)
- Sunnyside Avenue/Nees Avenue (p.m. peak hour only)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)

- Fowler Avenue/State Route 168 Eastbound Ramps (p.m. peak hour only)

Based on the operational deficiency criteria stated in Section 3.2 of this TIA, the project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under existing plus project conditions.

It should be noted that out of the five intersections forecasted to operate at a deficient LOS, three intersections are currently operating at a deficient LOS. As such, the project is forecast to add to the existing deficiencies at these intersections.

8.2.2 Roadway Segments

A roadway segment LOS analysis was conducted for existing plus project conditions using the methodologies previously discussed. Table 8-B summarizes the results of this analysis and shows that all study roadway segments are forecasted to operate at a satisfactory LOS under existing plus project conditions.

8.3 NEAR-TERM (2028) PLUS PROJECT LEVELS OF SERVICE

8.3.1 Study Intersections

An intersection LOS analysis was conducted for near-term plus project conditions using the methodologies previously discussed. Table 8-C summarizes the results of this analysis and shows that the following intersections are forecasted to operate at an unsatisfactory LOS under near-term plus project conditions:

- Minnewawa Avenue/Behymer Avenue (a.m. peak hour only)
- Minnewawa Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Shepherd Avenue (p.m. peak hour only)
- Clovis Avenue/Nees Avenue (p.m. peak hour only)
- Clovis Avenue/Herndon Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/SR-168 Eastbound Ramps (p.m. peak hour only)

Based on the operational deficiency criteria stated in Section 3.2 of this TIA, the project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under near-term plus project conditions.

8.3.2 Roadway Segments

A roadway segment LOS analysis was conducted for near-term plus project conditions using the methodologies previously discussed. Table 8-D summarizes the results of this analysis and shows that the following roadway segments are forecast to operate at an unsatisfactory LOS under near-term plus project conditions:

- Shepherd Avenue between Willow Avenue and Minnewawa Avenue (p.m. peak hour only)
- Shepherd Avenue between Clovis Avenue and Sunnyside Avenue (p.m. peak hour only)
- Minnewawa Avenue between Behymer Avenue and Shepherd Avenue (a.m. and p.m. peak hours)

All other roadway segments are forecasted to operate at a satisfactory LOS under near-term plus project conditions.

8.4 CUMULATIVE (2046) WITHOUT PROJECT LEVELS OF SERVICE

8.4.1 Study Intersections

An intersection LOS analysis was conducted for cumulative without project conditions using the methodologies previously discussed. Table 8-E summarizes the results of this analysis and shows that the following intersections are forecasted to operate at an unsatisfactory LOS under cumulative without project conditions:

- Willow Avenue/Shepherd Avenue (p.m. peak hour only)
- Minnewawa Avenue/Behymer Avenue (a.m. and p.m. peak hours)
- Minnewawa Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Shepherd Avenue (p.m. peak hour only)
- Clovis Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Herndon Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Teague Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/SR-168 Eastbound Ramps (p.m. peak hour only)

All other study intersections are forecasted to operate at a satisfactory LOS under cumulative (2046) without project conditions.

8.4.2 Roadway Segments

A roadway segment LOS analysis was conducted for cumulative without project conditions using the methodologies previously discussed. Table 8-F summarizes the results of this analysis and shows that the following roadway segments are forecast to operate at an unsatisfactory LOS under cumulative without project conditions:

- Behymer Avenue between Minnewawa Avenue and Sunnyside Avenue (a.m. peak hour only)
- Shepherd Avenue between Willow Avenue and Minnewawa Avenue (p.m. peak hour only)
- Shepherd Avenue between Clovis Avenue and Sunnyside Avenue (p.m. peak hour only)
- Minnewawa Avenue between Behymer Avenue and Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue between Shepherd Avenue and Project Driveway 1 (a.m. and p.m. peak hours)

- Fowler Avenue between Ticonderoga and Shepherd Avenue (a.m. and p.m. peak hours)

All other roadway segments are forecasted to operate at a satisfactory LOS under cumulative without project conditions.

8.5 CUMULATIVE (2046) PLUS PROJECT LEVELS OF SERVICE

8.5.1 Study Intersections

An intersection LOS analysis was conducted for cumulative plus project conditions using the methodologies previously discussed. Table 8-E summarizes the results of this analysis and shows that the following intersection is forecasted to operate at an unsatisfactory LOS under cumulative plus project conditions:

- Willow Avenue/Shepherd Avenue (p.m. peak hour only)
- Minnewawa Avenue/Behymer Avenue (a.m. and p.m. peak hours)
- Minnewawa Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Clovis Avenue/Alluvial Avenue (a.m. peak hour only)
- Clovis Avenue/Herndon Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue/Nees Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Shepherd Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/Teague Avenue (a.m. and p.m. peak hours)
- Fowler Avenue/SR-168 Eastbound Ramps (p.m. peak hour only)
- Sunnyside Avenue/Project Driveway 1 (a.m. and p.m. peak hours)
- Sunnyside Avenue/Project Driveway 2 (a.m. and p.m. peak hours)

Based on the operational deficiency criteria stated in Section 3.2 of this TIA, the project is forecasted to create an operational deficiency at these intersections. All other study intersections are forecasted to operate at a satisfactory LOS under cumulative plus project conditions.

It should be noted that out of the 14 intersections forecast to operate at a deficient LOS, 11 intersections forecast to operate at a deficient LOS under cumulative (2046) without project conditions. As such, the project is forecast to add to the forecasted deficiencies at these 11 intersections.

Detailed intersection LOS worksheets are included in Appendix E.

8.5.2 Roadway Segments

A roadway segment LOS analysis was conducted for cumulative plus project conditions using the methodologies previously discussed. Table 8-F summarizes the results of this analysis and shows that the following roadway segments are forecast to operate at an unsatisfactory LOS under cumulative plus project conditions:

- Behymer Avenue between Minnewawa Avenue and Sunnyside Avenue (a.m. peak hour only)
- Shepherd Avenue between Willow Avenue and Minnewawa Avenue (p.m. peak hour only)
- Shepherd Avenue between Clovis Avenue and Sunnyside Avenue (a.m. and p.m. peak hours)
- Shepherd Avenue between Sunnyside Avenue and Project Driveway 3 (p.m. peak hour only)
- Minnewawa Avenue between Behymer Avenue and Shepherd Avenue (a.m. and p.m. peak hours)
- Sunnyside Avenue between Shepherd Avenue and Project Driveway 1 (a.m. and p.m. peak hours)
- Fowler Avenue between Ticonderoga and Shepherd Avenue (a.m. and p.m. peak hours)

Based on the operational deficiency criteria stated in Section 3.2 of this TIA, the project is forecasted to create an operational deficiency at these roadway segments. All other roadway segments are forecasted to operate at a satisfactory LOS under cumulative plus project conditions.

It should be noted that out of the seven roadway segments forecast to operate at a deficient LOS, six segments are forecast to operate at a deficient LOS under cumulative (2046) without project conditions. As such, the project is forecast to add to the forecasted deficiencies at these six roadway segments.

8.6 LIST OF CHAPTER 8.0 TABLES

Table 8-A - Existing Intersection Levels of Service

			Without Project					Plus Project					A.M. Peak Hour	P.M. Peak Hour	
				A.M. Peak Hour		P.M. Peak Hour			A.M. Peak Hour		P.M. Peak Hour		Increase	Increase	
Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS	Delay (sec.)	LOS	Control	Delay (sec.)	LOS	Delay (sec.)	LOS	in Delay (sec.)	in Delay (sec.)	Improvement Required?
1 . Willow Avenue/Behymer Avenue	Clovis/Fresno	D	Signal	33.1	C	30.5	C	Signal	33.2	C	30.6	C	0.1	0.1	No
2 . Willow Avenue/Shepherd Avenue	Clovis/Fresno	D	Signal	37.1	D	40.2	D	Signal	38.2	D	41.3	D	1.1	1.1	No
3 . Minnewawa Avenue/Behymer Avenue	Clovis	D	AWSC	58.7	**F** *	12.3	B	AWSC	60.0	**F** *	12.4	B	1.3	0.1	**Yes**
4 . Minnewawa Avenue/Shepherd Avenue	Clovis	D	Signal	46.8	D	45.8	D	Signal	49.0	D	47.8	D	2.2	2.0	No
5 . Clovis Avenue/Shepherd Avenue	Clovis	D	Signal	50.7	D	54.5	D	Signal	52.0	D	54.8	D	1.3	0.3	No
6 . Clovis Avenue/Teague Avenue	Clovis	D	Signal	29.7	C	16.8	B	Signal	31.2	C	17.2	B	1.5	0.4	No
7 . Clovis Avenue/Nees Avenue	Clovis	D	Signal	50.4	D	50.9	D	Signal	51.8	D	51.1	D	1.4	0.2	No
8 . Clovis Avenue/Alluvial Avenue	Clovis	D	Signal	40.8	D	37.5	D	Signal	40.8	D	37.5	D	0.0	0.0	No
9 . State Route 168 Westbound Ramps/Herndon Avenue	Caltrans	45 sec	Signal	29.4	C	26.2	C	Signal	34.6	C	26.2	C	5.2	0.0	No
10 . State Route 168 Eastbound Ramps/Herndon Avenue	Caltrans	45 sec	Signal	21.0	C	22.7	C	Signal	21.2	C	23.7	C	0.2	1.0	No
11 . Clovis Avenue/Herndon Avenue	Clovis	D	Signal	44.0	D	51.3	D	Signal	45.3	D	52.5	D	1.3	1.2	No
12 . Sunnyside Avenue/Behymer Avenue	Clovis	D	TWSC	15.1	C	0.0	A	TWSC	15.1	C	0.0	A	0.0	0.0	No
13 . Sunnyside Avenue/Shepherd Avenue	Clovis	D	AWSC	13.3	B	12.9	B	AWSC	34.1	D	62.0	**F** *	20.8	49.1	**Yes**
14 . Sunnyside Avenue/Teague Avenue	Clovis	D	TWSC	10.6	B	9.8	A	TWSC	11.5	B	10.5	B	0.9	0.7	No
15 . Sunnyside Avenue/Nees Avenue	Clovis	D	AWSC	24.2	C	31.3	D	AWSC	31.8	D	44.4	**E** *	7.6	13.1	**Yes**
16 . Fowler Avenue/Behymer Avenue	Clovis	D	AWSC	22.5	C	9.5	A	AWSC	22.9	C	9.5	A	0.4	0.0	No
17 . Fowler Avenue/Ticonderoga	Clovis	D	OWSC	14.3	B	10.6	B	OWSC	13.3	B	10.4	B	-1.0	-0.2	No
18 . Fowler Avenue/Shepherd Avenue	Clovis	D	Signal	69.1	**E** *	54.6	D	Signal	69.2	**E** *	55.0	D	0.1	0.4	**Yes**
19 . Fowler Avenue/Teague Avenue	Clovis	D	TWSC	11.9	B	12.6	B	TWSC	12.2	B	13.2	B	0.3	0.6	No
20 . Fowler Avenue/Nees Avenue	Clovis	D	Signal	41.0	D	39.8	D	Signal	41.9	D	41.5	D	0.9	1.7	No
21 . Fowler Avenue/State Route 168 Westbound Ramps	Caltrans	45 sec	Signal	22.3	C	17.5	B	Signal	22.5	C	17.6	B	0.2	0.1	No
22 . Fowler Avenue/State Route 168 Eastbound Ramps	Caltrans	45 sec	Signal	22.5	C	60.3	**E** *	Signal	22.7	C	60.8	**E** *	0.2	0.5	**Yes**
23 . Sunnyside Avenue/Project Driveway 1	Clovis	D	-	*Future Intersection*		*Future Intersection*		OWSC	9.1	A	9.2	A	9.1	9.2	No
24 . Sunnyside Avenue/Project Driveway 2	Clovis	D	-	*Future Intersection*		*Future Intersection*		OWSC	9.6	A	9.8	A	9.6	9.8	No
25 . Project Driveway 3/Shepherd Avenue	Clovis	D	-	*Future Intersection*		*Future Intersection*		OWSC	11.0	B	10.4	B	11.0	10.4	No
26 . Stanford Avenue-Project Driveway 4/Perrin Road	Clovis	D	-	*No Conflicting Movements*		*No Conflicting Movements*		TWSC	9.3	A	9.5	A	9.3	9.5	No

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

Table 8-B - Existing Roadway Segment Weekday Peak Hour Levels of Service

Roadway Segment	Jurisdiction	Overall Classification	Peak Hour Roadway Capacity[2]	A.M. Peak Hour				P.M. Peak Hour			
				Without Project		Plus Project		Without Project		Plus Project	
				Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
Segments on Behymer Avenue											
1 . between Willow Avenue and Minnewawa Avenue	Clovis	2-Lane Undivided Arterial	1,310	370	C	370	C	240	C	250	C
2 . between Minnewawa Avenue and Sunnyside Avenue	Clovis	2-Lane Undivided Collector	1,310	700	D	710	D	390	C	400	C
3 . between Sunnyside Avenue and Fowler Avenue	Clovis	2-Lane Undivided Rural Collector	1,000	630	D	640	D	380	C	380	C
Segments on Shepherd Avenue											
4 . between Willow Avenue and Minnewawa Avenue	Clovis	3-Lane Raised Median Arterial	2,830	890	C	990	C	1,040	C	1,180	C
5 . between Minnewawa Avenue and Clovis Avenue	Clovis	3-Lane Raised Median Arterial	2,830	910	C	1,070	C	950	C	1,160	C
6 . between Clovis Avenue and Sunnyside Avenue	Clovis	2-Lane Undivided Expressway	2,130	870	C	1,140	D	810	C	1,170	D
7 . between Sunnyside Avenue and Project Driveway 3	Clovis	2-Lane Undivided Expressway	2,130	750	C	1,000	C	710	C	1,040	D
8 . between Project Driveway 3 and Fowler Avenue	Clovis	2-Lane Undivided Expressway	2,130	750	C	850	C	710	C	830	C
Segments on Herndon Avenue											
9 . between State Route 168 Eastbound Ramps and Clovis Avenue	Clovis	10-Lane Raised Median Arterial	9,475	2,920	C	3,000	C	3,760	C	3,870	C
Segments on Willow Avenue											
10 . between Behymer Avenue and Shepherd Avenue	Clovis/Fresno	6-Lane Raised Median Arterial	5,680	1,640	C	1,680	C	1,460	C	1,510	C
Segments on Minnewawa Avenue											
11 . between Behymer Avenue and Shepherd Avenue	Clovis	2-Lane Undivided Arterial	1,310	550	C	550	C	490	C	490	C
Segments on Clovis Avenue											
12 . between Shepherd Avenue and Teague Avenue	Clovis	4-Lane Raised Median Arterial	3,780	510	C	610	C	460	C	600	C
13 . between Teague Avenue and Nees Avenue	Clovis	4-Lane Raised Median Arterial	3,780	1,020	C	1,120	C	830	C	960	C
14 . between Nees Avenue and Alluvial Avenue	Clovis	4-Lane Raised Median Arterial	3,780	1,010	C	1,110	C	1,090	C	1,220	C
15 . between Alluvial Avenue and Herndon Avenue	Clovis	4-Lane Raised Median Arterial	3,780	1,480	C	1,580	C	1,730	C	1,860	C
Segments on Sunnyside Avenue											
16 . between Project Driveway 1 and Shepherd Avenue	Clovis	2-Lane Undivided Collector	1,310	60	C	200	C	60	C	250	C
17 . between Shepherd Avenue and Teague Avenue	Clovis	2-Lane Undivided Collector	1,310	240	C	300	C	240	C	320	C
18 . between Teague Avenue and Nees Avenue	Clovis	2-Lane Undivided Collector	1,310	240	C	300	C	250	C	330	C
Segments on Fowler Avenue											
19 . between Behymer Avenue and Ticonderoga	Clovis	2-Lane Undivided Rural Collector	1,000	800	D	800	D	480	C	490	C
20 . between Ticonderoga and Shepherd Avenue	Clovis	2-Lane Undivided Rural Collector	1,000	800	D	800	D	490	C	490	C
21 . between Shepherd Avenue and Teague Avenue	Clovis	3-Lane Raised Median Arterial	2,830	460	C	520	C	580	C	670	C
22 . between Teague Avenue and Nees Avenue	Clovis	2-Lane Undivided Arterial	1,310	430	C	490	C	580	D	670	D
23 . between Nees Avenue and State Route 168 Westbound Ramps	Clovis	3-Lane Raised Median Arterial	2,830	1,370	C	1,430	D	1,720	D	1,800	D

Notes:

LOS = Level of Service

[1] Classifications for all segments have been obtained from the City of Clovis's General Plan Circulation Diagram, dated December 2014.

[2] Roadway capacities for all segments have been obtained from the Clovis General Plan and Development Code Update Draft PEIR, dated June 2014.

Table 8-C - Near-Term (2028) Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Control	Plus Project						Improvement Required?
				A.M. Peak Hour			P.M. Peak Hour			
				Delay (sec.)	LOS		Delay (sec.)	LOS		
1 . Willow Avenue/Behymer Avenue	Clovis/Fresno	D	Signal	35.7	D		30.8	C		No
2 . Willow Avenue/Shepherd Avenue	Clovis/Fresno	D	Signal	43.7	D		53.0	D		No
3 . Minnewawa Avenue/Behymer Avenue	Clovis	D	AWSC	100.9	**F**	*	16.9	C		**Yes**
4 . Minnewawa Avenue/Shepherd Avenue	Clovis	D	Signal	118.6	**F**	*	148.0	**F**	*	**Yes**
5 . Clovis Avenue/Shepherd Avenue	Clovis	D	Signal	53.0	D		69.6	**E**	*	**Yes**
6 . Clovis Avenue/Teague Avenue	Clovis	D	Signal	26.5	C		11.8	B		No
7 . Clovis Avenue/Nees Avenue	Clovis	D	Signal	51.6	D		60.7	**E**	*	**Yes**
8 . Clovis Avenue/Alluvial Avenue	Clovis	D	Signal	42.6	D		40.0	D		No
9 . State Route 168 Westbound Ramps/Herndon Avenue	Caltrans	45 sec	Signal	31.1	C		26.9	C		No
10 . State Route 168 Eastbound Ramps/Herndon Avenue	Caltrans	45 sec	Signal	22.4	C		36.6	D		No
11 . Clovis Avenue/Herndon Avenue	Clovis	D	Signal	57.1	**E**	*	67.6	**E**	*	**Yes**
12 . Sunnyside Avenue/Behymer Avenue	Clovis	D	TWSC	15.3	C		0.0	A		No
13 . Sunnyside Avenue/Shepherd Avenue	Clovis	D	AWSC	>200	**F**	*	>200	**F**	*	**Yes**
14 . Sunnyside Avenue/Teague Avenue	Clovis	D	TWSC	13.1	B		12.8	B		No
15 . Sunnyside Avenue/Nees Avenue	Clovis	D	AWSC	45.5	**E**	*	71.9	**F**	*	**Yes**
16 . Fowler Avenue/Behymer Avenue	Clovis	D	AWSC	24.2	C		9.6	A		No
17 . Fowler Avenue/Ticonderoga	Clovis	D	OWSC	13.4	B		10.5	B		No
18 . Fowler Avenue/Shepherd Avenue	Clovis	D	Signal	81.8	**F**	*	137.6	**F**	*	**Yes**
19 . Fowler Avenue/Teague Avenue	Clovis	D	TWSC	14.3	B		20.9	C		No
20 . Fowler Avenue/Nees Avenue	Clovis	D	Signal	39.4	D		38.3	D		No
21 . Fowler Avenue/State Route 168 Westbound Ramps	Caltrans	45 sec	Signal	22.3	C		17.1	B		No
22 . Fowler Avenue/State Route 168 Eastbound Ramps	Caltrans	45 sec	Signal	22.7	C		64.3	**E**	*	**Yes**
23 . Sunnyside Avenue/Project Driveway 1	Clovis	D	OWSC	9.4	A		9.8	A		No
24 . Sunnyside Avenue/Project Driveway 2	Clovis	D	OWSC	10.1	B		10.6	B		No
25 . Project Driveway 3/Shepherd Avenue	Clovis	D	OWSC	12.7	B		14.3	B		No
26 . Stanford Avenue-Project Driveway 4/Perrin Road	Clovis	D	TWSC	9.3	A		9.5	A		No

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

Table 8-D - Near-Term (2028) Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Overall Classification	Peak Hour Roadway Capacity^2	A.M. Peak Hour		P.M. Peak Hour	
				Plus Project		Plus Project	
				Volume	LOS	Volume	LOS
Segments on Behymer Avenue							
1 . between Willow Avenue and Minnewawa Avenue	Clovis	2-Lane Undivided Arterial	1,310	410	C	310	C
2 . between Minnewawa Avenue and Sunnyside Avenue	Clovis	2-Lane Undivided Collector	1,310	760	D	480	C
3 . between Sunnyside Avenue and Fowler Avenue	Clovis	2-Lane Undivided Rural Collector	1,000	650	D	390	C
Segments on Shepherd Avenue							
4 . between Willow Avenue and Minnewawa Avenue	Clovis	3-Lane Raised Median Arterial	2,830	2,040	D	2,760	**E** *
5 . between Minnewawa Avenue and Clovis Avenue	Clovis	3-Lane Raised Median Arterial	2,830	1,970	D	2,470	D
6 . between Clovis Avenue and Sunnyside Avenue	Clovis	2-Lane Undivided Expressway	2,130	1,990	D	2,390	**F** *
7 . between Sunnyside Avenue and Project Driveway 3	Clovis	2-Lane Undivided Expressway	2,130	1,610	D	1,990	D
8 . between Project Driveway 3 and Fowler Avenue	Clovis	2-Lane Undivided Expressway	2,130	1,440	D	1,780	D
Segments on Herndon Avenue							
9 . between State Route 168 Eastbound Ramps and Clovis Avenue	Clovis	10-Lane Raised Median Arterial	9,475	3,480	C	4,500	C
Segments on Willow Avenue							
10 . between Behymer Avenue and Shepherd Avenue	Clovis/Fresno	6-Lane Raised Median Arterial	5,680	2,920	C	3,460	D
Segments on Minnewawa Avenue							
11 . between Behymer Avenue and Shepherd Avenue	Clovis	2-Lane Undivided Arterial	1,310	1,240	**E** *	1,430	**F** *
Segments on Clovis Avenue							
12 . between Shepherd Avenue and Teague Avenue	Clovis	4-Lane Raised Median Arterial	3,780	1,160	C	1,360	C
13 . between Teague Avenue and Nees Avenue	Clovis	4-Lane Raised Median Arterial	3,780	1,650	C	1,670	C
14 . between Nees Avenue and Alluvial Avenue	Clovis	4-Lane Raised Median Arterial	3,780	1,820	C	2,210	D
15 . between Alluvial Avenue and Herndon Avenue	Clovis	4-Lane Raised Median Arterial	3,780	2,210	D	2,730	D
Segments on Sunnyside Avenue							
16 . between Project Driveway 1 and Shepherd Avenue	Clovis	2-Lane Undivided Collector	1,310	250	C	350	C
17 . between Shepherd Avenue and Teague Avenue	Clovis	2-Lane Undivided Collector	1,310	460	C	530	C
18 . between Teague Avenue and Nees Avenue	Clovis	2-Lane Undivided Collector	1,310	410	C	470	C
Segments on Fowler Avenue							
19 . between Behymer Avenue and Ticonderoga	Clovis	2-Lane Undivided Rural Collector	1,000	810	D	500	C
20 . between Ticonderoga and Shepherd Avenue	Clovis	2-Lane Undivided Rural Collector	1,000	820	D	540	C
21 . between Shepherd Avenue and Teague Avenue	Clovis	3-Lane Raised Median Arterial	2,830	680	C	890	C
22 . between Teague Avenue and Nees Avenue	Clovis	2-Lane Undivided Arterial	1,310	600	D	800	D
23 . between Nees Avenue and State Route 168 Westbound Ramps	Clovis	3-Lane Raised Median Arterial	2,830	1,500	D	1,890	D

Notes:

LOS = Level of Service

[1] Classifications for all segments have been obtained from the City of Clovis's General Plan Circulation Diagram, dated December 2014.

[2] Roadway capacities for all segments have been obtained from the Clovis General Plan and Development Code Update Draft PEIR, dated June 2014.

Table 8-E - Cumulative (2046) Intersection Levels of Service

			Without Project							Plus Project							A.M. Peak Hour	P.M. Peak Hour	
				A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour			P.M. Peak Hour			Increase in Delay (sec.)	Increase in Delay (sec.)	
Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Control	Delay (sec.)	LOS		Delay (sec.)	LOS				Improvement Required?
1 . Willow Avenue/Behymer Avenue	Clovis/Fresno	D	Signal	48.7	D		37.2	D		Signal	48.9	D		38.4	D		0.2	1.2	No
2 . Willow Avenue/Shepherd Avenue	Clovis/Fresno	D	Signal	50.6	D		60.0	**E**	*	Signal	51.0	D		64.1	**E**	*	0.4	4.1	**Yes**
3 . Minnewawa Avenue/Behymer Avenue	Clovis	D	AWSC	>200	**F**	*	>200	**F**	*	AWSC	>200	**F**	*	>200	**F**	*	2.6	1.5	**Yes**
4 . Minnewawa Avenue/Shepherd Avenue	Clovis	D	Signal	150.1	**F**	*	144.1	**F**	*	Signal	164.4	**F**	*	162.3	**F**	*	14.3	18.2	**Yes**
5 . Clovis Avenue/Shepherd Avenue	Clovis	D	Signal	50.5	D		56.9	**E**	*	Signal	61.5	**E**	*	67.4	**E**	*	11.0	10.5	**Yes**
6 . Clovis Avenue/Teague Avenue	Clovis	D	Signal	31.1	C		18.3	B		Signal	34.4	C		21.7	C		3.3	3.4	No
7 . Clovis Avenue/Nees Avenue	Clovis	D	Signal	59.8	**E**	*	87.0	**F**	*	Signal	59.9	**E**	*	87.7	**F**	*	0.1	0.7	**Yes**
8 . Clovis Avenue/Alluvial Avenue	Clovis	D	Signal	52.1	D		47.3	D		Signal	56.4	**E**	*	49.8	D		4.3	2.5	**Yes**
9 . State Route 168 Westbound Ramps/Herndon Avenue	Caltrans	45 sec	Signal	35.9	D		27.4	C		Signal	36.9	D		27.4	C		1.0	0.0	No
10 . State Route 168 Eastbound Ramps/Herndon Avenue	Caltrans	45 sec	Signal	22.3	C		33.2	C		Signal	22.6	C		38.3	D		0.3	5.1	No
11 . Clovis Avenue/Herndon Avenue	Clovis	D	Signal	55.8	**E**	*	84.8	**F**	*	Signal	62.7	**E**	*	90.4	**F**	*	6.9	5.6	**Yes**
12 . Sunnyside Avenue/Behymer Avenue	Clovis	D	TWSC	15.8	C		0.0	A		TWSC	15.9	C		0.0	A		0.1	0.0	No
13 . Sunnyside Avenue/Shepherd Avenue	Clovis	D	AWSC	>200	**F**	*	>200	**F**	*	AWSC	>200	**F**	*	>200	**F**	*	112.9	161.8	**Yes**
14 . Sunnyside Avenue/Teague Avenue	Clovis	D	TWSC	14.7	B		13.9	B		TWSC	16.3	C		15.5	C		1.6	1.6	No
15 . Sunnyside Avenue/Nees Avenue	Clovis	D	AWSC	130.5	**F**	*	178.4	**F**	*	AWSC	165.4	**F**	*	>200	**F**	*	34.9	39.2	**Yes**
16 . Fowler Avenue/Behymer Avenue	Clovis	D	AWSC	27.3	D		10.1	B		AWSC	27.9	D		10.2	B		0.6	0.1	No
17 . Fowler Avenue/Ticonderoga	Clovis	D	OWSC	14.7	B		11.2	B		OWSC	13.5	B		11.0	B		-1.2	-0.2	No
18 . Fowler Avenue/Shepherd Avenue	Clovis	D	Signal	85.6	**F**	*	121.4	**F**	*	Signal	86.3	**F**	*	129.1	**F**	*	0.7	7.7	**Yes**
19 . Fowler Avenue/Teague Avenue	Clovis	D	TWSC	48.6	**E**	*	100.5	**F**	*	TWSC	52.5	**F**	*	133.5	**F**	*	3.9	33.0	**Yes**
20 . Fowler Avenue/Nees Avenue	Clovis	D	Signal	41.4	D		40.6	D		Signal	41.4	D		40.8	D		0.0	0.2	No
21 . Fowler Avenue/State Route 168 Westbound Ramps	Caltrans	45 sec	Signal	23.4	C		17.7	B		Signal	23.7	C		17.9	B		0.3	0.2	No
22 . Fowler Avenue/State Route 168 Eastbound Ramps	Caltrans	45 sec	Signal	23.4	C		70.0	**E**	*	Signal	23.7	C		70.5	**E**	*	0.3	0.5	**Yes**
23 . Sunnyside Avenue/Project Driveway 1	Clovis	D	-	*Future Intersection*			*Future Intersection*			OWSC	46.5	**E**	*	53.6	**F**	*	46.5	53.6	**Yes**
24 . Sunnyside Avenue/Project Driveway 2	Clovis	D	-	*Future Intersection*			*Future Intersection*			OWSC	140.9	**F**	*	131.1	**F**	*	140.9	131.1	**Yes**
25 . Project Driveway 3/Shepherd Avenue	Clovis	D	-	*Future Intersection*			*Future Intersection*			OWSC	13.7	B		18.6	C		13.7	18.6	No
26 . Stanford Avenue-Project Driveway 4/Perrin Road	Clovis	D	-	*No Conflicting Movements*			*No Conflicting Movements*			TWSC	9.3	A		9.2	A		9.3	9.2	No

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

Table 8-F - Cumulative (2046) Roadway Segment Weekday Peak Hour Levels of Service

Roadway Segment	Jurisdiction	Overall Classification	Peak Hour Roadway Capacity[2]	A.M. Peak Hour				P.M. Peak Hour			
				Without Project		Plus Project		Without Project		Plus Project	
				Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
Segments on Behymer Avenue											
1 . between Willow Avenue and Minnewawa Avenue	Clovis	2-Lane Undivided Arterial	1,310	950	D	960	D	950	D	960	D
2 . between Minnewawa Avenue and Sunnyside Avenue	Clovis	2-Lane Undivided Collector	1,310	1,460	**F** *	1,470	**F** *	1,100	D	1,110	D
3 . between Sunnyside Avenue and Fowler Avenue	Clovis	2-Lane Undivided Rural Collector	1,000	720	D	730	D	470	C	480	C
Segments on Shepherd Avenue											
4 . between Willow Avenue and Minnewawa Avenue	Clovis	3-Lane Raised Median Arterial	2,830	2,030	D	2,140	D	2,740	**E** *	2,890	**F** *
5 . between Minnewawa Avenue and Clovis Avenue	Clovis	3-Lane Raised Median Arterial	2,830	1,890	D	2,050	D	2,350	D	2,570	D
6 . between Clovis Avenue and Sunnyside Avenue	Clovis	2-Lane Undivided Expressway	2,130	1,810	D	2,080	**E** *	2,130	**F** *	2,490	**F** *
7 . between Sunnyside Avenue and Project Driveway 3	Clovis	2-Lane Undivided Expressway	2,130	1,400	D	1,650	D	1,730	D	2,070	**E** *
8 . between Project Driveway 3 and Fowler Avenue	Clovis	2-Lane Undivided Expressway	2,130	1,400	D	1,500	D	1,730	D	1,860	D
Segments on Herndon Avenue											
9 . between State Route 168 Eastbound Ramps and Clovis Avenue	Clovis	10-Lane Raised Median Arterial	9,475	3,760	C	3,840	C	4,800	C	4,900	C
Segments on Willow Avenue											
10 . between Behymer Avenue and Shepherd Avenue	Clovis/Fresno	6-Lane Raised Median Arterial	5,680	3,020	C	3,060	D	3,570	D	3,630	D
Segments on Minnewawa Avenue											
11 . between Behymer Avenue and Shepherd Avenue	Clovis	2-Lane Undivided Arterial	1,310	1,800	**F** *	1,800	**F** *	1,570	**F** *	1,570	**F** *
Segments on Clovis Avenue											
12 . between Shepherd Avenue and Teague Avenue	Clovis	4-Lane Raised Median Arterial	3,780	1,440	C	1,550	C	1,740	C	1,880	C
13 . between Teague Avenue and Nees Avenue	Clovis	4-Lane Raised Median Arterial	3,780	1,770	C	1,870	C	1,910	C	2,040	D
14 . between Nees Avenue and Alluvial Avenue	Clovis	4-Lane Raised Median Arterial	3,780	1,800	C	1,890	C	2,170	D	2,300	D
15 . between Alluvial Avenue and Herndon Avenue	Clovis	4-Lane Raised Median Arterial	3,780	2,250	D	2,350	D	2,720	D	2,850	D
Segments on Sunnyside Avenue											
16 . between Project Driveway 1 and Shepherd Avenue	Clovis	2-Lane Undivided Collector	1,310	1,510	**F** *	1,650	**F** *	1,610	**F** *	1,800	**F** *
17 . between Shepherd Avenue and Teague Avenue	Clovis	2-Lane Undivided Collector	1,310	560	C	620	D	560	C	640	D
18 . between Teague Avenue and Nees Avenue	Clovis	2-Lane Undivided Collector	1,310	560	C	620	D	540	C	620	D
Segments on Fowler Avenue											
19 . between Behymer Avenue and Ticonderoga	Clovis	2-Lane Undivided Rural Collector	1,000	890	D	900	D	590	D	600	D
20 . between Ticonderoga and Shepherd Avenue	Clovis	2-Lane Undivided Rural Collector	1,000	1,410	**F** *	1,410	**F** *	1,110	**F** *	1,110	**F** *
21 . between Shepherd Avenue and Teague Avenue	Clovis	3-Lane Raised Median Arterial	2,830	1,110	C	1,170	C	1,230	C	1,320	C
22 . between Teague Avenue and Nees Avenue	Clovis	2-Lane Undivided Arterial	1,310	970	D	1,030	D	1,100	D	1,190	D
23 . between Nees Avenue and State Route 168 Westbound Ramps	Clovis	3-Lane Raised Median Arterial	2,830	1,660	D	1,720	D	2,480	D	2,560	D

Notes:

LOS = Level of Service

[1] Classifications for all segments have been obtained from the City of Clovis's General Plan Circulation Diagram, dated December 2014.

[2] Roadway capacities for all segments have been obtained from the Clovis General Plan and Development Code Update Draft PEIR, dated June 2014.

9.0 CIRCULATION IMPROVEMENTS AND FUNDING SOURCES

9.1 RECOMMENDED IMPROVEMENTS

Improvements have been recommended at study intersections and roadway segments where an operational deficiency has been identified based on the results of the LOS analysis. Table 9-A summarizes the recommended improvements for study intersections for all analysis scenarios. Tables 9-B, 9-C, and 9-D summarize the post-improvement intersection LOS under existing, near-term, and cumulative conditions, respectively.

It should be noted that as shown in Tables 8-A, 8-C, and 8-E, the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, as shown in Tables 10-B and 10-C, both the ramp intersections are projected to have queuing deficiencies under future conditions (Near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. As shown in Tables 9-C, and 9-D, the intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under Near-term, and cumulative scenarios with implementation of this improvement. Further, as shown in Tables 10-E and 10-F, and discussed in chapter 10.0 of this report, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Detailed LOS worksheets are included in Appendix E. Figures 9-1, 9-2, and 9-3 illustrate the with recommended improvements intersection geometrics and traffic control under existing, near-term, and cumulative conditions, respectively.

A peak-hour signal warrant analyses have been conducted for the intersections where a signal has been proposed. As such, a signal was only recommended as an improvement if it meets the peak-hour signal warrant. Detailed signal warrant analysis worksheets are included in Appendix F.

Table 9-E summarizes the recommended improvements for roadway segments for all analysis scenarios. Tables 9-F and 9-G summarize the post-improvement roadway segment LOS under near-term and cumulative conditions, respectively.

Improvements identified at intersections and roadway segments adjacent to the project site along Shepherd Avenue and Sunnyside Avenue are illustrated in Figures 9-4, 9-5, and 9-6.

It should be noted that the segment of Fowler Avenue between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

9.2 FUNDING SOURCES AND MECHANISMS

Where there is a funding mechanism (fee program) for the recommended improvements, payment into the fee program would be considered sufficient project obligation to alleviate project-related operational deficiencies. At study locations where the addition of project traffic creates an operational deficiency (existing Plus project conditions) and there is no funding mechanism in place, the project will be responsible for the implementation of the improvement. At locations where the project adds to or creates a forecast deficiency and there is no funding mechanism in place, the project is responsible for its fair-share payment.

9.2.1 Fresno Council of Governments Federal Transportation Improvement Program

The Fresno COG prepares the Federal Transportation Improvement Program (FTIP) in cooperation with its member agencies and transit operators, State and federal agencies, and with public involvement. The FTIP is a compilation of project lists from the State Transportation Improvement Program (STIP), urbanized and non-urbanized areas, and other programs using federal funding. The basic premise behind an FTIP is that it is the incremental implementation (4 years) of the long-range Regional Transportation Plan (RTP) (24 years). The FTIP serves to present to federal funding agencies manageable components of funding the long-range RTP.

9.2.2 City of Clovis Development Impact Fee Program

Several recommended improvements are part of Clovis Development Impact Fee (DIF) Program. As such, since these improvements are included in the City's DIF program, the project will be paying into this fee program for these improvements. The City currently have three mechanisms within its DIF program which will be responsible for these improvements. Following is a summary of these three mechanisms within the City's DIF program:

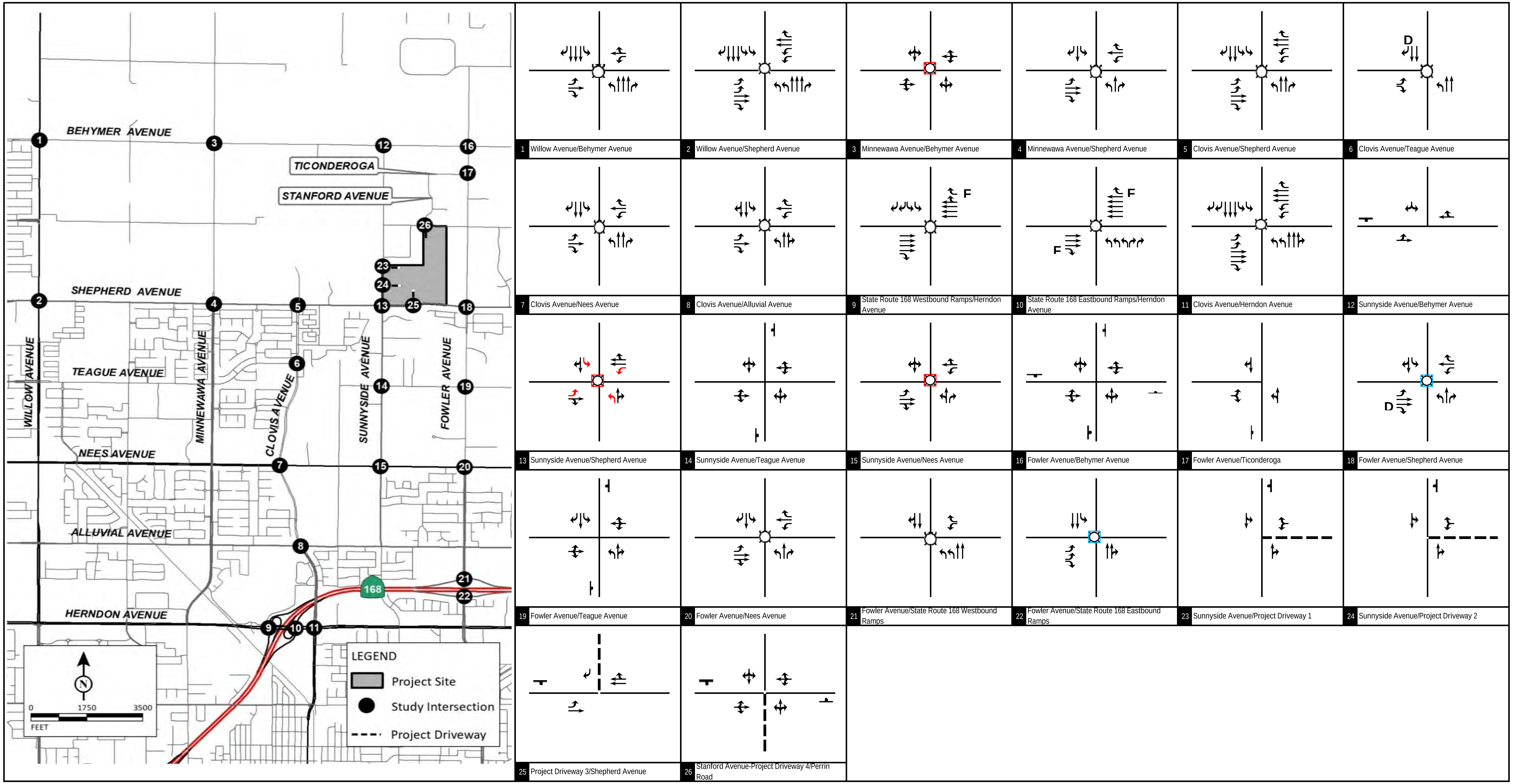
- **Traffic Signal Fee:** The Traffic Signal fee pays for the construction and financing of those certain planned traffic signals at the intersection of Major Streets and the interconnecting fiber optic system.
- **Outside Travel Lane Fee:** The Outside Travel Lane fee pays for the construction and financing of those certain planned travel lanes of a Major Street that are located between the frontage improvements and the Center Travel Lanes.
- **Center Travel Lane Fee:** The Center Travel Lane fee pays for the construction and financing of those certain planned travel lanes of a Major Street that are located within the median area. The fee also includes the adjacent travel lane on roads with 4 lanes or less, or the 2 adjacent lanes on 6-lane roads.

9.2.3 Project Fair Share

In the absence of a fee program where the project has an impact on the roadway network, the project will pay its respective fair share for the proposed improvements. The project's fair share has been calculated based on project traffic as a percentage of total growth of existing traffic plus project volumes.

Table 9-H summarizes the recommended improvement for the deficient intersections, a funding mechanism, and its fair share percentage. Table 9-I summarizes the corresponding improvements and funding mechanism for the roadway segments.

9.3 LIST OF CHAPTER 9.0 FIGURES AND TABLES



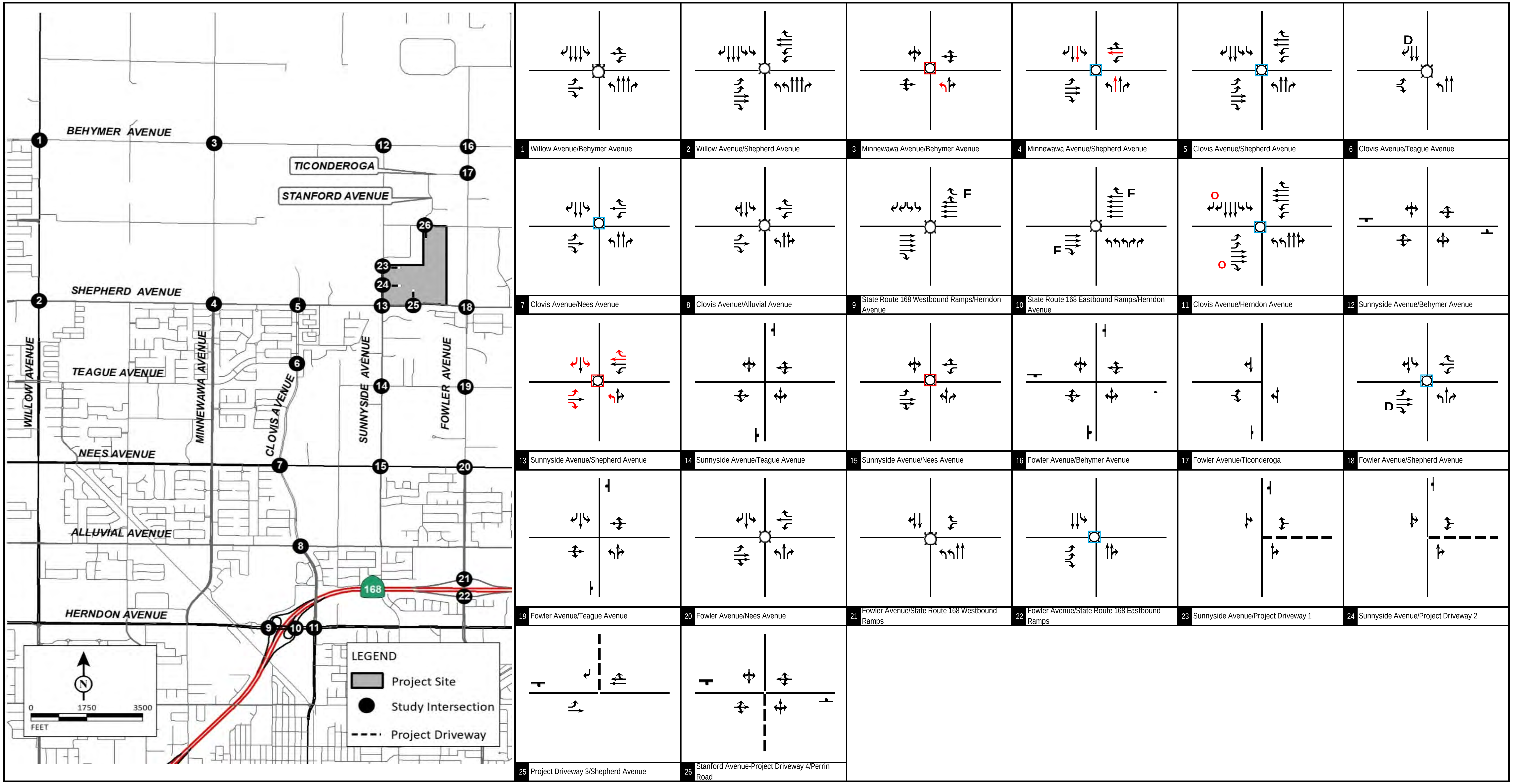
LSA

FIGURE 9-1

Legend

¤ Signal	**F** Free right-turn	----- Project Driveway	↰ Recommended Improvements
⊥ Stop Sign	**O** Right-turn overlap	¤ Optimize Signal Timing	
D Defacto right turn	**Y** Yield	¤ Install Traffic Signal	

Shepherd North Project
Transportation Impact Analysis
Existing Plus Project with Improvements Study Intersection Geometrics and Traffic Control



LSA

FIGURE 9-2

Legend

○ Signal	F Free right-turn	----- Project Driveway	↰ Recommended Improvements
⊥ Stop Sign	O Right-turn overlap	○ Optimize Signal Timing	
D Defacto right turn	Y Yield	○ Install Traffic Signal	

Shepherd North Project
Transportation Impact Analysis

Near -Term (2028) Plus Project with Improvements Study Intersection Geometrics and Traffic Control

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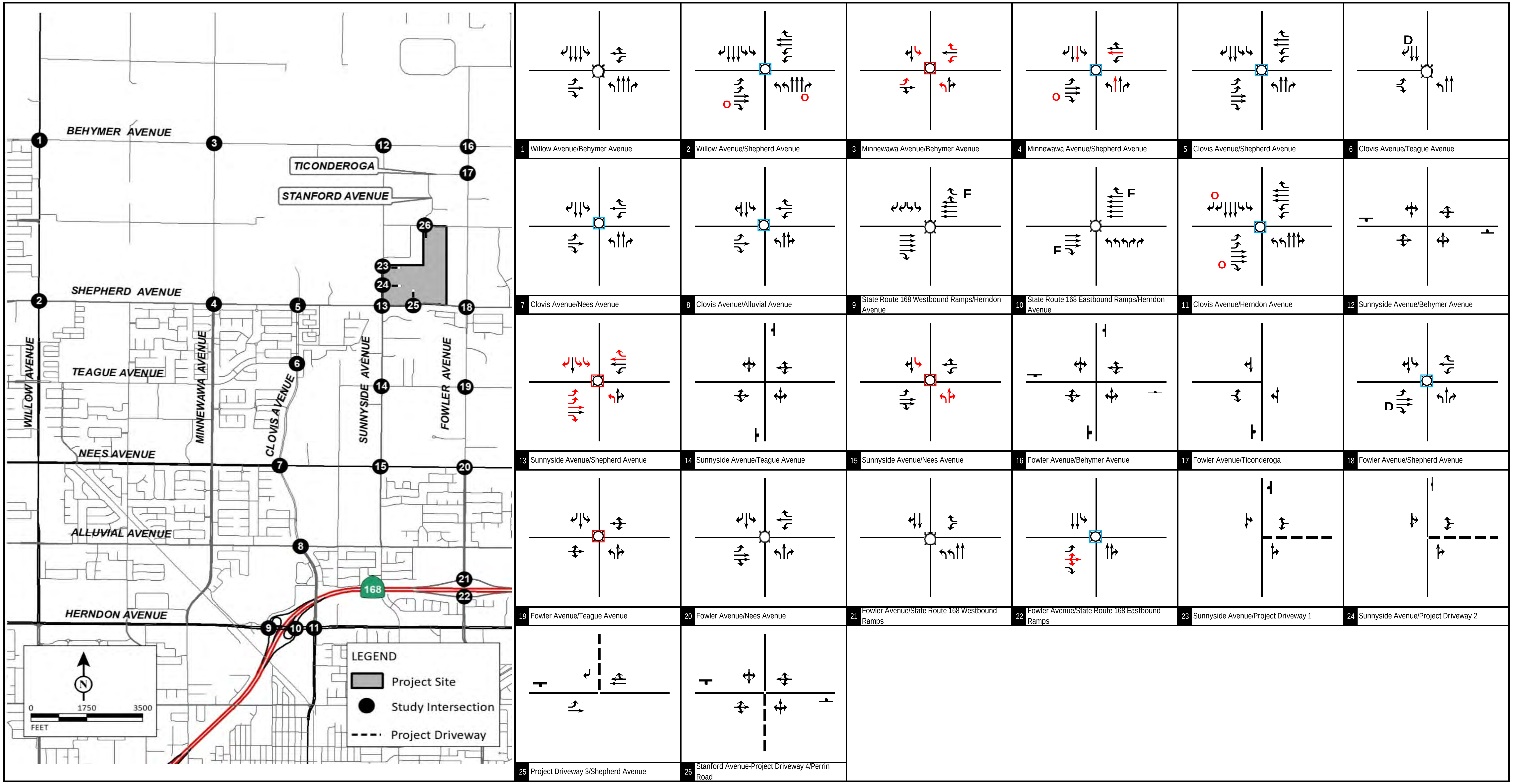

LSA

FIGURE 9-3

Legend

- ○ Signal
- ⊸ Stop Sign
- **D** Defacto right turn
- **F** Free right-turn
- **O** Right-turn overlap
- **Y** Yield
- ----- Project Driveway
- ○ Optimize Signal Timing
- ○ Install Traffic Signal
- ↰ Recommended Improvements

Shepherd North Project
Transportation Impact Analysis

Cumulative (2046) Plus Project with Improvements Study Intersection Geometrics and Traffic Control

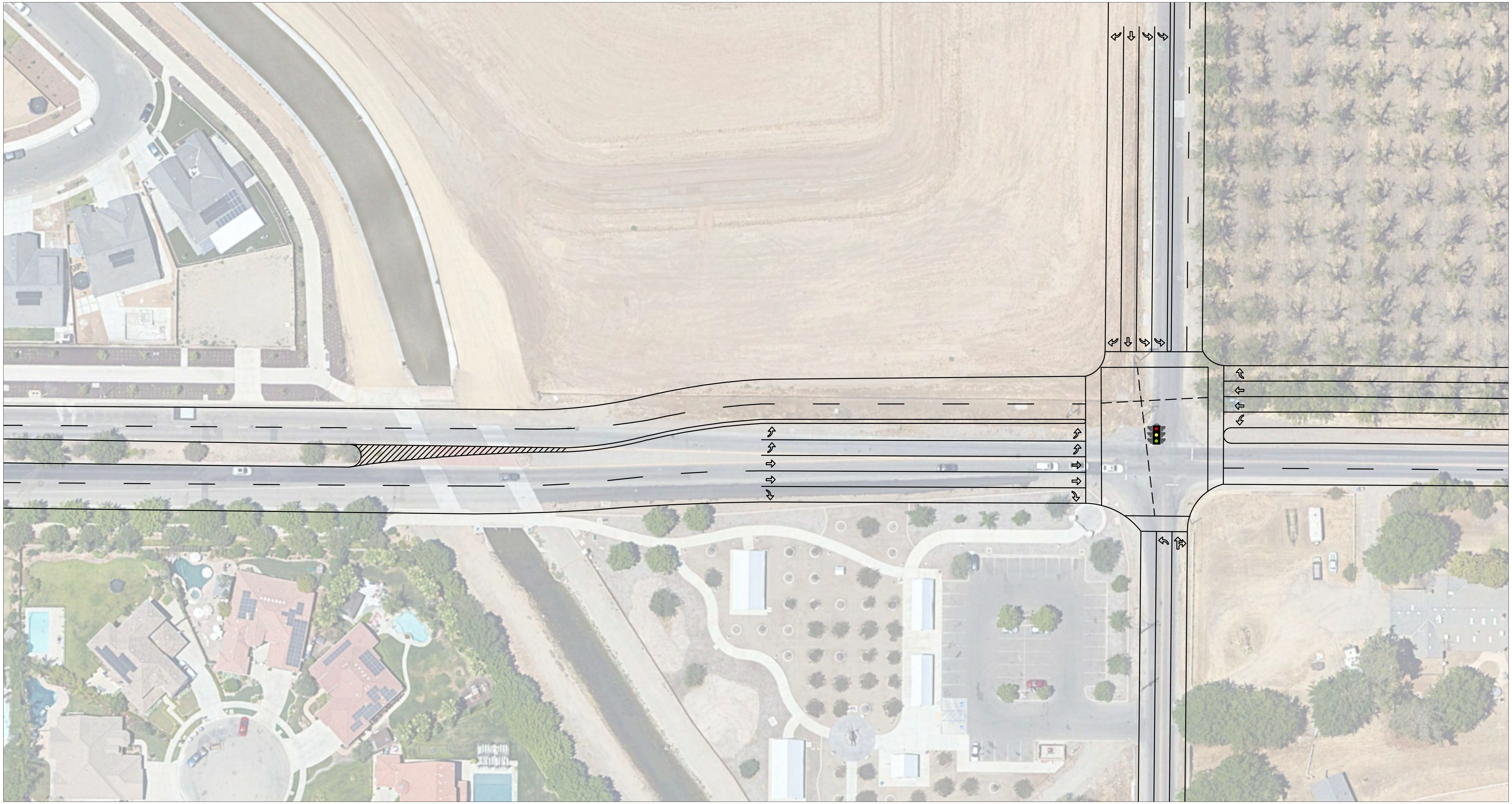

FIGURE 9-4

LEGEND

— Proposed Striping

🚦 Proposed Signal

N

0 35 70
FEET

SOURCE: Harbour & Associates, March 2022
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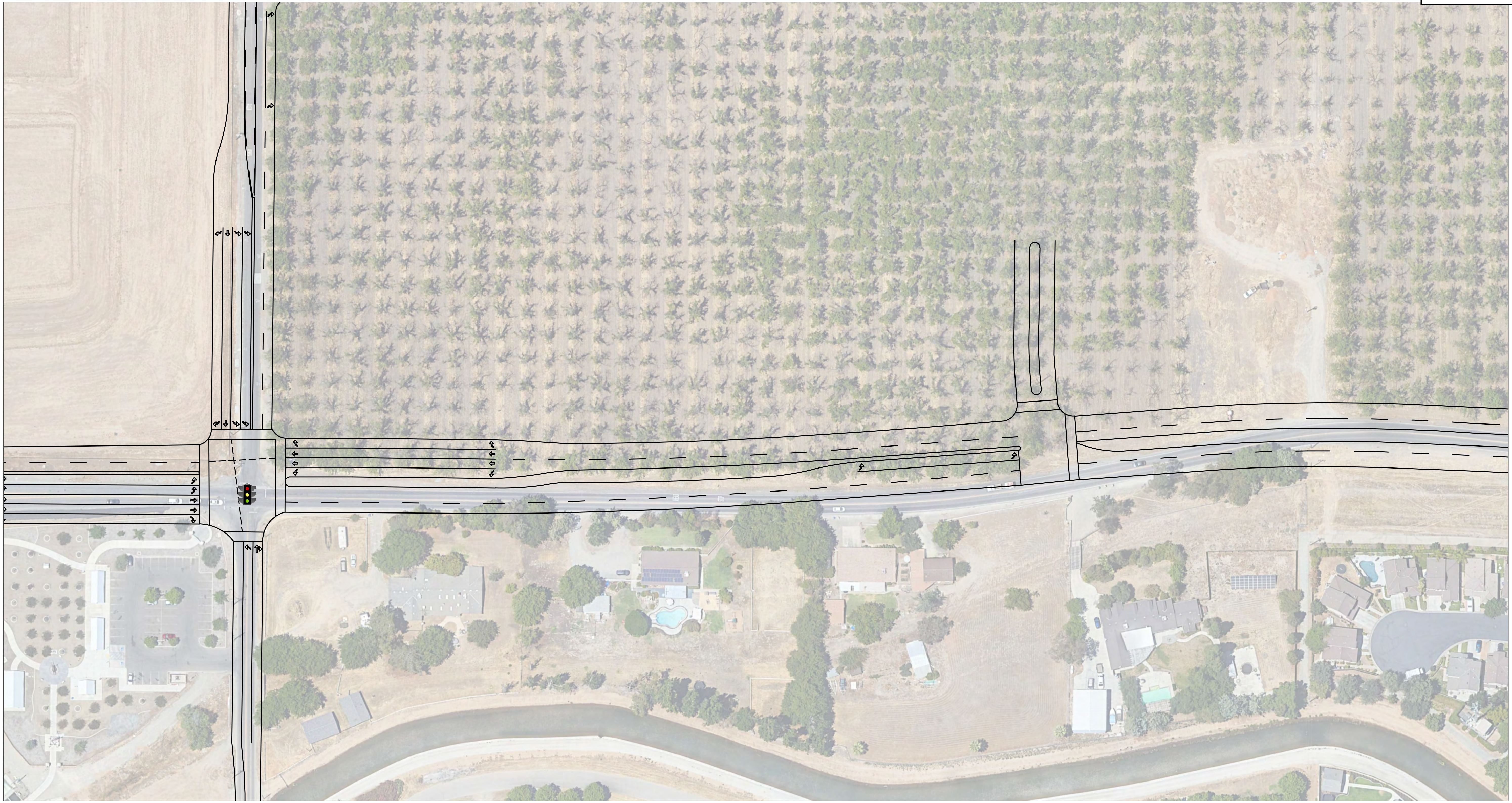
Shepherd North Project
Transportation Impact Analysis
Conceptual Striping Plan at Project Frontage - Part 1



LSA

FIGURE 9-5

LEGEND

— Proposed Striping

🚦 Proposed Signal

SOURCE: Harbour & Associates, March 2022

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Shepherd North Project

Transportation Impact Analysis

Conceptual Striping Plan at Project Frontage - Part 2

LSA

FIGURE 9-6

LEGEND

— Proposed Striping

🚦 Proposed Signal

SOURCE: Harbour & Associates, March 2022

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Shepherd North Project

Transportation Impact Analysis

Conceptual Striping Plan at Project Frontage - Part 3

Table 9-A - Recommended Improvements for Intersections

Intersection	Jurisdiction	Existing Plus Project Improvements	Near-Term (2028) Plus Project Improvements	Cumulative (2046) Plus Project Improvements
2 . Willow Avenue/Shepherd Avenue	Clovis/Fresno			Add NBR and EBR overlap phasing, Optimize signal timing.
3 . Minnewawa Avenue/Behymer Avenue	Clovis	Install a Signal.	Install a Signal, add NBL.	Install a Signal. Add NBL, SBL, EBL, WBL, WBR.
4 . Minnewawa Avenue/Shepherd Avenue	Clovis		Add NBT, SBT, WBT. Optimize the signal timing.	Add NBT, SBT, WBT. Add EBR overlap phasing. Optimize the signal timing.
5 . Clovis Avenue/Shepherd Avenue	Clovis		Optimize signal timing.	Optimize signal timing.
7 . Clovis Avenue/Nees Avenue	Clovis		Optimize signal timing.	Optimize signal timing.
8 . Clovis Avenue/Alluvial Avenue	Clovis			Optimize signal timing.
11 . Clovis Avenue/Herndon Avenue	Clovis		Add EBR and SBR overlap phasing and restrict NB and EB U-turns. Cooridinate and optimize the signal along with the SR-168 ramp intersections.	Add EBR and SBR overlap phasing and restrict NB and EB U-turns. Cooridinate and optimize the signal along with the SR-168 ramp intersections.
13 . Sunnyside Avenue/Shepherd Avenue	Clovis	Install a signal. Add EBL, WBT, SBL, NBL.	Install a signal. Add EBL, EBR, WBT, WBR, SBL, SBR, NBL.	Install a Signal. Add 2 EBL, 1 EBT, 1 EBR, 1 WBT, 1 WBR, 2 SBL, 1 SBR, 1 NBL.
15 . Sunnyside Avenue/Nees Avenue	Clovis	Install a Signal.	Install a Signal.	Install a Signal. Add SBL. Restripe the south leg to NBL and NBTR.
18 . Fowler Avenue/Shepherd Avenue	Clovis	Optimize signal timing.	Optimize signal timing.	Optimize signal timing.
19 . Fowler Avenue/Teague Avenue	Clovis			Install a Signal.
22 . Fowler Avenue/State Route 168 Eastbound Ramps	Caltrans	Optimize signal timing.	Optimize signal timing.	Restripe the second EBL to EBLTR. Optimize signal timing.
23 . Sunnyside Avenue/Project Driveway 1	Clovis			Add a TWLTL median.
24 . Sunnyside Avenue/Project Driveway 2	Clovis			Add a TWLTL median.

Notes:

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound

L = Left, T = Through, R = Right

Table 9-B - Existing Plus Project with Recommended Improvements Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Plus Project Without Improvements					Plus Project With Improvements				
			Control	A.M. Peak Hour		P.M. Peak Hour		Control	A.M. Peak Hour		P.M. Peak Hour	
				Delay (sec.)	LOS	Delay (sec.)	LOS		Delay (sec.)	LOS	Delay (sec.)	LOS
3 . Minnewawa Avenue/Behymer Avenue	Clovis	D	AWSC	60.0	**F** *	12.4	B	Signal	17.0	B	11.4	B
13 . Sunnyside Avenue/Shepherd Avenue	Clovis	D	AWSC	34.1	D	62.0	**F** *	Signal	33.0	C	32.3	C
15 . Sunnyside Avenue/Nees Avenue	Clovis	D	AWSC	31.8	D	44.4	**E** *	Signal	15.9	B	13.7	B
18 . Fowler Avenue/Shepherd Avenue	Clovis	D	Signal	69.2	**E** *	55.0	D	Signal	37.4	D	36.8	D
22 . Fowler Avenue/State Route 168 Eastbound Ramps	Caltrans	45 sec	Signal	22.7	C	60.8	**E** *	Signal	15.3	B	25.3	C

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

Table 9-C - Near-Term (2028) Plus Project with Recommended Improvements Intersection Levels of Service

			Plus Project Without Improvements					Plus Project With Improvements				
				A.M. Peak Hour		P.M. Peak Hour			A.M. Peak Hour		P.M. Peak Hour	
Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS	Delay (sec.)	LOS	Control	Delay (sec.)	LOS	Delay (sec.)	LOS
3 . Minnewawa Avenue/Behymer Avenue	Clovis	D	AWSC	100.9	**F** *	16.9	C	Signal	19.0	B	11.6	B
4 . Minnewawa Avenue/Shepherd Avenue	Clovis	D	Signal	118.6	**F** *	148.0	**F** *	Signal	48.6	D	45.6	D
5 . Clovis Avenue/Shepherd Avenue	Clovis	D	Signal	53.0	D	69.6	**E** *	Signal	53.0	D	45.6	D
7 . Clovis Avenue/Nees Avenue	Clovis	D	Signal	51.6	D	60.7	**E** *	Signal	38.7	D	44.9	D
11 . Clovis Avenue/Herndon Avenue	Clovis	D	Signal	57.1	**E** *	67.6	**E** *	Signal	35.1	D	41.1	D
13 . Sunnyside Avenue/Shepherd Avenue	Clovis	D	AWSC	>200	**F** *	>200	**F** *	Signal	34.2	C	45.8	D
15 . Sunnyside Avenue/Nees Avenue	Clovis	D	AWSC	45.5	**E** *	71.9	**F** *	Signal	18.6	B	13.3	B
18 . Fowler Avenue/Shepherd Avenue	Clovis	D	Signal	81.8	**F** *	137.6	**F** *	Signal	46.7	D	43.9	D
22 . Fowler Avenue/State Route 168 Eastbound Ramps	Caltrans	45 sec	Signal	22.7	C	64.3	**E** *	Signal	15.5	B	26.7	C

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

Table 9-D - Cumulative (2046) Plus Project with Recommended Improvements Intersection Levels of Service

			Plus Project Without Improvements							Plus Project With Improvements				
				A.M. Peak Hour			P.M. Peak Hour				A.M. Peak Hour		P.M. Peak Hour	
Intersection	Jurisdiction	LOS Standard	Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Control	Delay (sec.)	LOS	Delay (sec.)	LOS
2 . Willow Avenue/Shepherd Avenue	Clovis/Fresno	D	Signal	51.0	D		64.1	**E**	*	Signal	48.2	D	54.6	D
3 . Minnewawa Avenue/Behymer Avenue	Clovis	D	AWSC	>200	**F**	*	>200	**F**	*	Signal	45.2	D	31.1	C
4 . Minnewawa Avenue/Shepherd Avenue	Clovis	D	Signal	164.4	**F**	*	162.3	**F**	*	Signal	54.8	D	50.5	D
5 . Clovis Avenue/Shepherd Avenue	Clovis	D	Signal	61.5	**E**	*	67.4	**E**	*	Signal	50.1	D	50.4	D
7 . Clovis Avenue/Nees Avenue	Clovis	D	Signal	59.9	**E**	*	87.7	**F**	*	Signal	41.0	D	51.4	D
8 . Clovis Avenue/Alluvial Avenue	Clovis	D	Signal	56.4	**E**	*	49.8	D		Signal	54.4	D	49.8	D
11 . Clovis Avenue/Herndon Avenue	Clovis	D	Signal	62.7	**E**	*	90.4	**F**	*	Signal	42.7	D	49.0	D
13 . Sunnyside Avenue/Shepherd Avenue	Clovis	D	AWSC	>200	**F**	*	>200	**F**	*	Signal	37.8	D	54.7	D
15 . Sunnyside Avenue/Nees Avenue	Clovis	D	AWSC	165.4	**F**	*	>200	**F**	*	Signal	30.9	C	27.4	C
18 . Fowler Avenue/Shepherd Avenue	Clovis	D	Signal	86.3	**F**	*	129.1	**F**	*	Signal	53.7	D	54.3	D
19 . Fowler Avenue/Teague Avenue	Clovis	D	TWSC	52.5	**F**	*	133.5	**F**	*	Signal	6.0	A	6.0	A
22 . Fowler Avenue/State Route 168 Eastbound Ramps	Caltrans	45 sec	Signal	23.7	C		70.5	**E**	*	Signal	16.4	B	30.1	C
23 . Sunnyside Avenue/Project Driveway 1	Clovis	D	OWSC	46.5	**E**	*	53.6	**F**	*	OWSC	23.5	C	26.2	D
24 . Sunnyside Avenue/Project Driveway 2	Clovis	D	OWSC	140.9	**F**	*	131.1	**F**	*	OWSC	35.0	D	34.4	D

Notes:

AWSC= All-Way Stop Control; OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

Table 9-E - Recommended Improvements for Roadway Segments

Roadway Segment	Jurisdiction	Near-Term (2028) Plus Project Improvements	Cumulative (2046) Plus Project Improvements
Segments on Behymer Avenue			
2 . between Minnewawa Avenue and Sunnyside Avenue	Clovis		Convert to 2-Lane TWLTL Collector.
Segments on Shepherd Avenue			
4 . between Willow Avenue and Minnewawa Avenue	Clovis	Convert to 4-Lane Raised Median Arterial.	Convert to 4-Lane Raised Median Arterial.
6 . between Clovis Avenue and Sunnyside Avenue	Clovis	Convert to 4-Lane Raised Median Expressway.	Convert to 4-Lane Raised Median Expressway.
7 . between Sunnyside Avenue and Project Driveway 3	Clovis	-	Convert to 4-Lane Raised Median Expressway.
Segments on Minnewawa Avenue			
11 . between Behymer Avenue and Shepherd Avenue	Clovis	Convert to 2-Lane TWLTL Arterial.	Convert to 4-Lane Undivided Arterial.
Segments on Sunnyside Avenue			
16 . between Project Driveway 1 and Shepherd Avenue	Clovis		Convert to 3-Lane TWLTL Collector.
Segments on Fowler Avenue			
20 . between Ticonderoga and Shepherd Avenue	Clovis		No feasible improvements available since this roadway segment is already built to the City's General Plan Roadway classification standard.

Table 9-F - Near-Term (2028) Plus Project with Recommended Improvements Roadway Segments Levels of Service

Roadway Segment	Jurisdiction	Existing Classification	Proposed Classification	A.M. Peak Hour						P.M. Peak Hour					
				Plus Project without Improvements			Plus Project with Improvements			Plus Project without Improvements			Plus Project with Improvements		
				Capacity	Volume	LOS	Capacity	Volume	LOS	Capacity	Volume	LOS	Capacity	Volume	LOS
Segments on Shepherd Avenue															
4 . between Willow Avenue and Minnewawa Avenue	Clovis	3-Lane Raised Median Arterial	4-Lane Raised Median Arterial	2,830	2,040	D	3780	2,040	D	2,830	2,760	**E** *	3,780	2,760	D
6 . between Clovis Avenue and Sunnyside Avenue	Clovis	2-Lane Undivided Expressway	4-Lane Raised Median Expressway	2,130	1,990	D	4260	1,990	C	2,130	2,390	**F** *	4,260	2,390	D
Segments on Minnewawa Avenue															
11 . between Behymer Avenue and Shepherd Avenue	Clovis	2-Lane Undivided Arterial	2-Lane TWLTL Arterial	1,310	1,240	**E** *	1790	1,240	D	1,310	1,430	**F** *	1,790	1,430	D

Notes:

LOS = Level of Service

[1] Classifications for all segments have been obtained from the City of Clovis's General Plan Circulation Map, dated December 2014.

[2] Roadway capacities for all segments have been obtained from the Clovis General Plan and Development Code Update Draft PEIR, dated June 2014.

Table 9-G - Cumulative (2046) Plus Project with Recommended Improvements Roadway Segments Levels of Service

Roadway Segment	Jurisdiction	Existing Classification	Proposed Classification	A.M. Peak Hour						P.M. Peak Hour					
				Plus Project without Improvements			Plus Project with Improvements			Plus Project without Improvements			Plus Project with Improvements		
				Capacity	Volume	LOS	Capacity	Volume	LOS	Capacity	Volume	LOS	Capacity	Volume	LOS
Segments on Behymer Avenue															
2 . between Minnewawa Avenue and Sunnyside Avenue	Clovis	2-Lane Undivided Collector	2-Lane TWLTL Collector	1,310	1,470	**F** *	1790	1,470	D	1,310	1,110	D	1,790	1,110	D
Segments on Shepherd Avenue															
4 . between Willow Avenue and Minnewawa Avenue	Clovis	3-Lane Raised Median Arterial	4-Lane Raised Median Arterial	2,830	2,140	D	3780	2,140	D	2,830	2,890	**F** *	3,780	2,890	D
6 . between Clovis Avenue and Sunnyside Avenue	Clovis	2-Lane Undivided Expressway	4-Lane Raised Median Expressway	2,130	2,080	**E** *	4260	2,080	D	2,130	2,490	**F** *	4,260	2,490	D
7 . between Sunnyside Avenue and Project Driveway 3	Clovis	2-Lane Undivided Expressway	4-Lane Raised Median Expressway	2,130	1,650	D	4260	1,650	C	2,130	2,070	**E** *	4,260	2,070	C
Segments on Minnewawa Avenue															
11 . between Behymer Avenue and Shepherd Avenue	Clovis	2-Lane Undivided Arterial	4-Lane Undivided Arterial	1,310	1,800	**F** *	2640	1,800	D	1,310	1,570	**F** *	2,640	1,570	D
Segments on Sunnyside Avenue															
16 . between Project Driveway 1 and Shepherd Avenue	Clovis	2-Lane Undivided Collector	3-Lane TWLTL Collector	1,310	1,650	**F** *	2640	1,650	D	1,310	1,800	**F** *	2,640	1,800	D
Segments on Fowler Avenue															
20 . between Ticonderoga and Shepherd Avenue	Clovis	2-Lane Undivided Rural Collector	2-Lane Undivided Rural Collector	1,000	1,410	**F** *	1000	1,410	**F** *	1,000	1,110	**F** *	1,000	1,110	**F** *

Notes:

LOS = Level of Service

[1] Classifications for all segments have been obtained from the City of Clovis's General Plan Circulation Map, dated December 2014.

[2] Roadway capacities for all segments have been obtained from the Clovis General Plan and Development Code Update Draft PEIR, dated June 2014.

Table 9-H - Intersection Improvement Funding Mechanism and Fair Share

Intersection	Jurisdiction	Recommended Improvements	Funding Mechanism	Project Responsibility[1]	Improvements Covered by Clovis Development Improvement Fee Program	Improvements Covered by FTIP	Improvements Covered by Fair Share	Fair Share Percentage[2]
2 . Willow Avenue/Shepherd Avenue	Clovis/Fresno	Add NBR and EBR overlap phasing, Optimize signal timing.	Fair Share				Add NBR and EBR overlap phasing, Optimize signal timing.	3.46%
3 . Minnewawa Avenue/Behymer Avenue	Clovis	Install a Signal. Add NBL, SBL, EBL, WBL, WBR.	Clovis DIF		Install a Signal. Add NBL, SBL, EBL, WBL, WBR.			
4 . Minnewawa Avenue/Shepherd Avenue	Clovis	Add NBT, SBT, WBT. Add EBR overlap phasing. Optimize the signal timing.	Fair Share				Add NBT, SBT, WBT. Add EBR overlap phasing. Optimize the signal timing.	7.02%
5 . Clovis Avenue/Shepherd Avenue	Clovis	Optimize signal timing.	Fair Share				Optimize signal timing.	11.07%
7 . Clovis Avenue/Nees Avenue	Clovis	Optimize signal timing.	Fresno COG 2021 FTIP			Optimize signal timing.		
8 . Clovis Avenue/Alluvial Avenue	Clovis	Optimize signal timing.	Fair Share					11.31%
11 . Clovis Avenue/Herndon Avenue	Clovis	Add EBR and SBR overlap phasing and restrict NB and EB U-turns. Cooridinate and optimize the signal along with the SR-168 ramp intersections.	Fair Share				Add EBR and SBR overlap phasing and restrict NB and EB U-turns. Cooridinate and optimize the signal along with the SR-168 ramp intersections.	8.18%
13 . Sunnyside Avenue/Shepherd Avenue	Clovis	Install a Signal. Add 2 EBL, 1 EBT, 1 EBR, 1 WBT, 1 WBR, 2 SBL, 1 SBR, 1 NBL.	Clovis DIF, Fair Share		Install a Signal. Add EBL, EBT, EBR, WBT, WBR, SBL, NBL.		Add 2nd EBL, 2nd SBL, and SBR.	15.24%
15 . Sunnyside Avenue/Nees Avenue	Clovis	Install a Signal. Add SBL. Restripe the south leg to NBL and NBTR.	Clovis DIF		Install a Signal. Add SBL. Restripe the south leg to NBL and NBTR.			
18 . Fowler Avenue/Shepherd Avenue	Clovis	Optimize signal timing.	Clovis DIF		Optimize signal timing.			
19 . Fowler Avenue/Teague Avenue	Clovis	Install a Signal.	Clovis DIF		Install a signal.			
22 . Fowler Avenue/State Route 168 Eastbound Ramps	Caltrans	Restripe the second EBL to EBLTR. Optimize signal timing.	Fair Share				Restripe the second EBL to EBLTR. Optimize signal timing.	16.16%
23 . Sunnyside Avenue/Project Driveway 1	Clovis	Add a TWLTL median.	Fair Share				Add a TWLTL median.	5.21%
24 . Sunnyside Avenue/Project Driveway 2	Clovis	Add a TWLTL median.	Fair Share				Add a TWLTL median.	11.65%

Notes:

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound

L = Left, T = Through, R = Right

FTIP: Fresno council of Governments 2021 Federal Transportation Improvement Program

[1] Improvements listed under this section would be 100 percent project responsibility.

[2] Project Fair Share Percentage is the highest fair share value of the AM and PM peak hour when both peak hours require improvements, or only in the peak hour that require improvements.

Table 9-I - Roadway Segment Improvement Funding Mechanism and Fair Share

Roadway Segment	Jurisdiction	Cumulative (2046) Plus Project Improvements	Funding Mechanism	Project Responsibility	Improvements Covered by Clovis Five year Community Investment Program	Improvements Covered by FTIP	Improvements Covered by Fair Share	Fair Share Percentage
Segments on Behymer Avenue								
2 . between Minnewawa Avenue and Sunnyside Avenue	Clovis	Convert to 2-Lane TWLTL Collector.	Fair Share				Convert to 2-Lane TWLTL Collector.	0.52%
Segments on Shepherd Avenue								
4 . between Willow Avenue and Minnewawa Avenue	Clovis	Convert to 4-Lane Raised Median Arterial.	Fair Share				Convert to 4-Lane Raised Median Arterial.	7.68%
6 . between Clovis Avenue and Sunnyside Avenue	Clovis	Convert to 4-Lane Raised Median Expressway.	Fair Share				Convert to 4-Lane Raised Median Expressway.	22.21%
7 . between Sunnyside Avenue and Project Driveway 3	Clovis	Convert to 4-Lane Raised Median Expressway.	Fair Share				Convert to 4-Lane Raised Median Expressway.	24.73%
Segments on Minnewawa Avenue								
11 . between Behymer Avenue and Shepherd Avenue	Clovis	Convert to 4-Lane Undivided Arterial.	Fair Share		-		Convert to 4-Lane Undivided Arterial.	0.00%
Segments on Sunnyside Avenue								
16 . between Project Driveway 1 and Shepherd Avenue	Clovis	Convert to 3-Lane TWLTL Collector.	Fair Share				Convert to 3-Lane TWLTL Collector.	10.56%
Segments on Fowler Avenue								
20 . between Ticonderoga and Shepherd Avenue	Clovis	No feasible improvements available since this roadway segment is already built to the City's General Plan Roadway classification standard.	Fair Share				No feasible improvements available since this roadway segment is already built to the City's General Plan Roadway classification standard.	0.00%

Notes:

LOS = Level of Service

[1] Classifications for all segments have been obtained from the City of Clovis's General Plan Circulation Map, dated 2014.

[2] Roadway capacities for all segments have been obtained from the Clovis General Plan and Development Code Update Draft PEIR, dated June 2014.

10.0 INTERSECTION QUEUING ANALYSIS

Tables 10-A, 10-B, and 10-C list the available turn-pocket storage lengths and summarize the 95th percentile back-of-queue lengths at the study intersections under existing, near-term, and cumulative (2046) without project and plus project conditions. The queues for the signalized intersections have been reported from Synchro, while for unsignalized intersections, the SimTraffic queues have been reported since Synchro does not appropriately report queues at unsignalized intersections.

Tables 10-D, 10-E, and 10-F lists the 95th percentile back-of-queue lengths at the study intersections for plus project and plus project with improvements conditions, under existing, near-term (2028), and cumulative (2046) scenarios. It also includes the recommended turn-pocket storage lengths at these intersections. The recommended turn pocket storage lengths have been calculated based on recommended lane geometry with improvements and availability of adequate right-of-way.

It should be noted that as shown in Tables 8-A, 8-C, and 8-E, the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, as shown in Tables 10-B and 10-C, both the ramp intersections are projected to have queuing deficiencies under future conditions (Near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. As shown in Tables 9-C, and 9-D, the intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under Near-term, and cumulative scenarios with implementation of this improvement. Further, as shown in Tables 10-E and 10-F, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Detailed queuing worksheets are included in Appendix G.

10.1 LIST OF CHAPTER 10.0 TABLES

- Table 10-A: Existing Queuing Analysis
- Table 10-B: Near-Term (2028) Queuing Analysis
- Table 10-C: Cumulative (2046) Queuing Analysis
- Table 10-D: Existing Plus Project with Improvements Queuing Analysis
- Table 10-E: Near-Term (2028) Plus Project with Improvements Queuing Analysis
- Table 10-F: Cumulative (2046) Plus Project with Improvements Queuing Analysis

Table 10-A - Existing Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Existing			
			Without Project[2]		Plus Project [2]	
			AM	PM	AM	PM
1 . Willow Avenue/Behymer Avenue	**NBL**	250	**130**	**180**	**130**	180
Signal	**NBR**	105	0	0	0	0
	SBL	250	**85**	**75**	**85**	80
	SBR	200	**10**	0	**10**	0
	EBL	235	**115**	**35**	**115**	35
	WBL	90	**40**	**65**	**40**	65
2 . Willow Avenue/Shepherd Avenue	**2x NBL**	250	125	170	125	170
Signal	**NBR**	160	0	20	0	25
	2x SBL	250	125	100	130	125
	SBR	150	0	0	0	0
	2x EBL	230	**35**	**40**	**35**	40
	EBR	100	**65**	**60**	**60**	60
	WBL	250	45	40	50	40
	WBR	100	45	65	75	75
4 . Minnewawa Avenue/Shepherd Avenue	**NBL**	230	175	155	180	155
Signal	**NBR**	105	0	0	15	30
	SBL	255	150	120	150	120
	SBR	25	0	0	0	0
	EBL	230	**65**	**50**	**65**	50
	EBR	50	**105**	**40**	**110**	35
	WBL	215	80	45	130	85
	WBR	60	50	40	45	40
5 . Clovis Avenue/Shepherd Avenue	**NBL**	235	135	200	135	200
Signal	**NBR**	50	35	15	45	60
	2x SBL	250	20	10	20	15
	SBR	50	10	0	10	0
	2x EBL	240	**35**	**35**	**35**	35
	EBR	50	**75**	**55**	**75**	20
	2x WBL	245	90	65	135	100
	WBR	175	0	0	0	0
6 . Clovis Avenue/Teague Avenue	**NBL**	200	200	140	195	140
Signal	**SBR**	50	25	20	45	20
	EBL	250	80	75	80	80
7 . Clovis Avenue/Nees Avenue	**NBL**	300	**130**	**195**	**130**	220
Signal	**NBR**	95	0	0	0	0
	SBL	260	**130**	**90**	**130**	90
	SBR	105	0	0	0	0
	EBL	230	**70**	**55**	**70**	55
	WBL	55	**80**	**55**	**125**	90
	WBR	60	115	5	115	20

Table 10-A - Existing Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Existing			
			Without Project[2]		Plus Project [2]	
			AM	PM	AM	PM
8 . Clovis Avenue/Alluvial Avenue	**NBL**	230	**175**	**195**	**180**	195
Signal	**SBL**	235	180	120	180	120
	EBL	150	35	40	35	40
	EBR	105	**80**	**100**	**85**	110
	WBL	165	**80**	**70**	**80**	70
	WBR	105	**25**	**15**	**45**	35
9 . State Route 168 Westbound Ramps/Herndon Avenue	**SBL**	235	45	45	45	45
Signal	**SBR**	280	**480**	**190**	**490**	190
	EBR	365	45	40	45	40
10 . State Route 168 Eastbound Ramps/Herndon Avenue	**NBL**	430	**150**	**150**	**150**	150
Signal	**NBR**	430	170	**350**	180	390
11 . Clovis Avenue/Herndon Avenue	**2x NBL**	200	**175**	**240**	**175**	240
Signal	**2x SBL**	230	**130**	**195**	**130**	195
	2x SBR	185	45	40	50	45
	2x EBL	240	180	250	195	295
	2x WBL	245	**120**	**220**	**120**	220
	WBR	150	**130**	**100**	**135**	105
18 . Fowler Avenue/Shepherd Avenue	**NBL**	150	**215**	175	**230**	240
Signal	**SBL**	200	**265**	180	**265**	180
	EBL	115	50	55	50	55
	WBL	260	80	95	80	95
	WBR	55	**350**	**110**	**355**	105
20 . Fowler Avenue/Nees Avenue	**NBL**	200	150	**205**	150	205
Signal	**SBL**	85	55	65	60	70
	SBR	25	0	0	0	0
	EBL	230	45	**60**	45	60
	WBL	140	**110**	**70**	**110**	70
	WBR	25	0	0	0	0
21 . Fowler Avenue/State Route 168 Westbound Ramps	**NBL**	260	**235**	**210**	**230**	200
Signal	**WBR**	380	0	0	0	0
22 . Fowler Avenue/State Route 168 Eastbound Ramps	**SBL**	85	**30**	**45**	**25**	45
Signal	**EBL**	535	**70**	**125**	**75**	135
23 . Sunnyside Avenue/Project Driveway 1	**WBLTR**	-	0	0	40	30
OWSC						
24 . Sunnyside Avenue/Project Driveway 2	**WBLTR**	-	0	0	60	45
OWSC						

Table 10-A - Existing Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Existing			
			Without Project[2]		Plus Project [2]	
			AM	PM	AM	PM
25 . Project Driveway 3/Shepherd Avenue	**SBR**	-	0	0	55	65
OWSC	**EBL**	200	0	0	50	70
26 . Stanford Avenue-Project Driveway 4/Perrin Road	**NBLTR**	-	0	0	50	50
TWSC						

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

Table 10-B - Near-Term (2028) Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Near Term Year (2028) Plus Project[2]	
			AM	PM
1 . Willow Avenue/Behymer Avenue	**NBL**	250	185	235
Signal	**NBR**	105	0	0
	SBL	250	90	100
	SBR	200	15	0
	EBL	235	115	35
	WBL	90	50	85
2 . Willow Avenue/Shepherd Avenue	**2x NBL**	250	140	195
Signal	**NBR**	160	125	**450**
	2x SBL	250	180	235
	SBR	150	145	140
	2x EBL	230	90	175
	EBR	100	95	60
	WBL	250	215	250
	WBR	100	**195**	**220**
4 . Minnewawa Avenue/Shepherd Avenue	**NBL**	230	**275**	**280**
Signal	**NBR**	105	40	85
	SBL	255	**310**	205
	SBR	25	**75**	**60**
	EBL	230	130	190
	EBR	50	**220**	**110**
	WBL	215	205	155
	WBR	60	**90**	**165**
5 . Clovis Avenue/Shepherd Avenue	**NBL**	235	170	**280**
Signal	**NBR**	50	**65**	**125**
	2x SBL	250	105	90
	SBR	50	**165**	**100**
	2x EBL	240	90	130
	EBR	50	**85**	**95**
	2x WBL	245	150	120
	WBR	175	55	85
6 . Clovis Avenue/Teague Avenue	**NBL**	200	200	140
Signal	**SBR**	50	**100**	35
	EBL	250	85	95

Table 10-B - Near-Term (2028) Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Near Term Year (2028) Plus Project[2] AM	Near Term Year (2028) Plus Project[2] PM
7 . Clovis Avenue/Nees Avenue	**NBL**	300	235	**500**
Signal	**NBR**	95	0	0
	SBL	260	130	90
	SBR	105	5	0
	EBL	230	90	105
	WBL	55	**125**	**90**
	WBR	60	**110**	5
8 . Clovis Avenue/Alluvial Avenue	**NBL**	230	175	195
Signal	**SBL**	235	**240**	155
	EBL	150	40	50
	EBR	105	80	100
	WBL	165	80	70
	WBR	105	35	45
9 . State Route 168 Westbound Ramps/Herndon Avenue	**SBL**	235	45	50
Signal	**SBR**	280	**490**	190
	EBR	365	45	40
10 . State Route 168 Eastbound Ramps/Herndon Avenue	**NBL**	430	155	155
Signal	**NBR**	430	275	**670**
11 . Clovis Avenue/Herndon Avenue	**2x NBL**	200	185	**260**
Signal	**2x SBL**	230	155	220
	2x SBR	185	150	50
	2x EBL	240	**250**	**590**
	2x WBL	245	125	220
	WBR	150	**155**	**170**
18 . Fowler Avenue/Shepherd Avenue	**NBL**	150	**290**	**425**
Signal	**SBL**	200	**265**	180
	EBL	115	70	90
	WBL	260	80	100
	WBR	55	**360**	**90**

Table 10-B - Near-Term (2028) Queuing Analysis

Intersection		Movement	Without Project Storage Length[1] (ft/ln)	Near Term Year (2028) Plus Project [2] AM	Near Term Year (2028) Plus Project [2] PM
20 .	Fowler Avenue/Nees Avenue	**NBL**	200	150	**205**
	Signal	**SBL**	85	70	75
		SBR	25	0	0
		EBL	230	45	60
		WBL	140	110	70
		WBR	25	0	10
21 .	Fowler Avenue/State Route 168 Westbound Ramps	**NBL**	260	240	210
	Signal	**WBR**	380	0	0
22 .	Fowler Avenue/State Route 168 Eastbound Ramps	**SBL**	85	25	40
	Signal	**EBL**	535	75	145
23 .	Sunnyside Avenue/Project Driveway 1	**WBLTR**	-	45	35
	OWSC				
24 .	Sunnyside Avenue/Project Driveway 2	**WBLTR**	-	55	50
	OWSC				
25 .	Project Driveway 3/Shepherd Avenue	**SBR**	-	420	430
	OWSC	**EBL**	200	50	70
26 .	Stanford Avenue-Project Driveway 4/Perrin Road	**NBLTR**	-	50	45
	TWSC				

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

Table 10-C - Cumulative (2046) Queuing Analysis

Intersection	Movement	Without Project Storage Length^1 (ft/ln)	Cumulative (2046)			
			Without Project^2		Plus Project ^{2}	
			AM	PM	AM	PM
1 . Willow Avenue/Behymer Avenue	NBL	250	240	245	240	245
Signal	NBR	105	0	95	0	95
	SBL	250	105	170	105	175
	SBR	200	20	0	20	0
	EBL	235	120	35	120	35
	WBL	90	**155**	**210**	**155**	**210**
2 . Willow Avenue/Shepherd Avenue	2x NBL	250	**255**	200	**255**	200
Signal	NBR	160	**175**	**490**	**180**	**500**
	2x SBL	250	175	210	185	250
	SBR	150	**165**	150	**165**	150
	2x EBL	230	95	185	95	185
	EBR	100	**155**	**310**	**160**	**320**
	WBL	250	225	**265**	230	**270**
	WBR	100	**175**	**215**	**205**	**235**
4 . Minnewawa Avenue/Shepherd Avenue	NBL	230	**335**	**530**	**335**	**530**
Signal	NBR	105	40	65	45	**115**
	SBL	255	**580**	215	**580**	215
	SBR	25	**85**	**65**	**85**	**65**
	EBL	230	135	195	135	195
	EBR	50	**350**	**170**	**390**	**175**
	WBL	215	160	125	210	155
	WBR	60	**95**	**175**	**95**	**175**
5 . Clovis Avenue/Shepherd Avenue	NBL	235	185	**320**	185	**320**
Signal	NBR	50	50	**255**	50	**400**
	2x SBL	250	115	95	115	95
	SBR	50	**220**	**105**	**220**	**105**
	2x EBL	240	90	135	90	135
	EBR	50	**180**	**110**	**180**	**115**
	2x WBL	245	210	155	**305**	185
	WBR	175	85	90	110	90
6 . Clovis Avenue/Teague Avenue	NBL	200	**225**	155	**225**	160
Signal	SBR	50	**150**	35	**160**	35
	EBL	250	90	140	90	145
7 . Clovis Avenue/Nees Avenue	NBL	300	245	**540**	245	**600**
Signal	NBR	95	0	0	0	0
	SBL	260	190	180	195	180
	SBR	105	70	0	70	0
	EBL	230	130	165	130	165
	WBL	55	**80**	**75**	**130**	**105**
	WBR	60	**170**	**325**	**170**	**355**

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Table 10-C - Cumulative (2046) Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Cumulative (2046)			
			Without Project[2]		Plus Project [2]	
			AM	PM	AM	PM
8 . Clovis Avenue/Alluvial Avenue	**NBL**	230	**445**	**405**	**445**	**405**
Signal	**SBL**	235	**255**	175	**255**	175
	EBL	150	40	50	40	50
	EBR	105	105	105	105	105
	WBL	165	80	70	80	70
	WBR	105	40	50	40	50
9 . State Route 168 Westbound Ramps/Herndon Avenue	**SBL**	235	50	50	50	50
Signal	**SBR**	280	**565**	225	**575**	225
	EBR	365	50	45	50	45
10 . State Route 168 Eastbound Ramps/Herndon Avenue	**NBL**	430	155	240	155	240
Signal	**NBR**	430	305	**645**	320	**710**
11 . Clovis Avenue/Herndon Avenue	**2x NBL**	200	**260**	**445**	**260**	**445**
Signal	**2x SBL**	230	155	225	160	225
	2x SBR	185	155	50	**225**	60
	2x EBL	240	**275**	**540**	**290**	**620**
	2x WBL	245	150	225	150	225
	WBR	150	**165**	**200**	**165**	**200**
18 . Fowler Avenue/Shepherd Avenue	**NBL**	150	**280**	**415**	**300**	**545**
Signal	**SBL**	200	**565**	**230**	**565**	**230**
	EBL	115	100	105	100	105
	WBL	260	130	130	130	130
	WBR	55	**395**	**265**	**400**	**265**
20 . Fowler Avenue/Nees Avenue	**NBL**	200	195	**220**	195	**235**
Signal	**SBL**	85	**135**	**95**	**135**	**95**
	SBR	25	**35**	20	**35**	20
	EBL	230	45	110	45	110
	WBL	140	135	95	135	95
	WBR	25	0	**50**	0	**55**
21 . Fowler Avenue/State Route 168 Westbound Ramps	**NBL**	260	250	220	250	215
Signal	**WBR**	380	0	0	0	0
22 . Fowler Avenue/State Route 168 Eastbound Ramps	**SBL**	85	25	45	25	45
Signal	**EBL**	535	65	140	70	150
23 . Sunnyside Avenue/Project Driveway 1	**WBLTR**	-	0	0	55	245
OWSC						
24 . Sunnyside Avenue/Project Driveway 2	**WBLTR**	-	0	0	100	465
OWSC						

Table 10-C - Cumulative (2046) Queuing Analysis

	Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Cumulative (2046)			
				Without Project[2]		Plus Project [2]	
				AM	PM	AM	PM
25 .	Project Driveway 3/Shepherd Avenue	**SBR**	-	0	0	460	410
	OWSC	**EBL**	200	0	0	25	65
26 .	Stanford Avenue-Project Driveway 4/Perrin Road	**NBLTR**	-	0	0	50	45
	TWSC						

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

Table 10-D - Existing Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Storage Length[1] (ft/ln)	Existing			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
1 . Willow Avenue/Behymer Avenue	NBL	250	250	130	180	130	180
Signal	NBR	105	105	0	0	0	0
	SBL	250	250	85	80	85	80
	SBR	200	200	10	0	10	0
	EBL	235	235	115	35	115	35
	WBL	90	210	40	65	40	65
2 . Willow Avenue/Shepherd Avenue	2x NBL	250	260	125	170	125	170
Signal	NBR	160	225	0	25	15	30
	2x SBL	250	280	130	125	130	125
	SBR	150	165	0	0	0	0
	2x EBL	230	230	35	40	35	40
	EBR	100	175	60	60	60	45
	WBL	250	280	50	40	50	40
	WBR	100	200	75	75	60	65
4 . Minnewawa Avenue/Shepherd Avenue	NBL	230	230	180	155	170	145
Signal	NBR	105	105	15	30	0	25
	SBL	255	255	150	120	140	110
	SBR	25	25	0	0	0	5
	EBL	230	250	65	50	65	45
	EBR	50	50	**110**	35	**75**	30
	WBL	215	215	130	85	125	80
	WBR	60	130	45	40	40	35
5 . Clovis Avenue/Shepherd Avenue	NBL	235	235	135	200	135	170
Signal	NBR	50	50	45	**60**	45	50
	2x SBL	250	250	20	15	20	15
	SBR	50	270	10	0	10	0
	2x EBL	240	240	35	35	35	30
	EBR	50	50	**75**	20	**75**	30
	2x WBL	245	245	135	100	135	85
	WBR	175	175	0	0	0	0
6 . Clovis Avenue/Teague Avenue	NBL	200	225	195	140	200	140
Signal	SBR	50	50	45	20	45	20
	EBL	250	250	80	80	80	80
7 . Clovis Avenue/Nees Avenue	NBL	300	475	130	220	95	160
Signal	NBR	95	95	0	0	0	5
	SBL	260	260	130	90	95	75
	SBR	105	105	0	0	0	0
	EBL	230	230	70	55	50	45
	WBL	55	60	**125**	**90**	**95**	**75**
	WBR	60	60	**115**	20	**100**	20
8 . Clovis Avenue/Alluvial Avenue	NBL	230	420	180	195	175	195
Signal	SBL	235	215	180	120	180	120
	EBL	150	150	35	40	35	40
	EBR	105	110	85	**110**	80	100
	WBL	165	165	80	70	80	70
	WBR	105	105	45	35	25	15
9 . State Route 168 Westbound Ramps/Herndon Avenue	SBL	235	235	45	45	45	45
Signal	SBR[3]	280	445	**490**	190	**480**	190
	EBR	365	365	45	40	45	40

Table 10-D - Existing Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Storage Length[1] (ft/ln)	Existing			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
10 . State Route 168 Eastbound Ramps/Herndon Avenue	**NBL**	430	430	150	150	150	150
Signal	**NBR**	430	430	180	390	180	390
11 . Clovis Avenue/Herndon Avenue	**2x NBL**	200	200	175	**240**	165	**225**
Signal	**2x SBL**	230	230	130	195	125	215
	2x SBR	185	185	50	45	**220**	115
	2x EBL	240	350	195	**295**	180	265
	2x WBL	245	245	120	220	115	230
	WBR	150	150	135	105	55	35
13 . Sunnyside Avenue/Shepherd Avenue	**NBL**		250	0	0	70	120
Signal	**SBL**		250	0	0	40	40
	EBL		250	0	0	45	120
	WBL		250	0	0	80	85
15 . Sunnyside Avenue/Nees Avenue	**EBL**	50	70	0	0	10	20
Signal	**WBL**	65	65	0	0	30	25
18 . Fowler Avenue/Shepherd Avenue	**NBL**	150	285	**215**	**175**	210	170
Signal	**SBL**	200	200	**265**	180	165	125
	EBL	115	115	50	55	20	40
	WBL	260	260	80	95	55	70
	WBR	55	205	**350**	**110**	60	35
20 . Fowler Avenue/Nees Avenue	**NBL**	200	220	150	**205**	150	205
Signal	**SBL**	85	125	55	65	60	70
	SBR	25	50	0	0	0	0
	EBL	230	230	45	60	40	65
	WBL	140	140	110	70	110	70
	WBR	25	60	0	0	0	0
21 . Fowler Avenue/State Route 168 Westbound Ramps	**NBL**	260	260	235	210	205	190
Signal	**WBR**	380	380	0	0	0	0
22 . Fowler Avenue/State Route 168 Eastbound Ramps	**SBL**	85	85	30	45	20	35
Signal	**EBL**	535	535	70	125	105	300
23 . Sunnyside Avenue/Project Driveway 1	**WBLTR**	-	-	40	30	40	35
OWSC							
24 . Sunnyside Avenue/Project Driveway 2	**WBLTR**	-	-	60	45	55	50
OWSC							
25 . Project Driveway 3/Shepherd Avenue	**SBR**	-	-	55	65	60	45
OWSC	**EBL**	200	200	50	70	50	90
26 . Stanford Avenue-Project Driveway 4/Perrin Road	**NBLTR**	-	-	50	50	45	50
TWSC							

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

[3] Storage length based on signal coordinations mitigation with SR-168 Ramps.

Table 10-E - Near-Term (2028) Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Storage Length[1] (ft/ln)	Near Term Year (2028)			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
1 . Willow Avenue/Behymer Avenue	**NBL**	250	250	185	235	185	235
Signal	**NBR**	105	105	0	0	0	0
	SBL	250	250	90	100	90	100
	SBR	200	200	15	0	15	0
	EBL	235	235	115	35	115	35
	WBL	90	210	50	85	50	85
2 . Willow Avenue/Shepherd Avenue	**2x NBL**	250	260	140	195	140	190
Signal	**NBR**	160	225	125	**450**	125	**430**
	2x SBL	250	280	180	235	180	265
	SBR	150	165	145	140	145	120
	2x EBL	230	230	90	175	90	175
	EBR	100	175	95	60	55	80
	WBL	250	280	215	250	215	260
	WBR	100	200	**195**	**220**	95	150
3 . Minnewawa Avenue/Behymer Avenue	**NBL**		250	0	0	20	35
Signal							
4 . Minnewawa Avenue/Shepherd Avenue	**NBL**	230	230	**275**	**280**	**270**	**315**
Signal	**NBR**	105	105	40	85	20	55
	SBL	255	255	**310**	205	**285**	235
	SBR	25	25	**75**	**60**	**40**	10
	EBL	230	250	130	190	155	230
	EBR	50	50	**220**	**110**	**170**	**55**
	WBL	215	215	205	155	**225**	170
	WBR	60	130	**90**	**165**	0	0
5 . Clovis Avenue/Shepherd Avenue	**NBL**	235	235	170	**280**	170	**300**
Signal	**NBR**	50	50	**65**	**125**	**65**	**80**
	2x SBL	250	250	105	90	105	85
	SBR	50	270	**165**	**100**	50	50
	2x EBL	240	240	90	130	90	115
	EBR	50	50	**85**	**95**	**85**	**70**
	2x WBL	245	245	150	120	150	105
	WBR	175	175	55	85	55	60
6 . Clovis Avenue/Teague Avenue	**NBL**	200	225	200	140	200	140
Signal	**SBR**	50	50	**100**	35	**100**	35
	EBL	250	250	85	95	85	95
7 . Clovis Avenue/Nees Avenue	**NBL**	300	475	235	**500**	230	445
Signal	**NBR**	95	95	0	0	0	5
	SBL	260	260	130	90	95	75
	SBR	105	105	5	0	20	0
	EBL	230	230	90	105	65	90
	WBL	55	60	**125**	**90**	**95**	**70**
	WBR	60	60	**110**	5	**100**	20
8 . Clovis Avenue/Alluvial Avenue	**NBL**	230	420	175	195	175	195
Signal	**SBL**	235	215	**240**	155	**240**	155
	EBL	150	150	40	50	40	50
	EBR	105	110	80	100	80	100
	WBL	165	165	80	70	80	70
	WBR	105	105	35	45	35	45

Table 10-E - Near-Term (2028) Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length^{1} (ft/ln)	Plus Project Storage Length^{1} (ft/ln)	Near Term Year (2028) Plus Project ^{2} AM	Near Term Year (2028) Plus Project ^{2} PM	Near Term Year (2028) Plus Project with Improvements^{2} AM	Near Term Year (2028) Plus Project with Improvements^{2} PM
9 . State Route 168 Westbound Ramps/Herndon Avenue	SBL	235	235	45	50	35	55
Signal	SBR	280	445	**490**	190	350	190
	EBR	365	365	45	40	60	35
10 . State Route 168 Eastbound Ramps/Herndon Avenue	NBL	430	430	155	155	120	105
Signal	NBR	430	430	275	**670**	250	430
11 . Clovis Avenue/Herndon Avenue	2x NBL	200	200	185	**260**	150	**240**
Signal	2x SBL	230	230	155	220	175	**265**
	2x SBR	185	185	150	50	**205**	170
	2x EBL	240	350	**250**	**590**	260	**475**
	2x WBL	245	245	125	220	100	235
	WBR	150	150	**155**	**170**	65	115
13 . Sunnyside Avenue/Shepherd Avenue	NBL		250	0	0	160	**255**
Signal	SBL		250	0	0	40	40
	SBR		300				
	EBL		250	0	0	75	175
	WBL		250	0	0	50	115
	WBR		250			0	0
15 . Sunnyside Avenue/Nees Avenue	EBL	50	70	0	0	15	30
Signal	WBL	65	65	0	0	30	25
18 . Fowler Avenue/Shepherd Avenue	NBL	150	285	**290**	**425**	**295**	**335**
Signal	SBL	200	200	**265**	180	165	150
	EBL	115	115	70	90	20	65
	WBL	260	260	80	100	55	75
	WBR	55	205	**360**	**90**	60	30
20 . Fowler Avenue/Nees Avenue	NBL	200	220	150	**205**	150	205
Signal	SBL	85	125	70	75	70	75
	SBR	25	50	0	0	0	0
	EBL	230	230	45	60	45	65
	WBL	140	140	110	70	110	70
	WBR	25	60	0	10	0	10
21 . Fowler Avenue/State Route 168 Westbound Ramps	NBL	260	260	240	210	210	190
Signal	WBR	380	380	0	0	0	0
22 . Fowler Avenue/State Route 168 Eastbound Ramps	SBL	85	85	25	40	20	35
Signal	EBL	535	535	75	145	110	325
		0	0				
23 . Sunnyside Avenue/Project Driveway 1	WBLTR	-	-	45	35	40	40
OWSC							
24 . Sunnyside Avenue/Project Driveway 2	WBLTR	-	-	55	50	55	55
OWSC							
25 . Project Driveway 3/Shepherd Avenue	SBR	-	-	420	430	75	60
OWSC	EBL	200	200	50	70	65	105

Table 10-E - Near-Term (2028) Plus Project with Improvements Queuing Analysis

				Near Term Year (2028)			
				Plus Project [2]		Plus Project with Improvements[2]	
Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Storage Length[1] (ft/ln)	AM	PM	AM	PM
26 . Stanford Avenue-Project Driveway 4/Perrin Road	**NBLTR**	-	-	50	45	45	45
TWSC							

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

Table 10-F - Cumulative (2046) Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Storage Length[1] (ft/ln)	Cumulative (2046)			
				Plus Project [2]		Plus Project with Improvements[2]	
				AM	PM	AM	PM
1 . Willow Avenue/Behymer Avenue	NBL	250	250	240	245	240	245
Signal	NBR	105	105	0	95	0	95
	SBL	250	250	105	175	105	175
	SBR	200	200	20	0	20	0
	EBL	235	235	120	35	120	35
	WBL	90	210	**155**	**210**	155	210
2 . Willow Avenue/Shepherd Avenue	2x NBL	250	260	**255**	200	260	200
Signal	NBR	160	225	**180**	**500**	125	**465**
	2x SBL	250	280	185	250	185	280
	SBR	150	165	**165**	150	165	135
	2x EBL	230	230	95	185	90	185
	EBR	100	175	**160**	**320**	120	**335**
	WBL	250	280	230	**270**	200	190
	WBR	100	200	**205**	**235**	90	180
3 . Minnewawa Avenue/Behymer Avenue	SBL		250	0	0	235	190
Signal	EBL		200	0	0	10	10
	WBL		200	0	0	45	20
	WBR		200	0	0	65	40
4 . Minnewawa Avenue/Shepherd Avenue	NBL	230	230	**335**	**530**	**390**	**520**
Signal	NBR	105	105	45	**115**	5	85
	SBL	255	255	**580**	215	**445**	**275**
	SBR	25	25	**85**	**65**	**65**	20
	EBL	230	250	135	195	200	245
	EBR	50	50	**390**	**175**	**185**	**70**
	WBL	215	215	210	155	**230**	215
5 . Clovis Avenue/Shepherd Avenue	NBL	235	235	185	**320**	180	**335**
Signal	NBR	50	50	50	**400**	**80**	**255**
	2x SBL	250	250	115	95	110	90
	SBR	50	270	**220**	**105**	75	55
	2x EBL	240	240	90	135	90	115
	EBR	50	50	**180**	**115**	**180**	**80**
	2x WBL	245	245	**305**	185	205	165
	WBR	175	175	110	90	95	30
6 . Clovis Avenue/Teague Avenue	NBL	200	225	**225**	160	225	150
Signal	SBR	50	50	**160**	35	**165**	40
	EBL	250	250	90	145	90	145
7 . Clovis Avenue/Nees Avenue	NBL	300	475	245	**600**	240	475
Signal	NBR	95	95	0	0	0	5
	SBL	260	260	195	180	165	180
	SBR	105	105	70	0	65	0
	EBL	230	230	130	165	95	170
	WBL	55	60	**130**	**105**	**95**	**90**
	WBR	60	60	**170**	**355**	**145**	**270**
8 . Clovis Avenue/Alluvial Avenue	NBL	230	420	**445**	**405**	415	405
Signal	SBL	235	215	**255**	175	210	175
	EBL	150	150	40	50	40	50
	EBR	105	110	105	105	105	105
	WBL	165	165	80	70	80	70
	WBR	105	105	40	50	65	50

Table 10-F - Cumulative (2046) Plus Project with Improvements Queuing Analysis

Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Storage Length[1] (ft/ln)	Cumulative (2046) Plus Project [2] AM	PM	Plus Project with Improvements[2] AM	PM
9 . State Route 168 Westbound Ramps/Herndon Avenue	**SBL**	235	235	50	50	40	55
Signal	**SBR**	280	445	**575**	225	415	240
	EBR	365	365	50	45	65	40
10 . State Route 168 Eastbound Ramps/Herndon Avenue	**NBL**	430	430	155	240	125	155
Signal	**NBR**	430	430	320	**710**	280	425
11 . Clovis Avenue/Herndon Avenue	**2x NBL**	200	200	**260**	**445**	**225**	**350**
Signal	**2x SBL**	230	230	160	225	140	**270**
	2x SBR	185	185	**225**	60	**335**	**215**
	2x EBL	240	350	**290**	**620**	295	**485**
	2x WBL	245	245	150	225	135	230
	WBR	150	150	**165**	**200**	85	125
13 . Sunnyside Avenue/Shepherd Avenue	**NBL**		250	0	0	135	**255**
Signal	**SBL**		250	0	0	135	95
	SBR		300				
	EBL		250	0	0	110	230
	WBL		250	0	0	90	95
	WBR		250			15	90
15 . Sunnyside Avenue/Nees Avenue	**SBL**		200	0	0	45	30
Signal	**EBL**	50	70	0	0	20	70
	WBL	65	65	0	0	40	50
17 . Fowler Avenue/Ticonderoga	**NBL**		300	0	0	15	20
Signal	**EBL**		100	0	0	20	15
18 . Fowler Avenue/Shepherd Avenue	**NBL**	150	285	**300**	**545**	**310**	**420**
Signal	**SBL**	200	200	**565**	**230**	**365**	**230**
	EBL	115	115	100	105	75	80
	WBL	260	260	130	130	105	95
	WBR	55	205	**400**	**265**	80	100
19 . Fowler Avenue/Teague Avenue	**NBL**		100	0	0	5	15
Signal	**SBL**		260	0	0	35	10
20 . Fowler Avenue/Nees Avenue	**NBL**	200	220	195	**235**	195	220
Signal	**SBL**	85	125	**135**	**95**	125	85
	SBR	25	50	**35**	20	45	35
	EBL	230	230	45	110	45	110
	WBL	140	140	135	95	135	95
	WBR	25	60	0	**55**	0	55
21 . Fowler Avenue/State Route 168 Westbound Ramps	**NBL**	260	260	250	215	220	200
Signal	**WBR**	380	380	0	0	0	0
22 . Fowler Avenue/State Route 168 Eastbound Ramps	**SBL**	85	85	25	45	25	40
Signal	**EBL**	535	535	70	150	105	335
23 . Sunnyside Avenue/Project Driveway 1	**WBLTR**	-	-	55	245	50	45
OWSC							

Table 10-F - Cumulative (2046) Plus Project with Improvements Queuing Analysis

	Intersection	Movement	Without Project Storage Length[1] (ft/ln)	Plus Project Storage Length[1] (ft/ln)	Cumulative (2046) Plus Project [2] AM	Cumulative (2046) Plus Project [2] PM	Cumulative (2046) Plus Project with Improvements[2] AM	Cumulative (2046) Plus Project with Improvements[2] PM
24 .	Sunnyside Avenue/Project Driveway 2	**WBLTR**	-	-	100	465	540	65
	OWSC							
25 .	Project Driveway 3/Shepherd Avenue	**SBR**	-	-	460	410	55	80
	Signal	**EBL**	200	200	25	65	50	145
26 .	Stanford Avenue-Project Driveway 4/Perrin Road	**NBLTR**	-	-	50	45	45	45
	TWSC							

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; R = Right

Bold = Queue exceeds available storage.

[1] Storage length for all movements obtained from Google Earth measurements and conceptual site plan.

[2] All queues reported are 95th percentile queues. Queues for signalized intersections have been taken from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

11.0 SITE DISTANCE ANALYSIS AND SAFE ROUTES TO SCHOOL ANALYSIS

As discussed previously and shown on Figure 1-2, access to the project will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road, and one on Shepherd Avenue. All driveways will operate as full-access driveways.

11.1 SIGHT DISTANCE ANALYSIS

A sight distance analysis was conducted at the project driveways along Sunnyside Avenue, Shepherd Avenue, and Perrin Road. Sight distance is the length of the visible roadway a driver can see approaching vehicles before their line of sight is blocked by any object. For purposes of this analysis, only the stopping sight distance and corner sight distance have been evaluated.

According to the Caltrans *Highway Design Manual* (HDM) (dated July 2020), the stopping sight distance is the minimum sight distance along a roadway required to allow a driver to decrease their speed from the design speed to a complete stop. The corner sight distance is the minimum sight distance in which a driver at a stop-controlled approach can see oncoming traffic on the major street to safely maneuver onto the roadway.

The stopping sight distance was evaluated on the roadways along the project frontage, Including Sunnyside Avenue, Shepherd Avenue, and Perrin Road. The posted speed limit on Shepherd Avenue along the project frontage is 40 miles per hour (mph). For purposes of this analysis, the posted speed limit has been considered as the design speed. There is no posted speed limit on Sunnyside Avenue or Perrin Road, but the north leg of the intersection of Sunnyside Avenue/Shepherd Avenue marks the end of the 45 mph speed zone. Therefore, for purposes of this analysis, the speed limits for both these roadways have been considered to be 40 mph. As stated in Table 201.1 of the HDM, the minimum stopping sight distance is 300 feet for a design speed of 40 mph. Therefore, the minimum stopping sight distance for all project driveways have been considered to be 300 feet.

As for corner sight distance, Section 405.1 of the HDM states that corner sight distance requirements are not applicable for urban driveways unless signalized. At signalized driveways, the minimum corner sight distance was based on design speed, time gap, and type of vehicle for the minor road vehicle to enter the major road. Based on these design speeds and the requirements established in the HDM, it was determined that minimum corner sight distances of the project driveways are as follows:

- **Sunnyside Avenue/Project Driveway 1:** 475 feet
- **Sunnyside Avenue/Project Driveway 2:** 500 feet
- **Project Driveway 3/Shepherd Avenue:** 385 feet
- **Project Driveway 4 – Stanford Avenue/Perrin Road:** 445 feet

As illustrated on Figures 11-1, 11-2, 11-3, and 11-4, the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers.

11.2 SAFE ROUTES TO SCHOOL

The project will be under the jurisdiction of the Clovis Unified School District (CUSD). The CUSD provides transportation for students who live in excess of an established radius zone. The zones are a radius of 1.00 mile for grades Kindergarten through 6th and 2.50 miles for grades 7th through 12th.

Based on the current CUSD maps and school district boundaries, elementary school students residing in the project will be attending the Riverview Elementary School, located at the southeast corner of Chestnut Avenue and Behymer Avenue. The distance between the elementary school and the project is approximately 2.6 miles. As such, the project is not within the school's walking radius area. As such, CUSD will provide transportation for the elementary school students. Additionally, some elementary school students from the project will be accessing the elementary school by cars. Therefore, no safety improvements may be required for the elementary school students.

It should be noted that the project is within the vicinity of the proposed Heritage Grove Specific Plan project. Based on the project description of the Specific Plan, an elementary school is being proposed within Planning Area 9 of the Specific Plan. Though the completion date for this elementary school is still undetermined, elementary school students from the project are anticipated to attend this school once completed. This new school will be within close proximity of the project site. The Heritage Grove Specific Plan project will also be constructing sidewalks and bike lanes as part of internal circulation network to provide safe route for walking and biking to school. As such, no further safety improvements may be required for the elementary school students upon construction of this elementary school.

The project is currently within the district boundaries of Granite Ridge Intermediate School, and Clovis North High School. Both these schools are located at the northwest corner of the intersection of Willow Avenue/International Avenue. The distance between these schools and the project is approximately 3.8 miles. As such, CUSD will provide transportation for the intermediate and high school student from the project. Because of the distance, it is not anticipated that students residing within the project will be walking/biking to the intermediate or high school.

As such, no further safety improvements will be required for accessing the elementary, intermediate or high school from the project site.

11.3 LIST OF CHAPTER 11.0 FIGURES

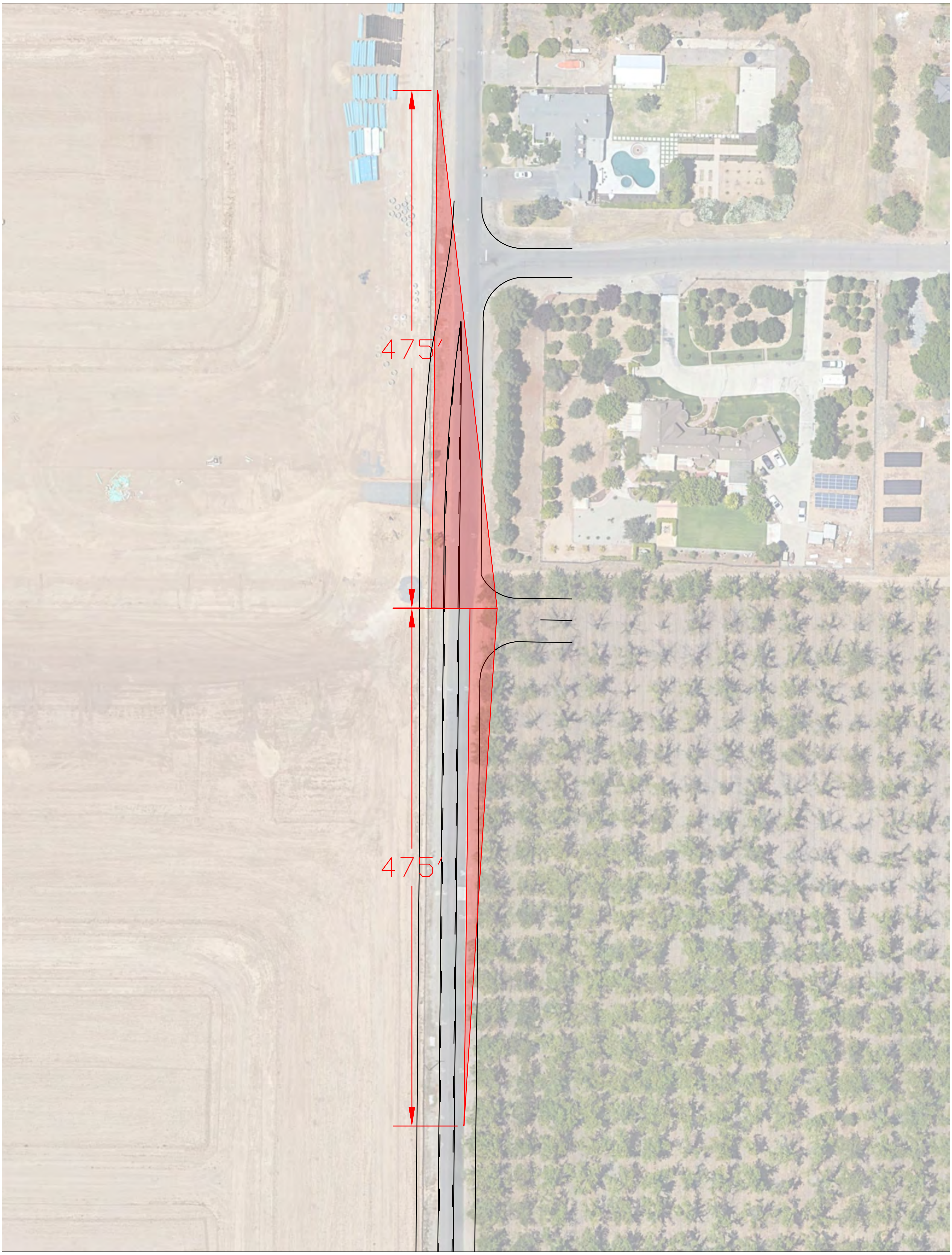

FIGURE 11-1

LEGEND

🟥 = Sight Distance Triangle

NOT TO SCALE
SOURCE: Google Earth 2022
P:\DNV2201\Traffic\Striping Plan\Template.dwg (2/13/2023)

Shepherd North Project
Transportation Impact Analysis
Sight Distance Analysis at Sunnyside Avenue/Project Driveway 1

FIGURE 11-2

LSA

LEGEND

🟥 = Sight Distance Triangle

N

NOT TO SCALE
SOURCE: Google Earth 2022
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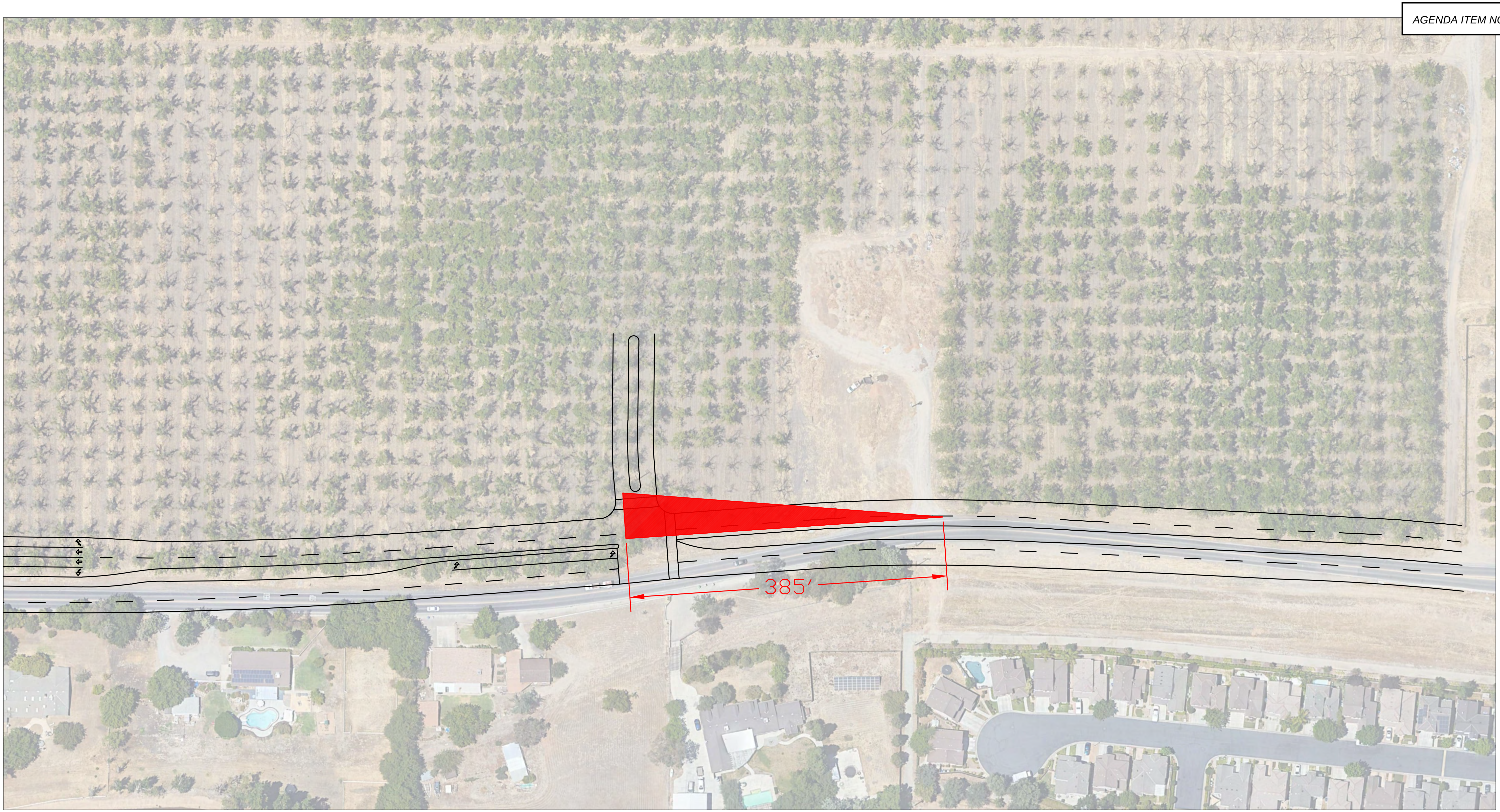
Shepherd North Project
Transportation Impact Analysis
Sight Distance Analysis at Sunnyside Avenue/Project Driveway 2



LSA

FIGURE 11-3

LEGEND

🟥 = Sight Distance Triangle

N

Shepherd North Project
Transportation Impact Analysis

Sight Distance Analysis at Project Driveway 3/Shepherd Avenue

NOT TO SCALE
SOURCE: Google Earth 2022
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FIGURE 11-4

LEGEND

🟥 = Sight Distance Triangle

N

NOT TO SCALE
SOURCE: Google Earth 2022
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Shepherd North Project
Transportation Impact Analysis

Sight Distance Analysis at Project Driveway 4-Stanford Avenue/Perrin Road

12.0 CALTRANS FREEWAY QUEUING ANALYSIS

As recommended by the Caltrans staff during the scoping agreement process, a freeway queuing analysis has been conducted at all Caltrans facilities at which project traffic gets added. Since the project is estimated to add traffic at the Herndon Avenue and Fowler Avenue interchanges, a freeway queuing analysis was performed at the off-ramps at these interchanges.

12.1 FREEWAY QUEUING ANALYSIS

A freeway queuing analysis was performed to examine safety impacts at the Herndon Avenue and Fowler Avenue interchange off-ramps. The queuing analysis will review the speed differential between the off-ramp queue and mainline traffic during the peak hours. If the speed differential exceeds the significance thresholds as outlined in the *Safety Review Practitioners Guidance* (30 mph), traffic safety improvements will need to be identified to offset operational deficiencies on traffic safety, if any.

Table 12-A summarizes the off-ramp speed differential between the SR-168 mainline and the off-ramps at the Herndon Avenue and Fowler Avenue interchanges. The ramp and mainline speeds were calculated using the Highway Capacity Software (i.e., HCS 7). As summarized in Table 12-A, the speed differential between the freeway mainlines and off-ramps for both interchanges are less than 30 mph with the exception of the diverge segment at the SR-168 westbound Herndon Avenue Off-Ramp. As such, no safety improvements may be necessary at all other locations.

The diverge segment at the SR-168 westbound Herndon Avenue Off-Ramp is forecast to operate at an unsatisfactory condition (LOS F) during p.m. peak hours under existing, near-term (2026) and cumulative (2046) conditions. Therefore, HCS 7 results may be unreliable for that diverge segment. However, since the segment is performing at LOS F, it could be estimated that the facility is being heavily congested, and a speed differential between the off-ramp queue and mainline traffic would potentially be much lower than the Caltrans significance threshold of 30 mph. However, improvements would be required at this off-ramp location to improve traffic operations in the freeway mainline. Since the project has no direct control of implementing improvements at a Caltrans facility, the deficiency at this location would remain significant and unavoidable.

It should be noted that as shown in Tables 8-A, 8-C, and 8-E, the intersections of SR- 168 Westbound Ramps/Herndon Avenue, and SR- 168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios. However, as shown in Tables 10-B and 10-C, both the ramp intersections are projected to have queuing deficiencies under future conditions (Near-term and cumulative scenarios). Additionally, the adjacent intersection of Clovis Avenue/Herndon Avenue is forecast to operate at an unsatisfactory LOS under Near-term, and cumulative scenarios, which may further deteriorate the ramp performance due to proximity of this intersection to the freeway ramps. Therefore, an evaluation of these intersections using signal timing coordination and optimization was performed under near-term and cumulative scenario. As shown in Tables 9-C, and 9-D, the intersection of Clovis Avenue/Herndon Avenue is forecast to operate at a satisfactory LOS along with the ramp intersections under Near-term, and cumulative scenarios with implementation of this improvement. Further, as shown in Tables 10-E and 10-F, and discussed in chapter 10.0 of this report, this also helps eliminate the queuing issues at the ramp intersections along with additional storage length improvement proposed to the SR- 168 Westbound Ramps at Herndon Avenue.

Detailed HCS worksheets are included in Appendix H.

12.2 LIST OF CHAPTER 12.0 TABLES

Table 12-A - Caltrans Off-Ramp Speed Differential

	Without Project								Plus Project							
	AM Peak Hour				PM Peak Hour				AM Peak Hour				PM Peak Hour			
SR-168	Freeway Speed (mi/hr)	Ramp Speed (mi/hr)	Speed Difference (mi/hr)	Safety Impact	Freeway Speed (mi/hr)	Ramp Speed (mi/hr)	Speed Difference (mi/hr)	Safety Impact	Freeway Speed (mi/hr)	Ramp Speed (mi/hr)	Speed Difference (mi/hr)	Safety Impact	Freeway Speed (mi/hr)	Ramp Speed (mi/hr)	Speed Difference (mi/hr)	Safety Impact
Existing (2022)																
1 . EB: Herndon Avenue Off-Ramp	62.6	58.0	4.6	No	64.5	57.3	7.2	No	62.7	57.9	4.8	No	64.2	57.1	7.1	No
2 . EB: Fowler Avenue Off-Ramp	65.0	59.5	5.5	No	65.7	58.2	7.5	No	64.9	59.5	5.4	No	65.5	58.1	7.4	No
3 . WB: Fowler Avenue Off-Ramp	60.6	60.6	0.0	No	60.5	60.5	0.0	No	60.6	60.6	0.0	No	--	--	--	--
4 . WB: Herndon Avenue Off-Ramp	58.5	58.5	0.0	No	--	--	--	--	58.5	58.5	0.0	No	--	--	--	--
Near Term (2028)																
1 . EB: Herndon Avenue Off-Ramp	62.2	57.6	4.6	No	63.4	56.4	7.0	No	62.2	57.6	4.6	No	63.1	56.2	6.9	No
2 . EB: Fowler Avenue Off-Ramp	65.2	59.5	5.7	No	65.5	58.1	7.4	No	65.1	59.5	5.6	No	65.3	57.9	7.4	No
3 . WB: Fowler Avenue Off-Ramp	60.6	60.6	0.0	No	--	--	--	--	60.6	60.6	0.0	No	--	--	--	--
4 . WB: Herndon Avenue Off-Ramp	58.5	58.5	0.0	No	--	--	--	--	58.5	58.5	0.0	No	--	--	--	--
Cumulative (2046)																
1 . EB: Herndon Avenue Off-Ramp	62.0	57.5	4.5	No	62.2	55.5	6.7	No	61.9	57.4	4.5	No	61.9	55.3	6.6	No
2 . EB: Fowler Avenue Off-Ramp	64.7	59.3	5.4	No	65.3	57.9	7.4	No	64.6	59.3	5.3	No	65.1	57.8	7.3	No
3 . WB: Fowler Avenue Off-Ramp	60.6	60.6	0.0	No	--	--	--	--	60.6	60.6	0.0	No	--	--	--	--
4 . WB: Herndon Avenue Off-Ramp	58.3	58.3	0.0	No	--	--	--	--	58.3	58.3	0.0	No	--	--	--	--

Notes:
mi/hr : miles per hour
pc/mi/ln: passanger cars per mile per lane
-- indicates deficient LOS due to high congestion.

13.0 SUMMARY AND CONCLUSIONS

The proposed project will consist of 605 single-family homes on approximately 77 acres of the site. The remaining 78 acres of the site will be used for roads, utilities, greenspace, landscaping, and pedestrian paths. It is anticipated that the project buildout will occur in year 2028. Access to the project will be provided by four full-access driveways: two on Sunnyside Avenue, one on Perrin Road, and one on Shepherd Avenue.

13.1 VEHICLE MILES TRAVELED ANALYSIS SUMMARY

The project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact. The project will implement applicable mitigation measures in consultation with the City staff. . It is estimated that the project could achieve approximately 1.18 percent VMT reduction from various mitigation measures.

13.2 EXISTING CONDITIONS SUMMARY

All study intersections and roadway segments operate at a satisfactory LOS under existing without and with project conditions with the exception of 5 intersections.

13.3 NEAR-TERM (2028) CONDITIONS SUMMARY

All intersections and roadway segments are forecast to operate at a satisfactory LOS under near-term (2028) plus project conditions with the exception of 10 intersections and 3 roadway segments.

13.4 CUMULATIVE (2046) CONDITIONS SUMMARY

All intersections and roadway segments are forecast to operate at a satisfactory LOS under cumulative (2046) plus project conditions with the exception of 14 intersections and 7 roadway segments.

13.5 IMPROVEMENTS SUMMARY

Based on the improvements discussed in Section 9.1, Recommended Improvements, of this report, all intersections and all but one roadway segment are estimated to operate satisfactorily. Some of the recommended circulation improvements are covered by the Fresno COG FTIP and the City's Community Investment Program. For the remaining improvements, some improvements along the project frontage will be direct project responsibility. The project will pay fair share percentages for the remaining improvements.

13.6 QUEUEING ANALYSIS SUMMARY

The recommended storage lengths have been proposed at intersections based on the availability of right-of-way and 95th percentile back-of-queue lengths at the study intersections. Additionally, a signal timing coordination and optimization has been proposed at the SR-168 Ramps and the adjacent intersection to alleviate LOS and queuing issues at this location.

13.7 SIGHT DISTANCE ANALYSIS SUMMARY

A sight distance analysis was conducted at the project driveways. Based on the sight distance analysis, the proposed project driveways achieve adequate sight distances and have clear sight triangles for the drivers.

13.8 SAFE ROUTES TO SCHOOL ANALYSIS SUMMARY

The project is approximately 2.0 miles from the elementary school and it is estimated that CUSD will provide for student transportation for elementary school students. The project is within the boundary of Granite Ridge Intermediate School and Clovis North High School. The CUSD is estimated to arrange for transport to the intermediate and high school due to the distance.

13.9 FREEWAY QUEUING ANALYSIS SUMMARY

The speed differential between the off-ramp and the mainline is less than 30 mph for all scenarios except for the diverge segment for the off-ramp at the Herndon Avenue Interchange Since the project has no direct control of implementing improvements at a Caltrans facility, the deficiency at this location would remain significant and unavoidable.

APPENDIX A

SCOPING AGREEMENT

LSA

CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

July 26, 2022

Mr. Sean K. Smith
Supervising Civil Engineer
Engineering Division, City of Clovis
1033 Fifth Street
Clovis, California 93612

Subject: Scope of Work for the Shepherd North Project Transportation Impact Analysis (LSA Project No. DNV2201)

Dear Sean:

LSA will be preparing a Transportation Impact Analysis (TIA) for the Shepherd North Project (project) in the City of Clovis (City) in Fresno County (County). The 155-acre project site is located at the northeast corner of intersection of Sunnyside Avenue and Shepherd Avenue. The project site is currently vacant. Figure 1 (all figures, tables, and appendices attached) illustrates the regional and project location.

The project will be a residential development including 605 single-family homes of approximately 77-acre of the site. It should be noted that remaining 78-acre of the site will be used for roads, utilities, greenspace, landscaping, and pedestrian paths. Figure 2 illustrates the tentative subdivision map for the project. Access to the project site will be provided via four driveways – two on Sunnyside Avenue, one on Perrin Road, and one on Shepherd Avenue. For purposes of this analysis, all driveways have been considered as full-access driveways.

LSA anticipates that the following scope of work will be required to prepare the TIA for the proposed project.

SCOPE OF WORK

LEVEL OF SERVICE ANALYSIS

Study Area Intersections

While Level of Service (LOS) analysis is no longer a determinant of California Environmental Quality Act (CEQA) impacts, consistency with the City's General Plan goals and policies is still required. Therefore, a Local Transportation Analysis (LTA) will be prepared to satisfy the requirements established by the City of Clovis *Interim Transportation Impact Analysis Guidelines* (TIA Guidelines), dated July 14, 2020, and requirements established by the California Department of Transportation (Caltrans). As such, traffic operations at all study intersections will be analyzed during the weekday a.m. and p.m. peak hours. The a.m. peak hour is defined as the one hour period of the highest traffic volume occurring between 7:00 and 9:00 a.m. while the p.m. peak hour is defined as the one hour period of the highest traffic volume occurring between 4:00 and 6:00 p.m. Intersection LOS will be calculated using the *Highway Capacity* Manual 6th Edition (HCM 6) analysis methodologies and by using the Synchro 11 software.

As per the City's TIA guidelines, the extent of the study area should include the following:

- Pedestrian, bicycle, and transit facilities within a half-mile distance from the project site boundary;
- All intersections of major streets that would provide direct access to the project;
- All signalized intersections within one-half mile of the project site boundary where the project would add 50 or more peak hour trips, and signalized intersections beyond one-half mile where the project would add 100 or more peak hour trips; and
- All unsignalized intersections within a half-mile of the project site boundary where the project would add more than 50 peak hour trips.

As such, the TIA will examine the following intersections:

1. Willow Avenue/Behymer Avenue (City of Clovis/City of Fresno);
2. Willow Avenue/Shepherd Avenue (City of Clovis/City of Fresno);
3. Minnewawa Avenue/Behymer Avenue (City of Clovis);
4. Minnewawa Avenue/Shepherd Avenue (City of Clovis);
5. Clovis Avenue/Shepherd Avenue (City of Clovis);
6. Clovis Avenue/Teague Avenue (City of Clovis);
7. Clovis Avenue/Nees Avenue (City of Clovis);
8. Clovis Avenue/Alluvial Avenue (City of Clovis);
9. State Route 168 (SR-168) Westbound Ramps/Herndon Avenue (Caltrans);
10. SR-168 Eastbound Ramps/Herndon Avenue (Caltrans);
11. Clovis Avenue/Herndon Avenue (City of Clovis);
12. Sunnyside Avenue/Behymer Avenue (City of Clovis);
13. Sunnyside Avenue/Shepherd Avenue (City of Clovis);
14. Sunnyside Avenue/Teague Avenue (City of Clovis);
15. Sunnyside Avenue/Nees Avenue (City of Clovis);
16. Fowler Avenue/Behymer Avenue (City of Clovis);
17. Fowler Avenue/Ticonderoga (City of Clovis);
18. Fowler Avenue/Shepherd Avenue (City of Clovis);
19. Fowler Avenue/Teague Avenue (City of Clovis);

20. Fowler Avenue/Nees Avenue (City of Clovis);
21. Fowler Avenue/SR-168 Westbound Ramps (Caltrans);
22. Fowler Avenue/SR-168 Eastbound Ramps (Caltrans);
23. Sunnyside Avenue/Project Driveway 1 (City of Clovis);
24. Sunnyside Avenue/Project Driveway 2 (City of Clovis);
25. Project Driveway 3/Shepherd Avenue (City of Clovis); and
26. Project Driveway 4-Stanford Avenue/Perrin Road (City of Clovis).

Figure 3 illustrates the study area intersections.

Roadway Segments

In addition to the study area intersections, the TIA will examine traffic operations at the following roadway segments:

1. Behymer Avenue, between Willow Avenue and Minnewawa Avenue (City of Clovis);
2. Behymer Avenue, between Minnewawa Avenue and Sunnyside Avenue (City of Clovis);
3. Behymer Avenue, between Sunnyside Avenue and Fowler Avenue (City of Clovis);
4. Shepherd Avenue, between Willow Avenue and Minnewawa Avenue (City of Clovis);
5. Shepherd Avenue, between Minnewawa Avenue and Clovis Avenue (City of Clovis);
6. Shepherd Avenue, between Clovis Avenue and Sunnyside Avenue (City of Clovis);
7. Shepherd Avenue, between Sunnyside Avenue and Project Driveway 3 (City of Clovis);
8. Shepherd Avenue, between Project Driveway 3 and Fowler Avenue (City of Clovis);
9. Herndon Avenue, between State Route 168 Eastbound Ramps and Clovis Avenue (City of Clovis);
10. Willow Avenue, between Behymer Avenue and Shepherd Avenue (City of Clovis/City of Fresno);
11. Minnewawa Avenue, between Behymer Avenue and Shepherd Avenue (City of Clovis);
12. Clovis Avenue, between Shepherd Avenue and Teague Avenue (City of Clovis);
13. Clovis Avenue, between Teague Avenue and Nees Avenue (City of Clovis);
14. Clovis Avenue, between Nees Avenue and Alluvial Avenue (City of Clovis);
15. Clovis Avenue, between Alluvial Avenue and Herndon Avenue (City of Clovis);
16. Sunnyside Avenue, between Project Driveway 1 and Shepherd Avenue (City of Clovis);
17. Sunnyside Avenue, between Shepherd Avenue and Teague Avenue (City of Clovis);

18. Sunnyside Avenue, between Teague Avenue and Nees Avenue (City of Clovis);
19. Fowler Avenue, between Behymer Avenue and Ticonderoga (City of Clovis);
20. Fowler Avenue, between Ticonderoga and Shepherd Avenue (City of Clovis);
21. Fowler Avenue, between Shepherd Avenue and Teague Avenue (City of Clovis);
22. Fowler Avenue, between Teague Avenue and Nees Avenue (City of Clovis); and
23. Fowler Avenue, between Nees Avenue and State Route 168 Westbound Ramps (City of Clovis).

As recommended in the City's TIA guidelines, daily traffic operations at roadway segments will be analyzed based on the peak hour level of service volume thresholds obtained from Chapter 5.16, *Transportation and Traffic,* of the City's *General Plan and Development Code Update Draft Program Environmental Impact Report,* dated June 2014.

Project Trip Generation, Trip Distribution, and Trip Assignment

The trip generation for the proposed project was developed using rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition) for Land Uses 210 - "Single-Family Detached Housing." The project trip generation is summarized in Table A. The project is anticipated to generate 5,705 total daily trips, with 424 trips occurring during the a.m. peak hour and 569 trips occurring during the p.m. peak hour.

The project trip distribution patterns were derived from the select zone model runs obtained from the Fresno Council of Governments' (COG's) Activity-Based Model (ABM). The select zone model plot is included in Appendix A. Figure 4 illustrates the project trip distribution. The project trip assignment at the study intersections is the product of the project trip generation and the corresponding trip distribution percentages. Figure 5 illustrates the project trip assignment at the suggested study area of intersections.

Analysis Scenarios

The TIA will be prepared based on consultation with City staff and Caltrans to meet the requirements of both the City and Caltrans. The TIA will examine traffic operations at the study area intersections and roadway segments under the following scenarios:

- Existing Conditions;
- Existing Plus Project Conditions;
- Near-Term Plus Project Conditions;
- Cumulative Year without Project Conditions; and
- Cumulative Year Plus Project Conditions.

Volume Development and Analysis Methodology

Traffic volumes for existing conditions are typically developed using existing count data collected at study area intersections and roadway segments. Despite the ongoing COVID-19 pandemic, LSA anticipates that at present, traffic is operating near or at pre-pandemic levels, and therefore, adjustments to traffic counts will not be required. However, in case City staff requires adjustments to existing traffic counts, appropriate adjustments will be made by obtaining historical counts at study area intersections and segments.

Traffic volumes under near-term plus project conditions will be developed by adding traffic volumes from approved and pending projects located near the study area and project traffic to existing traffic volumes. LSA will contact City staff and adjacent jurisdictions for a list of cumulative projects.

Traffic volumes for cumulative year without project conditions will be developed by using forecast volumes obtained from the Fresno COG ABM. The methodology to develop cumulative year without project traffic volumes at study area intersections and roadway segments will be consistent with the COG's procedures for post-processing of modeled traffic volumes. The resulting intersection and roadway segment LOS will be calculated using the previously discussed methodologies.

Existing and cumulative year plus project traffic volumes will be developed by adding project traffic to the traffic volumes for the corresponding without project scenarios.

Intersection Queuing Analysis

An intersection queuing analysis will be performed at all study intersections. The queuing analysis will be performed using Synchro for signalized intersections and using SimTraffic for unsignalized intersections.

Caltrans Ramp Queuing Analysis

As requested by Caltrans staff, a ramp queuing analysis will be performed at the SR-168/Herndon Avenue and SR-168/Fowler Avenue interchanges to identify potential traffic safety impacts. The evaluation of safety impacts will include a review for speed differential between the exit ramps queue and the mainline of SR-168 during the same peak hour study period. The analysis will be performed as per the Caltrans *Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance*, dated July 2020.

Site Access and Circulation Analysis

A site access and circulation analysis will be conducted as per the criteria stated in the City's TIA guidelines. The following issues will be evaluated as part of this analysis:

- Anticipated queues and minimum required throat depth (MRTD) at all project access locations;
- A sight distance analysis at the project driveways including recommended improvements in cases of unsafe traffic conditions; and
- Safety of potential pedestrian paths of travels from the project site to schools, commercial areas, and nearby bus stops.

Analysis of Traffic Operations and Recommended Circulation Improvements

Levels of service without the project will be compared with levels of service plus the project for all analysis scenarios to determine operational deficiencies based on the LOS standards and operational deficiency criteria as applicable for the City and Caltrans. Furthermore, necessary improvements will be recommended to offset any operational deficiencies. Improvements may include addition of intersection turn lanes, segment lane additions, signalization, etc. The LOS with the proposed improvements will be calculated and summarized, along with a comparison of the LOS without improvements.

Signal Warrant Analysis (if Required)

A signal warrant analysis would be conducted at unsignalized intersections if a signal is recommended as an improvement. Peak hour approach volumes for study intersections will be examined to determine whether signalization may be warranted per the criteria defined in the California supplement of the *Manual on Uniform Traffic Control Devices* (CA-MUTCD).

Fair-Share Contributions (if Required)

A fair share percentage will be calculated for study area intersection and roadway segment improvements recommended in the TIA that are not included in the Measure C program, the City's Development Fee program or any other funding program. The percentage of fair share for the project will be calculated at each location using the total trips generated by the project divided by the total "new" traffic, which is the net increase in traffic volumes from existing to cumulative year conditions.

PROJECT VEHICLE MILES TRAVELED ANALYSIS

The TIA will include a Vehicle Miles Traveled (VMT) analysis to meet CEQA requirements. The project VMT analysis will be prepared consistent with the City's TIA Guidelines. As per the City's TIA Guidelines, the project cannot be considered as a small project given that the project exceeds 53 dwelling units. Therefore, a full VMT analysis will be required for the project. For purposes of this analysis, the project-generated VMT per capita will be obtained from the Fresno COG ABM. As per the City's TIA Guidelines, a significant project-generated VMT impact would occur if the project's VMT per capita exceeds a level of 13 percent below the existing County average VMT per capita provided in the guidelines. In case of a significant VMT impact, appropriate mitigation measures will be recommended based on discussion with City staff.

Should you have any questions, please do not hesitate to contact me at (951) 781-9310 or email me at Ambarish.Mukherjee@lsa.net.

Sincerely,

LSA ASSOCIATES, INC.

A. Mukherjee.

Ambarish Mukherjee, AICP, PE
Principal

ATTACHMENTS

Table A: Project Trip Generation
Figure 1: Regional and Project Location
Figure 2: Tentative Subdivision Map
Figure 3: Study Area Intersections
Figure 4: Project Trip Distribution
Figure 5: Project Trip Assignment
Appendix A: Fresno COG ABM Select Zone Model Plots

TABLES

Table A - Project Trip Generation

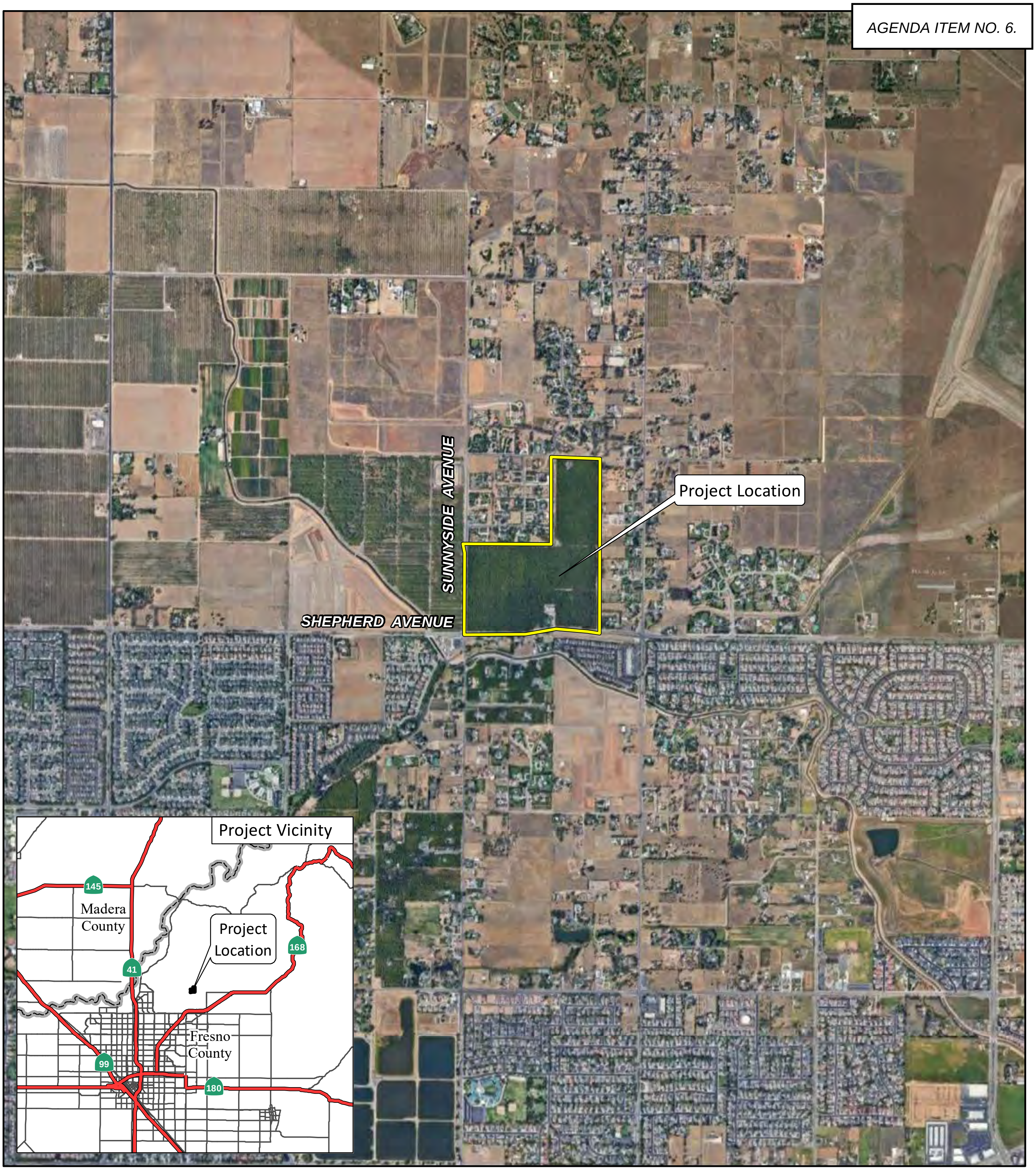
Land Use	Units		A.M. Peak Hour			P.M. Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Single-Family Detached Housing	605	DU							
Trips/Unit[1]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
Trip Generation			109	315	424	357	212	569	5,705

Notes:

DU = Dwelling Units

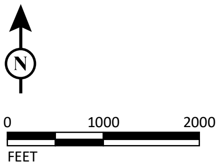
[1] Rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition), Land Use 210 - "Single-Family Detached Housing", Setting/Location - "General Urban/Suburban."

FIGURES



LSA

FIGURE 1



SOURCE: Google Earth (2018)

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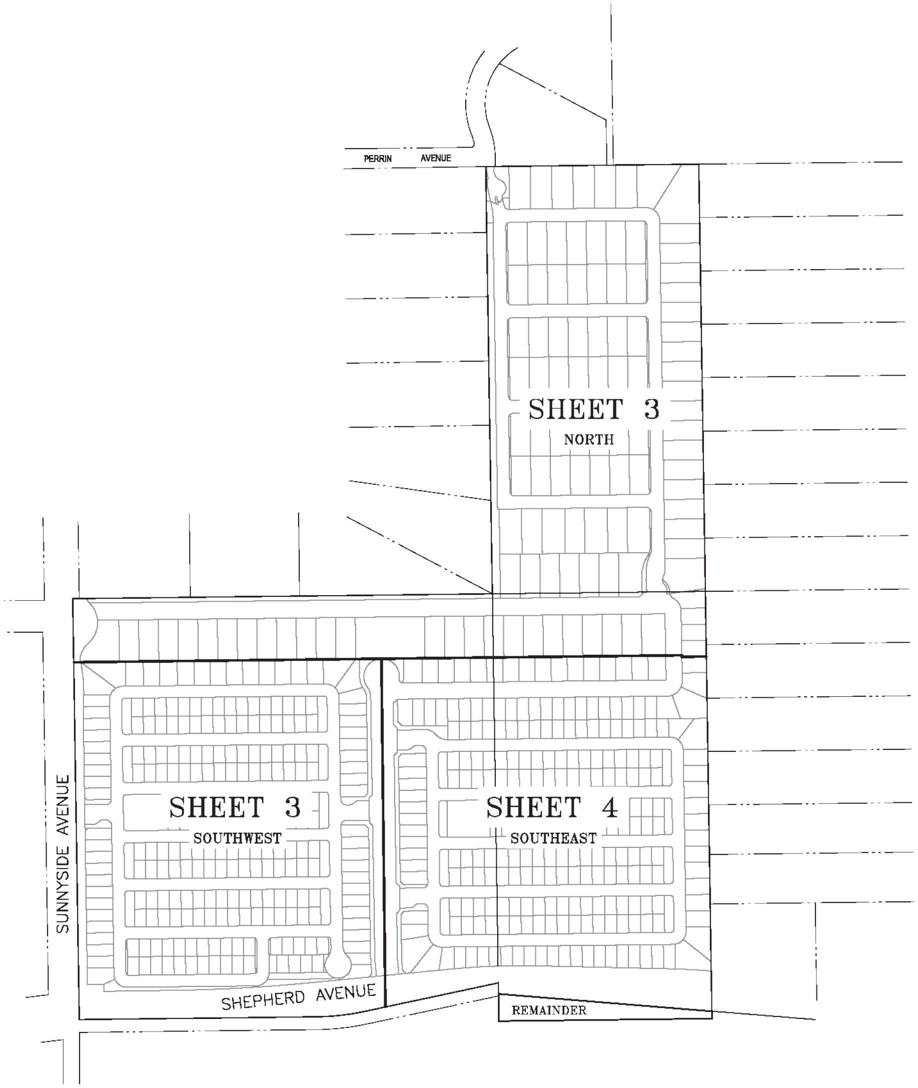
Shepherd North Project
Transportation Impact Analysis

Regional and Project Location



LSA

FIGURE 2

N

0 305 610

FEET

North Shepherd Project
Transportation Impact Analysis

Tenative Subdivision

SOURCE: Harbour & Associates, March 2022.
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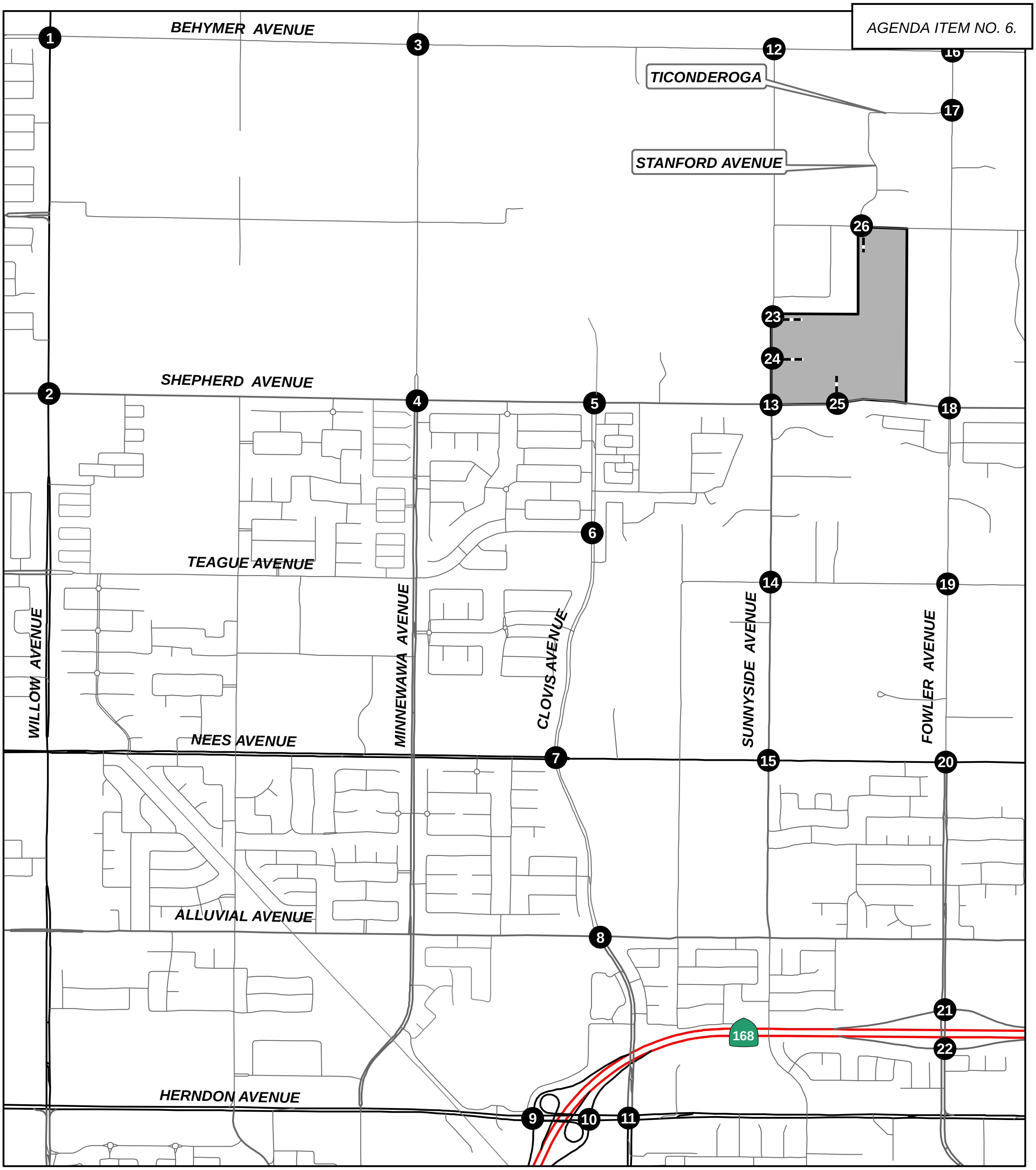
AGENDA ITEM NO. 6.



LSA

FIGURE 3

LEGEND

▨ Project Site

● Study Intersection

- - - Project Driveway

N

0 1000 2000
FEET

Shepherd North Project
Transportation Impact Analysis
Study Area Intersections

SOURCE: ESRI Streetmap (2013)

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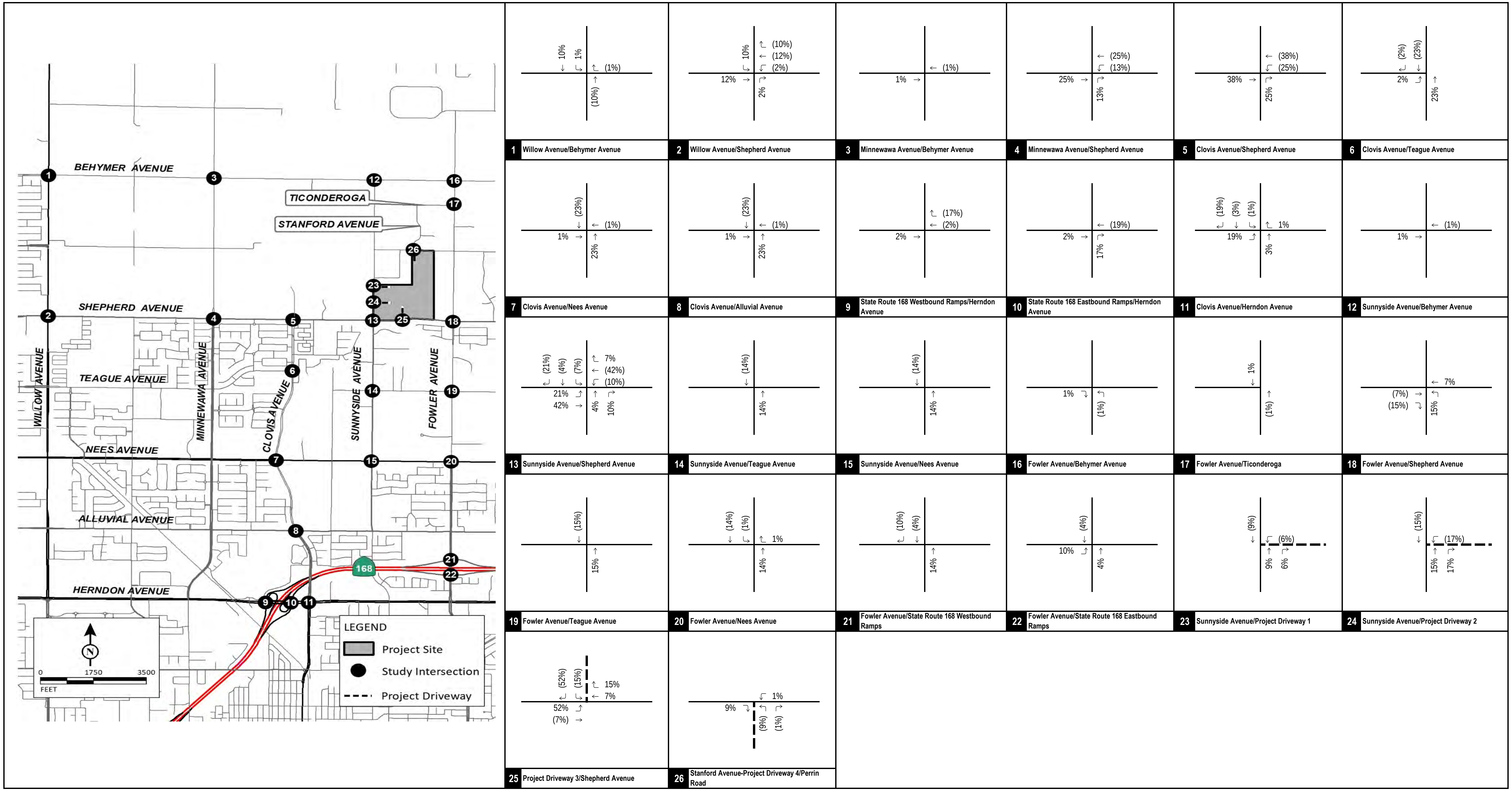


LSA

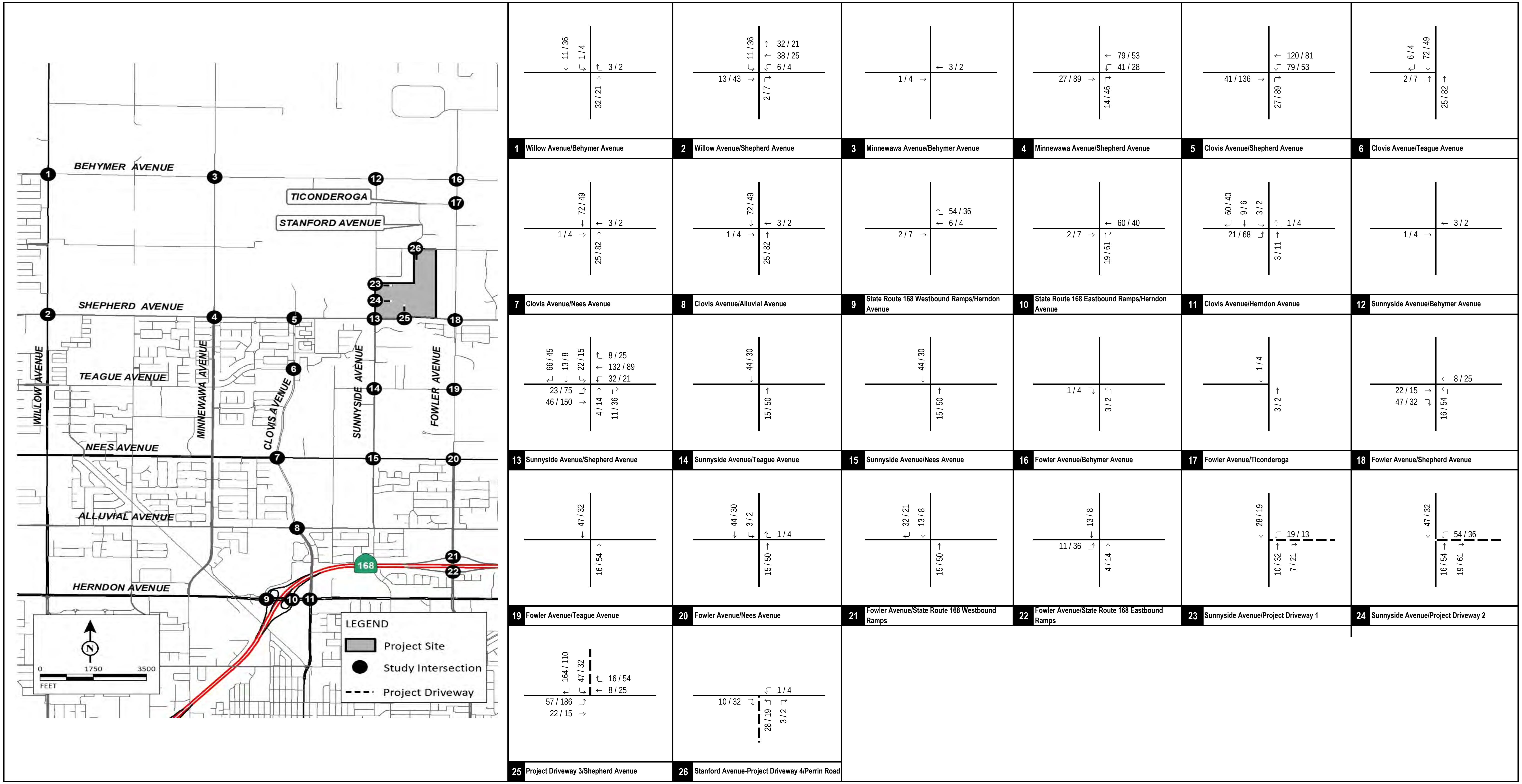
FIGURE 4

XX% (YY%)
Inbound (Outbound) Distribution
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Project Trip Distribution

P:\DNV2201\Traffic\z45_Dist.xlsx 7/26/2022



LSA

FIGURE 5

XXX / YYY
AM / PM Peak Hour Traffic Volumes
--- Project Driveway

Shepherd North Project
Transportation Impact Analysis

Project Trip Assignment

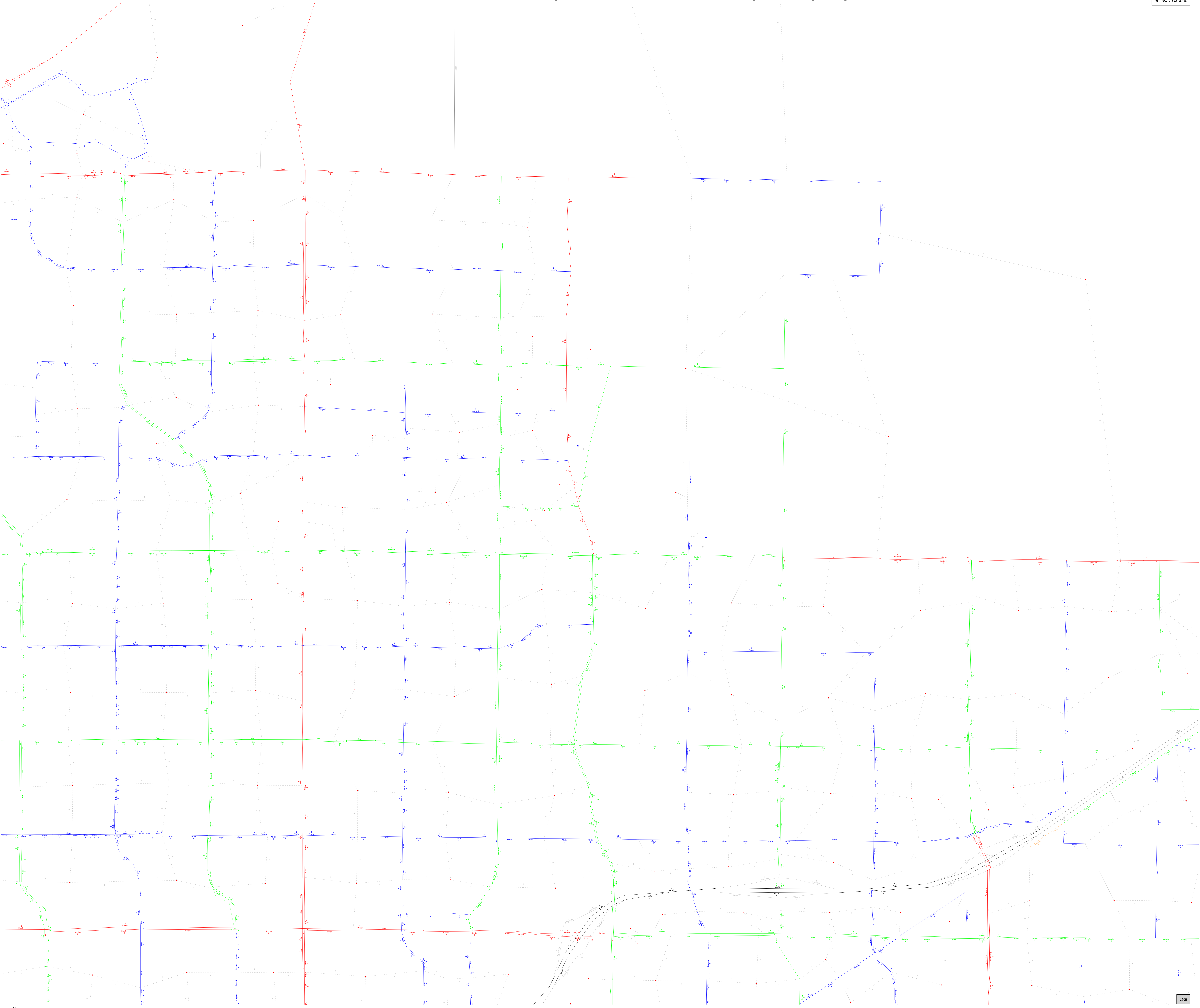
P:\DNV2201\Traffic\z45_Assign.xlsx 7/26/2022

APPENDIX A

FRESNO COG ABM SELECT ZONE MODEL PLOTS

Fresno COG 2035 Travel Model - PM peak hour Select Zone Distribution (North Shepherd)

AGENDA ITEM NO. 6.



APPENDIX B

VMT CALCULATION WORKSHEETS

Appendix B

VMT Calculations Worksheet

Total project households	605
Total project population (a)	2097
Percent Population traveling to outside (b) *	7.79%
Project Population traveling to outside (c=b*a)	163
Total Internal-Internal (II) Project VMT (d) **	29,749
Internal project population (e=a-c)	1,933.29
II VMT per capita (f=d/e)	15.39
IX VMT per capita (g) ***	20.2
Total IX VMT (h=g*c)	3,300
Total project VMT (i=d+h)	33,049
VMT per capita (j=i/a)	15.8
VMT adjustment factor for new base model (k)	1.08
Adjusted project VMT per capita (l = k*j)	17.0

** : Obtained from "Fresno_worker_ixxifractions.dat" from model inputs. Used same percentages/values as the parent TAZ (2771)*

***: Includes all tours and all sub-tours from the ABM model run for VMT estimation*

****: IX VMT per capita was estimated as average for all TAZs in the CSTDM Zone 2569*

APPENDIX C

TRAFFIC COUNT SHEETS AND SIGNAL TIMING SHEETS

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

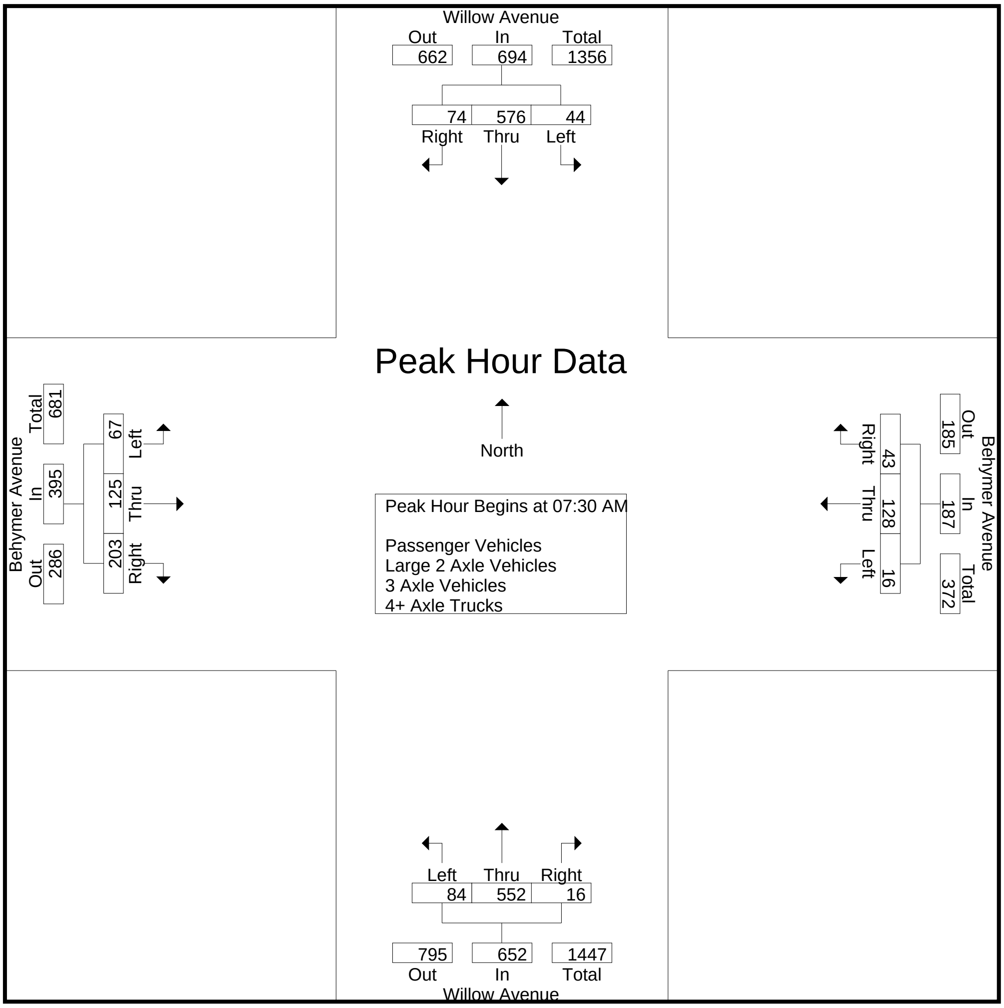
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	64	3	70	3	10	9	22	13	61	3	77	3	18	18	39	208
07:15 AM	7	67	7	81	2	16	18	36	17	88	3	108	11	16	26	53	278
07:30 AM	13	138	7	158	4	26	17	47	14	137	3	154	12	26	46	84	443
07:45 AM	13	160	22	195	3	28	13	44	27	225	6	258	32	31	50	113	610
Total	36	429	39	504	12	80	57	149	71	511	15	597	58	91	140	289	1539
08:00 AM	15	192	36	243	6	52	8	66	21	114	3	138	16	27	65	108	555
08:15 AM	3	86	9	98	3	22	5	30	22	76	4	102	7	41	42	90	320
08:30 AM	3	57	1	61	4	15	6	25	13	71	7	91	4	15	30	49	226
08:45 AM	3	71	1	75	1	18	9	28	16	72	6	94	3	14	18	35	232
Total	24	406	47	477	14	107	28	149	72	333	20	425	30	97	155	282	1333
Grand Total	60	835	86	981	26	187	85	298	143	844	35	1022	88	188	295	571	2872
Apprch %	6.1	85.1	8.8		8.7	62.8	28.5		14	82.6	3.4		15.4	32.9	51.7		
Total %	2.1	29.1	3	34.2	0.9	6.5	3	10.4	5	29.4	1.2	35.6	3.1	6.5	10.3	19.9	
Passenger Vehicles	58	815	84	957	26	180	80	286	139	821	34	994	87	180	292	559	2796
% Passenger Vehicles	96.7	97.6	97.7	97.6	100	96.3	94.1	96	97.2	97.3	97.1	97.3	98.9	95.7	99	97.9	97.4
Large 2 Axle Vehicles	2	12	2	16	0	7	4	11	4	13	1	18	1	6	3	10	55
% Large 2 Axle Vehicles	3.3	1.4	2.3	1.6	0	3.7	4.7	3.7	2.8	1.5	2.9	1.8	1.1	3.2	1	1.8	1.9
3 Axle Vehicles	0	5	0	5	0	0	1	1	0	7	0	7	0	2	0	2	15
% 3 Axle Vehicles	0	0.6	0	0.5	0	0	1.2	0.3	0	0.8	0	0.7	0	1.1	0	0.4	0.5
4+ Axle Trucks	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
% 4+ Axle Trucks	0	0.4	0	0.3	0	0	0	0	0	0.4	0	0.3	0	0	0	0	0.2

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	13	138	7	158	4	26	**17**	47	14	137	3	154	12	26	46	84	443
07:45 AM	13	160	22	195	3	28	13	44	**27**	**225**	**6**	**258**	**32**	31	50	**113**	**610**
08:00 AM	**15**	**192**	**36**	**243**	**6**	**52**	8	**66**	21	114	3	138	16	27	**65**	108	555
08:15 AM	3	86	9	98	3	22	5	30	22	76	4	102	7	**41**	42	90	320
Total Volume	44	576	74	694	16	128	43	187	84	552	16	652	67	125	203	395	1928
% App. Total	6.3	83	10.7		8.6	68.4	23		12.9	84.7	2.5		17	31.6	51.4		
PHF	.733	.750	.514	.714	.667	.615	.632	.708	.778	.613	.667	.632	.523	.762	.781	.874	.790

City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	13	138	7	158	2	16	**18**	36	17	88	3	108	12	26	46	84
+15 mins.	13	160	22	195	4	26	17	47	14	137	3	154	**32**	31	50	**113**
+30 mins.	**15**	**192**	**36**	**243**	3	28	13	44	**27**	**225**	**6**	**258**	16	27	**65**	108
+45 mins.	3	86	9	98	**6**	**52**	8	**66**	21	114	3	138	7	**41**	42	90
Total Volume	44	576	74	694	15	122	56	193	79	564	15	658	67	125	203	395
% App. Total	6.3	83	10.7		7.8	63.2	29		12	85.7	2.3		17	31.6	51.4	
PHF	.733	.750	.514	.714	.625	.587	.778	.731	.731	.627	.625	.638	.523	.762	.781	.874

Counts Unlimited, Inc.
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City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	62	3	67	3	7	8	18	12	57	3	72	3	18	18	39	196
07:15 AM	6	62	6	74	2	16	17	35	16	86	3	105	11	16	25	52	266
07:30 AM	13	138	7	158	4	25	16	45	14	134	3	151	12	26	46	84	438
07:45 AM	13	158	22	193	3	28	13	44	27	224	6	257	32	28	50	110	604
Total	34	420	38	492	12	76	54	142	69	501	15	585	58	88	139	285	1504
08:00 AM	15	188	35	238	6	51	8	65	20	113	3	136	16	27	64	107	546
08:15 AM	3	85	9	97	3	22	3	28	22	69	4	95	6	39	42	87	307
08:30 AM	3	55	1	59	4	14	6	24	12	67	7	86	4	12	29	45	214
08:45 AM	3	67	1	71	1	17	9	27	16	71	5	92	3	14	18	35	225
Total	24	395	46	465	14	104	26	144	70	320	19	409	29	92	153	274	1292
Grand Total	58	815	84	957	26	180	80	286	139	821	34	994	87	180	292	559	2796
Apprch %	6.1	85.2	8.8		9.1	62.9	28		14	82.6	3.4		15.6	32.2	52.2		
Total %	2.1	29.1	3	34.2	0.9	6.4	2.9	10.2	5	29.4	1.2	35.6	3.1	6.4	10.4	20	

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	13	138	7	158	4	25	**16**	45	14	134	3	151	12	26	46	84	438
07:45 AM	13	158	22	193	3	28	13	44	**27**	**224**	**6**	**257**	**32**	28	50	**110**	**604**
08:00 AM	**15**	**188**	**35**	**238**	**6**	**51**	8	**65**	20	113	3	136	16	27	**64**	107	546
08:15 AM	3	85	9	97	3	22	3	28	22	69	4	95	6	**39**	42	87	307
Total Volume	44	569	73	686	16	126	40	182	83	540	16	639	66	120	202	388	1895
% App. Total	6.4	82.9	10.6		8.8	69.2	22		13	84.5	2.5		17	30.9	52.1		
PHF	.733	.757	.521	.721	.667	.618	.625	.700	.769	.603	.667	.622	.516	.769	.789	.882	.784

Counts Unlimited, Inc.
PO Box 1178
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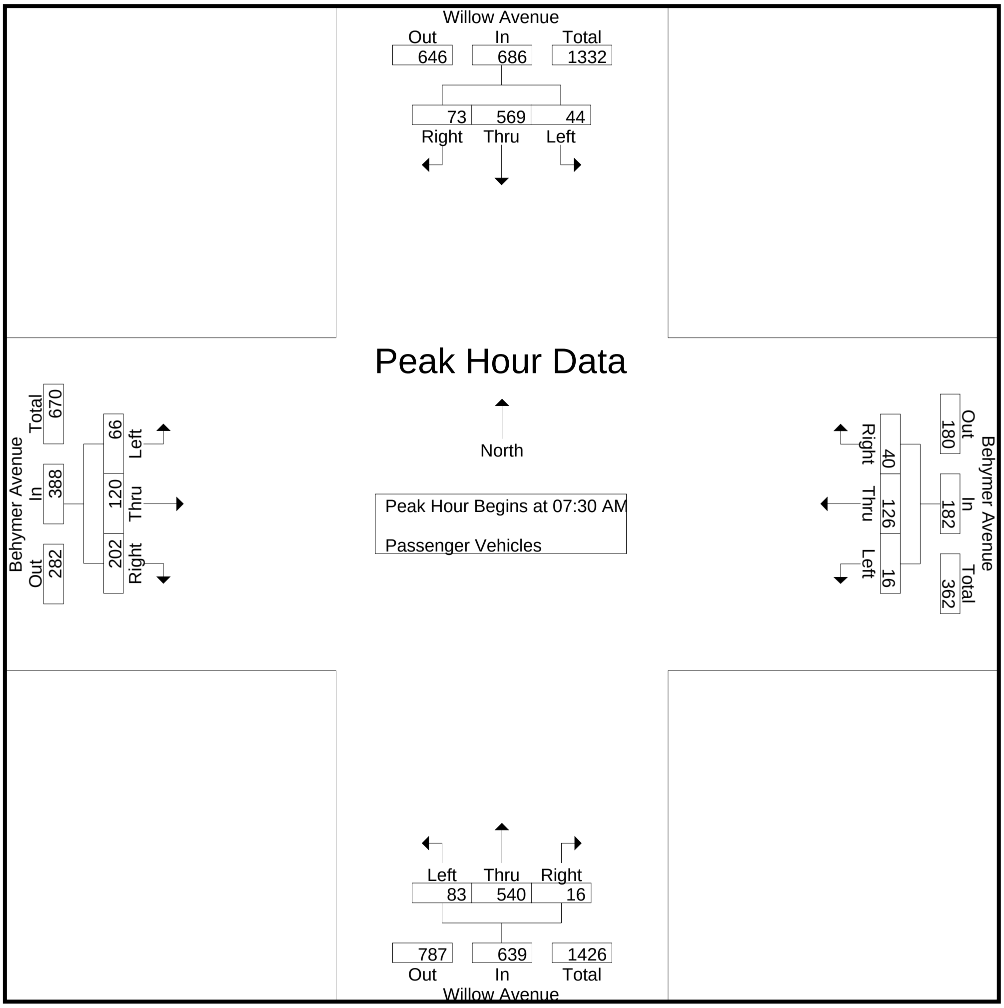
City of Clovis	File Name : 02_CVS_Willow_Beh AMC
N/S: Willow Avenue	Site Code : 00322473
E/W: Behymer Avenue	Start Date : 5/24/2022
Weather: Clear	Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	13	138	7	158	4	25	**16**	45	14	134	3	151	12	26	46	84
+15 mins.	13	158	22	193	3	28	13	44	**27**	**224**	**6**	**257**	**32**	28	50	**110**
+30 mins.	**15**	**188**	**35**	**238**	**6**	**51**	8	**65**	20	113	3	136	16	27	**64**	107
+45 mins.	3	85	9	97	3	22	3	28	22	69	4	95	6	**39**	42	87
Total Volume	44	569	73	686	16	126	40	182	83	540	16	639	66	120	202	388
% App. Total	6.4	82.9	10.6		8.8	69.2	22		13	84.5	2.5		17	30.9	52.1	
PHF	.733	.757	.521	.721	.667	.618	.625	.700	.769	.603	.667	.622	.516	.769	.789	.882

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City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh AMC
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Groups Printed- Large 2 Axle Vehicles

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	0	2	0	3	1	4	1	4	0	5	0	0	0	0	11
07:15 AM	1	4	1	6	0	0	1	1	1	2	0	3	0	0	1	1	11
07:30 AM	0	0	0	0	0	1	0	1	0	2	0	2	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3	4
Total	2	5	1	8	0	4	2	6	2	9	0	11	0	3	1	4	29
08:00 AM	0	4	1	5	0	1	0	1	1	0	0	1	0	0	1	1	8
08:15 AM	0	1	0	1	0	0	2	2	0	3	0	3	1	2	0	3	9
08:30 AM	0	0	0	0	0	1	0	1	1	1	0	2	0	1	1	2	5
08:45 AM	0	2	0	2	0	1	0	1	0	0	1	1	0	0	0	0	4
Total	0	7	1	8	0	3	2	5	2	4	1	7	1	3	2	6	26
Grand Total	2	12	2	16	0	7	4	11	4	13	1	18	1	6	3	10	55
Apprch %	12.5	75	12.5		0	63.6	36.4		22.2	72.2	5.6		10	60	30		
Total %	3.6	21.8	3.6	29.1	0	12.7	7.3	20	7.3	23.6	1.8	32.7	1.8	10.9	5.5	18.2	

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**1**	0	1	0	2	0	2	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	**3**	0	**3**	4
08:00 AM	0	**4**	**1**	**5**	0	1	0	1	**1**	0	0	1	0	0	**1**	1	8
08:15 AM	0	1	0	1	0	0	**2**	**2**	0	**3**	0	**3**	**1**	2	0	3	**9**
Total Volume	0	5	1	6	0	2	2	4	1	6	0	7	1	5	1	7	24
% App. Total	0	83.3	16.7		0	50	50		14.3	85.7	0		14.3	71.4	14.3		
PHF	.000	.313	.250	.300	.000	.500	.250	.500	.250	.500	.000	.583	.250	.417	.250	.583	.667

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City of Clovis
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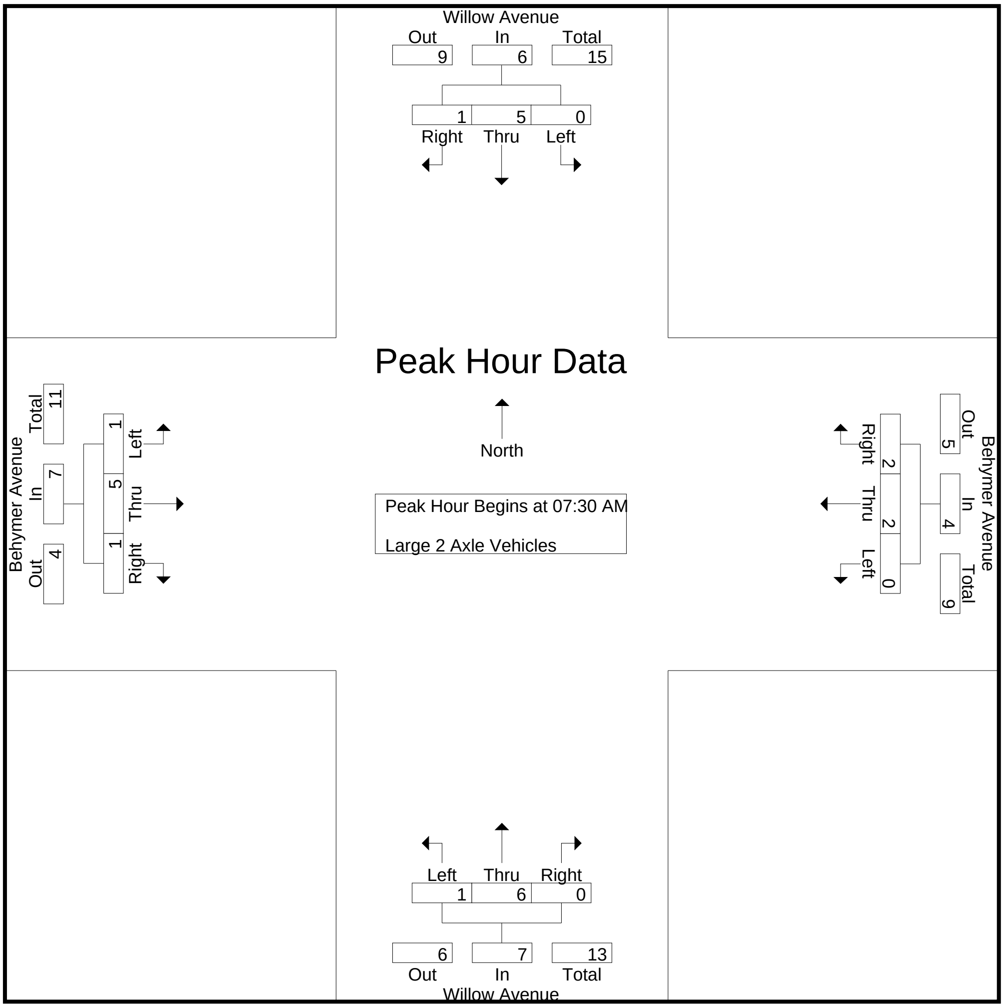

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**1**	0	1	0	2	0	2	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	**3**	0	**3**
+30 mins.	0	**4**	**1**	**5**	0	1	0	1	**1**	0	0	1	0	0	**1**	1
+45 mins.	0	1	0	1	0	0	**2**	**2**	0	**3**	0	**3**	**1**	2	0	3
Total Volume	0	5	1	6	0	2	2	4	1	6	0	7	1	5	1	7
% App. Total	0	83.3	16.7		0	50	50		14.3	85.7	0		14.3	71.4	14.3	
PHF	.000	.313	.250	.300	.000	.500	.250	.500	.250	.500	.000	.583	.250	.417	.250	.583

City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh AMC
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Groups Printed- 3 Axle Vehicles

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
08:30 AM	0	1	0	1	0	0	0	0	0	3	0	3	0	2	0	2	6
08:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	0	3	0	0	0	0	0	7	0	7	0	2	0	2	12
Grand Total	0	5	0	5	0	0	1	1	0	7	0	7	0	2	0	2	15
Apprch %	0	100	0		0	0	100		0	100	0		0	100	0		
Total %	0	33.3	0	33.3	0	0	6.7	6.7	0	46.7	0	46.7	0	13.3	0	13.3	

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	1
07:45 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	**3**	0	**3**	0	0	0	0	**3**
Total Volume	0	1	0	1	0	0	1	1	0	4	0	4	0	0	0	0	6
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.250	.250	.000	.333	.000	.333	.000	.000	.000	.000	.500

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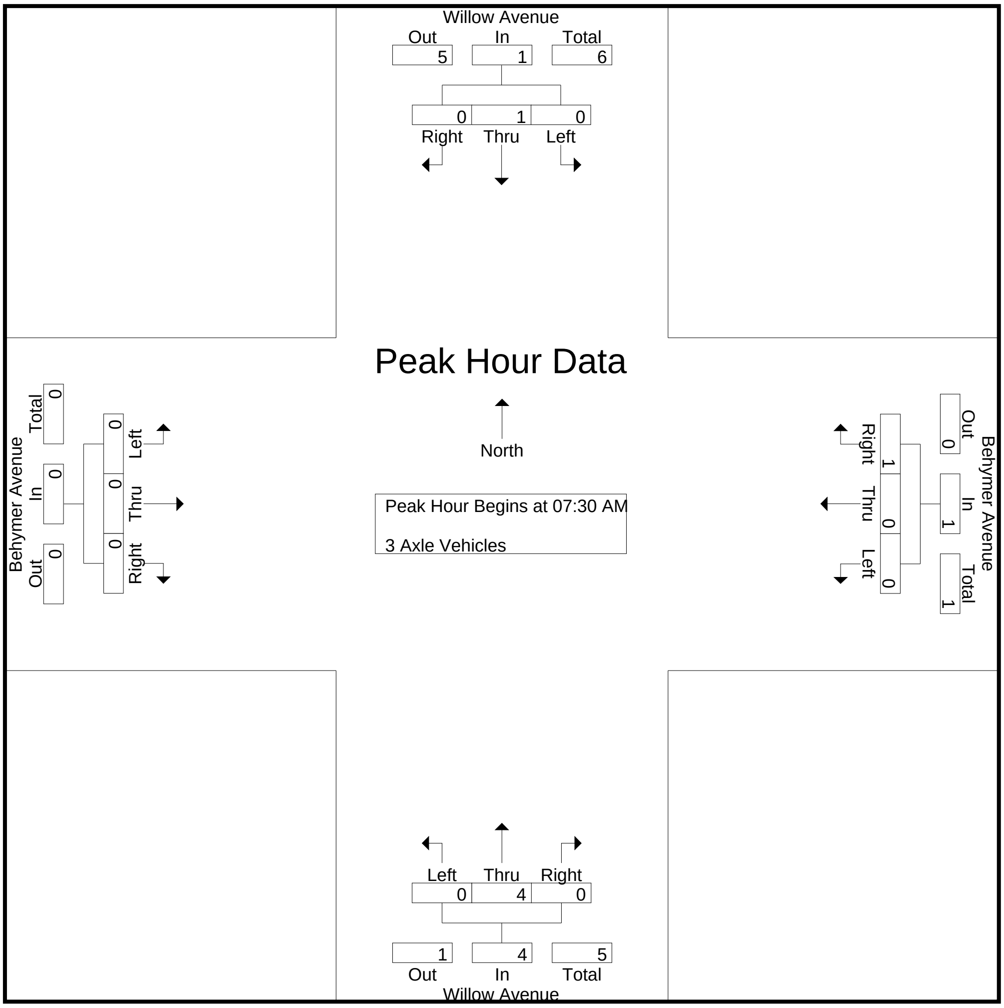

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	**3**	0	**3**	0	0	0	0
Total Volume	0	1	0	1	0	0	1	1	0	4	0	4	0	0	0	0
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.250	.250	.000	.333	.000	.333	.000	.000	.000	.000

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City of Clovis
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File Name : 02_CVS_Willow_Beh AMC
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Groups Printed- 4+ Axle Trucks

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Grand Total	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	50	0	50	0	0	0	0	0	50	0	50	0	0	0	0	

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
07:45 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.750

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City of Clovis
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File Name : 02_CVS_Willow_Beh AMC
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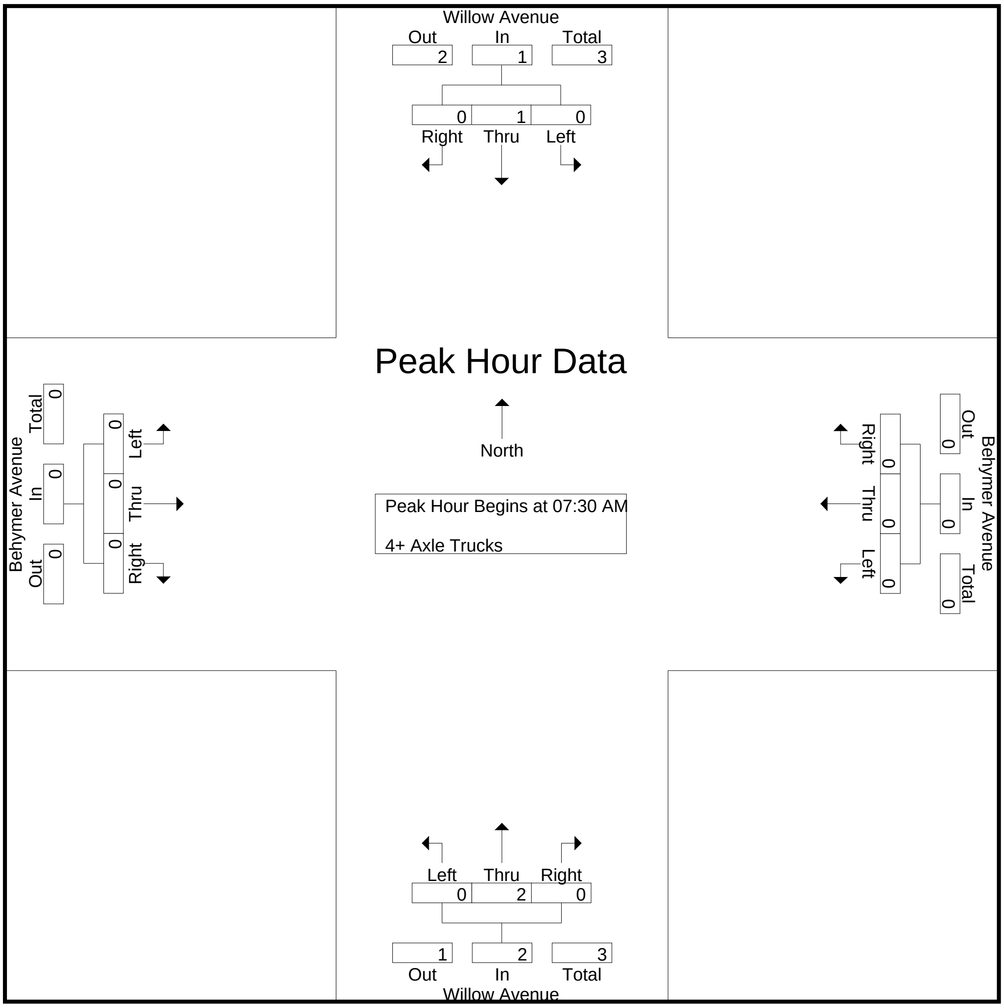

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

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City of Clovis
N/S: Willow Avenue
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Weather: Clear

File Name : 02_CVS_Willow_Beh PMC
Site Code : 00322473
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	9	93	4	106	6	20	5	31	29	95	13	137	4	18	25	47	321
04:15 PM	6	102	4	112	9	12	6	27	28	82	5	115	2	9	18	29	283
04:30 PM	4	62	2	68	4	21	6	31	28	112	4	144	1	12	19	32	275
04:45 PM	15	101	3	119	5	24	7	36	35	108	11	154	5	12	22	39	348
Total	34	358	13	405	24	77	24	125	120	397	33	550	12	51	84	147	1227
05:00 PM	8	99	2	109	2	20	9	31	30	88	4	122	2	5	19	26	288
05:15 PM	10	92	3	105	7	24	9	40	27	143	5	175	3	16	21	40	360
05:30 PM	4	64	0	68	5	20	6	31	25	98	6	129	2	11	29	42	270
05:45 PM	6	80	6	92	1	22	8	31	21	110	3	134	2	16	34	52	309
Total	28	335	11	374	15	86	32	133	103	439	18	560	9	48	103	160	1227
Grand Total	62	693	24	779	39	163	56	258	223	836	51	1110	21	99	187	307	2454
Apprch %	8	89	3.1		15.1	63.2	21.7		20.1	75.3	4.6		6.8	32.2	60.9		
Total %	2.5	28.2	1	31.7	1.6	6.6	2.3	10.5	9.1	34.1	2.1	45.2	0.9	4	7.6	12.5	
Passenger Vehicles	61	684	24	769	39	162	56	257	220	836	50	1106	21	99	185	305	2437
% Passenger Vehicles	98.4	98.7	100	98.7	100	99.4	100	99.6	98.7	100	98	99.6	100	100	98.9	99.3	99.3
Large 2 Axle Vehicles	1	8	0	9	0	0	0	0	3	0	1	4	0	0	2	2	15
% Large 2 Axle Vehicles	1.6	1.2	0	1.2	0	0	0	0	1.3	0	2	0.4	0	0	1.1	0.7	0.6
3 Axle Vehicles	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0	0	0	0	0.6	0	0.4	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	62	2	68	4	21	6	31	28	112	4	144	1	12	19	32	275
04:45 PM	**15**	**101**	**3**	**119**	5	**24**	7	36	**35**	108	**11**	154	**5**	12	**22**	39	348
05:00 PM	8	99	2	109	2	20	**9**	31	30	88	4	122	2	5	19	26	288
05:15 PM	10	92	3	105	**7**	24	9	**40**	27	**143**	5	**175**	3	**16**	21	**40**	**360**
Total Volume	37	354	10	401	18	89	31	138	120	451	24	595	11	45	81	137	1271
% App. Total	9.2	88.3	2.5		13	64.5	22.5		20.2	75.8	4		8	32.8	59.1		
PHF	.617	.876	.833	.842	.643	.927	.861	.863	.857	.788	.545	.850	.550	.703	.920	.856	.883

City of Clovis
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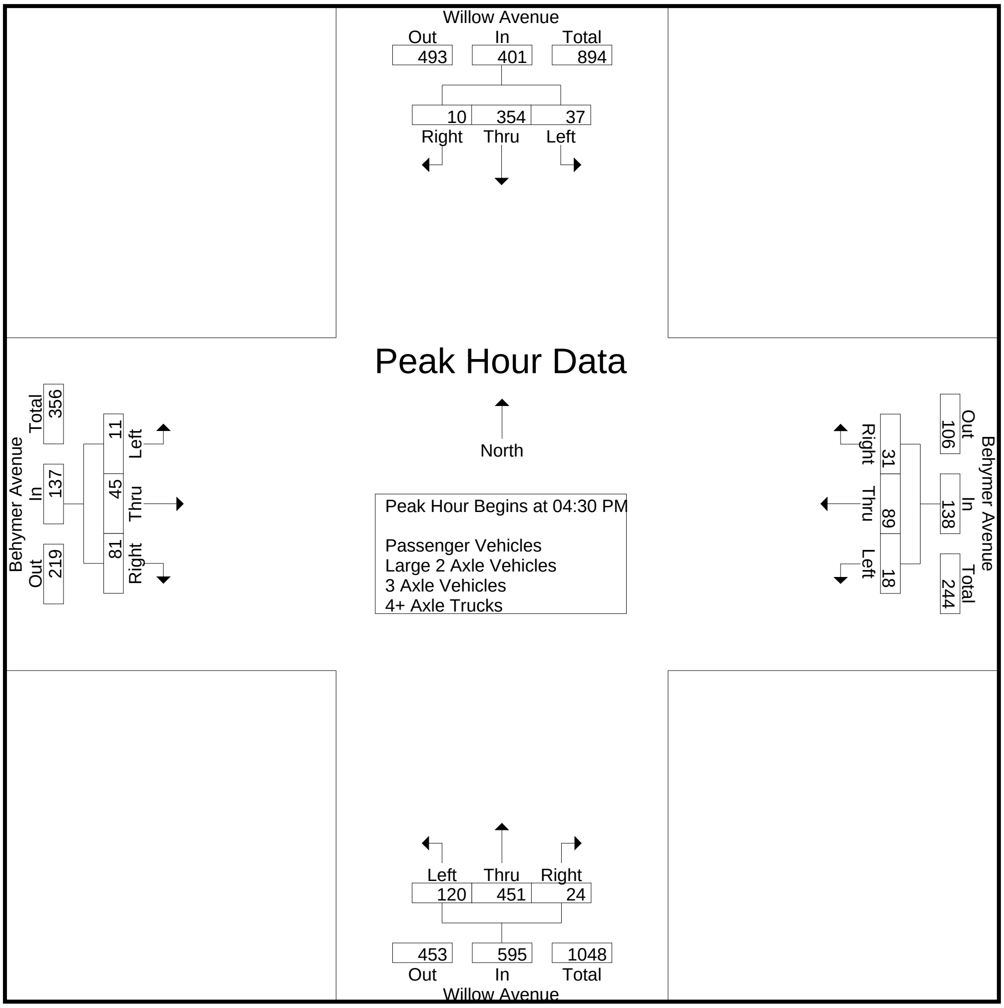

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:30 PM				04:30 PM				05:00 PM			
+0 mins.	6	**102**	**4**	112	4	21	6	31	28	112	4	144	2	5	19	26
+15 mins.	4	62	2	68	5	**24**	7	36	**35**	108	**11**	154	**3**	**16**	21	40
+30 mins.	**15**	101	3	**119**	2	20	**9**	31	30	88	4	122	2	11	29	42
+45 mins.	8	99	2	109	**7**	24	9	**40**	27	**143**	5	**175**	2	16	**34**	**52**
Total Volume	33	364	11	408	18	89	31	138	120	451	24	595	9	48	103	160
% App. Total	8.1	89.2	2.7		13	64.5	22.5		20.2	75.8	4		5.6	30	64.4	
PHF	.550	.892	.688	.857	.643	.927	.861	.863	.857	.788	.545	.850	.750	.750	.757	.769

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Groups Printed- Passenger Vehicles

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	9	91	4	104	6	20	5	31	29	95	13	137	4	18	23	45	317
04:15 PM	6	100	4	110	9	12	6	27	27	82	4	113	2	9	18	29	279
04:30 PM	4	61	2	67	4	21	6	31	27	112	4	143	1	12	19	32	273
04:45 PM	15	101	3	119	5	24	7	36	35	108	11	154	5	12	22	39	348
Total	34	353	13	400	24	77	24	125	118	397	32	547	12	51	82	145	1217
05:00 PM	8	97	2	107	2	19	9	30	30	88	4	122	2	5	19	26	285
05:15 PM	9	91	3	103	7	24	9	40	26	143	5	174	3	16	21	40	357
05:30 PM	4	64	0	68	5	20	6	31	25	98	6	129	2	11	29	42	270
05:45 PM	6	79	6	91	1	22	8	31	21	110	3	134	2	16	34	52	308
Total	27	331	11	369	15	85	32	132	102	439	18	559	9	48	103	160	1220
Grand Total	61	684	24	769	39	162	56	257	220	836	50	1106	21	99	185	305	2437
Apprch %	7.9	88.9	3.1		15.2	63	21.8		19.9	75.6	4.5		6.9	32.5	60.7		
Total %	2.5	28.1	1	31.6	1.6	6.6	2.3	10.5	9	34.3	2.1	45.4	0.9	4.1	7.6	12.5	

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	61	2	67	4	21	6	31	27	112	4	143	1	12	19	32	273
04:45 PM	**15**	**101**	**3**	**119**	5	**24**	7	36	**35**	108	**11**	154	**5**	12	**22**	39	348
05:00 PM	8	97	2	107	2	19	**9**	30	30	88	4	122	2	5	19	26	285
05:15 PM	9	91	3	103	**7**	24	9	**40**	26	**143**	5	**174**	3	**16**	21	**40**	**357**
Total Volume	36	350	10	396	18	88	31	137	118	451	24	593	11	45	81	137	1263
% App. Total	9.1	88.4	2.5		13.1	64.2	22.6		19.9	76.1	4		8	32.8	59.1		
PHF	.600	.866	.833	.832	.643	.917	.861	.856	.843	.788	.545	.852	.550	.703	.920	.856	.884

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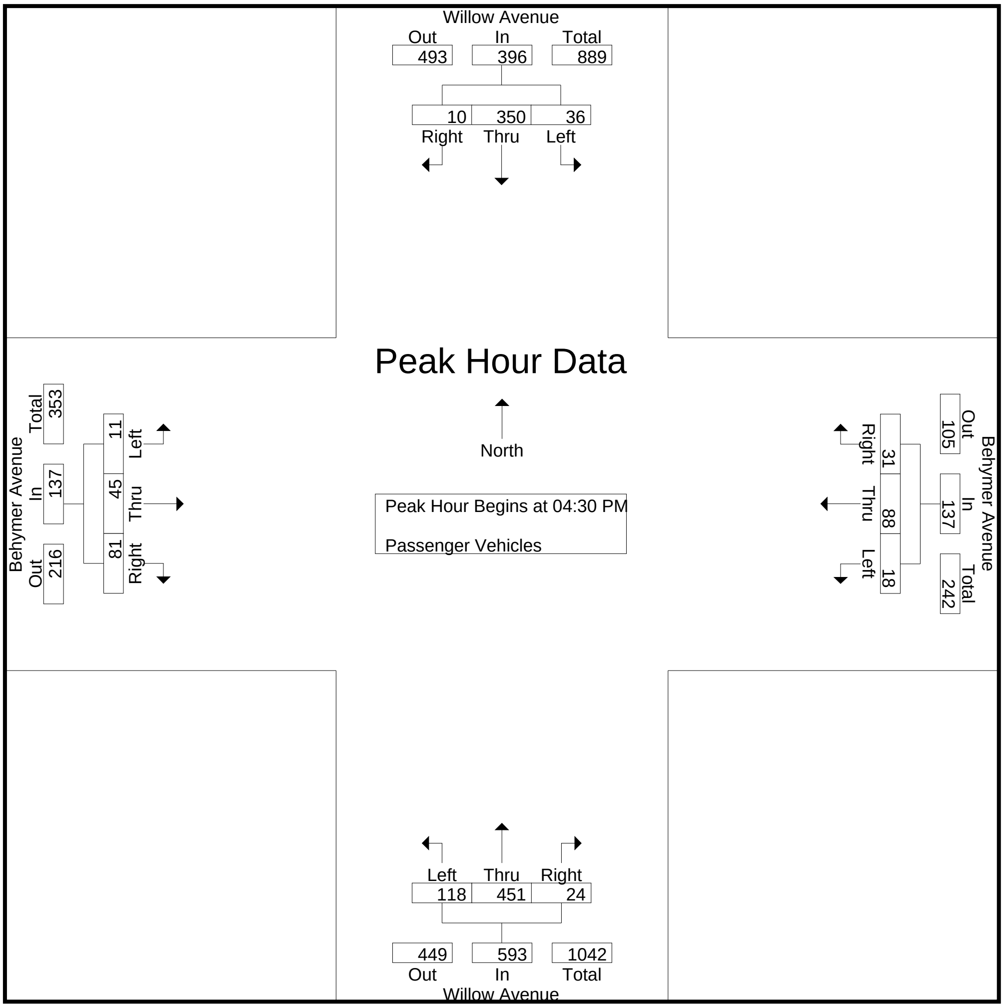
City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	4	61	2	67	4	21	6	31	27	112	4	143	1	12	19	32
+15 mins.	**15**	**101**	**3**	**119**	5	**24**	7	36	**35**	108	**11**	154	**5**	12	**22**	39
+30 mins.	8	97	2	107	2	19	**9**	30	30	88	4	122	2	5	19	26
+45 mins.	9	91	3	103	**7**	24	9	**40**	26	**143**	5	**174**	3	**16**	21	**40**
Total Volume	36	350	10	396	18	88	31	137	118	451	24	593	11	45	81	137
% App. Total	9.1	88.4	2.5		13.1	64.2	22.6		19.9	76.1	4		8	32.8	59.1	
PHF	.600	.866	.833	.832	.643	.917	.861	.856	.843	.788	.545	.852	.550	.703	.920	.856

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City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	3
04:15 PM	0	2	0	2	0	0	0	0	1	0	1	2	0	0	0	0	4
04:30 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	4	0	0	0	0	2	0	1	3	0	0	2	2	9
05:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	1	1	0	2	0	0	0	0	1	0	0	1	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	4	0	5	0	0	0	0	1	0	0	1	0	0	0	0	6
Grand Total	1	8	0	9	0	0	0	0	3	0	1	4	0	0	2	2	15
Apprch %	11.1	88.9	0		0	0	0		75	0	25		0	0	100		
Total %	6.7	53.3	0	60	0	0	0	0	20	0	6.7	26.7	0	0	13.3	13.3	

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	1	0	1	0	0	0	0	**1**	0	0	**1**	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	**1**	1	0	2	0	0	0	0	1	0	0	1	0	0	0	0	**3**
Total Volume	1	4	0	5	0	0	0	0	2	0	0	2	0	0	0	0	7
% App. Total	20	80	0		0	0	0		100	0	0		0	0	0		
PHF	.250	.500	.000	.625	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.583

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City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh PMC
Site Code : 00322473
Start Date : 5/24/2022
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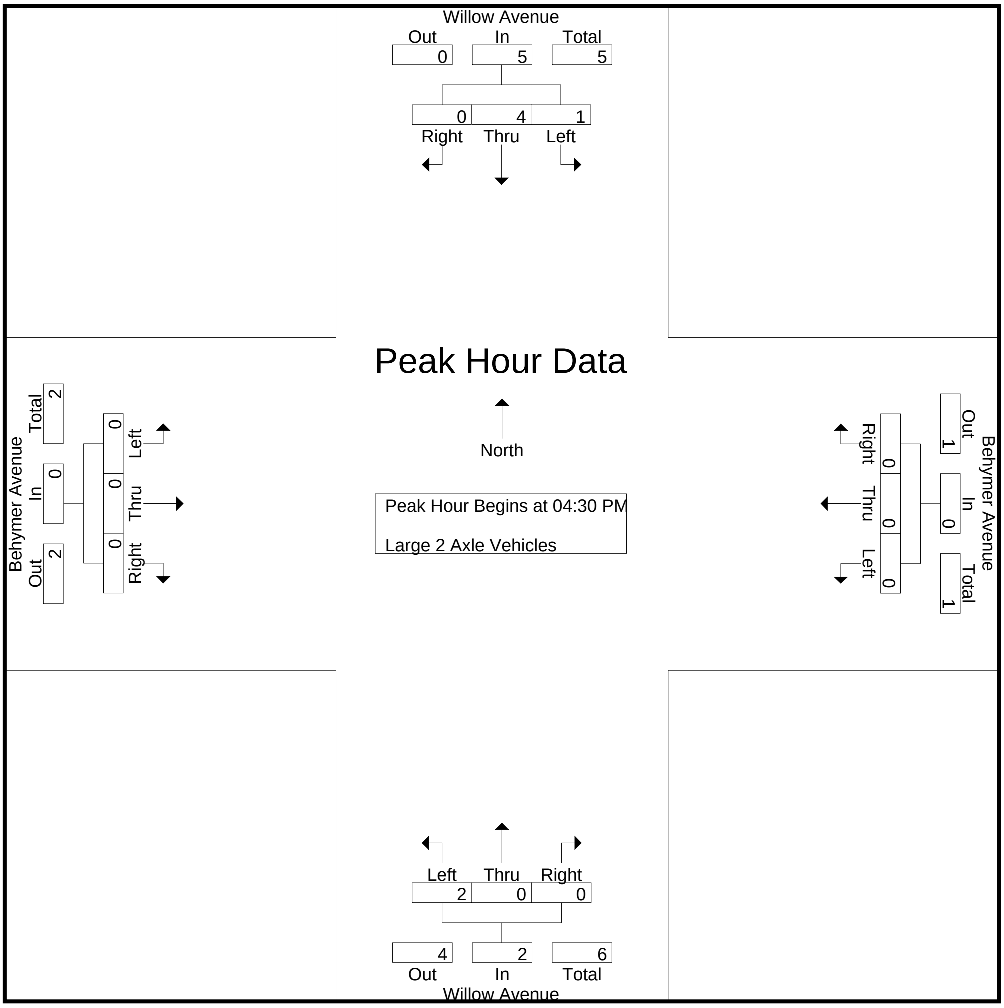

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	1	0	1	0	0	0	0	**1**	0	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	**1**	1	0	2	0	0	0	0	1	0	0	1	0	0	0	0
Total Volume	1	4	0	5	0	0	0	0	2	0	0	2	0	0	0	0
% App. Total	20	80	0		0	0	0		100	0	0		0	0	0	
PHF	.250	.500	.000	.625	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000

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City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

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City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh PMC
Site Code : 00322473
Start Date : 5/24/2022
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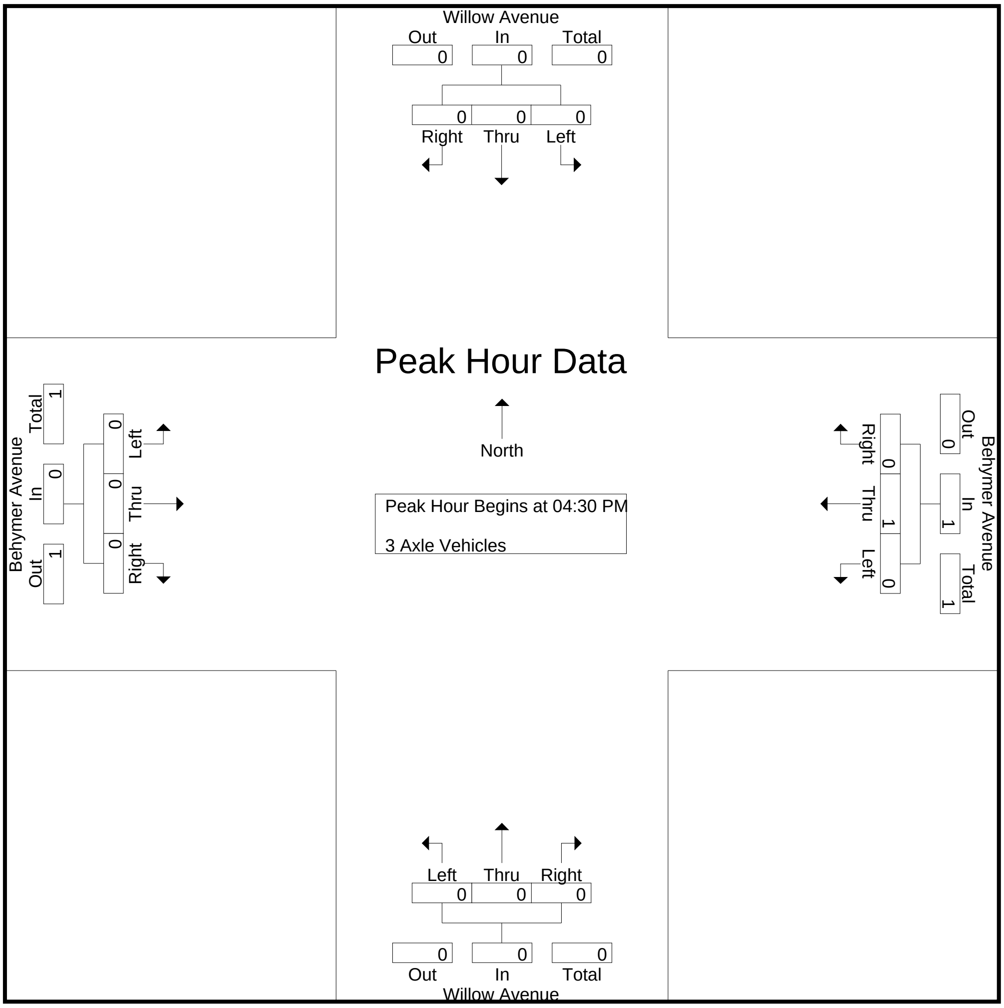

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Willow Avenue Southbound				Behymer Avenue Westbound				Willow Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Willow Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Willow_Beh PMC
Site Code : 00322473
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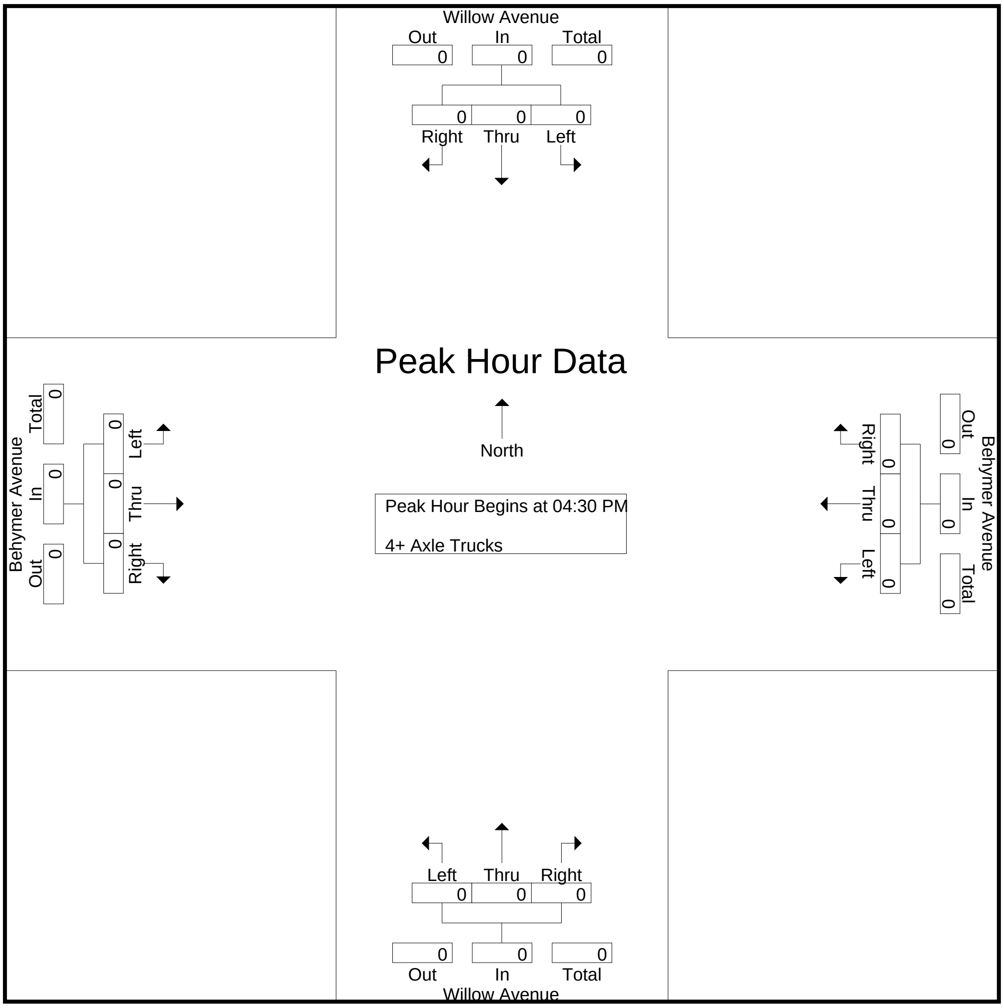

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Willow Avenue
E/W: Behymer Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Willow Avenue	East Leg Behymer Avenue	South Leg Willow Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	2	2
7:15 AM	0	0	0	1	1
7:30 AM	0	0	0	1	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	4	4

	North Leg Willow Avenue	East Leg Behymer Avenue	South Leg Willow Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	1

Location: Clovis
N/S: Willow Avenue
E/W: Behymer Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Willow Avenue			Westbound Behymer Avenue			Northbound Willow Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	2	0	0	0	0	0	6	0	1	0	0	9
7:30 AM	0	0	1	0	0	0	0	6	0	0	0	0	7
7:45 AM	0	2	0	0	0	0	0	5	0	0	0	0	7
8:00 AM	0	4	0	0	0	0	0	4	0	0	0	0	8
8:15 AM	0	2	1	0	0	1	3	2	0	0	0	0	9
8:30 AM	0	4	0	0	0	0	0	1	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	1	3	0	0	0	1	5
TOTAL VOLUMES:	0	16	2	0	0	1	4	27	0	1	0	1	52

	Southbound Willow Avenue			Westbound Behymer Avenue			Northbound Willow Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	1	0	0	0	0	0	2	0	0	0	0	3
4:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
5:45 PM	0	3	0	0	0	0	0	1	0	0	0	0	4
TOTAL VOLUMES:	0	9	1	0	0	0	0	5	0	0	0	0	15

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City of Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	22	103	6	131	8	70	15	93	21	69	9	99	2	39	20	61	384
07:15 AM	27	109	6	142	6	62	21	89	34	101	16	151	6	67	27	100	482
07:30 AM	42	207	10	259	10	70	22	102	31	175	16	222	1	70	38	109	692
07:45 AM	45	176	14	235	17	85	29	131	42	193	7	242	15	74	43	132	740
Total	136	595	36	767	41	287	87	415	128	538	48	714	24	250	128	402	2298
08:00 AM	43	196	14	253	8	70	24	102	50	113	18	181	7	50	24	81	617
08:15 AM	31	161	12	204	9	73	23	105	37	106	8	151	6	49	40	95	555
08:30 AM	23	95	9	127	12	56	19	87	30	91	8	129	2	54	20	76	419
08:45 AM	26	98	7	131	8	77	22	107	28	94	2	124	10	45	25	80	442
Total	123	550	42	715	37	276	88	401	145	404	36	585	25	198	109	332	2033
Grand Total	259	1145	78	1482	78	563	175	816	273	942	84	1299	49	448	237	734	4331
Apprch %	17.5	77.3	5.3		9.6	69	21.4		21	72.5	6.5		6.7	61	32.3		
Total %	6	26.4	1.8	34.2	1.8	13	4	18.8	6.3	21.8	1.9	30	1.1	10.3	5.5	16.9	
Passenger Vehicles	252	1127	75	1454	78	557	169	804	264	913	82	1259	47	439	232	718	4235
% Passenger Vehicles	97.3	98.4	96.2	98.1	100	98.9	96.6	98.5	96.7	96.9	97.6	96.9	95.9	98	97.9	97.8	97.8
Large 2 Axle Vehicles	5	13	1	19	0	4	6	10	9	17	2	28	2	8	4	14	71
% Large 2 Axle Vehicles	1.9	1.1	1.3	1.3	0	0.7	3.4	1.2	3.3	1.8	2.4	2.2	4.1	1.8	1.7	1.9	1.6
3 Axle Vehicles	2	1	1	4	0	1	0	1	0	6	0	6	0	1	0	1	12
% 3 Axle Vehicles	0.8	0.1	1.3	0.3	0	0.2	0	0.1	0	0.6	0	0.5	0	0.2	0	0.1	0.3
4+ Axle Trucks	0	4	1	5	0	1	0	1	0	6	0	6	0	0	1	1	13
% 4+ Axle Trucks	0	0.3	1.3	0.3	0	0.2	0	0.1	0	0.6	0	0.5	0	0	0.4	0.1	0.3

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	42	**207**	10	**259**	10	70	22	102	31	175	16	222	1	70	38	109	692
07:45 AM	**45**	176	**14**	235	**17**	**85**	**29**	**131**	42	**193**	7	**242**	**15**	**74**	**43**	**132**	**740**
08:00 AM	43	196	14	253	8	70	24	102	**50**	113	**18**	181	7	50	24	81	617
08:15 AM	31	161	12	204	9	73	23	105	37	106	8	151	6	49	40	95	555
Total Volume	161	740	50	951	44	298	98	440	160	587	49	796	29	243	145	417	2604
% App. Total	16.9	77.8	5.3		10	67.7	22.3		20.1	73.7	6.2		7	58.3	34.8		
PHF	.894	.894	.893	.918	.647	.876	.845	.840	.800	.760	.681	.822	.483	.821	.843	.790	.880

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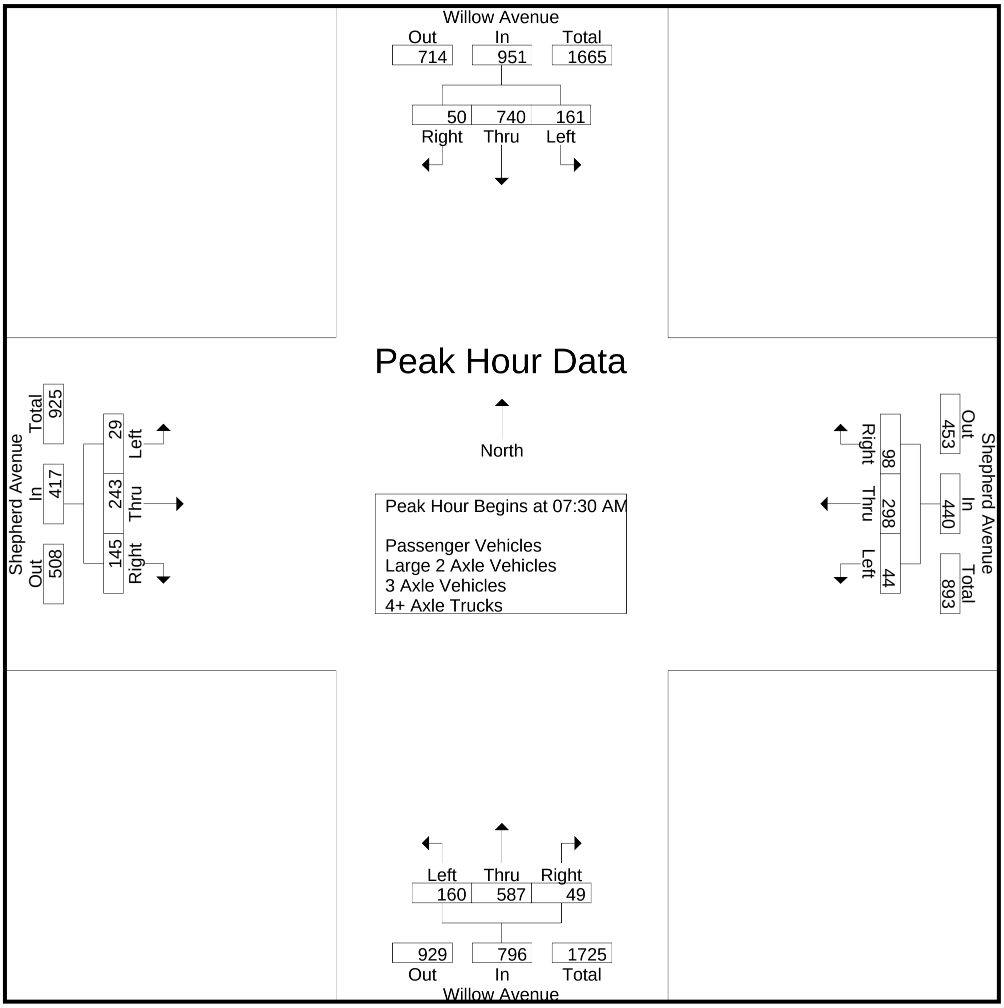
City of Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:15 AM				07:15 AM			
+0 mins.	42	**207**	10	**259**	10	70	22	102	34	101	16	151	6	67	27	100
+15 mins.	**45**	176	**14**	235	**17**	**85**	**29**	**131**	31	175	16	222	1	70	38	109
+30 mins.	43	196	14	253	8	70	24	102	42	**193**	7	**242**	**15**	**74**	**43**	**132**
+45 mins.	31	161	12	204	9	73	23	105	**50**	113	**18**	181	7	50	24	81
Total Volume	161	740	50	951	44	298	98	440	157	582	57	796	29	261	132	422
% App. Total	16.9	77.8	5.3		10	67.7	22.3		19.7	73.1	7.2		6.9	61.8	31.3	
PHF	.894	.894	.893	.918	.647	.876	.845	.840	.785	.754	.792	.822	.483	.882	.767	.799

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City of Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Passenger Vehicles

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	21	102	6	129	8	70	15	93	21	64	9	94	2	39	19	60	376
07:15 AM	27	104	6	137	6	61	21	88	32	98	16	146	6	66	26	98	469
07:30 AM	42	204	9	255	10	70	22	102	29	173	16	218	1	66	38	105	680
07:45 AM	44	175	14	233	17	84	29	130	42	191	5	238	15	74	42	131	732
Total	134	585	35	754	41	285	87	413	124	526	46	696	24	245	125	394	2257
08:00 AM	42	192	13	247	8	68	23	99	48	108	18	174	7	49	24	80	600
08:15 AM	30	161	12	203	9	71	18	98	35	102	8	145	5	48	39	92	538
08:30 AM	21	94	9	124	12	56	19	87	29	85	8	122	2	52	19	73	406
08:45 AM	25	95	6	126	8	77	22	107	28	92	2	122	9	45	25	79	434
Total	118	542	40	700	37	272	82	391	140	387	36	563	23	194	107	324	1978
Grand Total	252	1127	75	1454	78	557	169	804	264	913	82	1259	47	439	232	718	4235
Apprch %	17.3	77.5	5.2		9.7	69.3	21		21	72.5	6.5		6.5	61.1	32.3		
Total %	6	26.6	1.8	34.3	1.8	13.2	4	19	6.2	21.6	1.9	29.7	1.1	10.4	5.5	17	

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	42	**204**	9	**255**	10	70	22	102	29	173	16	218	1	66	38	105	680
07:45 AM	**44**	175	**14**	233	**17**	**84**	**29**	**130**	42	**191**	5	**238**	**15**	**74**	**42**	**131**	**732**
08:00 AM	42	192	13	247	8	68	23	99	**48**	108	**18**	174	7	49	24	80	600
08:15 AM	30	161	12	203	9	71	18	98	35	102	8	145	5	48	39	92	538
Total Volume	158	732	48	938	44	293	92	429	154	574	47	775	28	237	143	408	2550
% App. Total	16.8	78	5.1		10.3	68.3	21.4		19.9	74.1	6.1		6.9	58.1	35		
PHF	.898	.897	.857	.920	.647	.872	.793	.825	.802	.751	.653	.814	.467	.801	.851	.779	.871

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N/S: Willow Avenue
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Weather: Clear

File Name : 03_CVS_Willow_Shep AMC
Site Code : 00322473
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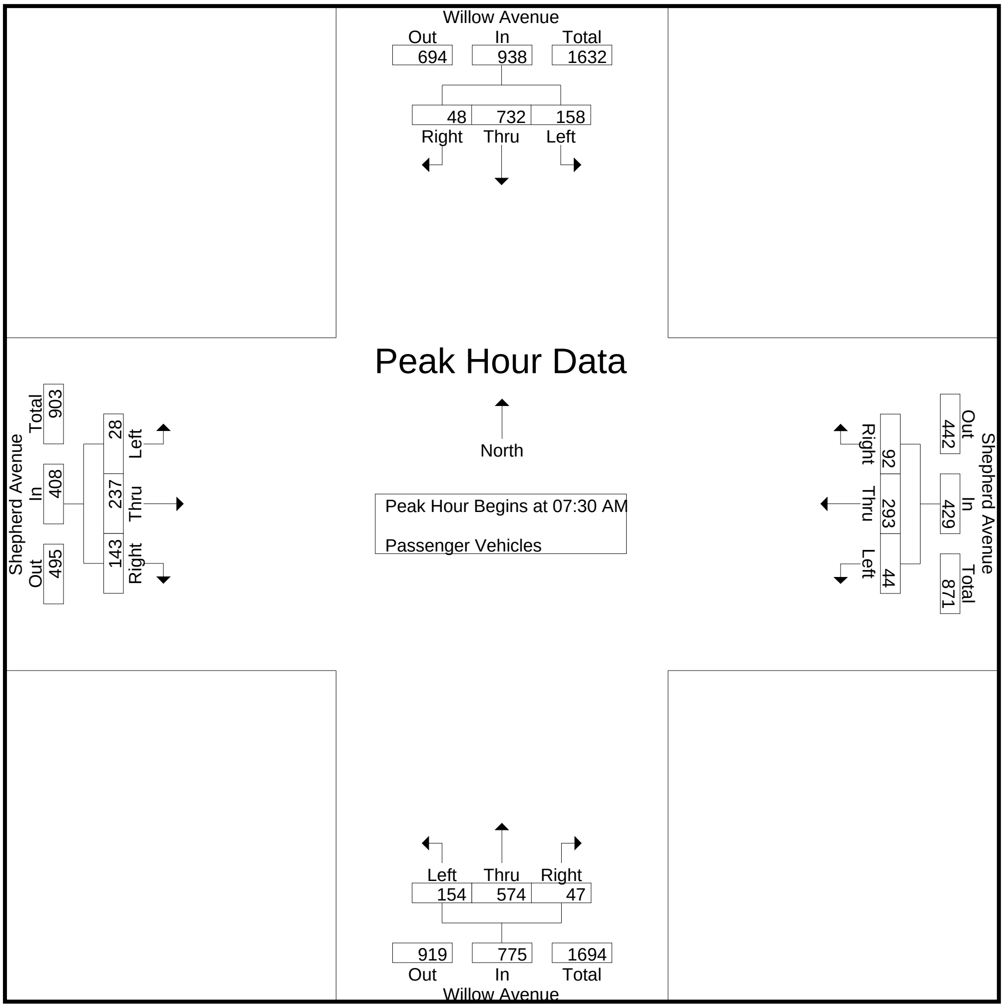

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	42	**204**	9	**255**	10	70	22	102	29	173	16	218	1	66	38	105
+15 mins.	**44**	175	**14**	233	**17**	**84**	**29**	**130**	42	**191**	5	**238**	**15**	**74**	**42**	**131**
+30 mins.	42	192	13	247	8	68	23	99	**48**	108	**18**	174	7	49	24	80
+45 mins.	30	161	12	203	9	71	18	98	35	102	8	145	5	48	39	92
Total Volume	158	732	48	938	44	293	92	429	154	574	47	775	28	237	143	408
% App. Total	16.8	78	5.1		10.3	68.3	21.4		19.9	74.1	6.1		6.9	58.1	35	
PHF	.898	.897	.857	.920	.647	.872	.793	.825	.802	.751	.653	.814	.467	.801	.851	.779

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E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	0	0	0	0	0	4	0	4	0	0	1	1	6
07:15 AM	0	4	0	4	0	1	0	1	2	3	0	5	0	1	1	2	12
07:30 AM	0	3	1	4	0	0	0	0	2	1	0	3	0	4	0	4	11
07:45 AM	0	1	0	1	0	1	0	1	0	2	2	4	0	0	1	1	7
Total	1	8	1	10	0	2	0	2	4	10	2	16	0	5	3	8	36
08:00 AM	1	3	0	4	0	0	1	1	2	2	0	4	0	1	0	1	10
08:15 AM	1	0	0	1	0	2	5	7	2	2	0	4	1	1	1	3	15
08:30 AM	1	0	0	1	0	0	0	0	1	3	0	4	0	1	0	1	6
08:45 AM	1	2	0	3	0	0	0	0	0	0	0	0	1	0	0	1	4
Total	4	5	0	9	0	2	6	8	5	7	0	12	2	3	1	6	35
Grand Total	5	13	1	19	0	4	6	10	9	17	2	28	2	8	4	14	71
Apprch %	26.3	68.4	5.3		0	40	60		32.1	60.7	7.1		14.3	57.1	28.6		
Total %	7	18.3	1.4	26.8	0	5.6	8.5	14.1	12.7	23.9	2.8	39.4	2.8	11.3	5.6	19.7	

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**3**	**1**	**4**	0	0	0	0	**2**	1	0	3	0	**4**	0	**4**	11
07:45 AM	0	1	0	1	0	1	0	1	0	**2**	**2**	**4**	0	0	**1**	1	7
08:00 AM	**1**	3	0	4	0	0	1	1	2	2	0	4	0	1	0	1	10
08:15 AM	1	0	0	1	0	**2**	**5**	**7**	2	2	0	4	**1**	1	1	3	**15**
Total Volume	2	7	1	10	0	3	6	9	6	7	2	15	1	6	2	9	43
% App. Total	20	70	10		0	33.3	66.7		40	46.7	13.3		11.1	66.7	22.2		
PHF	.500	.583	.250	.625	.000	.375	.300	.321	.750	.875	.250	.938	.250	.375	.500	.563	.717

City of Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep AMC
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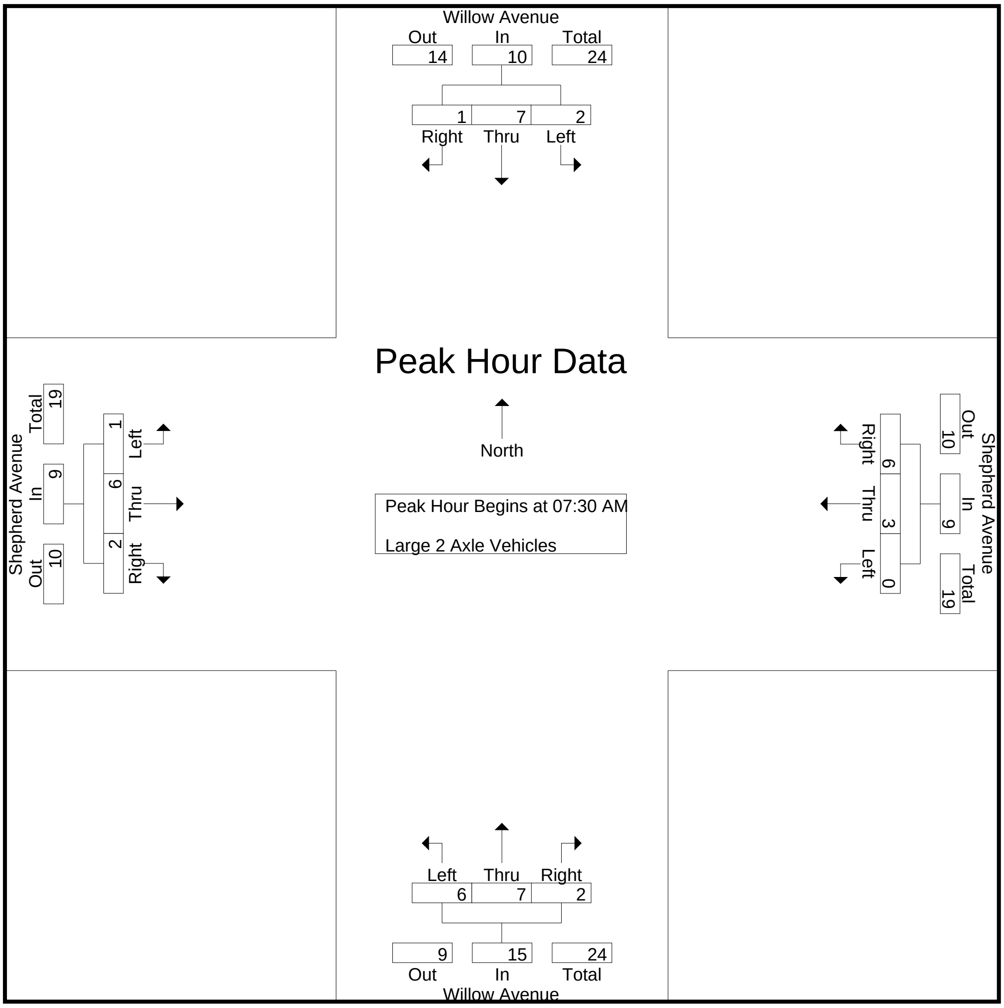

Peak Hour Data

Peak Hour Begins at 07:30 AM

Large 2 Axle Vehicles

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**3**	**1**	**4**	0	0	0	0	**2**	1	0	3	0	**4**	0	**4**
+15 mins.	0	1	0	1	0	1	0	1	0	**2**	**2**	**4**	0	0	**1**	1
+30 mins.	**1**	3	0	4	0	0	1	1	2	2	0	4	0	1	0	1
+45 mins.	1	0	0	1	0	**2**	**5**	**7**	2	2	0	4	**1**	1	1	3
Total Volume	2	7	1	10	0	3	6	9	6	7	2	15	1	6	2	9
% App. Total	20	70	10		0	33.3	66.7		40	46.7	13.3		11.1	66.7	22.2	
PHF	.500	.583	.250	.625	.000	.375	.300	.321	.750	.875	.250	.938	.250	.375	.500	.563

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Weather: Clear

File Name : 03_CVS_Willow_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	1	0	1	0	2	0	2	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	1	0	0	1	0	0	0	0	0	3	0	3	0	1	0	1	5
08:45 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	1	1	3	0	1	0	1	0	6	0	6	0	1	0	1	11
Grand Total	2	1	1	4	0	1	0	1	0	6	0	6	0	1	0	1	12
Apprch %	50	25	25		0	100	0		0	100	0		0	100	0		
Total %	16.7	8.3	8.3	33.3	0	8.3	0	8.3	0	50	0	50	0	8.3	0	8.3	

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	**1**	0	**1**	0	**2**	0	**2**	0	0	0	0	**3**
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	1	0	0	1	0	1	0	1	0	3	0	3	0	0	0	0	5
% App. Total	100	0	0		0	100	0		0	100	0		0	0	0		
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.375	.000	.375	.000	.000	.000	.000	.417

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City of Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep AMC
Site Code : 00322473
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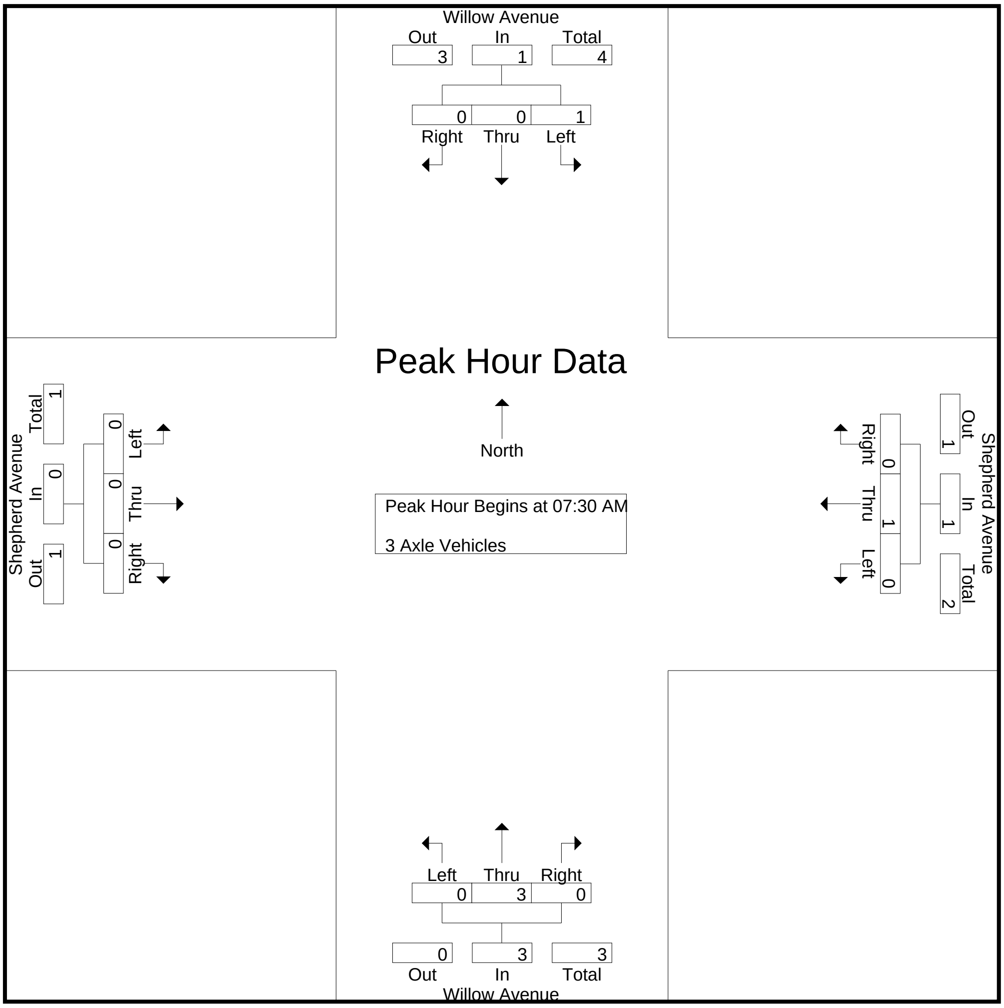

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	**1**	0	**1**	0	**2**	0	**2**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	1	0	0	1	0	1	0	1	0	3	0	3	0	0	0	0
% App. Total	100	0	0		0	100	0		0	100	0		0	0	0	
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.375	.000	.375	.000	.000	.000	.000

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City of Clovis
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File Name : 03_CVS_Willow_Shep AMC
Site Code : 00322473
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Groups Printed- 4+ Axle Trucks

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:00 AM	0	1	1	2	0	1	0	1	0	1	0	1	0	0	0	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	2	1	3	0	1	0	1	0	4	0	4	0	0	1	1	9
Grand Total	0	4	1	5	0	1	0	1	0	6	0	6	0	0	1	1	13
Apprch %	0	80	20		0	100	0		0	100	0		0	0	100		
Total %	0	30.8	7.7	38.5	0	7.7	0	7.7	0	46.2	0	46.2	0	0	7.7	7.7	

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	**1**	**1**	**2**	0	**1**	0	**1**	0	1	0	1	0	0	0	0	**4**
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	1	1	2	0	1	0	1	0	3	0	3	0	0	0	0	6
% App. Total	0	50	50		0	100	0		0	100	0		0	0	0		
PHF	.000	.250	.250	.250	.000	.250	.000	.250	.000	.750	.000	.750	.000	.000	.000	.000	.375

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City of Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
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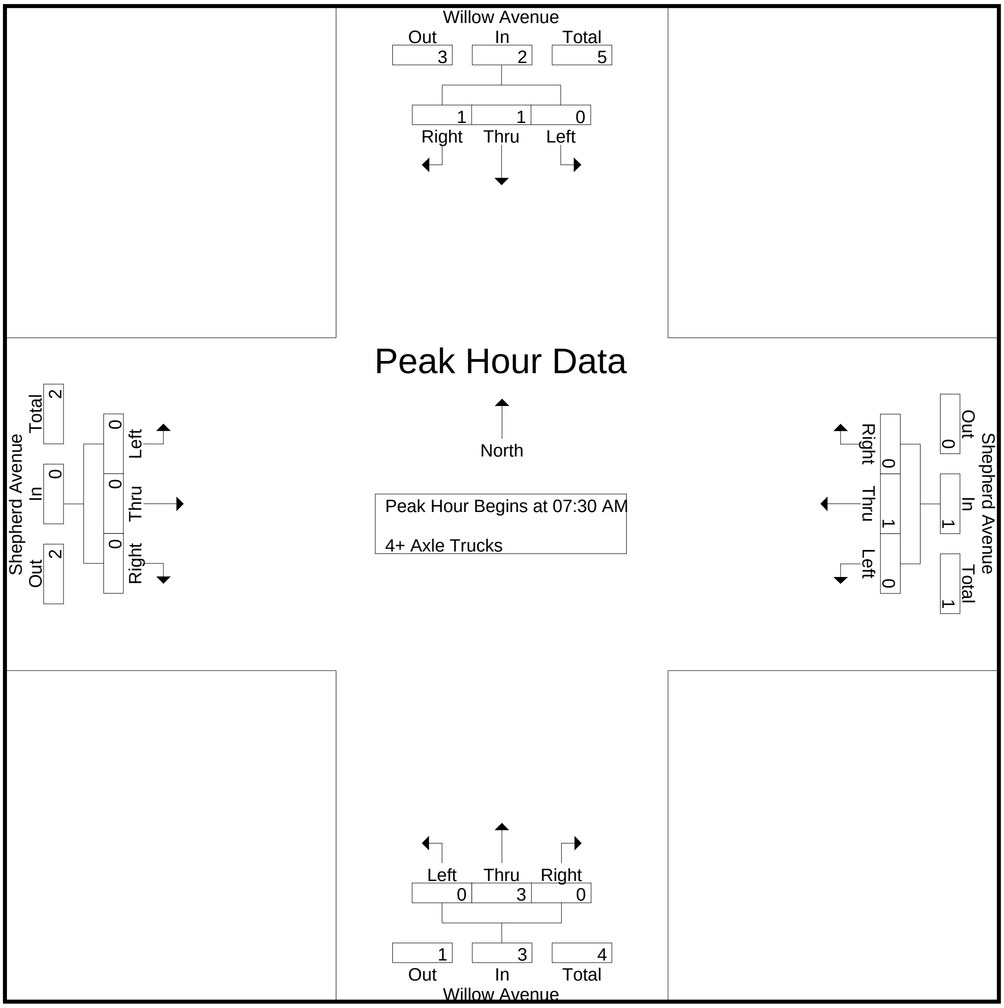

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	**1**	**2**	0	**1**	0	**1**	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	1	1	2	0	1	0	1	0	3	0	3	0	0	0	0
% App. Total	0	50	50		0	100	0		0	100	0		0	0	0	
PHF	.000	.250	.250	.250	.000	.250	.000	.250	.000	.750	.000	.750	.000	.000	.000	.000

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	26	112	10	148	7	72	39	118	47	121	14	182	7	70	19	96	544
04:15 PM	32	130	16	178	10	65	31	106	35	140	10	185	6	64	24	94	563
04:30 PM	34	94	6	134	13	63	35	111	59	177	18	254	7	82	30	119	618
04:45 PM	29	119	8	156	8	83	34	125	59	159	13	231	11	83	33	127	639
Total	121	455	40	616	38	283	139	460	200	597	55	852	31	299	106	436	2364
05:00 PM	37	89	11	137	7	63	37	107	53	140	25	218	10	77	22	109	571
05:15 PM	29	129	8	166	12	79	44	135	53	193	21	267	8	80	25	113	681
05:30 PM	32	127	4	163	7	90	30	127	78	165	30	273	7	83	33	123	686
05:45 PM	32	111	7	150	20	80	27	127	41	162	22	225	13	73	37	123	625
Total	130	456	30	616	46	312	138	496	225	660	98	983	38	313	117	468	2563
Grand Total	251	911	70	1232	84	595	277	956	425	1257	153	1835	69	612	223	904	4927
Apprch %	20.4	73.9	5.7		8.8	62.2	29		23.2	68.5	8.3		7.6	67.7	24.7		
Total %	5.1	18.5	1.4	25	1.7	12.1	5.6	19.4	8.6	25.5	3.1	37.2	1.4	12.4	4.5	18.3	
Passenger Vehicles	249	899	70	1218	84	590	275	949	424	1251	150	1825	68	609	222	899	4891
% Passenger Vehicles	99.2	98.7	100	98.9	100	99.2	99.3	99.3	99.8	99.5	98	99.5	98.6	99.5	99.6	99.4	99.3
Large 2 Axle Vehicles	2	11	0	13	0	5	2	7	1	6	3	10	1	3	1	5	35
% Large 2 Axle Vehicles	0.8	1.2	0	1.1	0	0.8	0.7	0.7	0.2	0.5	2	0.5	1.4	0.5	0.4	0.6	0.7
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	29	119	8	156	8	83	34	125	59	159	13	231	**11**	**83**	**33**	**127**	639
05:00 PM	**37**	89	**11**	137	7	63	37	107	53	140	25	218	10	77	22	109	571
05:15 PM	29	**129**	8	**166**	**12**	79	**44**	**135**	53	**193**	21	267	8	80	25	113	681
05:30 PM	32	127	4	163	7	**90**	30	127	**78**	165	**30**	**273**	7	83	33	123	**686**
Total Volume	127	464	31	622	34	315	145	494	243	657	89	989	36	323	113	472	2577
% App. Total	20.4	74.6	5		6.9	63.8	29.4		24.6	66.4	9		7.6	68.4	23.9		
PHF	.858	.899	.705	.937	.708	.875	.824	.915	.779	.851	.742	.906	.818	.973	.856	.929	.939

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File Name : 03_CVS_Willow_Shep PMC
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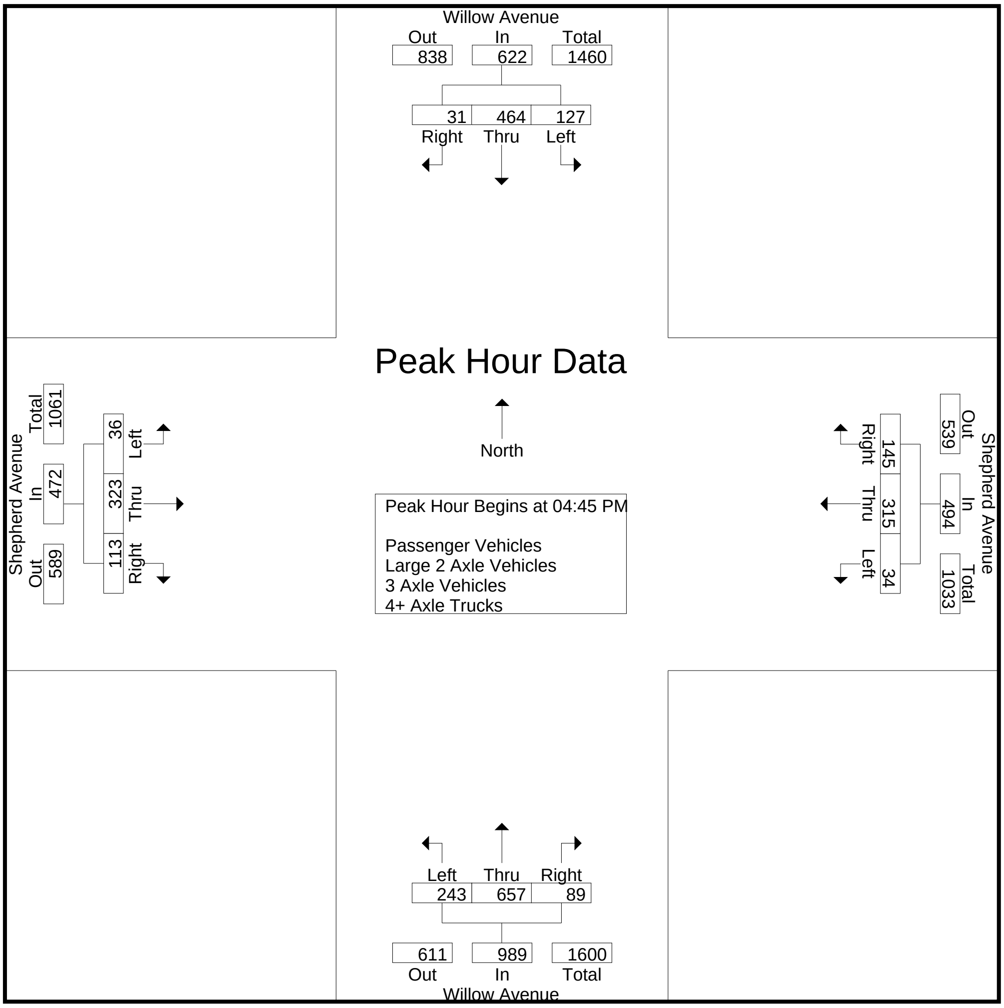

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				04:45 PM				04:45 PM			
+0 mins.	29	119	8	156	7	63	37	107	59	159	13	231	**11**	**83**	**33**	**127**
+15 mins.	**37**	89	**11**	137	12	79	**44**	**135**	53	140	25	218	10	77	22	109
+30 mins.	29	**129**	8	**166**	7	**90**	30	127	53	**193**	21	267	8	80	25	113
+45 mins.	32	127	4	163	**20**	80	27	127	**78**	165	**30**	**273**	7	83	33	123
Total Volume	127	464	31	622	46	312	138	496	243	657	89	989	36	323	113	472
% App. Total	20.4	74.6	5		9.3	62.9	27.8		24.6	66.4	9		7.6	68.4	23.9	
PHF	.858	.899	.705	.937	.575	.867	.784	.919	.779	.851	.742	.906	.818	.973	.856	.929

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City of Clovis
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Groups Printed- Passenger Vehicles

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	26	110	10	146	7	71	38	116	47	120	14	181	7	69	19	95	538
04:15 PM	31	126	16	173	10	63	31	104	35	139	9	183	5	63	23	91	551
04:30 PM	34	93	6	133	13	61	35	109	59	176	18	253	7	82	30	119	614
04:45 PM	29	118	8	155	8	83	34	125	59	158	12	229	11	83	33	127	636
Total	120	447	40	607	38	278	138	454	200	593	53	846	30	297	105	432	2339
05:00 PM	37	88	11	136	7	63	37	107	53	140	25	218	10	77	22	109	570
05:15 PM	28	128	8	164	12	79	44	135	53	192	20	265	8	80	25	113	677
05:30 PM	32	126	4	162	7	90	29	126	78	165	30	273	7	83	33	123	684
05:45 PM	32	110	7	149	20	80	27	127	40	161	22	223	13	72	37	122	621
Total	129	452	30	611	46	312	137	495	224	658	97	979	38	312	117	467	2552
Grand Total	249	899	70	1218	84	590	275	949	424	1251	150	1825	68	609	222	899	4891
Apprch %	20.4	73.8	5.7		8.9	62.2	29		23.2	68.5	8.2		7.6	67.7	24.7		
Total %	5.1	18.4	1.4	24.9	1.7	12.1	5.6	19.4	8.7	25.6	3.1	37.3	1.4	12.5	4.5	18.4	

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	29	118	8	155	8	83	34	125	59	158	12	229	**11**	**83**	**33**	**127**	636
05:00 PM	**37**	88	**11**	136	7	63	37	107	53	140	25	218	10	77	22	109	570
05:15 PM	28	**128**	8	**164**	**12**	79	**44**	**135**	53	**192**	20	265	8	80	25	113	677
05:30 PM	32	126	4	162	7	**90**	29	126	**78**	165	**30**	**273**	7	83	33	123	**684**
Total Volume	126	460	31	617	34	315	144	493	243	655	87	985	36	323	113	472	2567
% App. Total	20.4	74.6	5		6.9	63.9	29.2		24.7	66.5	8.8		7.6	68.4	23.9		
PHF	.851	.898	.705	.941	.708	.875	.818	.913	.779	.853	.725	.902	.818	.973	.856	.929	.938

AGENDA ITEM NO. 6.

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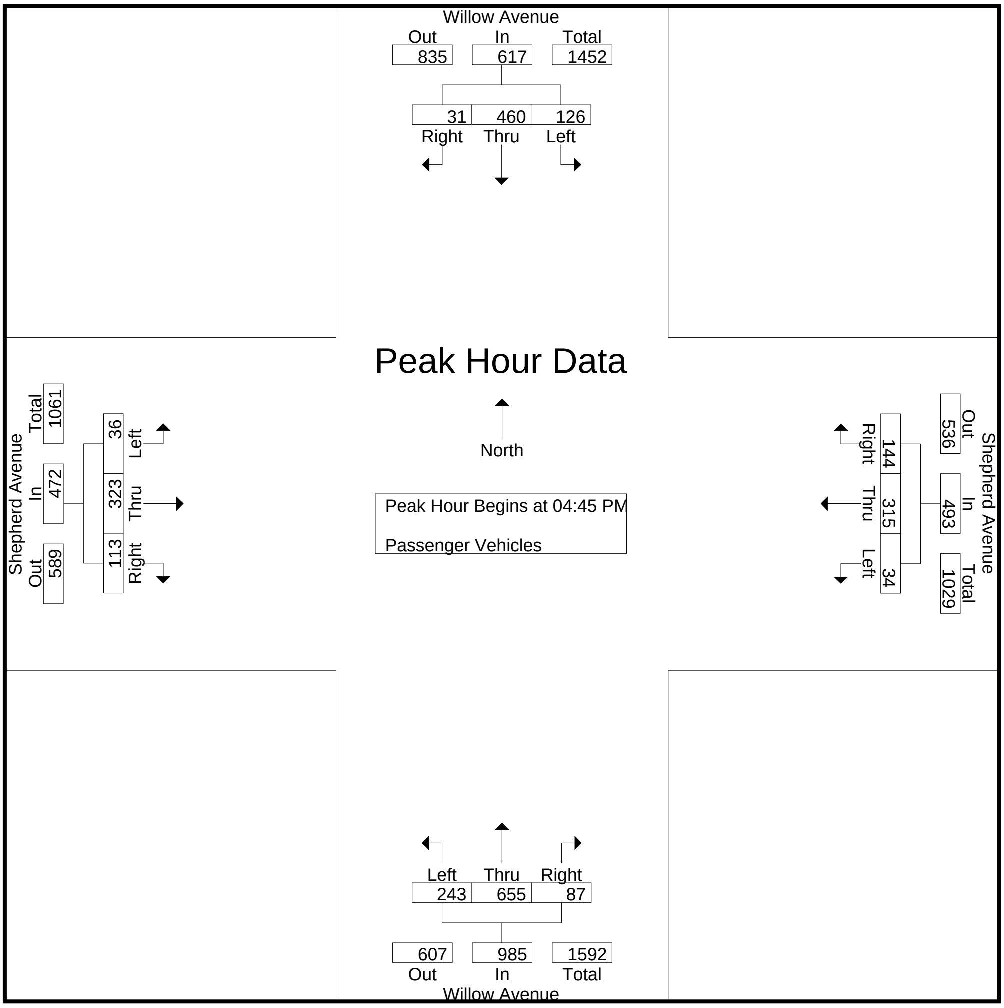

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	29	118	8	155	8	83	34	125	59	158	12	229	**11**	**83**	**33**	**127**
+15 mins.	**37**	88	**11**	136	7	63	37	107	53	140	25	218	10	77	22	109
+30 mins.	28	**128**	8	**164**	**12**	79	**44**	**135**	53	**192**	20	265	8	80	25	113
+45 mins.	32	126	4	162	7	**90**	29	126	**78**	165	**30**	**273**	7	83	33	123
Total Volume	126	460	31	617	34	315	144	493	243	655	87	985	36	323	113	472
% App. Total	20.4	74.6	5		6.9	63.9	29.2		24.7	66.5	8.8		7.6	68.4	23.9	
PHF	.851	.898	.705	.941	.708	.875	.818	.913	.779	.853	.725	.902	.818	.973	.856	.929

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City of Clovis
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E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep PMC
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Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	1	1	2	0	1	0	1	0	1	0	1	5
04:15 PM	1	4	0	5	0	2	0	2	0	1	1	2	1	1	1	3	12
04:30 PM	0	1	0	1	0	2	0	2	0	1	0	1	0	0	0	0	4
04:45 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
Total	1	7	0	8	0	5	1	6	0	4	2	6	1	2	1	4	24
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	1	1	0	2	0	0	0	0	0	1	1	2	0	0	0	0	4
05:30 PM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	1	1	0	2	0	1	0	1	4
Total	1	4	0	5	0	0	1	1	1	2	1	4	0	1	0	1	11
Grand Total	2	11	0	13	0	5	2	7	1	6	3	10	1	3	1	5	35
Apprch %	15.4	84.6	0		0	71.4	28.6		10	60	30		20	60	20		
Total %	5.7	31.4	0	37.1	0	14.3	5.7	20	2.9	17.1	8.6	28.6	2.9	8.6	2.9	14.3	

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	0	1	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	3
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	**1**	1	0	**2**	0	0	0	0	0	1	1	2	0	0	0	0	**4**
05:30 PM	0	1	0	1	0	0	**1**	**1**	0	0	0	0	0	0	0	0	2
Total Volume	1	4	0	5	0	0	1	1	0	2	2	4	0	0	0	0	10
% App. Total	20	80	0		0	0	100		0	50	50		0	0	0		
PHF	.250	1.00	.000	.625	.000	.000	.250	.250	.000	.500	.500	.500	.000	.000	.000	.000	.625

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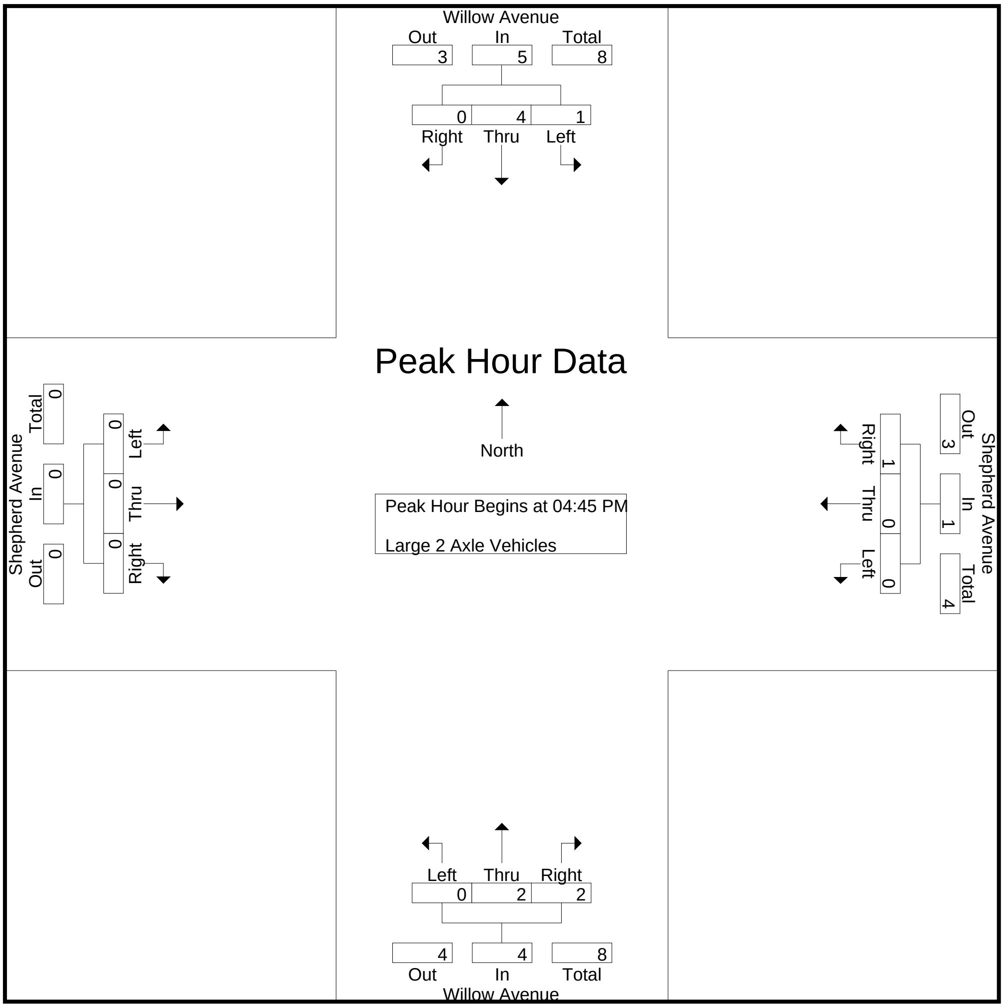

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	0	1	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	**1**	1	0	**2**	0	0	0	0	0	1	1	2	0	0	0	0
+45 mins.	0	1	0	1	0	0	**1**	**1**	0	0	0	0	0	0	0	0
Total Volume	1	4	0	5	0	0	1	1	0	2	2	4	0	0	0	0
% App. Total	20	80	0		0	0	100		0	50	50		0	0	0	
PHF	.250	1.000	.000	.625	.000	.000	.250	.250	.000	.500	.500	.500	.000	.000	.000	.000

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City of Clovis
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Groups Printed- 3 Axle Vehicles

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
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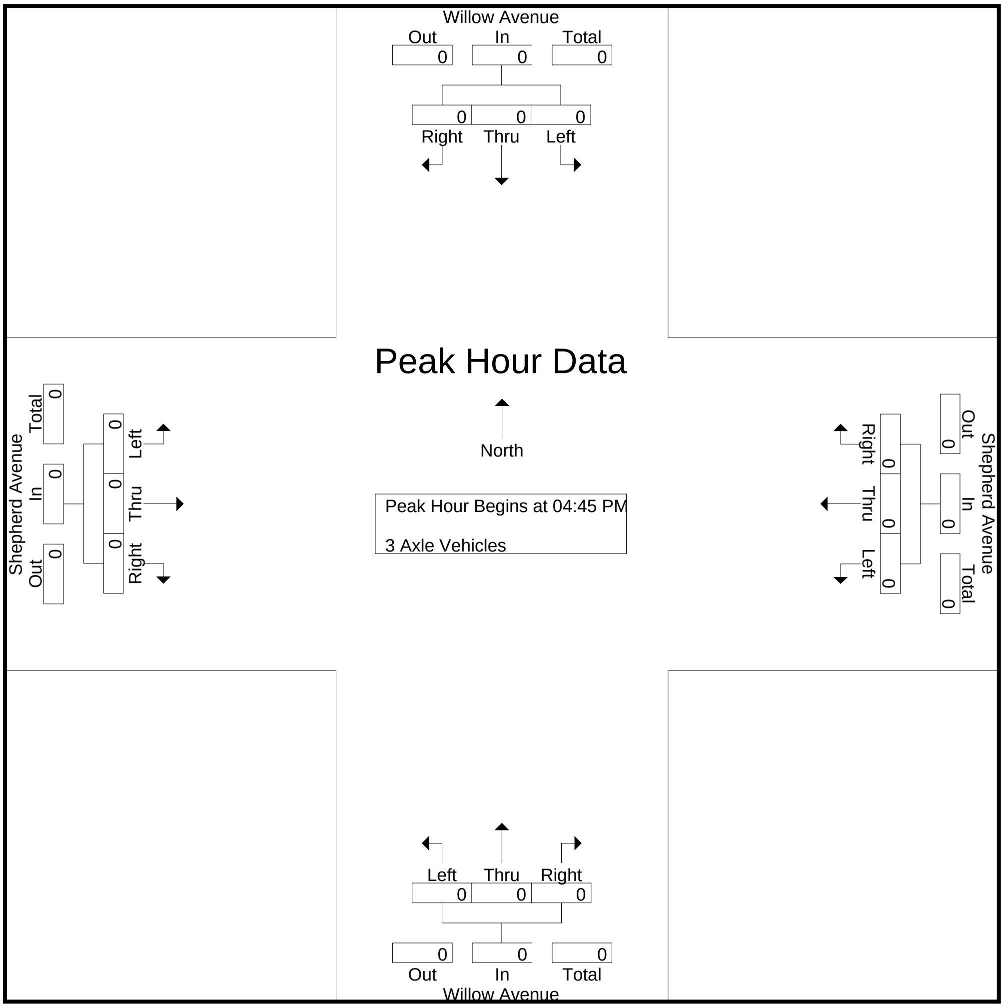

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Willow Avenue Southbound				Shepherd Avenue Westbound				Willow Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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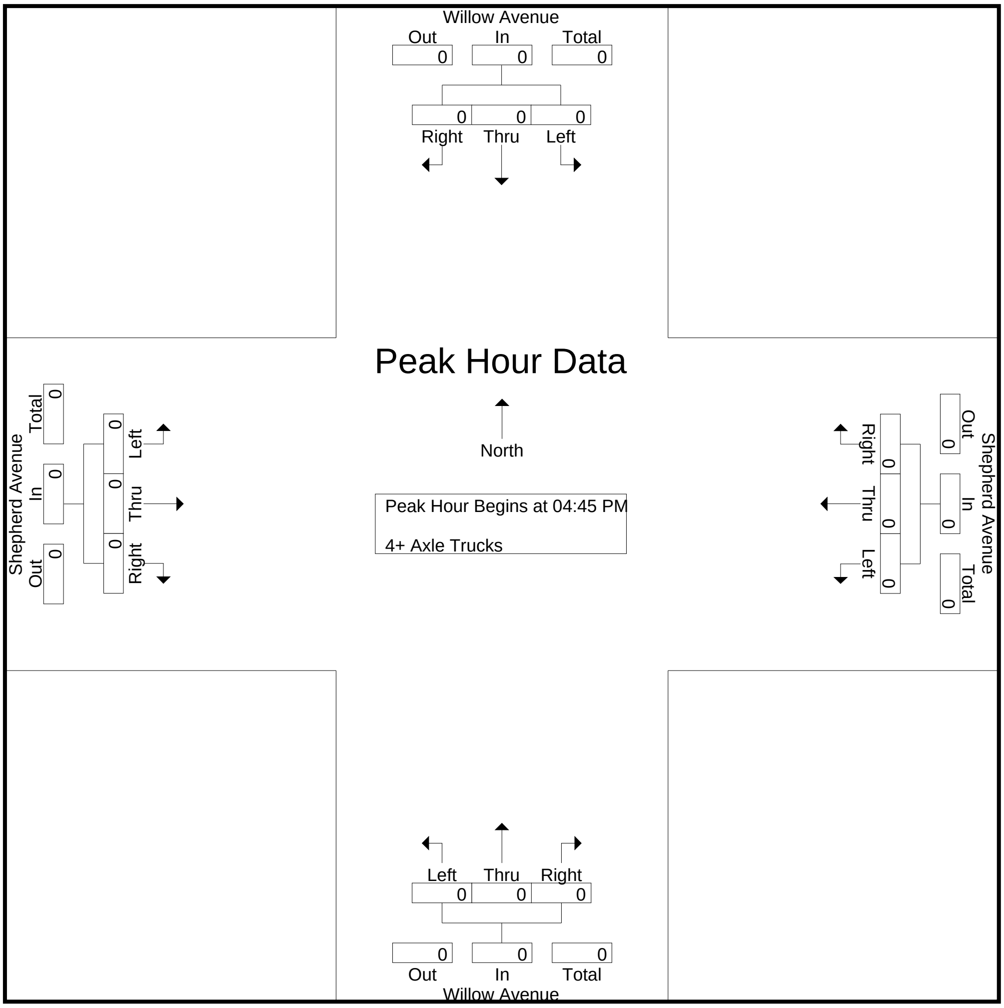
City of Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 03_CVS_Willow_Shep PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Willow Avenue	East Leg Shepherd Avenue	South Leg Willow Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	1	1	0	1	3

	North Leg Willow Avenue	East Leg Shepherd Avenue	South Leg Willow Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	1	1	2
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	1	1	0	0	2
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	1	1
TOTAL VOLUMES:	1	1	1	4	7

Location: Clovis
N/S: Willow Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Willow Avenue			Westbound Shepherd Avenue			Northbound Willow Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	1	1	0	0	0	0	2	0	1	0	0	0	5
7:15 AM	0	6	0	0	1	0	0	3	0	0	0	2	12
7:30 AM	0	2	0	0	0	1	0	0	0	0	0	0	3
7:45 AM	0	3	1	0	0	0	0	0	0	0	0	0	4
8:00 AM	0	0	0	0	1	0	0	1	0	0	1	0	3
8:15 AM	1	1	0	0	0	1	0	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	3	0	0	0	1	0	1	0	0	1	0	6
TOTAL VOLUMES:	2	16	1	0	2	3	2	5	1	0	2	2	36

	Southbound Willow Avenue			Westbound Shepherd Avenue			Northbound Willow Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	2	0	0	0	0	0	0	0	0	1	0	0	3
4:30 PM	1	0	2	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	2	0	0	1	0	1	0	0	0	0	4
TOTAL VOLUMES:	4	1	4	0	0	1	0	2	0	1	0	0	13

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City of Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 05_CVS_Min_Beh AM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Total Volume

	Minnewawa Avenue Southbound				Behymer Avenue Westbound				Minnewawa Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	18	23	0	41	3	15	36	54	3	31	1	35	0	13	9	22	152
07:15 AM	15	43	1	59	5	38	62	105	4	47	1	52	0	12	8	20	236
07:30 AM	24	75	0	99	6	34	102	142	8	46	1	55	2	29	12	43	339
07:45 AM	45	57	1	103	1	33	93	127	16	74	6	96	1	33	10	44	370
Total	102	198	2	302	15	120	293	428	31	198	9	238	3	87	39	129	1097
08:00 AM	39	50	1	90	0	40	40	80	13	45	0	58	0	40	14	54	282
08:15 AM	21	44	2	67	0	24	23	47	2	40	1	43	4	33	12	49	206
08:30 AM	12	39	2	53	1	19	26	46	5	33	0	38	2	8	11	21	158
08:45 AM	15	33	1	49	1	17	17	35	5	35	0	40	0	9	6	15	139
Total	87	166	6	259	2	100	106	208	25	153	1	179	6	90	43	139	785
Grand Total	189	364	8	561	17	220	399	636	56	351	10	417	9	177	82	268	1882
Apprch %	33.7	64.9	1.4		2.7	34.6	62.7		13.4	84.2	2.4		3.4	66	30.6		
Total %	10	19.3	0.4	29.8	0.9	11.7	21.2	33.8	3	18.7	0.5	22.2	0.5	9.4	4.4	14.2	

	Minnewawa Avenue Southbound				Behymer Avenue Westbound				Minnewawa Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	15	43	**1**	59	5	38	62	105	4	47	1	52	0	12	8	20	236
07:30 AM	24	**75**	0	99	**6**	34	**102**	**142**	8	46	1	55	**2**	29	12	43	339
07:45 AM	**45**	57	1	**103**	1	33	93	127	**16**	**74**	**6**	**96**	1	33	10	44	**370**
08:00 AM	39	50	1	90	0	**40**	40	80	13	45	0	58	0	**40**	**14**	**54**	282
Total Volume	123	225	3	351	12	145	297	454	41	212	8	261	3	114	44	161	1227
% App. Total	35	64.1	0.9		2.6	31.9	65.4		15.7	81.2	3.1		1.9	70.8	27.3		
PHF	.683	.750	.750	.852	.500	.906	.728	.799	.641	.716	.333	.680	.375	.713	.786	.745	.829

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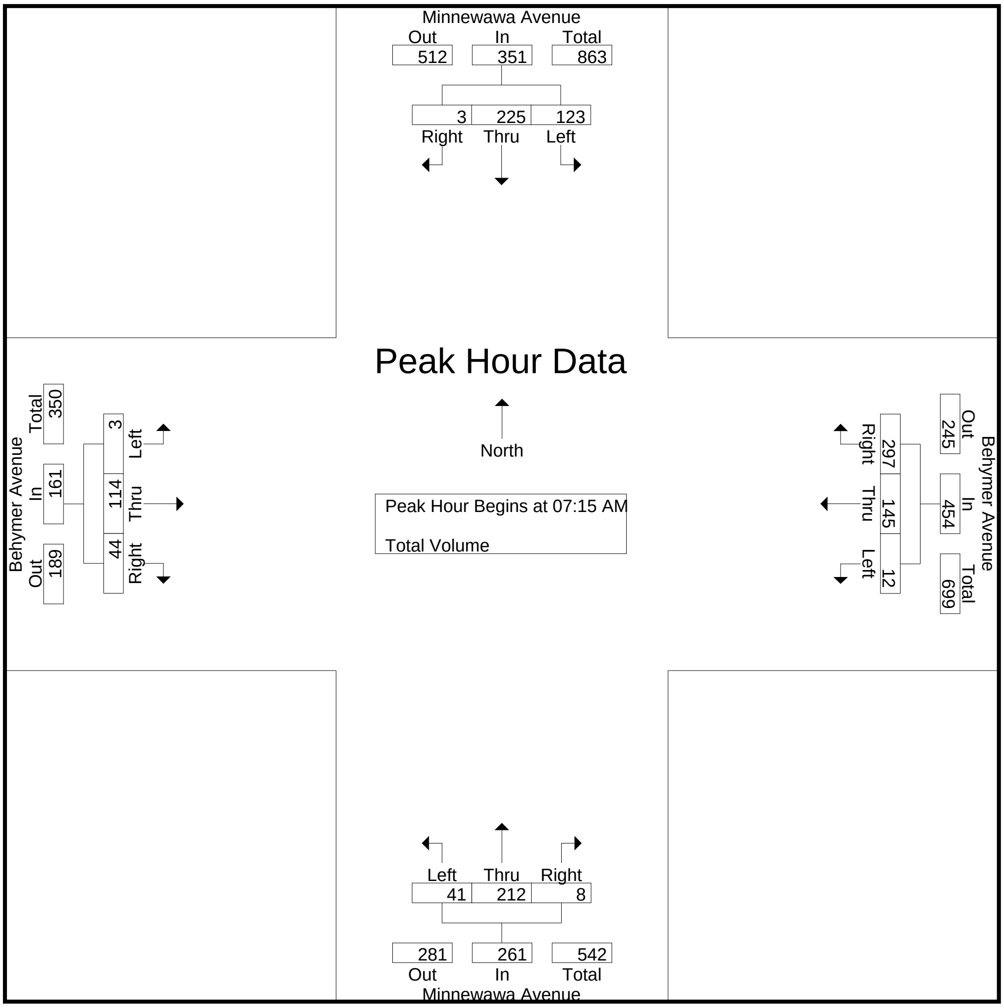
City of Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 05_CVS_Min_Beh AM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	24	**75**	0	99	5	38	62	105	4	47	1	52	2	29	12	43
+15 mins.	**45**	57	1	**103**	**6**	34	**102**	**142**	8	46	1	55	1	33	10	44
+30 mins.	39	50	1	90	1	33	93	127	**16**	**74**	**6**	**96**	0	**40**	**14**	**54**
+45 mins.	21	44	**2**	67	0	**40**	40	80	13	45	0	58	**4**	33	12	49
Total Volume	129	226	4	359	12	145	297	454	41	212	8	261	7	135	48	190
% App. Total	35.9	63	1.1		2.6	31.9	65.4		15.7	81.2	3.1		3.7	71.1	25.3	
PHF	.717	.753	.500	.871	.500	.906	.728	.799	.641	.716	.333	.680	.438	.844	.857	.880

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City of Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 05_CVS_Min_Beh PM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Total Volume

	Minnewawa Avenue Southbound				Behymer Avenue Westbound				Minnewawa Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	33	47	3	83	1	15	25	41	9	41	3	53	1	25	5	31	208
04:15 PM	34	53	0	87	0	13	18	31	7	52	0	59	0	9	5	14	191
04:30 PM	24	44	1	69	0	17	29	46	9	50	0	59	1	13	7	21	195
04:45 PM	25	49	0	74	1	20	24	45	11	40	0	51	3	24	11	38	208
Total	116	193	4	313	2	65	96	163	36	183	3	222	5	71	28	104	802
05:00 PM	25	37	0	62	1	28	28	57	10	44	2	56	0	15	4	19	194
05:15 PM	26	56	0	82	3	20	30	53	13	66	1	80	0	16	8	24	239
05:30 PM	19	48	2	69	1	18	17	36	12	55	3	70	0	14	7	21	196
05:45 PM	20	25	0	45	2	18	23	43	12	40	2	54	0	19	5	24	166
Total	90	166	2	258	7	84	98	189	47	205	8	260	0	64	24	88	795
Grand Total	206	359	6	571	9	149	194	352	83	388	11	482	5	135	52	192	1597
Apprch %	36.1	62.9	1.1		2.6	42.3	55.1		17.2	80.5	2.3		2.6	70.3	27.1		
Total %	12.9	22.5	0.4	35.8	0.6	9.3	12.1	22	5.2	24.3	0.7	30.2	0.3	8.5	3.3	12	

	Minnewawa Avenue Southbound				Behymer Avenue Westbound				Minnewawa Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	25	49	0	74	1	20	24	45	11	40	0	51	**3**	**24**	**11**	**38**	208
05:00 PM	25	37	0	62	1	**28**	28	**57**	10	44	2	56	0	15	4	19	194
05:15 PM	**26**	**56**	0	**82**	**3**	20	**30**	53	**13**	**66**	1	**80**	0	16	8	24	**239**
05:30 PM	19	48	**2**	69	1	18	17	36	12	55	**3**	70	0	14	7	21	196
Total Volume	95	190	2	287	6	86	99	191	46	205	6	257	3	69	30	102	837
% App. Total	33.1	66.2	0.7		3.1	45	51.8		17.9	79.8	2.3		2.9	67.6	29.4		
PHF	.913	.848	.250	.875	.500	.768	.825	.838	.885	.777	.500	.803	.250	.719	.682	.671	.876

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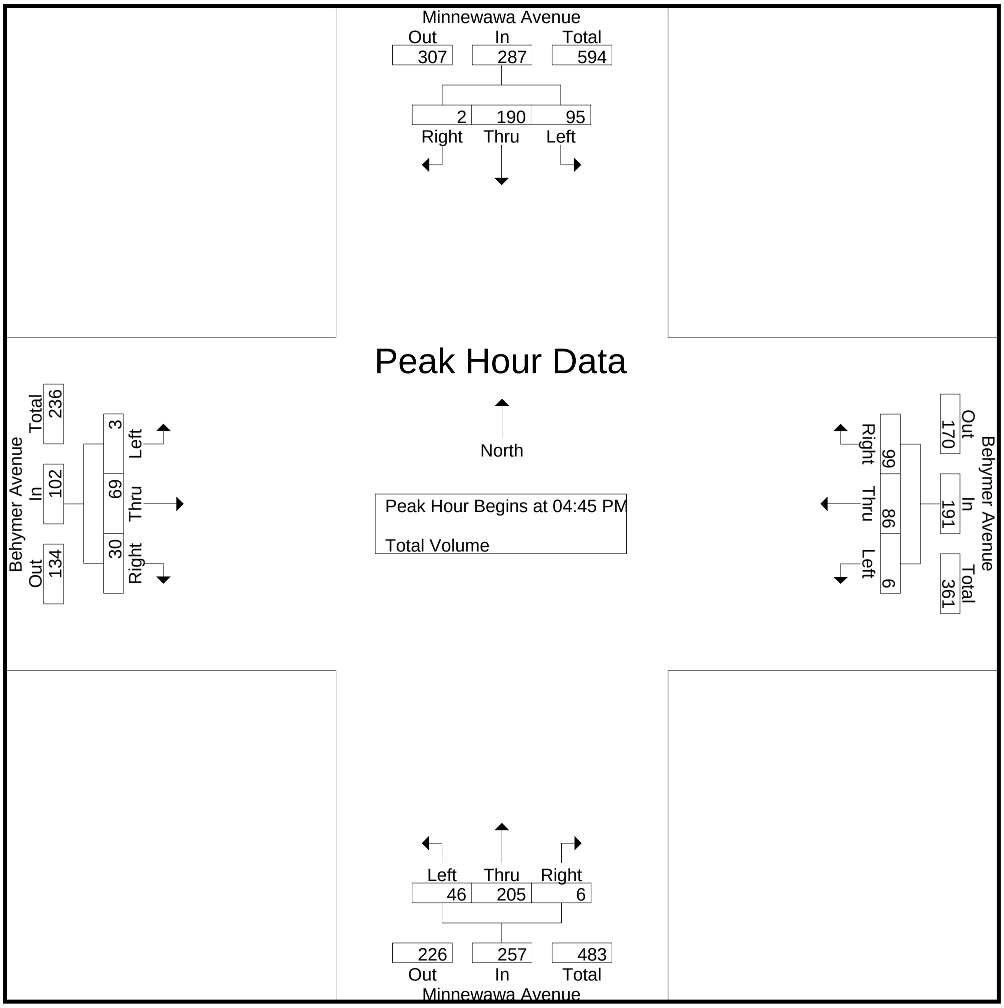
City of Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 05_CVS_Min_Beh PM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				05:00 PM				04:00 PM			
+0 mins.	33	47	**3**	83	0	17	29	46	10	44	2	56	1	**25**	5	31
+15 mins.	**34**	**53**	0	**87**	1	20	24	45	**13**	**66**	1	**80**	0	9	5	14
+30 mins.	24	44	1	69	1	**28**	28	**57**	12	55	**3**	70	1	13	7	21
+45 mins.	25	49	0	74	**3**	20	**30**	53	12	40	2	54	**3**	24	**11**	**38**
Total Volume	116	193	4	313	5	85	111	201	47	205	8	260	5	71	28	104
% App. Total	37.1	61.7	1.3		2.5	42.3	55.2		18.1	78.8	3.1		4.8	68.3	26.9	
PHF	.853	.910	.333	.899	.417	.759	.925	.882	.904	.777	.667	.813	.417	.710	.636	.684

Location: Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Minnewawa Avenue	East Leg Behymer Avenue	South Leg Minnewawa Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	1	0	0	0	1

	North Leg Minnewawa Avenue	East Leg Behymer Avenue	South Leg Minnewawa Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Minnewawa Avenue			Westbound Behymer Avenue			Northbound Minnewawa Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	0	0	0	1	1	2	0	0	0	0	7

	Southbound Minnewawa Avenue			Westbound Behymer Avenue			Northbound Minnewawa Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

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counts@countsunlimited.com

City of Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 01_CVS_Minnewawa_Behymer_AM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 1

Groups Printed- Total Volume

	Minnewawa Avenue Southbound				Behymer Avenue Westbound				Minnewawa Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	21	30	0	51	0	9	15	24	2	27	2	31	0	6	4	10	116
07:15 AM	9	31	1	41	0	10	19	29	6	36	0	42	0	7	8	15	127
07:30 AM	19	35	0	54	0	19	37	56	9	41	0	50	2	10	6	18	178
07:45 AM	22	50	0	72	4	32	50	86	11	55	1	67	2	18	12	32	257
Total	71	146	1	218	4	70	121	195	28	159	3	190	4	41	30	75	678
08:00 AM	21	36	0	57	0	20	39	59	7	57	3	67	1	19	13	33	216
08:15 AM	29	41	0	70	2	22	41	65	8	56	2	66	0	13	8	21	222
08:30 AM	21	37	0	58	3	20	34	57	8	38	2	48	0	6	7	13	176
08:45 AM	24	33	1	58	2	29	42	73	3	29	1	33	0	15	12	27	191
Total	95	147	1	243	7	91	156	254	26	180	8	214	1	53	40	94	805
Grand Total	166	293	2	461	11	161	277	449	54	339	11	404	5	94	70	169	1483
Apprch %	36	63.6	0.4		2.4	35.9	61.7		13.4	83.9	2.7		3	55.6	41.4		
Total %	11.2	19.8	0.1	31.1	0.7	10.9	18.7	30.3	3.6	22.9	0.7	27.2	0.3	6.3	4.7	11.4	

	Minnewawa Avenue Southbound				Behymer Avenue Westbound				Minnewawa Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	19	35	0	54	0	19	37	56	9	41	0	50	**2**	10	6	18	178
07:45 AM	22	**50**	0	**72**	**4**	**32**	**50**	**86**	**11**	55	1	**67**	2	18	12	32	**257**
08:00 AM	21	36	0	57	0	20	39	59	7	**57**	**3**	67	1	**19**	**13**	**33**	216
08:15 AM	**29**	41	0	70	2	22	41	65	8	56	2	66	0	13	8	21	222
Total Volume	91	162	0	253	6	93	167	266	35	209	6	250	5	60	39	104	873
% App. Total	36	64	0		2.3	35	62.8		14	83.6	2.4		4.8	57.7	37.5		
PHF	.784	.810	.000	.878	.375	.727	.835	.773	.795	.917	.500	.933	.625	.789	.750	.788	.849

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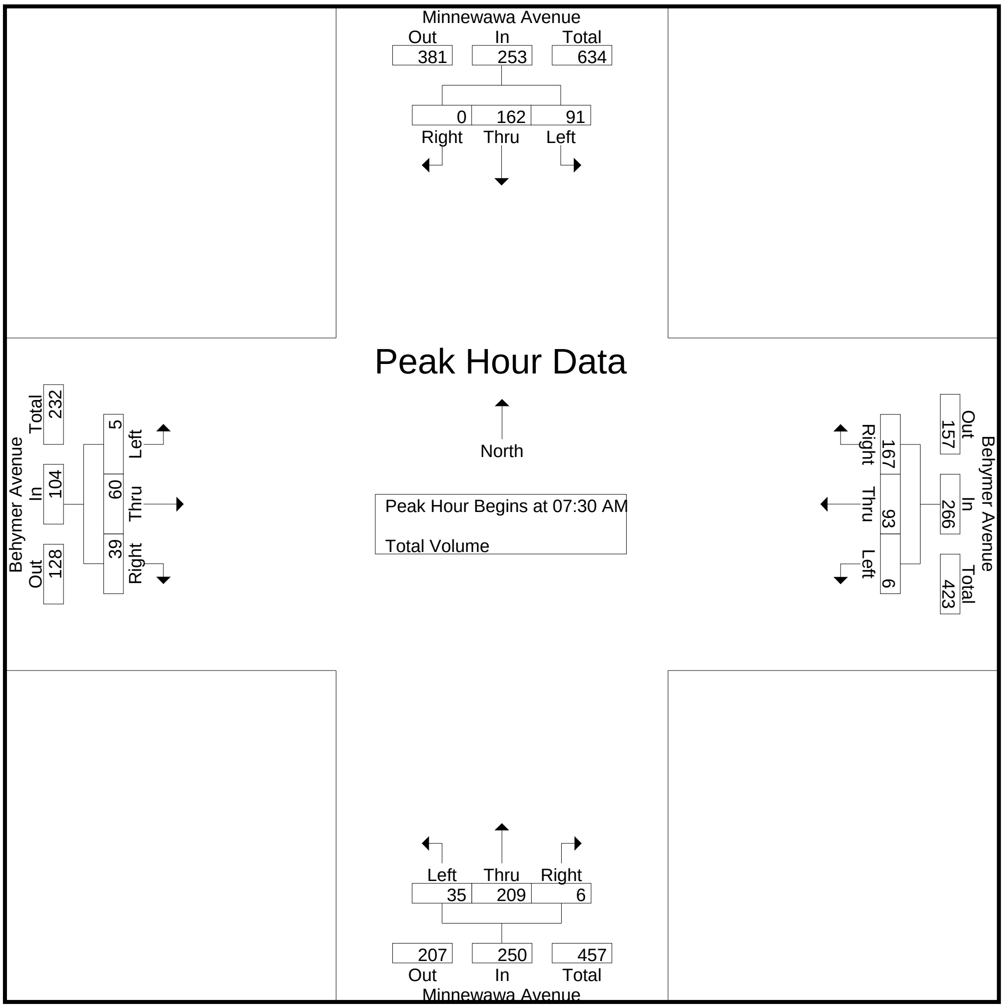
City of Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 01_CVS_Minnewawa_Behymer_AM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:30 AM				07:30 AM			
+0 mins.	22	**50**	0	**72**	**4**	**32**	**50**	**86**	9	41	0	50	**2**	10	6	18
+15 mins.	21	36	0	57	0	20	39	59	**11**	55	1	**67**	2	18	12	32
+30 mins.	**29**	41	0	70	2	22	41	65	7	**57**	**3**	67	1	**19**	**13**	**33**
+45 mins.	21	37	0	58	3	20	34	57	8	56	2	66	0	13	8	21
Total Volume	93	164	0	257	9	94	164	267	35	209	6	250	5	60	39	104
% App. Total	36.2	63.8	0		3.4	35.2	61.4		14	83.6	2.4		4.8	57.7	37.5	
PHF	.802	.820	.000	.892	.563	.734	.820	.776	.795	.917	.500	.933	.625	.789	.750	.788

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City of Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 01_CVS_Minnewawa_Behymer_PM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 1

Groups Printed- Total Volume

	Minnewawa Avenue Southbound				Behymer Avenue Westbound				Minnewawa Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	20	29	0	49	0	17	15	32	6	42	2	50	0	19	3	22	153
04:15 PM	24	45	0	69	4	13	19	36	8	37	3	48	0	11	7	18	171
04:30 PM	22	41	0	63	0	18	22	40	6	42	1	49	2	15	7	24	176
04:45 PM	21	40	0	61	1	25	19	45	3	58	1	62	0	13	5	18	186
Total	87	155	0	242	5	73	75	153	23	179	7	209	2	58	22	82	686
05:00 PM	29	43	0	72	2	21	23	46	11	55	0	66	0	7	11	18	202
05:15 PM	31	46	0	77	4	24	31	59	8	56	2	66	1	16	12	29	231
05:30 PM	26	45	1	72	4	20	18	42	15	51	3	69	0	32	6	38	221
05:45 PM	19	37	3	59	1	28	29	58	13	46	3	62	2	12	8	22	201
Total	105	171	4	280	11	93	101	205	47	208	8	263	3	67	37	107	855
Grand Total	192	326	4	522	16	166	176	358	70	387	15	472	5	125	59	189	1541
Apprch %	36.8	62.5	0.8		4.5	46.4	49.2		14.8	82	3.2		2.6	66.1	31.2		
Total %	12.5	21.2	0.3	33.9	1	10.8	11.4	23.2	4.5	25.1	1	30.6	0.3	8.1	3.8	12.3	

	Minnewawa Avenue Southbound				Behymer Avenue Westbound				Minnewawa Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	29	43	0	72	2	21	23	46	11	55	0	66	0	7	11	18	202
05:15 PM	**31**	**46**	0	**77**	**4**	24	**31**	**59**	8	**56**	2	66	1	16	**12**	29	**231**
05:30 PM	26	45	1	72	4	20	18	42	**15**	51	**3**	**69**	0	**32**	6	**38**	221
05:45 PM	19	37	**3**	59	1	**28**	29	58	13	46	3	62	**2**	12	8	22	201
Total Volume	105	171	4	280	11	93	101	205	47	208	8	263	3	67	37	107	855
% App. Total	37.5	61.1	1.4		5.4	45.4	49.3		17.9	79.1	3		2.8	62.6	34.6		
PHF	.847	.929	.333	.909	.688	.830	.815	.869	.783	.929	.667	.953	.375	.523	.771	.704	.925

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City of Clovis
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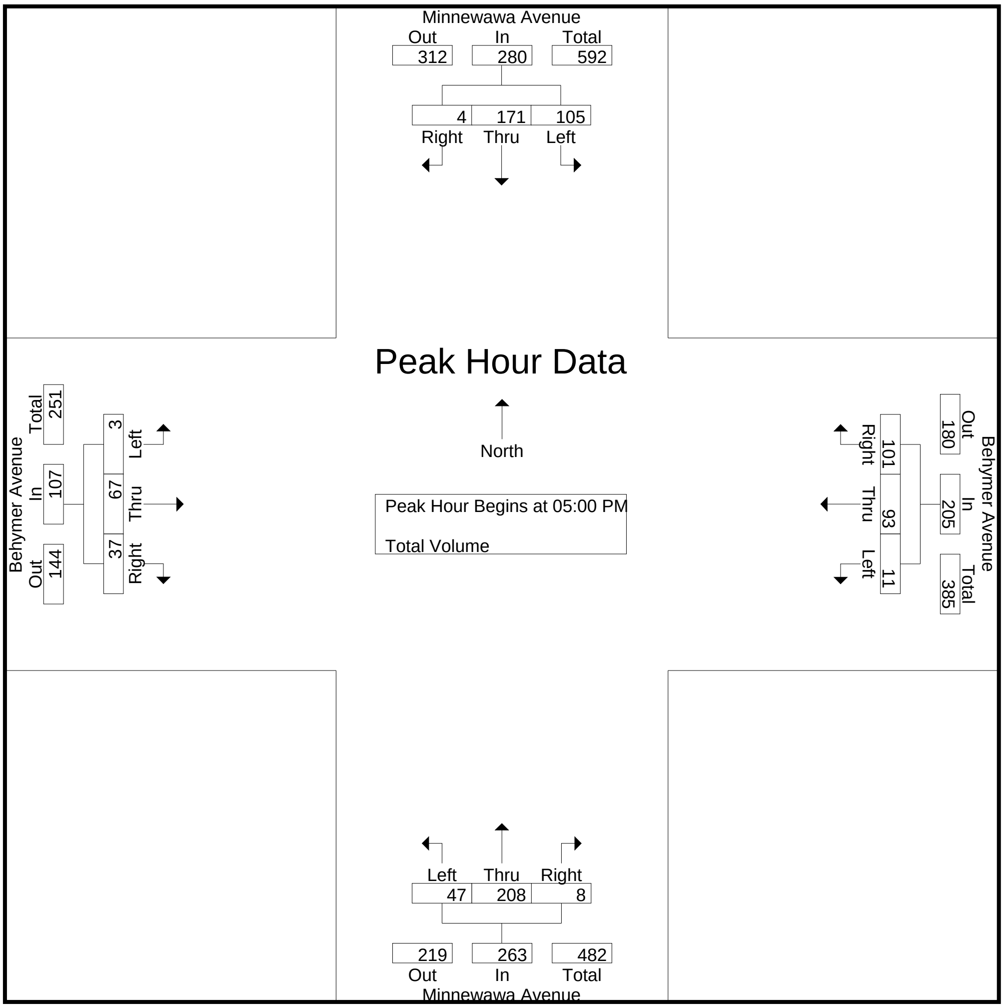
Weather: Clear

File Name : 01_CVS_Minnewawa_Behymer_PM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				04:45 PM				05:00 PM			
+0 mins.	21	40	0	61	2	21	23	46	3	**58**	1	62	0	7	11	18
+15 mins.	29	43	0	72	**4**	24	**31**	**59**	11	55	0	66	1	16	**12**	29
+30 mins.	**31**	**46**	0	**77**	4	20	18	42	8	56	2	66	0	**32**	6	**38**
+45 mins.	26	45	**1**	72	1	**28**	29	58	**15**	51	**3**	**69**	**2**	12	8	22
Total Volume	107	174	1	282	11	93	101	205	37	220	6	263	3	67	37	107
% App. Total	37.9	61.7	0.4		5.4	45.4	49.3		14.1	83.7	2.3		2.8	62.6	34.6	
PHF	.863	.946	.250	.916	.688	.830	.815	.869	.617	.948	.500	.953	.375	.523	.771	.704

Location: Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue

Date: 6/22/2022
Day: Wednesday

PEDESTRIANS

	North Leg Minnewawa Avenue	East Leg Behymer Avenue	South Leg Minnewawa Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Minnewawa Avenue	East Leg Behymer Avenue	South Leg Minnewawa Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Minnewawa Avenue
E/W: Behymer Avenue

Date: 6/22/2022
Day: Wednesday

BICYCLES

	Southbound Minnewawa Avenue			Westbound Behymer Avenue			Northbound Minnewawa Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	2	1	0	0	0	0	0	0	4

	Southbound Minnewawa Avenue			Westbound Behymer Avenue			Northbound Minnewawa Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
TOTAL VOLUMES:	0	0	0	0	0	0	0	3	0	0	0	0	3

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City of Clovis
N/S: Minnewawa Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 06_CVS_Min_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	26	2	32	8	68	13	89	13	21	2	36	2	50	18	70	227
07:15 AM	12	41	10	63	13	68	15	96	27	35	6	68	7	70	26	103	330
07:30 AM	28	49	11	88	19	74	18	111	39	38	14	91	13	76	41	130	420
07:45 AM	33	36	6	75	8	82	38	128	37	46	16	99	9	102	48	159	461
Total	77	152	29	258	48	292	84	424	116	140	38	294	31	298	133	462	1438
08:00 AM	30	33	2	65	4	67	20	91	24	31	5	60	4	91	37	132	348
08:15 AM	28	24	2	54	6	87	16	109	17	22	4	43	9	74	20	103	309
08:30 AM	14	36	0	50	1	78	15	94	18	23	3	44	4	70	11	85	273
08:45 AM	15	23	5	43	4	82	17	103	19	24	2	45	2	63	7	72	263
Total	87	116	9	212	15	314	68	397	78	100	14	192	19	298	75	392	1193
Grand Total	164	268	38	470	63	606	152	821	194	240	52	486	50	596	208	854	2631
Apprch %	34.9	57	8.1		7.7	73.8	18.5		39.9	49.4	10.7		5.9	69.8	24.4		
Total %	6.2	10.2	1.4	17.9	2.4	23	5.8	31.2	7.4	9.1	2	18.5	1.9	22.7	7.9	32.5	
Passenger Vehicles	152	265	37	454	63	596	139	798	194	228	51	473	49	583	205	837	2562
% Passenger Vehicles	92.7	98.9	97.4	96.6	100	98.3	91.4	97.2	100	95	98.1	97.3	98	97.8	98.6	98	97.4
Large 2 Axle Vehicles	5	2	1	8	0	6	10	16	0	6	1	7	1	9	3	13	44
% Large 2 Axle Vehicles	3	0.7	2.6	1.7	0	1	6.6	1.9	0	2.5	1.9	1.4	2	1.5	1.4	1.5	1.7
3 Axle Vehicles	6	1	0	7	0	3	3	6	0	3	0	3	0	4	0	4	20
% 3 Axle Vehicles	3.7	0.4	0	1.5	0	0.5	2	0.7	0	1.2	0	0.6	0	0.7	0	0.5	0.8
4+ Axle Trucks	1	0	0	1	0	1	0	1	0	3	0	3	0	0	0	0	5
% 4+ Axle Trucks	0.6	0	0	0.2	0	0.2	0	0.1	0	1.2	0	0.6	0	0	0	0	0.2

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	12	41	10	63	13	68	15	96	27	35	6	68	7	70	26	103	330
07:30 AM	28	**49**	**11**	**88**	**19**	74	18	111	**39**	38	14	91	**13**	76	41	130	420
07:45 AM	**33**	36	6	75	8	**82**	**38**	**128**	37	**46**	**16**	**99**	9	**102**	**48**	**159**	**461**
08:00 AM	30	33	2	65	4	67	20	91	24	31	5	60	4	91	37	132	348
Total Volume	103	159	29	291	44	291	91	426	127	150	41	318	33	339	152	524	1559
% App. Total	35.4	54.6	10		10.3	68.3	21.4		39.9	47.2	12.9		6.3	64.7	29		
PHF	.780	.811	.659	.827	.579	.887	.599	.832	.814	.815	.641	.803	.635	.831	.792	.824	.845

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City of Clovis
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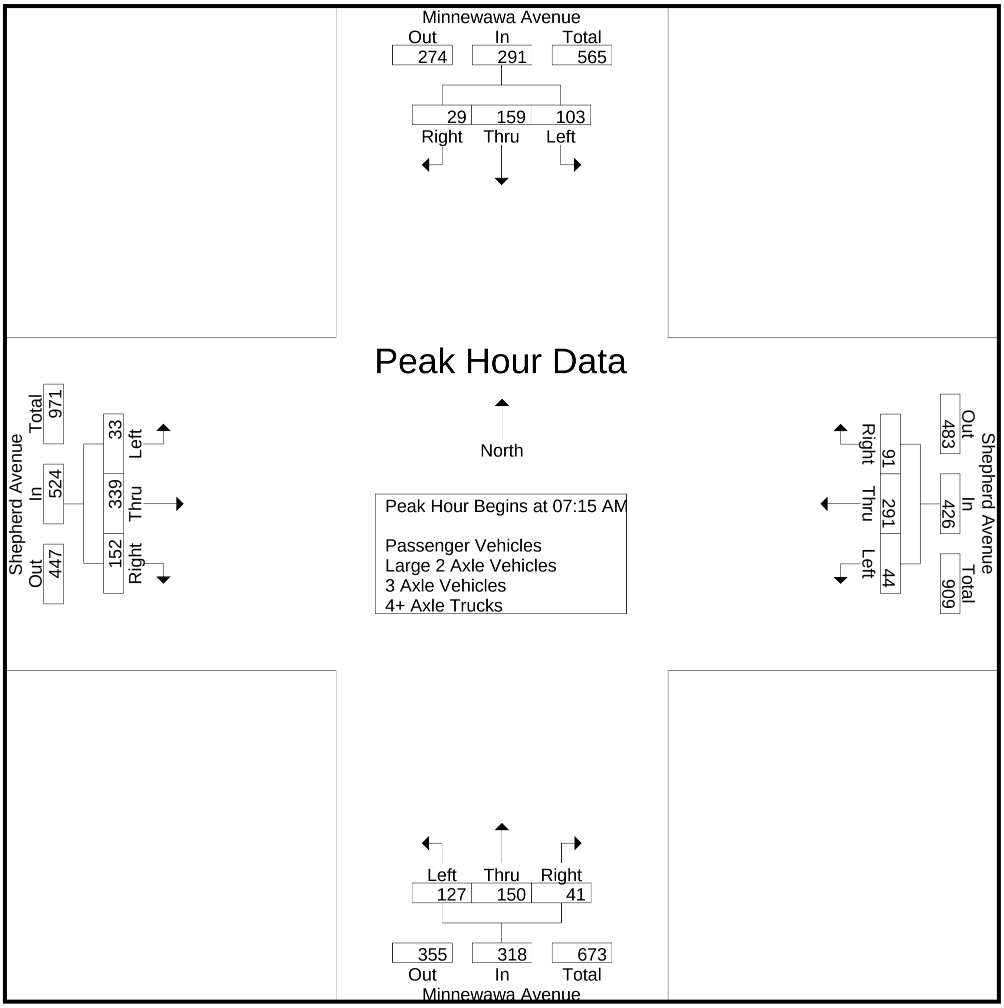
File Name : 06_CVS_Min_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:15 AM			
+0 mins.	12	41	10	63	**19**	74	18	111	27	35	6	68	7	70	26	103
+15 mins.	28	**49**	**11**	**88**	8	82	**38**	**128**	**39**	38	14	91	**13**	76	41	130
+30 mins.	**33**	36	6	75	4	67	20	91	37	**46**	**16**	**99**	9	**102**	**48**	**159**
+45 mins.	30	33	2	65	6	**87**	16	109	24	31	5	60	4	91	37	132
Total Volume	103	159	29	291	37	310	92	439	127	150	41	318	33	339	152	524
% App. Total	35.4	54.6	10		8.4	70.6	21		39.9	47.2	12.9		6.3	64.7	29	
PHF	.780	.811	.659	.827	.487	.891	.605	.857	.814	.815	.641	.803	.635	.831	.792	.824

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City of Clovis
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File Name : 06_CVS_Min_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	26	2	32	8	65	12	85	13	19	2	34	2	49	18	69	220
07:15 AM	12	41	9	62	13	68	13	94	27	32	6	65	7	70	26	103	324
07:30 AM	28	49	11	88	19	74	17	110	39	38	13	90	13	74	41	128	416
07:45 AM	28	36	6	70	8	81	36	125	37	46	16	99	9	100	48	157	451
Total	72	152	28	252	48	288	78	414	116	135	37	288	31	293	133	457	1411
08:00 AM	30	32	2	64	4	64	18	86	24	30	5	59	4	91	36	131	340
08:15 AM	25	24	2	51	6	86	14	106	17	20	4	41	8	70	20	98	296
08:30 AM	11	36	0	47	1	77	14	92	18	21	3	42	4	67	11	82	263
08:45 AM	14	21	5	40	4	81	15	100	19	22	2	43	2	62	5	69	252
Total	80	113	9	202	15	308	61	384	78	93	14	185	18	290	72	380	1151
Grand Total	152	265	37	454	63	596	139	798	194	228	51	473	49	583	205	837	2562
Apprch %	33.5	58.4	8.1		7.9	74.7	17.4		41	48.2	10.8		5.9	69.7	24.5		
Total %	5.9	10.3	1.4	17.7	2.5	23.3	5.4	31.1	7.6	8.9	2	18.5	1.9	22.8	8	32.7	

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	12	41	9	62	13	68	13	94	27	32	6	65	7	70	26	103	324
07:30 AM	28	**49**	**11**	**88**	**19**	74	17	110	**39**	38	13	90	**13**	74	41	128	416
07:45 AM	28	36	6	70	8	**81**	**36**	**125**	37	**46**	**16**	**99**	9	**100**	**48**	**157**	**451**
08:00 AM	**30**	32	2	64	4	64	18	86	24	30	5	59	4	91	36	131	340
Total Volume	98	158	28	284	44	287	84	415	127	146	40	313	33	335	151	519	1531
% App. Total	34.5	55.6	9.9		10.6	69.2	20.2		40.6	46.6	12.8		6.4	64.5	29.1		
PHF	.817	.806	.636	.807	.579	.886	.583	.830	.814	.793	.625	.790	.635	.838	.786	.826	.849

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City of Clovis
N/S: Minnewawa Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 06_CVS_Min_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
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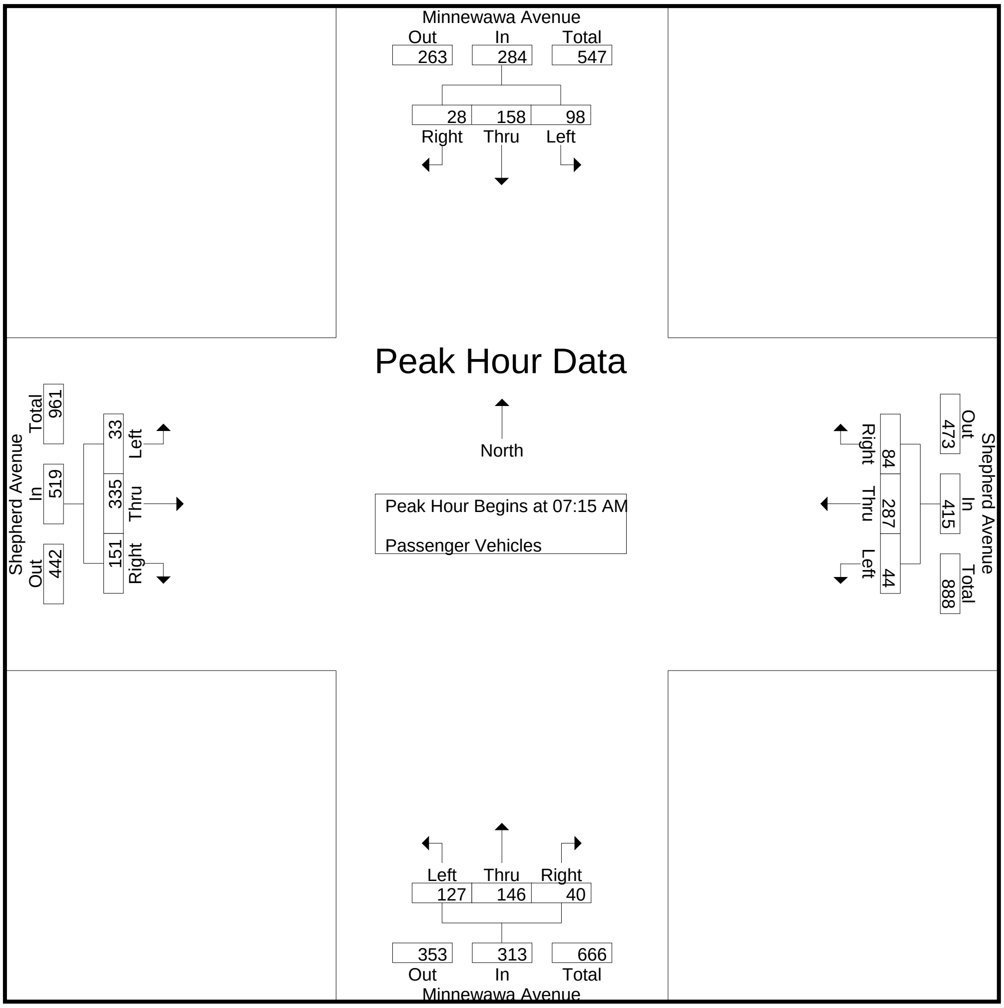

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	12	41	9	62	13	68	13	94	27	32	6	65	7	70	26	103
+15 mins.	28	**49**	**11**	**88**	**19**	74	17	110	**39**	38	13	90	**13**	74	41	128
+30 mins.	28	36	6	70	8	**81**	**36**	**125**	37	**46**	**16**	**99**	9	**100**	**48**	**157**
+45 mins.	**30**	32	2	64	4	64	18	86	24	30	5	59	4	91	36	131
Total Volume	98	158	28	284	44	287	84	415	127	146	40	313	33	335	151	519
% App. Total	34.5	55.6	9.9		10.6	69.2	20.2		40.6	46.6	12.8		6.4	64.5	29.1	
PHF	.817	.806	.636	.807	.579	.886	.583	.830	.814	.793	.625	.790	.635	.838	.786	.826

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Weather: Clear

File Name : 06_CVS_Min_Shep AMC
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Groups Printed- Large 2 Axle Vehicles

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	1	4	0	1	0	1	0	1	0	1	6
07:15 AM	0	0	1	1	0	0	1	1	0	3	0	3	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	1	1	0	0	1	1	0	2	0	2	4
07:45 AM	2	0	0	2	0	1	2	3	0	0	0	0	0	1	0	1	6
Total	2	0	1	3	0	4	5	9	0	4	1	5	0	4	0	4	21
08:00 AM	0	1	0	1	0	0	2	2	0	1	0	1	0	0	1	1	5
08:15 AM	2	0	0	2	0	1	2	3	0	0	0	0	1	3	0	4	9
08:30 AM	1	0	0	1	0	0	1	1	0	1	0	1	0	1	0	1	4
08:45 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	2	3	5
Total	3	2	0	5	0	2	5	7	0	2	0	2	1	5	3	9	23
Grand Total	5	2	1	8	0	6	10	16	0	6	1	7	1	9	3	13	44
Apprch %	62.5	25	12.5		0	37.5	62.5		0	85.7	14.3		7.7	69.2	23.1		
Total %	11.4	4.5	2.3	18.2	0	13.6	22.7	36.4	0	13.6	2.3	15.9	2.3	20.5	6.8	29.5	

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	**1**	1	0	0	1	1	0	**3**	0	**3**	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	1	1	0	0	**1**	1	0	**2**	0	**2**	4
07:45 AM	**2**	0	0	**2**	0	**1**	**2**	**3**	0	0	0	0	0	1	0	1	**6**
08:00 AM	0	**1**	0	1	0	0	2	2	0	1	0	1	0	0	**1**	1	5
Total Volume	2	1	1	4	0	1	6	7	0	4	1	5	0	3	1	4	20
% App. Total	50	25	25		0	14.3	85.7		0	80	20		0	75	25		
PHF	.250	.250	.250	.500	.000	.250	.750	.583	.000	.333	.250	.417	.000	.375	.250	.500	.833

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City of Clovis
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E/W: Shepherd Avenue
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File Name : 06_CVS_Min_Shep AMC
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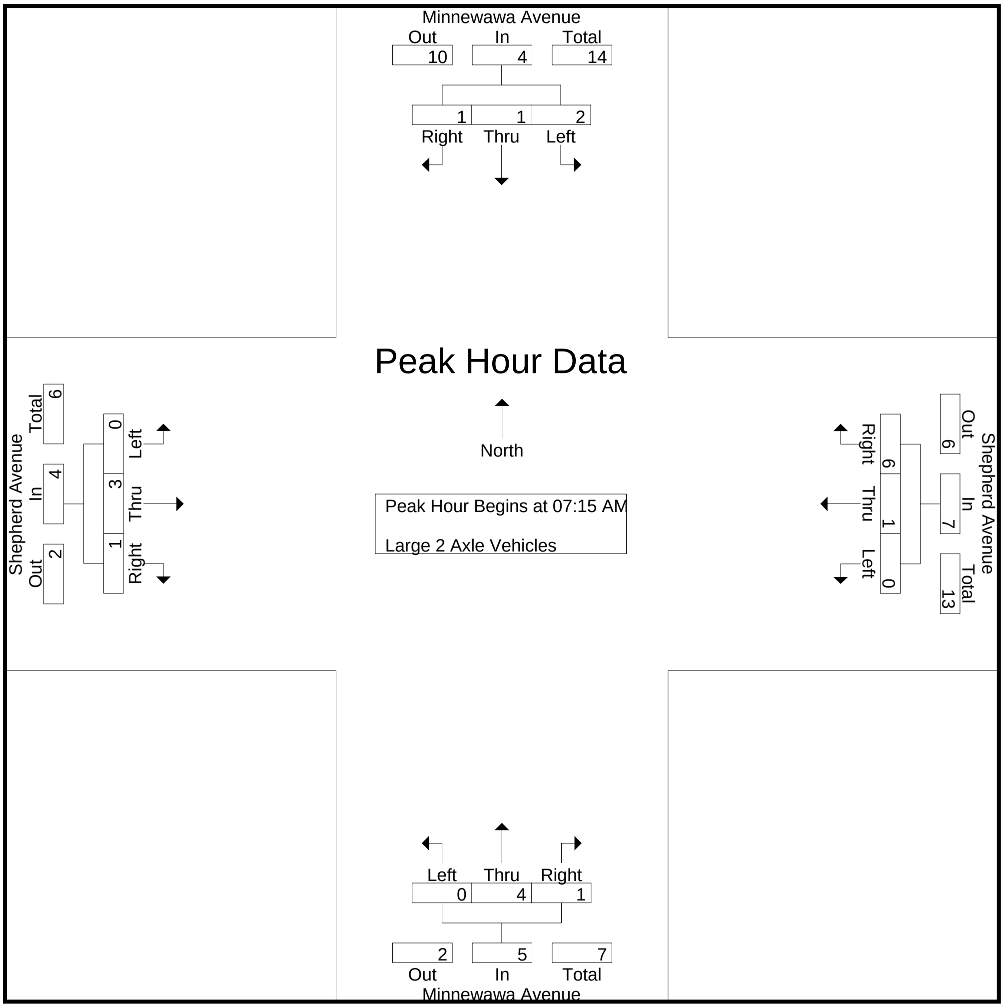

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	**1**	1	0	0	1	1	0	**3**	0	**3**	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	1	0	0	**1**	1	0	**2**	0	**2**
+30 mins.	**2**	0	0	**2**	0	**1**	**2**	**3**	0	0	0	0	0	1	0	1
+45 mins.	0	**1**	0	1	0	0	2	2	0	1	0	1	0	0	**1**	1
Total Volume	2	1	1	4	0	1	6	7	0	4	1	5	0	3	1	4
% App. Total	50	25	25		0	14.3	85.7		0	80	20		0	75	25	
PHF	.250	.250	.250	.500	.000	.250	.750	.583	.000	.333	.250	.417	.000	.375	.250	.500

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Groups Printed- 3 Axle Vehicles

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	3	0	0	3	0	0	0	0	0	0	0	0	0	1	0	1	4
Total	3	0	0	3	0	0	1	1	0	0	0	0	0	1	0	1	5
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:15 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
08:30 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	2	0	2	4
08:45 AM	1	1	0	2	0	0	2	2	0	2	0	2	0	0	0	0	6
Total	3	1	0	4	0	3	2	5	0	3	0	3	0	3	0	3	15
Grand Total	6	1	0	7	0	3	3	6	0	3	0	3	0	4	0	4	20
Apprch %	85.7	14.3	0		0	50	50		0	100	0		0	100	0		
Total %	30	5	0	35	0	15	15	30	0	15	0	15	0	20	0	20	

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	**3**	0	0	**3**	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**4**
08:00 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
Total Volume	3	0	0	3	0	2	1	3	0	0	0	0	0	1	0	1	7
% App. Total	100	0	0		0	66.7	33.3		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.250	.250	.375	.000	.000	.000	.000	.000	.250	.000	.250	.438

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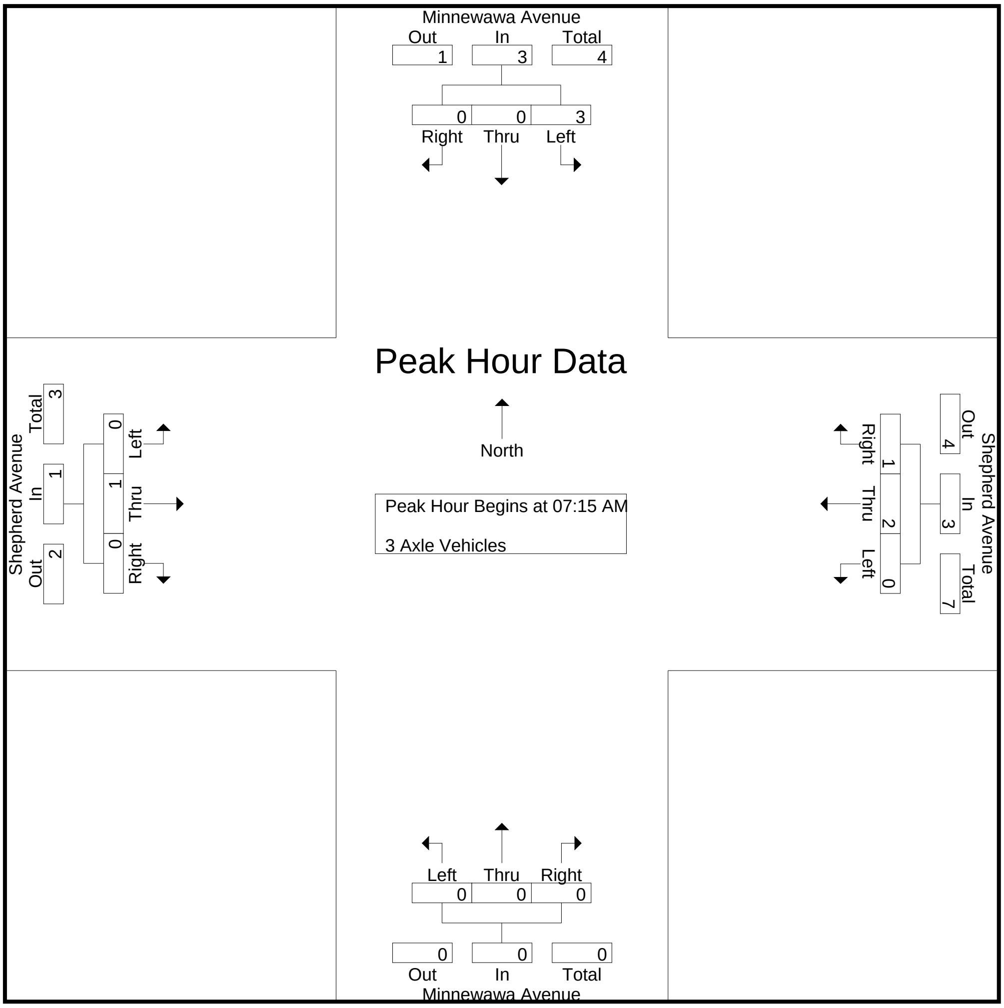

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	**3**	0	0	**3**	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+45 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
Total Volume	3	0	0	3	0	2	1	3	0	0	0	0	0	1	0	1
% App. Total	100	0	0		0	66.7	33.3		0	0	0		0	100	0	
PHF	.250	.000	.000	.250	.000	.250	.250	.375	.000	.000	.000	.000	.000	.250	.000	.250

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City of Clovis
N/S: Minnewawa Avenue
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File Name : 06_CVS_Min_Shep AMC
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Groups Printed- 4+ Axle Trucks

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	1	0	1	0	2	0	2	0	0	0	0	4
Grand Total	1	0	0	1	0	1	0	1	0	3	0	3	0	0	0	0	5
Apprch %	100	0	0		0	100	0		0	100	0		0	0	0		
Total %	20	0	0	20	0	20	0	20	0	60	0	60	0	0	0	0	

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

AGENDA ITEM NO. 6.

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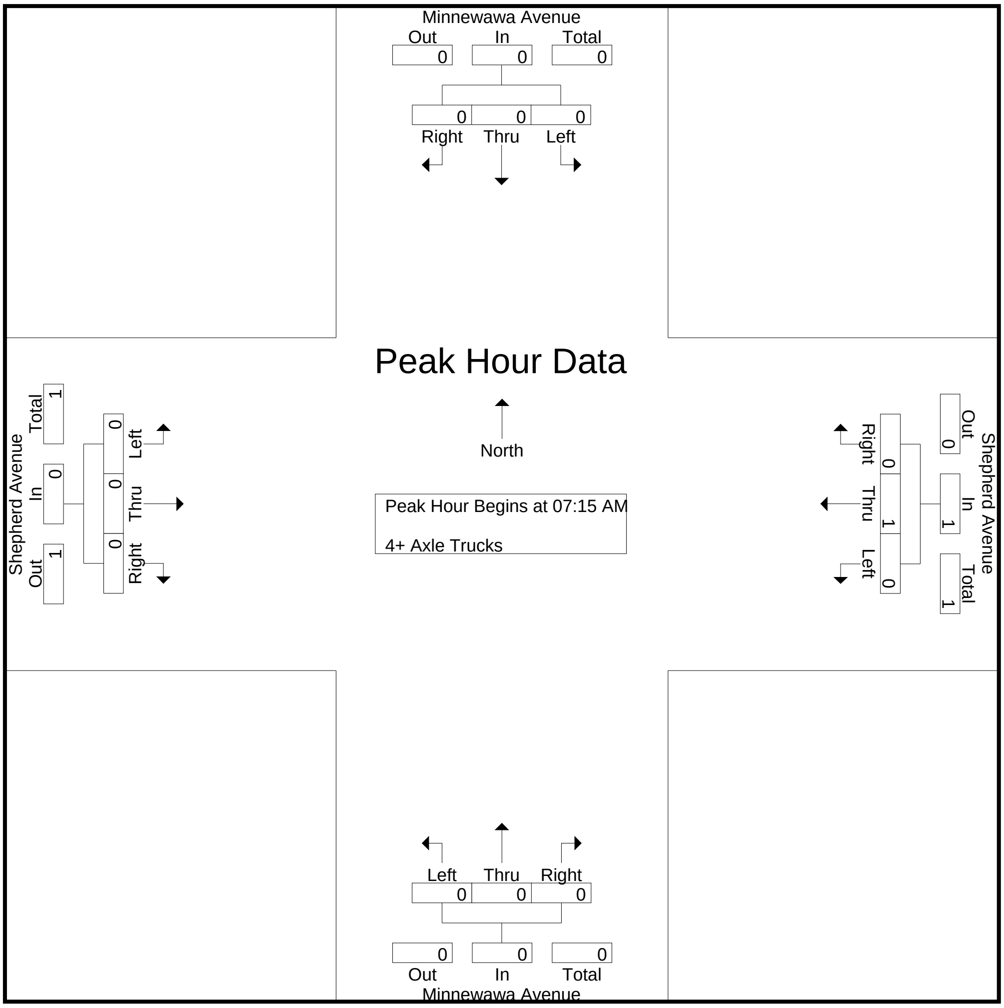

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Minnewawa Avenue				Shepherd Avenue				Minnewawa Avenue				Shepherd Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	14	39	3	56	7	81	19	107	27	31	7	65	6	83	18	107	335
04:15 PM	18	36	2	56	3	90	21	114	26	35	5	66	8	79	21	108	344
04:30 PM	14	39	2	55	5	89	28	122	20	31	3	54	5	84	22	111	342
04:45 PM	20	39	2	61	4	84	18	106	23	28	9	60	3	98	14	115	342
Total	66	153	9	228	19	344	86	449	96	125	24	245	22	344	75	441	1363
05:00 PM	20	22	3	45	6	70	16	92	24	33	7	64	10	97	18	125	326
05:15 PM	14	44	4	62	2	93	27	122	29	47	3	79	3	102	24	129	392
05:30 PM	22	37	4	63	7	95	24	126	28	44	7	79	4	93	25	122	390
05:45 PM	15	22	2	39	4	89	15	108	18	35	9	62	2	89	26	117	326
Total	71	125	13	209	19	347	82	448	99	159	26	284	19	381	93	493	1434
Grand Total	137	278	22	437	38	691	168	897	195	284	50	529	41	725	168	934	2797
Apprch %	31.4	63.6	5		4.2	77	18.7		36.9	53.7	9.5		4.4	77.6	18		
Total %	4.9	9.9	0.8	15.6	1.4	24.7	6	32.1	7	10.2	1.8	18.9	1.5	25.9	6	33.4	
Passenger Vehicles	135	270	22	427	37	686	167	890	192	281	50	523	41	719	166	926	2766
% Passenger Vehicles	98.5	97.1	100	97.7	97.4	99.3	99.4	99.2	98.5	98.9	100	98.9	100	99.2	98.8	99.1	98.9
Large 2 Axle Vehicles	2	7	0	9	1	5	1	7	3	3	0	6	0	6	2	8	30
% Large 2 Axle Vehicles	1.5	2.5	0	2.1	2.6	0.7	0.6	0.8	1.5	1.1	0	1.1	0	0.8	1.2	0.9	1.1
3 Axle Vehicles	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0.4	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Minnewawa Avenue				Shepherd Avenue				Minnewawa Avenue				Shepherd Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	20	39	2	61	4	84	18	106	23	28	**9**	60	3	98	14	115	342
05:00 PM	20	22	3	45	6	70	16	92	24	33	7	64	**10**	97	18	125	326
05:15 PM	14	**44**	**4**	62	2	93	**27**	122	**29**	**47**	3	**79**	3	**102**	24	**129**	**392**
05:30 PM	**22**	37	4	**63**	**7**	**95**	24	**126**	28	44	7	79	4	93	**25**	122	390
Total Volume	76	142	13	231	19	342	85	446	104	152	26	282	20	390	81	491	1450
% App. Total	32.9	61.5	5.6		4.3	76.7	19.1		36.9	53.9	9.2		4.1	79.4	16.5		
PHF	.864	.807	.813	.917	.679	.900	.787	.885	.897	.809	.722	.892	.500	.956	.810	.952	.925

City of Clovis
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Weather: Clear

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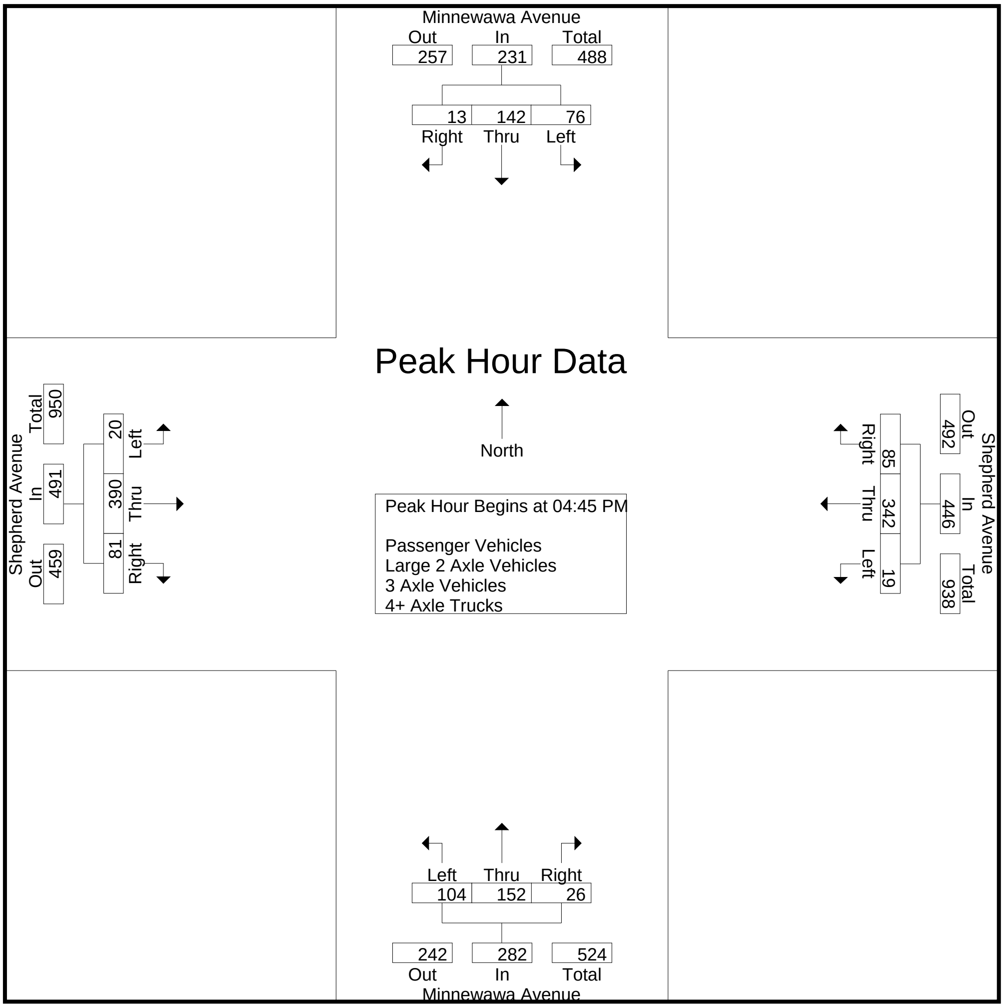

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				05:00 PM				05:00 PM			
+0 mins.	20	39	2	61	**7**	81	19	107	24	33	7	64	**10**	97	18	125
+15 mins.	20	22	3	45	3	**90**	21	114	**29**	**47**	3	**79**	3	**102**	24	**129**
+30 mins.	14	**44**	**4**	62	5	89	**28**	**122**	28	44	7	79	4	93	25	122
+45 mins.	**22**	37	4	**63**	4	84	18	106	18	35	**9**	62	2	89	**26**	117
Total Volume	76	142	13	231	19	344	86	449	99	159	26	284	19	381	93	493
% App. Total	32.9	61.5	5.6		4.2	76.6	19.2		34.9	56	9.2		3.9	77.3	18.9	
PHF	.864	.807	.813	.917	.679	.956	.768	.920	.853	.846	.722	.899	.475	.934	.894	.955

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Clovis
N/S: Minnewawa Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 06_CVS_Min_Shep PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	13	34	3	50	6	78	19	103	26	31	7	64	6	83	17	106	323
04:15 PM	18	35	2	55	3	89	20	112	24	35	5	64	8	76	21	105	336
04:30 PM	14	38	2	54	5	88	28	121	20	31	3	54	5	84	22	111	340
04:45 PM	19	39	2	60	4	84	18	106	23	28	9	60	3	96	14	113	339
Total	64	146	9	219	18	339	85	442	93	125	24	242	22	339	74	435	1338
05:00 PM	20	21	3	44	6	70	16	92	24	31	7	62	10	97	18	125	323
05:15 PM	14	44	4	62	2	93	27	122	29	47	3	79	3	102	23	128	391
05:30 PM	22	37	4	63	7	95	24	126	28	44	7	79	4	93	25	122	390
05:45 PM	15	22	2	39	4	89	15	108	18	34	9	61	2	88	26	116	324
Total	71	124	13	208	19	347	82	448	99	156	26	281	19	380	92	491	1428
Grand Total	135	270	22	427	37	686	167	890	192	281	50	523	41	719	166	926	2766
Apprch %	31.6	63.2	5.2		4.2	77.1	18.8		36.7	53.7	9.6		4.4	77.6	17.9		
Total %	4.9	9.8	0.8	15.4	1.3	24.8	6	32.2	6.9	10.2	1.8	18.9	1.5	26	6	33.5	

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	19	39	2	60	4	84	18	106	23	28	**9**	60	3	96	14	113	339
05:00 PM	20	21	3	44	6	70	16	92	24	31	7	62	**10**	97	18	125	323
05:15 PM	14	**44**	**4**	62	2	93	**27**	122	**29**	**47**	3	**79**	3	**102**	23	**128**	**391**
05:30 PM	**22**	37	4	**63**	**7**	**95**	24	**126**	28	44	7	79	4	93	**25**	122	390
Total Volume	75	141	13	229	19	342	85	446	104	150	26	280	20	388	80	488	1443
% App. Total	32.8	61.6	5.7		4.3	76.7	19.1		37.1	53.6	9.3		4.1	79.5	16.4		
PHF	.852	.801	.813	.909	.679	.900	.787	.885	.897	.798	.722	.886	.500	.951	.800	.953	.923

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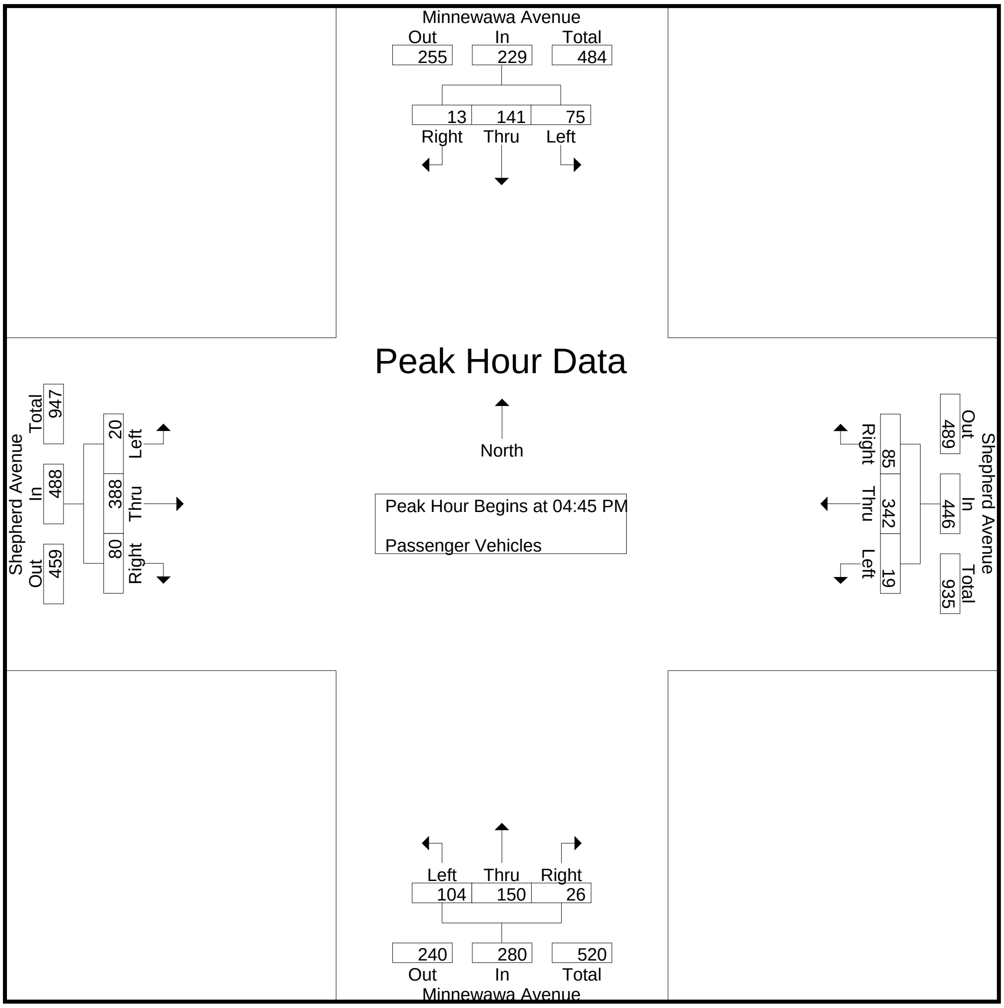

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	19	39	2	60	4	84	18	106	23	28	**9**	60	3	96	14	113
+15 mins.	20	21	3	44	6	70	16	92	24	31	7	62	**10**	97	18	125
+30 mins.	14	**44**	**4**	62	2	93	**27**	122	**29**	**47**	3	**79**	3	**102**	23	**128**
+45 mins.	**22**	37	4	**63**	**7**	**95**	24	**126**	28	44	7	79	4	93	**25**	122
Total Volume	75	141	13	229	19	342	85	446	104	150	26	280	20	388	80	488
% App. Total	32.8	61.6	5.7		4.3	76.7	19.1		37.1	53.6	9.3		4.1	79.5	16.4	
PHF	.852	.801	.813	.909	.679	.900	.787	.885	.897	.798	.722	.886	.500	.951	.800	.953

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City of Clovis
N/S: Minnewawa Avenue
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Weather: Clear

File Name : 06_CVS_Min_Shep PMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Large 2 Axle Vehicles

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	4	0	5	1	3	0	4	1	0	0	1	0	0	1	1	11
04:15 PM	0	1	0	1	0	1	1	2	2	0	0	2	0	3	0	3	8
04:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
Total	2	6	0	8	1	5	1	7	3	0	0	3	0	5	1	6	24
05:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Total	0	1	0	1	0	0	0	0	0	3	0	3	0	1	1	2	6
Grand Total	2	7	0	9	1	5	1	7	3	3	0	6	0	6	2	8	30
Apprch %	22.2	77.8	0		14.3	71.4	14.3		50	50	0		0	75	25		
Total %	6.7	23.3	0	30	3.3	16.7	3.3	23.3	10	10	0	20	0	20	6.7	26.7	

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**3**
05:00 PM	0	**1**	0	1	0	0	0	0	0	**2**	0	**2**	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	1	0	2	0	0	0	0	0	2	0	2	0	2	1	3	7
% App. Total	50	50	0		0	0	0		0	100	0		0	66.7	33.3		
PHF	.250	.250	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.250	.375	.583

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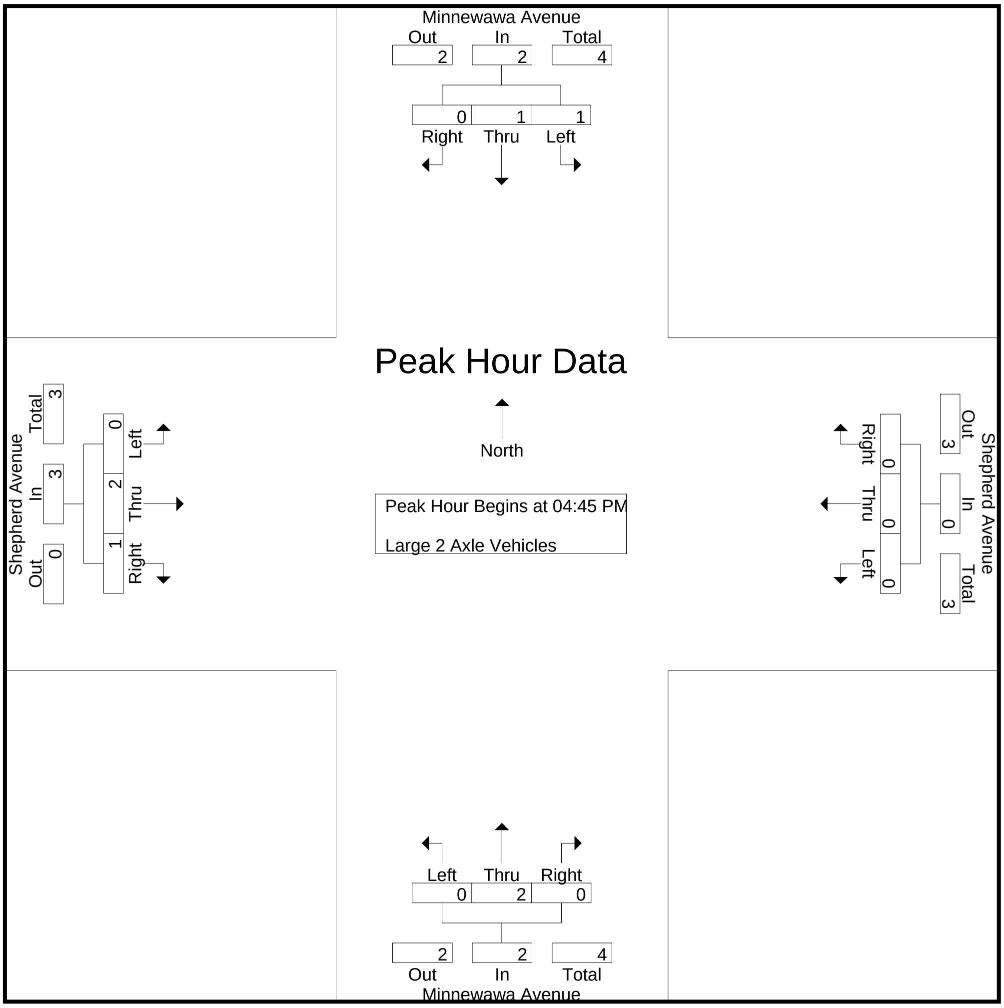

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+15 mins.	0	**1**	0	1	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	1	0	2	0	0	0	0	0	2	0	2	0	2	1	3
% App. Total	50	50	0		0	0	0		0	100	0		0	66.7	33.3	
PHF	.250	.250	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.250	.375

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File Name : 06_CVS_Min_Shep PMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- 3 Axle Vehicles

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Clovis
N/S: Minnewawa Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 06_CVS_Min_Shep PMC
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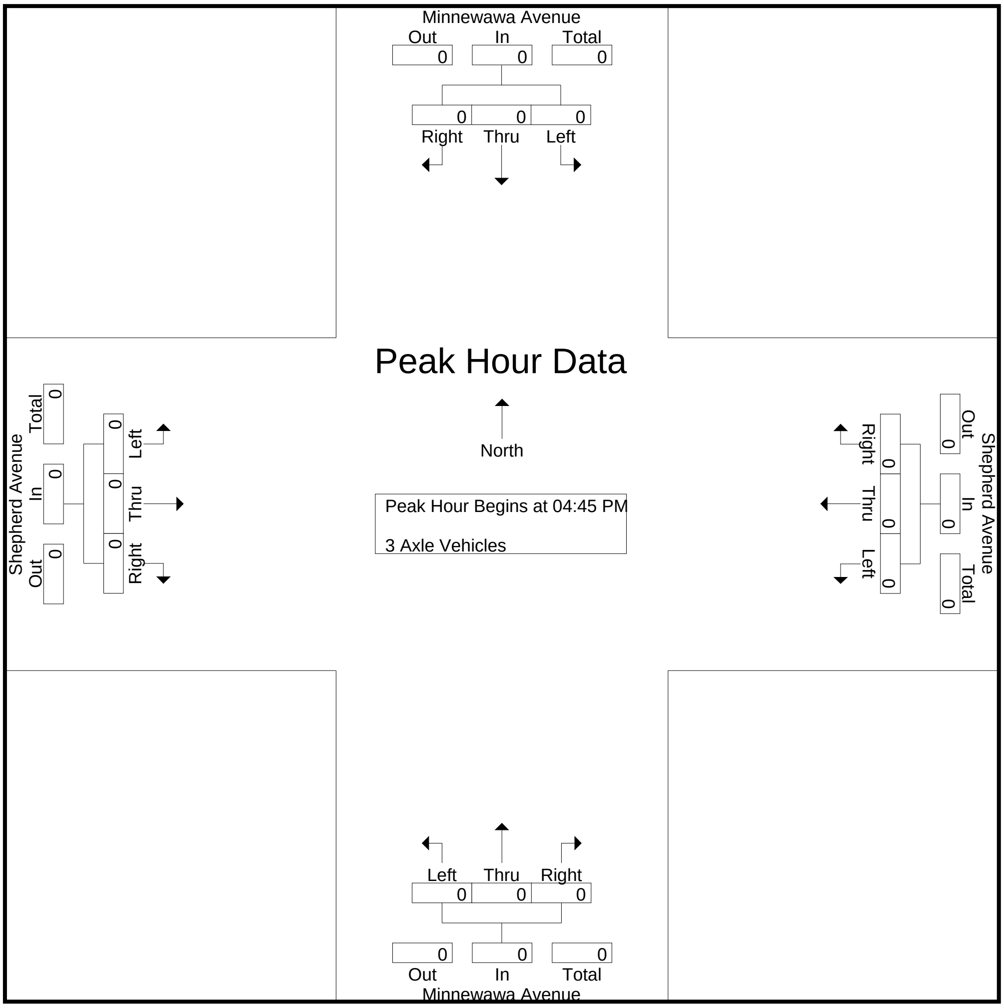

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
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File Name : 06_CVS_Min_Shep PMC
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Groups Printed- 4+ Axle Trucks

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Minnewawa Avenue Southbound				Shepherd Avenue Westbound				Minnewawa Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Minnewawa Avenue
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File Name : 06_CVS_Min_Shep PMC
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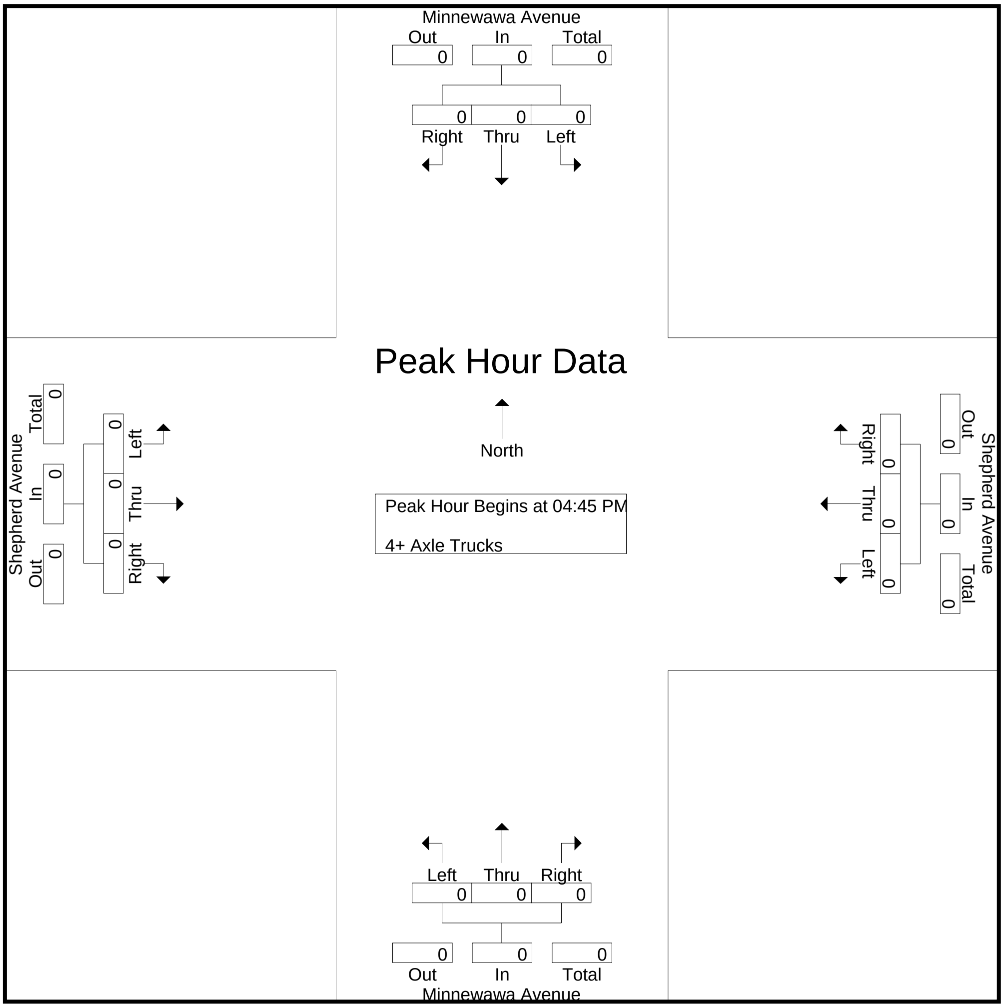

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Minnewawa Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Minnewawa Avenue	East Leg Shepherd Avenue	South Leg Minnewawa Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	1	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	1	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	2	0	2

	North Leg Minnewawa Avenue	East Leg Shepherd Avenue	South Leg Minnewawa Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Minnewawa Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Minnewawa Avenue			Westbound Shepherd Avenue			Northbound Minnewawa Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	2
7:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	1	0	0	1	1	2	0	0	0	0	5
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES:	1	1	1	0	1	2	2	2	0	1	1	0	12

	Southbound Minnewawa Avenue			Westbound Shepherd Avenue			Northbound Minnewawa Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	1	0	2

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City of Clovis
N/S: Clovis Avenue
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Weather: Clear

File Name : 08_CVS_Clo_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue				Shepherd Avenue				Clovis Avenue				Shepherd Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	5	3	11	16	74	2	92	13	13	3	29	4	39	12	55	187
07:15 AM	3	11	12	26	41	70	8	119	25	15	26	66	2	69	19	90	301
07:30 AM	8	33	30	71	29	79	31	139	29	16	24	69	3	75	39	117	396
07:45 AM	3	21	9	33	21	76	3	100	13	18	22	53	8	107	30	145	331
Total	17	70	54	141	107	299	44	450	80	62	75	217	17	290	100	407	1215
08:00 AM	5	6	16	27	18	69	6	93	13	10	14	37	19	86	30	135	292
08:15 AM	2	11	4	17	14	78	5	97	20	16	16	52	17	63	23	103	269
08:30 AM	6	12	9	27	10	70	1	81	18	6	10	34	10	51	23	84	226
08:45 AM	6	6	12	24	9	79	1	89	13	11	10	34	5	52	26	83	230
Total	19	35	41	95	51	296	13	360	64	43	50	157	51	252	102	405	1017
Grand Total	36	105	95	236	158	595	57	810	144	105	125	374	68	542	202	812	2232
Apprch %	15.3	44.5	40.3		19.5	73.5	7		38.5	28.1	33.4		8.4	66.7	24.9		
Total %	1.6	4.7	4.3	10.6	7.1	26.7	2.6	36.3	6.5	4.7	5.6	16.8	3	24.3	9.1	36.4	
Passenger Vehicles	30	97	91	218	156	579	54	789	139	93	120	352	63	523	200	786	2145
% Passenger Vehicles	83.3	92.4	95.8	92.4	98.7	97.3	94.7	97.4	96.5	88.6	96	94.1	92.6	96.5	99	96.8	96.1
Large 2 Axle Vehicles	5	4	2	11	2	12	3	17	5	7	3	15	3	11	0	14	57
% Large 2 Axle Vehicles	13.9	3.8	2.1	4.7	1.3	2	5.3	2.1	3.5	6.7	2.4	4	4.4	2	0	1.7	2.6
3 Axle Vehicles	1	2	1	4	0	4	0	4	0	4	1	5	2	8	1	11	24
% 3 Axle Vehicles	2.8	1.9	1.1	1.7	0	0.7	0	0.5	0	3.8	0.8	1.3	2.9	1.5	0.5	1.4	1.1
4+ Axle Trucks	0	2	1	3	0	0	0	0	0	1	1	2	0	0	1	1	6
% 4+ Axle Trucks	0	1.9	1.1	1.3	0	0	0	0	0	1	0.8	0.5	0	0	0.5	0.1	0.3

	Clovis Avenue				Shepherd Avenue				Clovis Avenue				Shepherd Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	11	12	26	**41**	70	8	119	25	15	**26**	66	2	69	19	90	301
07:30 AM	**8**	**33**	**30**	**71**	29	**79**	**31**	**139**	**29**	16	24	**69**	3	75	**39**	117	**396**
07:45 AM	3	21	9	33	21	76	3	100	13	**18**	22	53	8	**107**	30	**145**	331
08:00 AM	5	6	16	27	18	69	6	93	13	10	14	37	**19**	86	30	135	292
Total Volume	19	71	67	157	109	294	48	451	80	59	86	225	32	337	118	487	1320
% App. Total	12.1	45.2	42.7		24.2	65.2	10.6		35.6	26.2	38.2		6.6	69.2	24.2		
PHF	.594	.538	.558	.553	.665	.930	.387	.811	.690	.819	.827	.815	.421	.787	.756	.840	.833

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City of Clovis
N/S: Clovis Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 08_CVS_Clo_Shep AMC
Site Code : 00322473
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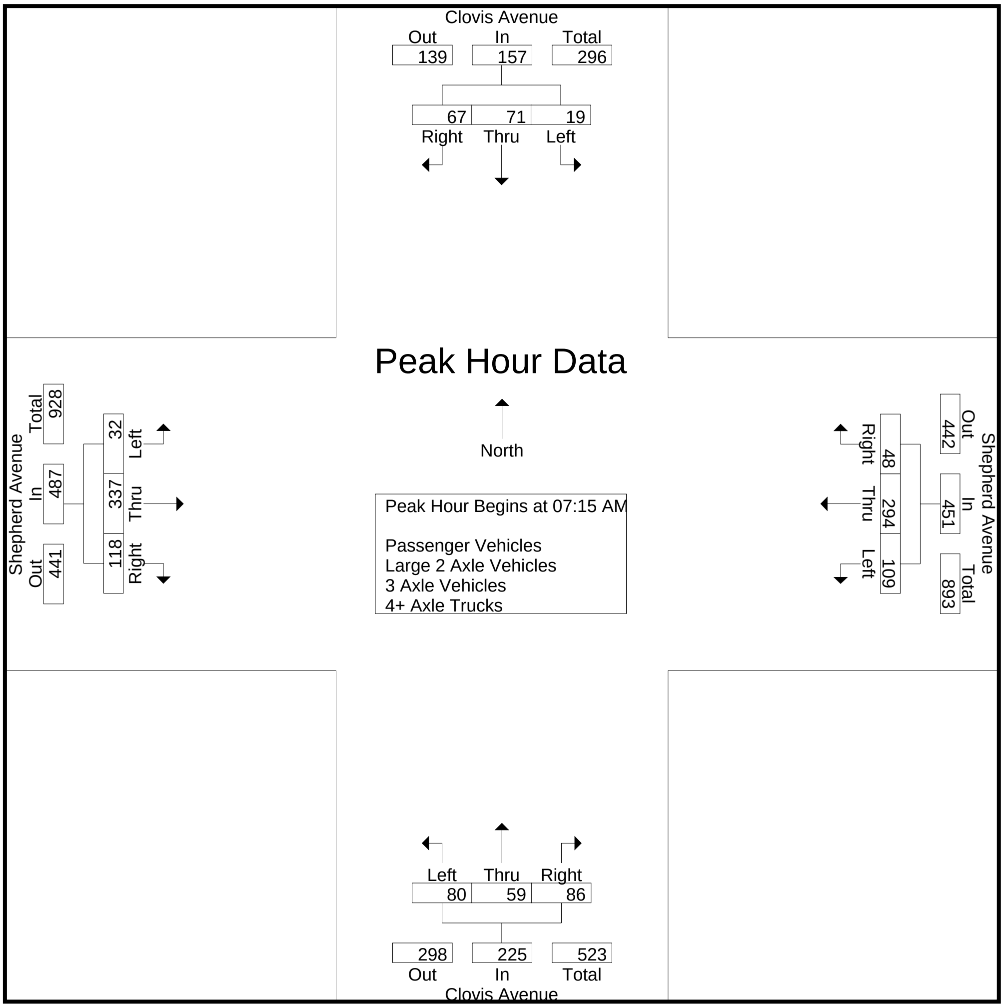

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	3	11	12	26	**41**	70	8	119	25	15	**26**	66	3	75	**39**	117
+15 mins.	**8**	**33**	**30**	**71**	29	**79**	**31**	**139**	**29**	16	24	**69**	8	**107**	30	**145**
+30 mins.	3	21	9	33	21	76	3	100	13	**18**	22	53	**19**	86	30	135
+45 mins.	5	6	16	27	18	69	6	93	13	10	14	37	17	63	23	103
Total Volume	19	71	67	157	109	294	48	451	80	59	86	225	47	331	122	500
% App. Total	12.1	45.2	42.7		24.2	65.2	10.6		35.6	26.2	38.2		9.4	66.2	24.4	
PHF	.594	.538	.558	.553	.665	.930	.387	.811	.690	.819	.827	.815	.618	.773	.782	.862

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Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	3	3	9	15	69	2	86	13	13	2	28	4	39	12	55	178
07:15 AM	3	11	12	26	41	69	8	118	24	13	25	62	2	68	19	89	295
07:30 AM	6	33	30	69	29	79	29	137	28	12	23	63	3	73	39	115	384
07:45 AM	3	19	9	31	20	75	3	98	11	15	22	48	6	100	30	136	313
Total	15	66	54	135	105	292	42	439	76	53	72	201	15	280	100	395	1170
08:00 AM	5	5	13	23	18	66	6	90	13	10	13	36	19	86	30	135	284
08:15 AM	1	10	4	15	14	75	5	94	19	15	15	49	15	60	23	98	256
08:30 AM	5	10	9	24	10	69	1	80	18	6	10	34	10	48	21	79	217
08:45 AM	4	6	11	21	9	77	0	86	13	9	10	32	4	49	26	79	218
Total	15	31	37	83	51	287	12	350	63	40	48	151	48	243	100	391	975
Grand Total	30	97	91	218	156	579	54	789	139	93	120	352	63	523	200	786	2145
Apprch %	13.8	44.5	41.7		19.8	73.4	6.8		39.5	26.4	34.1		8	66.5	25.4		
Total %	1.4	4.5	4.2	10.2	7.3	27	2.5	36.8	6.5	4.3	5.6	16.4	2.9	24.4	9.3	36.6	

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	11	12	26	**41**	69	8	118	24	13	**25**	62	2	68	19	89	295
07:30 AM	**6**	**33**	**30**	**69**	29	**79**	**29**	**137**	**28**	12	23	**63**	3	73	**39**	115	**384**
07:45 AM	3	19	9	31	20	75	3	98	11	**15**	22	48	6	**100**	30	**136**	313
08:00 AM	5	5	13	23	18	66	6	90	13	10	13	36	**19**	86	30	135	284
Total Volume	17	68	64	149	108	289	46	443	76	50	83	209	30	327	118	475	1276
% App. Total	11.4	45.6	43		24.4	65.2	10.4		36.4	23.9	39.7		6.3	68.8	24.8		
PHF	.708	.515	.533	.540	.659	.915	.397	.808	.679	.833	.830	.829	.395	.818	.756	.873	.831

AGENDA ITEM NO. 6.

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File Name : 08_CVS_Clo_Shep AMC
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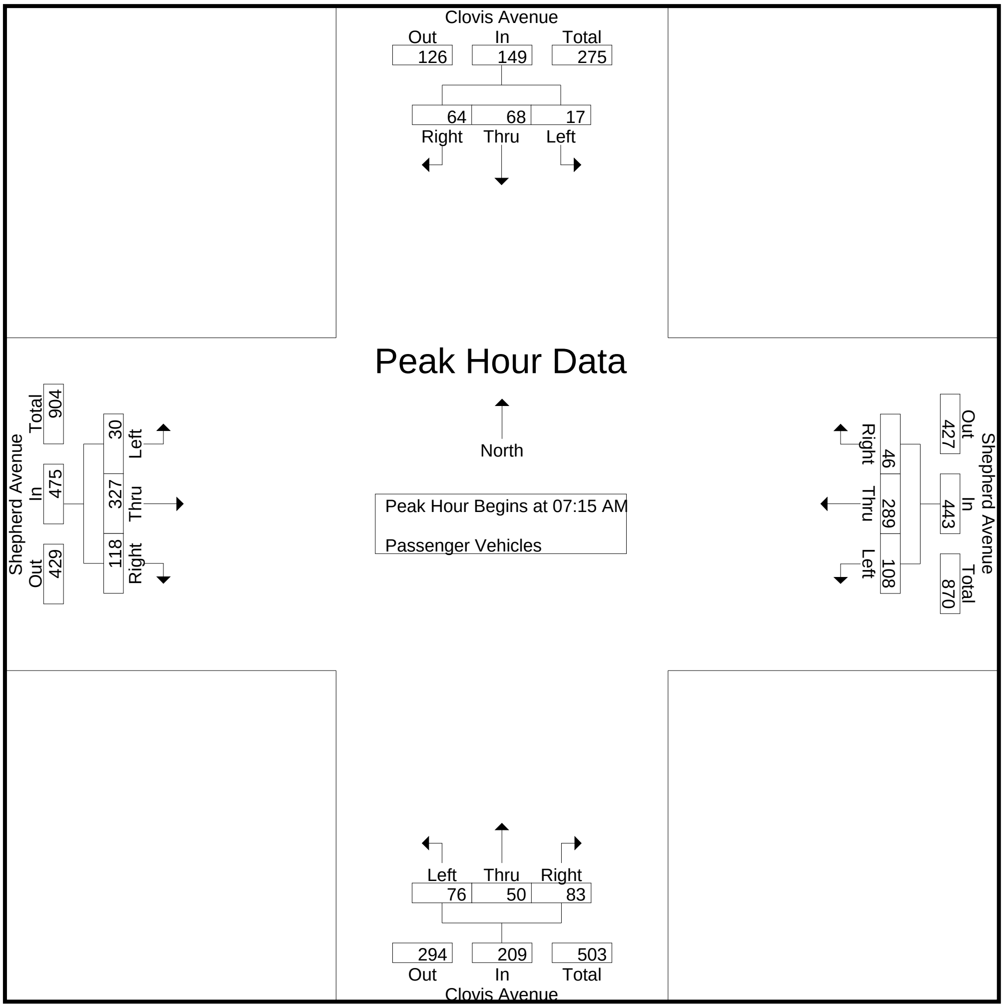

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	3	11	12	26	**41**	69	8	118	24	13	**25**	62	2	68	19	89
+15 mins.	**6**	**33**	**30**	**69**	29	**79**	**29**	**137**	**28**	12	23	**63**	3	73	**39**	115
+30 mins.	3	19	9	31	20	75	3	98	11	**15**	22	48	6	**100**	30	**136**
+45 mins.	5	5	13	23	18	66	6	90	13	10	13	36	**19**	86	30	135
Total Volume	17	68	64	149	108	289	46	443	76	50	83	209	30	327	118	475
% App. Total	11.4	45.6	43		24.4	65.2	10.4		36.4	23.9	39.7		6.3	68.8	24.8	
PHF	.708	.515	.533	.540	.659	.915	.397	.808	.679	.833	.830	.829	.395	.818	.756	.873

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Weather: Clear

File Name : 08_CVS_Clo_Shep AMC
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Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	5	0	6	0	0	1	1	0	0	0	0	7
07:15 AM	0	0	0	0	0	0	0	0	1	0	1	2	0	1	0	1	3
07:30 AM	2	0	0	2	0	0	2	2	1	1	1	3	0	2	0	2	9
07:45 AM	0	1	0	1	1	1	0	2	2	3	0	5	1	4	0	5	13
Total	2	1	0	3	2	6	2	10	4	4	3	11	1	7	0	8	32
08:00 AM	0	1	2	3	0	2	0	2	0	0	0	0	0	0	0	0	5
08:15 AM	1	0	0	1	0	3	0	3	1	1	0	2	2	2	0	4	10
08:30 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
08:45 AM	2	0	0	2	0	0	1	1	0	2	0	2	0	1	0	1	6
Total	3	3	2	8	0	6	1	7	1	3	0	4	2	4	0	6	25
Grand Total	5	4	2	11	2	12	3	17	5	7	3	15	3	11	0	14	57
Apprch %	45.5	36.4	18.2		11.8	70.6	17.6		33.3	46.7	20		21.4	78.6	0		
Total %	8.8	7	3.5	19.3	3.5	21.1	5.3	29.8	8.8	12.3	5.3	26.3	5.3	19.3	0	24.6	

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	1	0	**1**	2	0	1	0	1	3
07:30 AM	**2**	0	0	2	0	0	**2**	**2**	1	1	1	3	0	2	0	2	9
07:45 AM	0	**1**	0	1	**1**	1	0	2	**2**	**3**	0	**5**	**1**	**4**	0	**5**	**13**
08:00 AM	0	1	**2**	**3**	0	**2**	0	2	0	0	0	0	0	0	0	0	5
Total Volume	2	2	2	6	1	3	2	6	4	4	2	10	1	7	0	8	30
% App. Total	33.3	33.3	33.3		16.7	50	33.3		40	40	20		12.5	87.5	0		
PHF	.250	.500	.250	.500	.250	.375	.250	.750	.500	.333	.500	.500	.250	.438	.000	.400	.577

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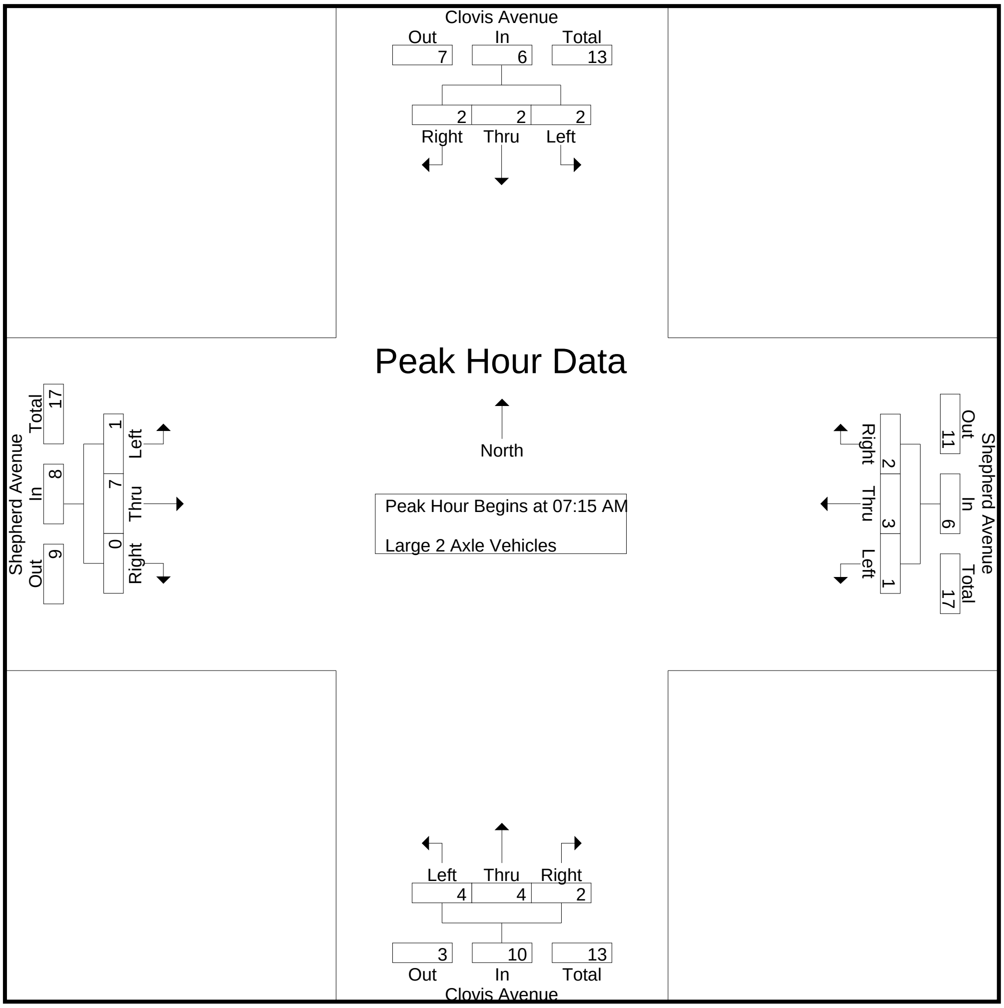

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	1	0	**1**	2	0	1	0	1
+15 mins.	**2**	0	0	2	0	0	**2**	**2**	1	1	1	3	0	2	0	2
+30 mins.	0	**1**	0	1	**1**	1	0	2	**2**	**3**	0	**5**	**1**	**4**	0	**5**
+45 mins.	0	1	**2**	**3**	0	**2**	0	2	0	0	0	0	0	0	0	0
Total Volume	2	2	2	6	1	3	2	6	4	4	2	10	1	7	0	8
% App. Total	33.3	33.3	33.3		16.7	50	33.3		40	40	20		12.5	87.5	0	
PHF	.250	.500	.250	.500	.250	.375	.250	.750	.500	.333	.500	.500	.250	.438	.000	.400

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City of Clovis
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Groups Printed- 3 Axle Vehicles

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	2	0	2	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	3	0	4	5
Total	0	2	0	2	0	1	0	1	0	4	0	4	1	3	0	4	11
08:00 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	2	1	3	4
08:45 AM	0	0	1	1	0	2	0	2	0	0	0	0	1	2	0	3	6
Total	1	0	1	2	0	3	0	3	0	0	1	1	1	5	1	7	13
Grand Total	1	2	1	4	0	4	0	4	0	4	1	5	2	8	1	11	24
Apprch %	25	50	25		0	100	0		0	80	20		18.2	72.7	9.1		
Total %	4.2	8.3	4.2	16.7	0	16.7	0	16.7	0	16.7	4.2	20.8	8.3	33.3	4.2	45.8	

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**1**	0	**1**	0	**2**	0	**2**	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**	**3**	0	**4**	**5**
08:00 AM	0	0	0	0	0	1	0	1	0	0	**1**	1	0	0	0	0	2
Total Volume	0	1	0	1	0	2	0	2	0	4	1	5	1	3	0	4	12
% App. Total	0	100	0		0	100	0		0	80	20		25	75	0		
PHF	.000	.250	.000	.250	.000	.500	.000	.500	.000	.500	.250	.625	.250	.250	.000	.250	.600

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File Name : 08_CVS_Clo_Shep AMC
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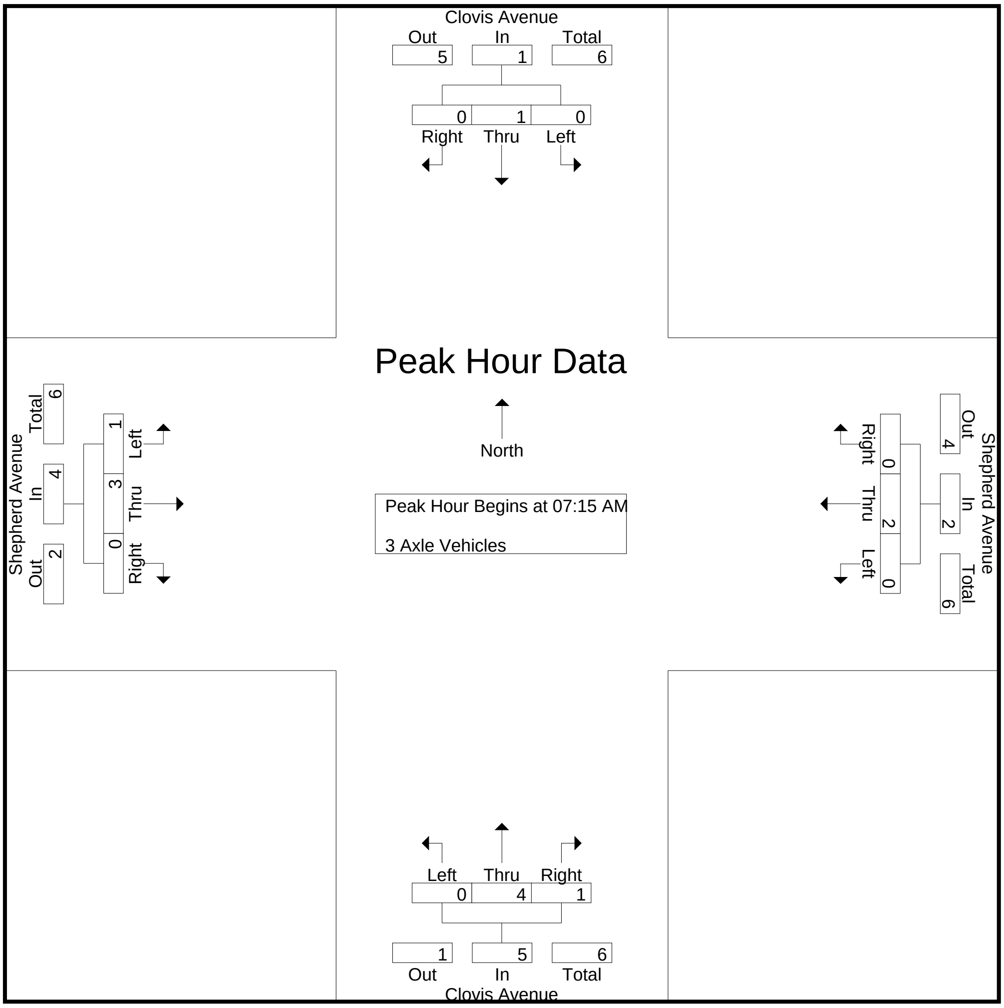

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	**2**	0	**2**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**	**3**	0	**4**
+45 mins.	0	0	0	0	0	1	0	1	0	0	**1**	1	0	0	0	0
Total Volume	0	1	0	1	0	2	0	2	0	4	1	5	1	3	0	4
% App. Total	0	100	0		0	100	0		0	80	20		25	75	0	
PHF	.000	.250	.000	.250	.000	.500	.000	.500	.000	.500	.250	.625	.250	.250	.000	.250

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File Name : 08_CVS_Clo_Shep AMC
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Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	0	0	0	0	0	1	1	0	0	1	1	4
Grand Total	0	2	1	3	0	0	0	0	0	1	1	2	0	0	1	1	6
Apprch %	0	66.7	33.3		0	0	0		0	50	50		0	0	100		
Total %	0	33.3	16.7	50	0	0	0	0	0	16.7	16.7	33.3	0	0	16.7	16.7	

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
% App. Total	0	0	100		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.500

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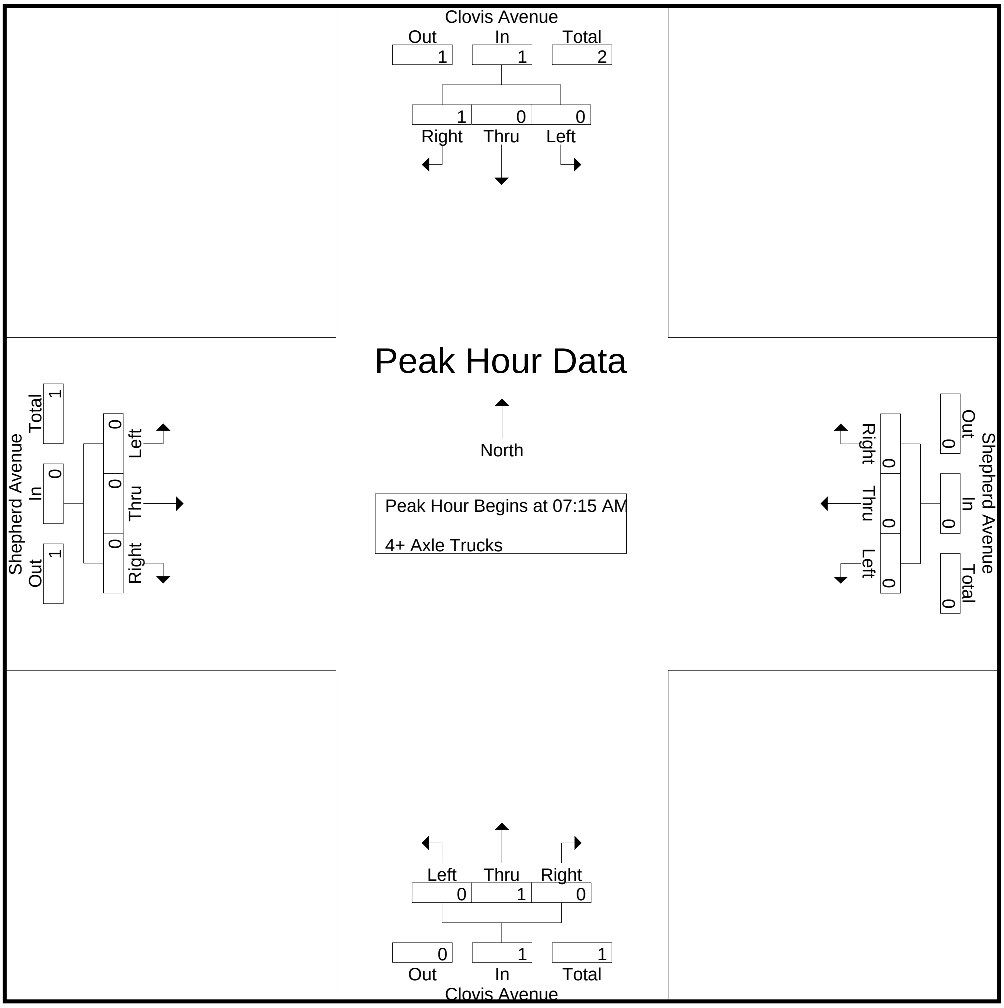
City of Clovis
N/S: Clovis Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 08_CVS_Clo_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	0	100		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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File Name : 08_CVS_Clo_Shep PMC
Site Code : 00322473
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	11	5	21	16	65	4	85	39	7	14	60	5	66	31	102	268
04:15 PM	2	5	7	14	8	83	9	100	33	10	12	55	3	73	26	102	271
04:30 PM	2	10	4	16	15	75	4	94	29	11	12	52	4	67	26	97	259
04:45 PM	4	7	5	16	17	70	0	87	35	8	21	64	11	79	27	117	284
Total	13	33	21	67	56	293	17	366	136	36	59	231	23	285	110	418	1082
05:00 PM	2	8	4	14	26	65	4	95	35	14	19	68	5	86	29	120	297
05:15 PM	0	6	10	16	17	92	1	110	40	7	14	61	8	92	23	123	310
05:30 PM	4	3	7	14	17	77	2	96	30	15	16	61	8	86	24	118	289
05:45 PM	1	3	4	8	9	76	1	86	25	8	15	48	10	86	18	114	256
Total	7	20	25	52	69	310	8	387	130	44	64	238	31	350	94	475	1152
Grand Total	20	53	46	119	125	603	25	753	266	80	123	469	54	635	204	893	2234
Apprch %	16.8	44.5	38.7		16.6	80.1	3.3		56.7	17.1	26.2		6	71.1	22.8		
Total %	0.9	2.4	2.1	5.3	5.6	27	1.1	33.7	11.9	3.6	5.5	21	2.4	28.4	9.1	40	
Passenger Vehicles	20	53	46	119	123	599	25	747	265	80	121	466	52	625	202	879	2211
% Passenger Vehicles	100	100	100	100	98.4	99.3	100	99.2	99.6	100	98.4	99.4	96.3	98.4	99	98.4	99
Large 2 Axle Vehicles	0	0	0	0	2	4	0	6	1	0	2	3	2	10	2	14	23
% Large 2 Axle Vehicles	0	0	0	0	1.6	0.7	0	0.8	0.4	0	1.6	0.6	3.7	1.6	1	1.6	1
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**4**	7	5	**16**	17	70	0	87	35	8	**21**	64	**11**	79	27	117	284
05:00 PM	2	**8**	4	14	**26**	65	**4**	95	35	14	19	**68**	5	86	**29**	120	297
05:15 PM	0	6	**10**	16	17	**92**	1	**110**	**40**	7	14	61	8	**92**	23	**123**	**310**
05:30 PM	4	3	7	14	17	77	2	96	30	**15**	16	61	8	86	24	118	289
Total Volume	10	24	26	60	77	304	7	388	140	44	70	254	32	343	103	478	1180
% App. Total	16.7	40	43.3		19.8	78.4	1.8		55.1	17.3	27.6		6.7	71.8	21.5		
PHF	.625	.750	.650	.938	.740	.826	.438	.882	.875	.733	.833	.934	.727	.932	.888	.972	.952

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City of Clovis
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E/W: Shepherd Avenue
Weather: Clear

File Name : 08_CVS_Clo_Shep PMC
Site Code : 00322473
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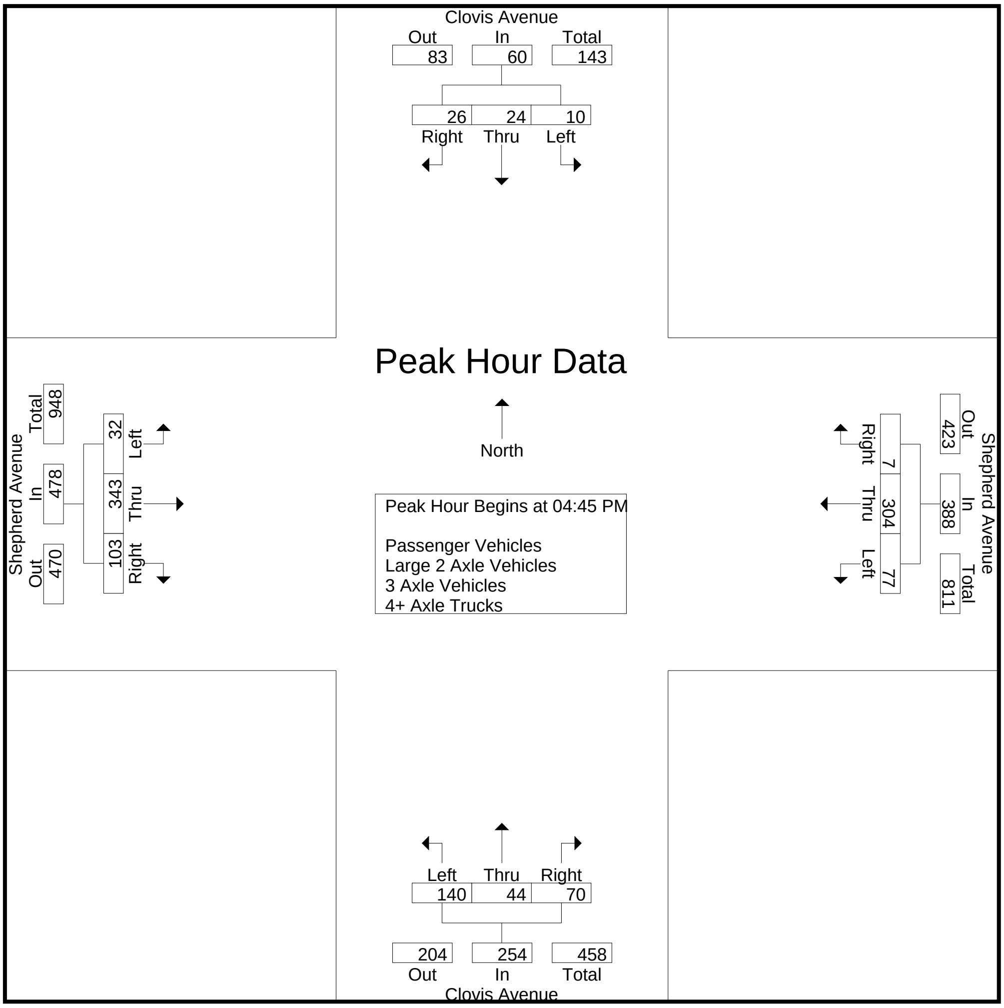

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**5**	**11**	5	**21**	17	70	0	87	35	8	**21**	64	**11**	79	27	117
+15 mins.	2	5	**7**	14	**26**	65	**4**	95	35	14	19	**68**	5	86	**29**	120
+30 mins.	2	10	4	16	17	**92**	1	**110**	**40**	7	14	61	8	**92**	23	**123**
+45 mins.	4	7	5	16	17	77	2	96	30	**15**	16	61	8	86	24	118
Total Volume	13	33	21	67	77	304	7	388	140	44	70	254	32	343	103	478
% App. Total	19.4	49.3	31.3		19.8	78.4	1.8		55.1	17.3	27.6		6.7	71.8	21.5	
PHF	.650	.750	.750	.798	.740	.826	.438	.882	.875	.733	.833	.934	.727	.932	.888	.972

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File Name : 08_CVS_Clo_Shep PMC
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Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	11	5	21	14	62	4	80	39	7	13	59	5	65	31	101	261
04:15 PM	2	5	7	14	8	82	9	99	32	10	12	54	3	68	25	96	263
04:30 PM	2	10	4	16	15	75	4	94	29	11	12	52	4	67	26	97	259
04:45 PM	4	7	5	16	17	70	0	87	35	8	21	64	9	76	27	112	279
Total	13	33	21	67	54	289	17	360	135	36	58	229	21	276	109	406	1062
05:00 PM	2	8	4	14	26	65	4	95	35	14	19	68	5	86	29	120	297
05:15 PM	0	6	10	16	17	92	1	110	40	7	13	60	8	92	23	123	309
05:30 PM	4	3	7	14	17	77	2	96	30	15	16	61	8	85	24	117	288
05:45 PM	1	3	4	8	9	76	1	86	25	8	15	48	10	86	17	113	255
Total	7	20	25	52	69	310	8	387	130	44	63	237	31	349	93	473	1149
Grand Total	20	53	46	119	123	599	25	747	265	80	121	466	52	625	202	879	2211
Apprch %	16.8	44.5	38.7		16.5	80.2	3.3		56.9	17.2	26		5.9	71.1	23		
Total %	0.9	2.4	2.1	5.4	5.6	27.1	1.1	33.8	12	3.6	5.5	21.1	2.4	28.3	9.1	39.8	

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**4**	7	5	**16**	17	70	0	87	35	8	**21**	64	**9**	76	27	112	279
05:00 PM	2	**8**	4	14	**26**	65	**4**	95	35	14	19	**68**	5	86	**29**	120	297
05:15 PM	0	6	**10**	16	17	**92**	1	**110**	**40**	7	13	60	8	**92**	23	**123**	**309**
05:30 PM	4	3	7	14	17	77	2	96	30	**15**	16	61	8	85	24	117	288
Total Volume	10	24	26	60	77	304	7	388	140	44	69	253	30	339	103	472	1173
% App. Total	16.7	40	43.3		19.8	78.4	1.8		55.3	17.4	27.3		6.4	71.8	21.8		
PHF	.625	.750	.650	.938	.740	.826	.438	.882	.875	.733	.821	.930	.833	.921	.888	.959	.949

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File Name : 08_CVS_Clo_Shep PMC
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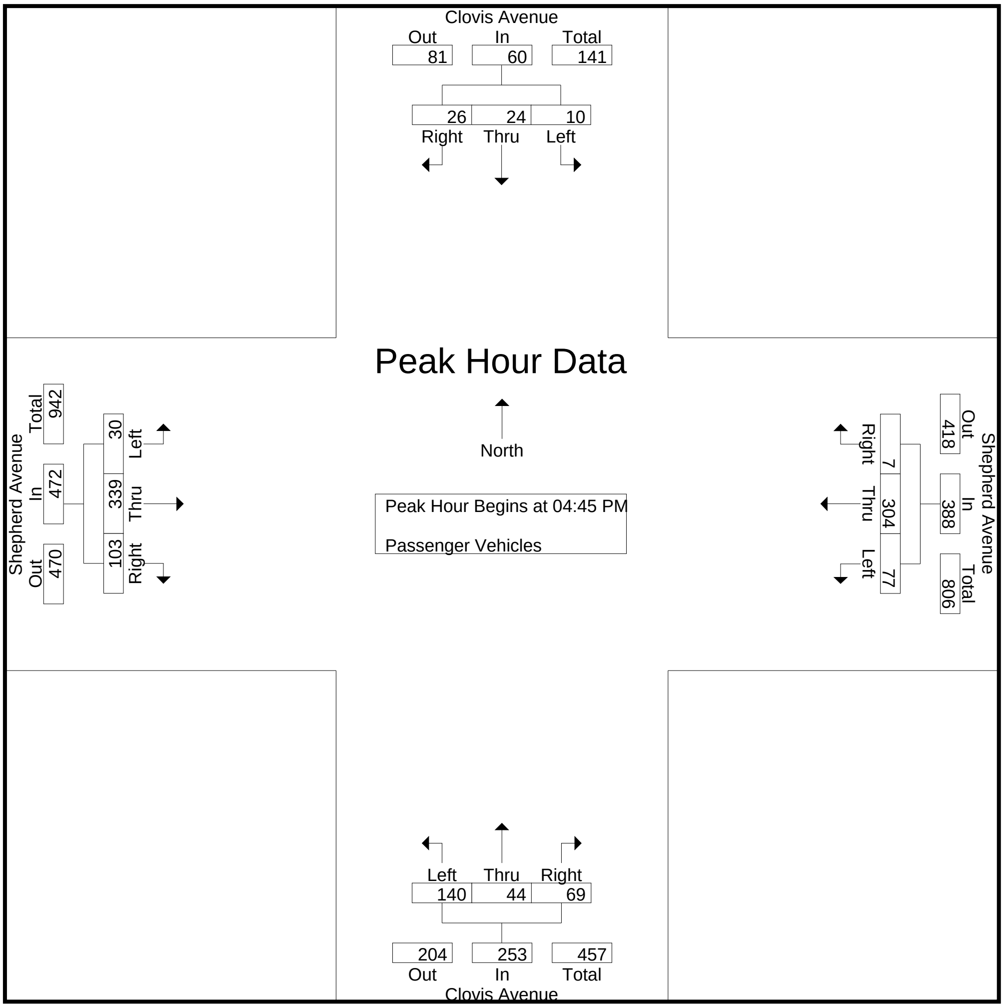

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**4**	7	5	**16**	17	70	0	87	35	8	**21**	64	**9**	76	27	112
+15 mins.	2	**8**	4	14	**26**	65	**4**	95	35	14	19	**68**	5	86	**29**	120
+30 mins.	0	6	**10**	16	17	**92**	1	**110**	**40**	7	13	60	8	**92**	23	**123**
+45 mins.	4	3	7	14	17	77	2	96	30	**15**	16	61	8	85	24	117
Total Volume	10	24	26	60	77	304	7	388	140	44	69	253	30	339	103	472
% App. Total	16.7	40	43.3		19.8	78.4	1.8		55.3	17.4	27.3		6.4	71.8	21.8	
PHF	.625	.750	.650	.938	.740	.826	.438	.882	.875	.733	.821	.930	.833	.921	.888	.959

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City of Clovis
N/S: Clovis Avenue
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Weather: Clear

File Name : 08_CVS_Clo_Shep PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	2	3	0	5	0	0	1	1	0	1	0	1	7
04:15 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	5	1	6	8
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	5
Total	0	0	0	0	2	4	0	6	1	0	1	2	2	9	1	12	20
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	2	3
Grand Total	0	0	0	0	2	4	0	6	1	0	2	3	2	10	2	14	23
Apprch %	0	0	0		33.3	66.7	0		33.3	0	66.7		14.3	71.4	14.3		
Total %	0	0	0	0	8.7	17.4	0	26.1	4.3	0	8.7	13	8.7	43.5	8.7	60.9	

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**3**	0	**5**	**5**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	2	4	0	6	7
% App. Total	0	0	0		0	0	0		0	0	100		33.3	66.7	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250	.333	.000	.300	.350

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File Name : 08_CVS_Clo_Shep PMC
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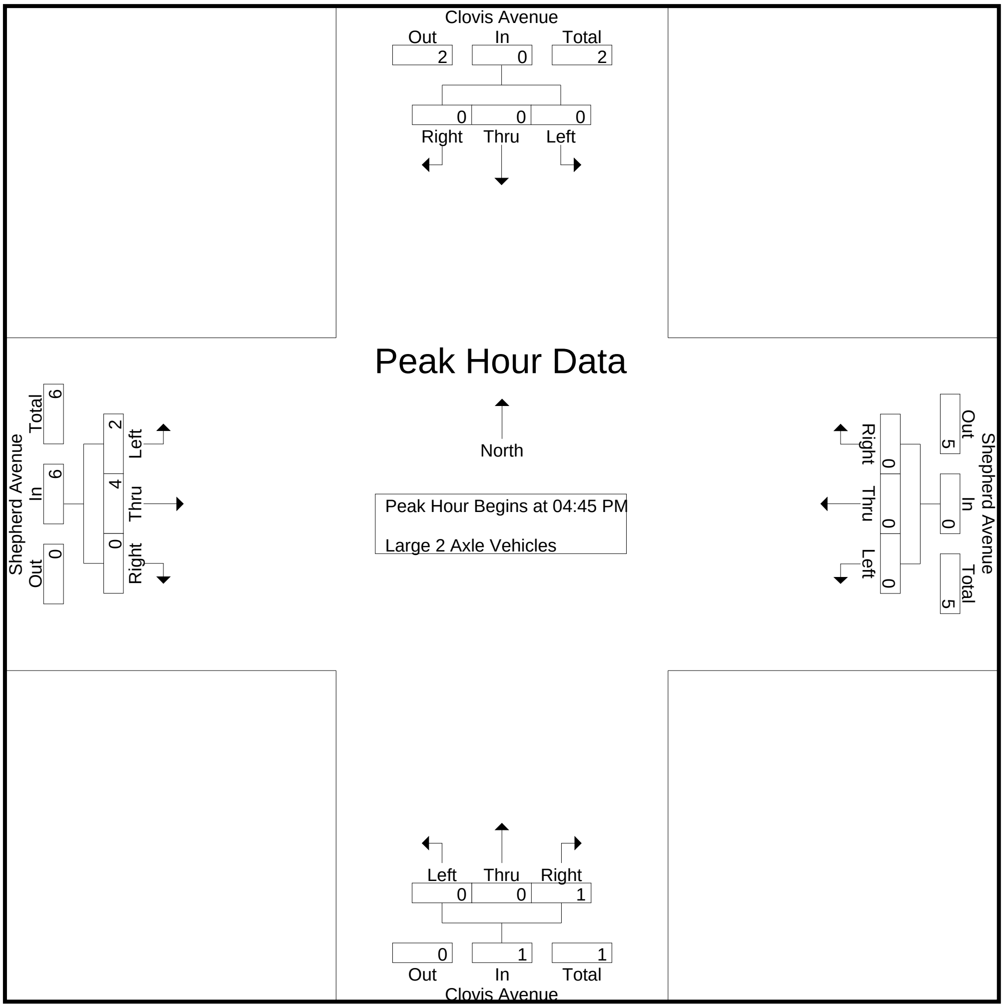

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**3**	0	**5**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	2	4	0	6
% App. Total	0	0	0		0	0	0		0	0	100		33.3	66.7	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250	.333	.000	.300

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Groups Printed- 3 Axle Vehicles

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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E/W: Shepherd Avenue
Weather: Clear

File Name : 08_CVS_Clo_Shep PMC
Site Code : 00322473
Start Date : 5/24/2022
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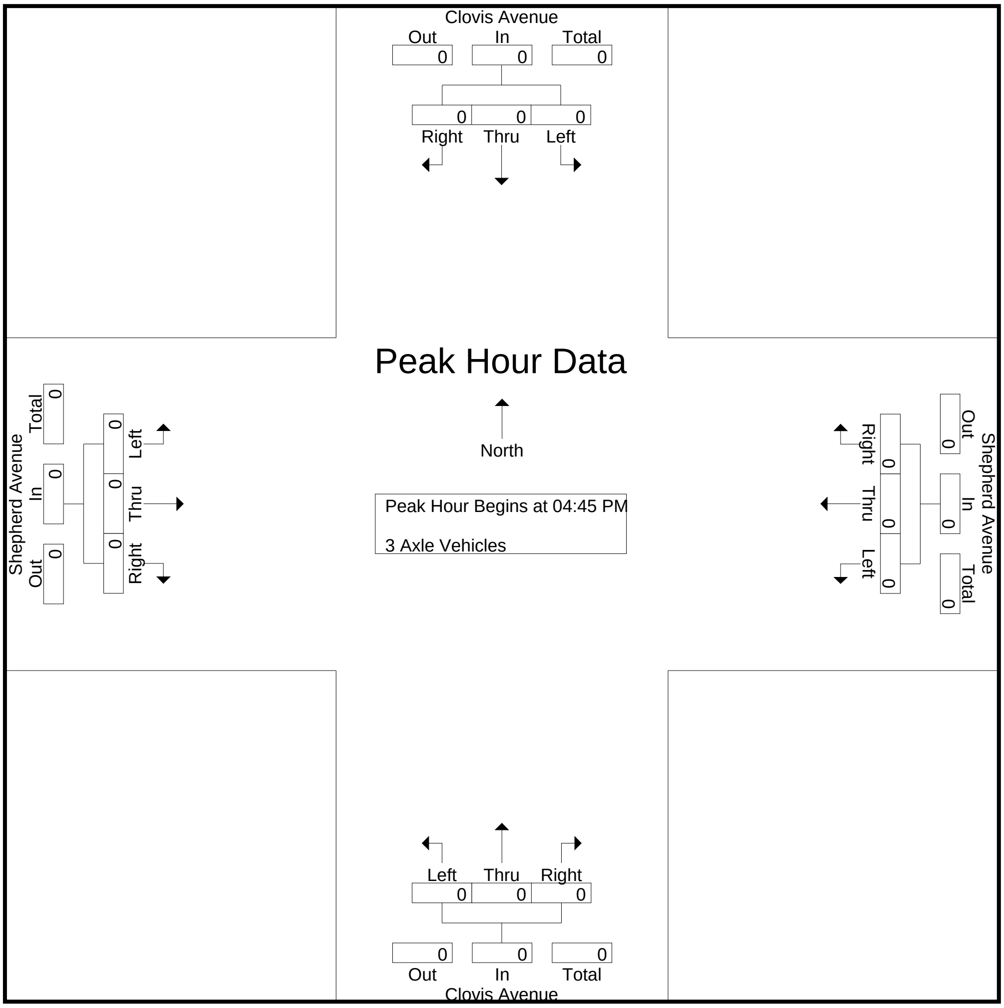

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Clovis Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 08_CVS_Clo_Shep PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Clovis Avenue Southbound				Shepherd Avenue Westbound				Clovis Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Clovis
N/S: Clovis Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 08_CVS_Clo_Shep PMC
Site Code : 00322473
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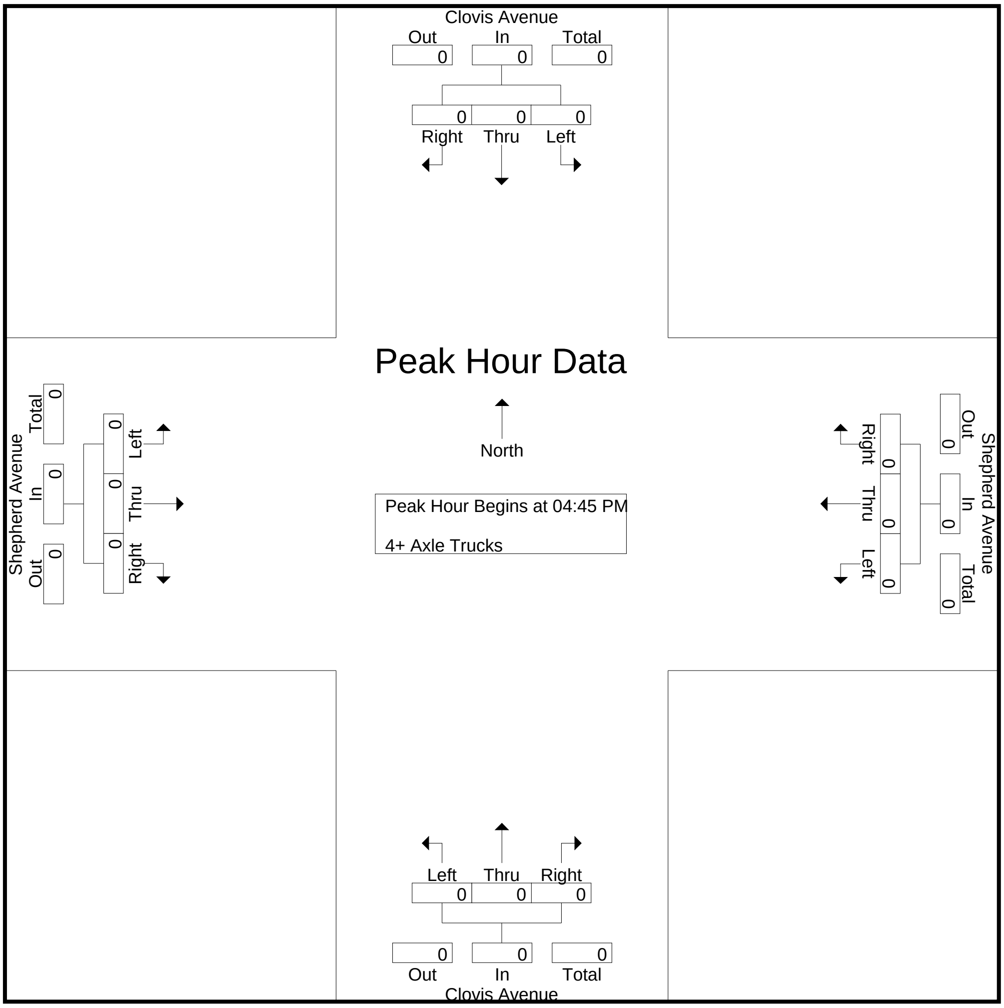

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Clovis Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Clovis Avenue	East Leg Shepherd Avenue	South Leg Clovis Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	1	0	1
7:15 AM	0	0	0	0	0
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	1	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	2	0	1	0	3
8:45 AM	3	0	0	0	3
TOTAL VOLUMES:	6	0	2	1	9

	North Leg Clovis Avenue	East Leg Shepherd Avenue	South Leg Clovis Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	0	1
TOTAL VOLUMES:	0	0	3	0	3

Location: Clovis
N/S: Clovis Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Clovis Avenue			Westbound Shepherd Avenue			Northbound Clovis Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	4	0	7

	Southbound Clovis Avenue			Westbound Shepherd Avenue			Northbound Clovis Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

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City of Clovis
N/S: Clovis Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 09_CVS_Clo_Teag AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	44	17	61	22	37	59	3	24	27	147
07:15 AM	51	53	104	79	55	134	15	33	48	286
07:30 AM	75	70	145	110	53	163	19	76	95	403
07:45 AM	78	29	107	43	54	97	22	70	92	296
Total	248	169	417	254	199	453	59	203	262	1132
08:00 AM	69	31	100	31	47	78	17	43	60	238
08:15 AM	75	20	95	19	52	71	24	53	77	243
08:30 AM	48	12	60	17	44	61	7	27	34	155
08:45 AM	57	10	67	12	34	46	5	16	21	134
Total	249	73	322	79	177	256	53	139	192	770
Grand Total	497	242	739	333	376	709	112	342	454	1902
Apprch %	67.3	32.7		47	53		24.7	75.3		
Total %	26.1	12.7	38.9	17.5	19.8	37.3	5.9	18	23.9	
Passenger Vehicles	486	237	723	333	360	693	110	339	449	1865
% Passenger Vehicles	97.8	97.9	97.8	100	95.7	97.7	98.2	99.1	98.9	98.1
Large 2 Axle Vehicles	4	1	5	0	11	11	2	1	3	19
% Large 2 Axle Vehicles	0.8	0.4	0.7	0	2.9	1.6	1.8	0.3	0.7	1
3 Axle Vehicles	4	2	6	0	2	2	0	2	2	10
% 3 Axle Vehicles	0.8	0.8	0.8	0	0.5	0.3	0	0.6	0.4	0.5
4+ Axle Trucks	3	2	5	0	3	3	0	0	0	8
% 4+ Axle Trucks	0.6	0.8	0.7	0	0.8	0.4	0	0	0	0.4

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	51	53	104	79	**55**	134	15	33	48	286
07:30 AM	75	**70**	**145**	**110**	53	**163**	19	**76**	**95**	**403**
07:45 AM	**78**	29	107	43	54	97	**22**	70	92	296
08:00 AM	69	31	100	31	47	78	17	43	60	238
Total Volume	273	183	456	263	209	472	73	222	295	1223
% App. Total	59.9	40.1		55.7	44.3		24.7	75.3		
PHF	.875	.654	.786	.598	.950	.724	.830	.730	.776	.759

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City of Clovis
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E/W: Teague Avenue
Weather: Clear

File Name : 09_CVS_Clo_Teag AMC
Site Code : 00322473
Start Date : 5/24/2022
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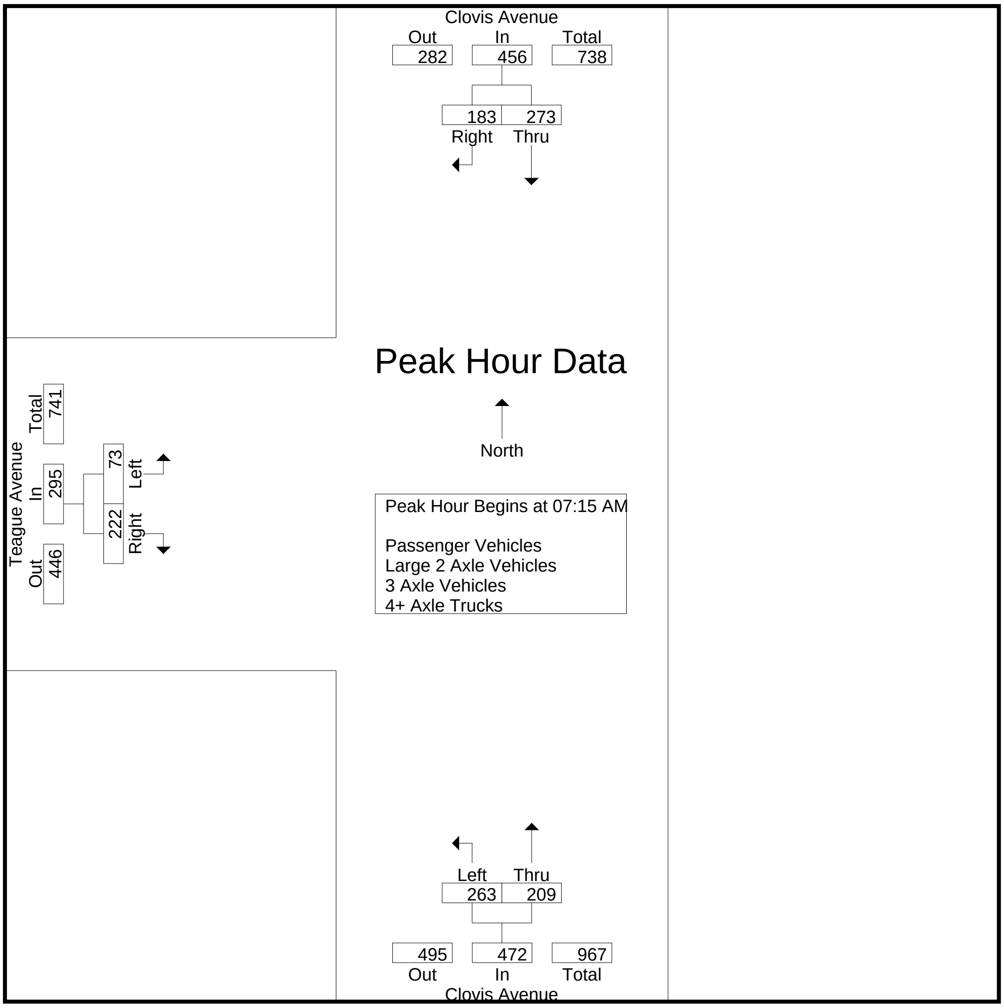

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:30 AM		
+0 mins.	51	53	104	79	**55**	134	19	**76**	**95**
+15 mins.	75	**70**	**145**	**110**	53	**163**	22	70	92
+30 mins.	**78**	29	107	43	54	97	17	43	60
+45 mins.	69	31	100	31	47	78	**24**	53	77
Total Volume	273	183	456	263	209	472	82	242	324
% App. Total	59.9	40.1		55.7	44.3		25.3	74.7	
PHF	.875	.654	.786	.598	.950	.724	.854	.796	.853

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City of Clovis
N/S: Clovis Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 09_CVS_Clo_Teag AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	43	16	59	22	35	57	2	24	26	142
07:15 AM	50	53	103	79	54	133	14	32	46	282
07:30 AM	74	70	144	110	50	160	19	76	95	399
07:45 AM	76	29	105	43	50	93	22	69	91	289
Total	243	168	411	254	189	443	57	201	258	1112
08:00 AM	68	29	97	31	46	77	17	43	60	234
08:15 AM	74	19	93	19	49	68	24	52	76	237
08:30 AM	46	11	57	17	43	60	7	27	34	151
08:45 AM	55	10	65	12	33	45	5	16	21	131
Total	243	69	312	79	171	250	53	138	191	753
Grand Total	486	237	723	333	360	693	110	339	449	1865
Apprch %	67.2	32.8		48.1	51.9		24.5	75.5		
Total %	26.1	12.7	38.8	17.9	19.3	37.2	5.9	18.2	24.1	

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	50	53	103	79	**54**	133	14	32	46	282
07:30 AM	74	**70**	**144**	**110**	50	**160**	19	**76**	**95**	**399**
07:45 AM	**76**	29	105	43	50	93	**22**	69	91	289
08:00 AM	68	29	97	31	46	77	17	43	60	234
Total Volume	268	181	449	263	200	463	72	220	292	1204
% App. Total	59.7	40.3		56.8	43.2		24.7	75.3		
PHF	.882	.646	.780	.598	.926	.723	.818	.724	.768	.754

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File Name : 09_CVS_Clo_Teag AMC
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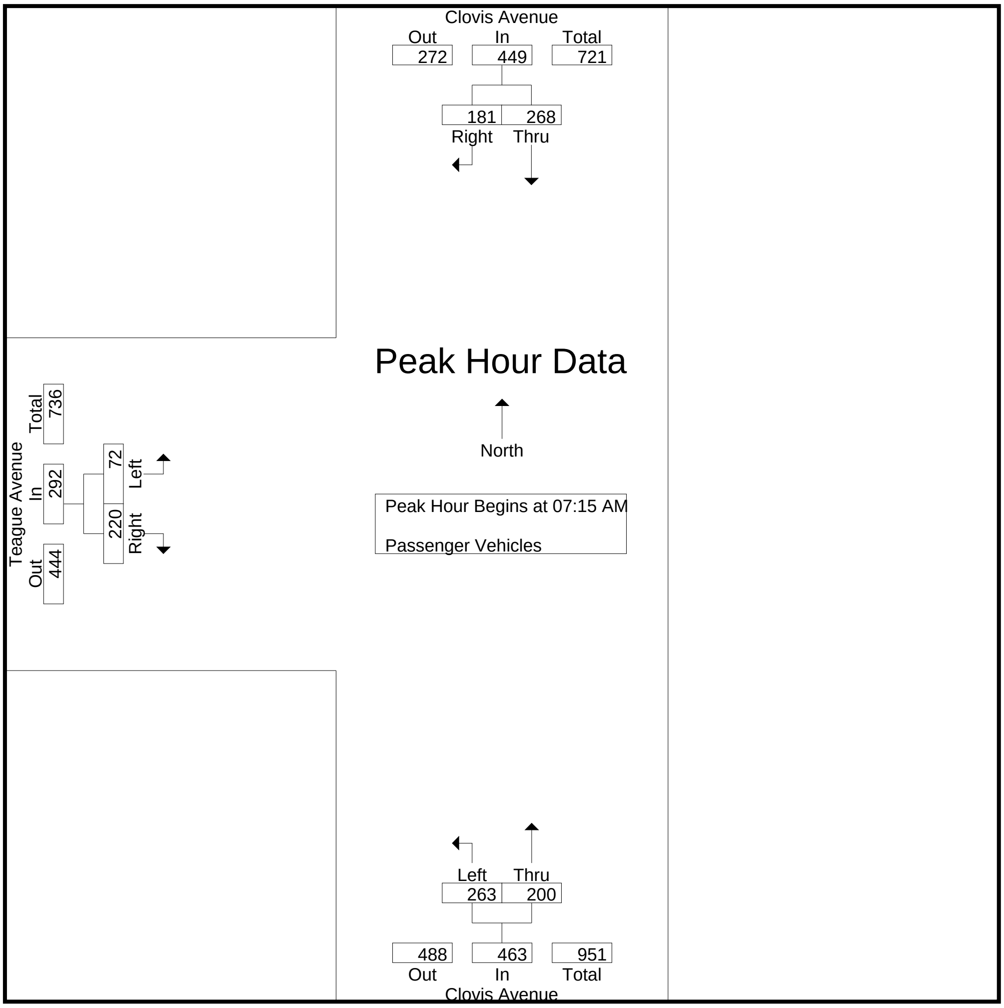

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	50	53	103	79	**54**	133	14	32	46
+15 mins.	74	**70**	**144**	**110**	50	**160**	19	**76**	**95**
+30 mins.	**76**	29	105	43	50	93	**22**	69	91
+45 mins.	68	29	97	31	46	77	17	43	60
Total Volume	268	181	449	263	200	463	72	220	292
% App. Total	59.7	40.3		56.8	43.2		24.7	75.3	
PHF	.882	.646	.780	.598	.926	.723	.818	.724	.768

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City of Clovis
N/S: Clovis Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 09_CVS_Clo_Teag AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	1	0	1	0	1	1	1	0	1	3
07:15 AM	0	0	0	0	1	1	1	0	1	2
07:30 AM	0	0	0	0	2	2	0	0	0	2
07:45 AM	1	0	1	0	4	4	0	0	0	5
Total	2	0	2	0	8	8	2	0	2	12
08:00 AM	1	1	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	1	1	0	1	1	2
08:30 AM	0	0	0	0	1	1	0	0	0	1
08:45 AM	1	0	1	0	1	1	0	0	0	2
Total	2	1	3	0	3	3	0	1	1	7
Grand Total	4	1	5	0	11	11	2	1	3	19
Apprch %	80	20		0	100		66.7	33.3		
Total %	21.1	5.3	26.3	0	57.9	57.9	10.5	5.3	15.8	

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	1	1	**1**	0	**1**	2
07:30 AM	0	0	0	0	2	2	0	0	0	2
07:45 AM	**1**	0	1	0	**4**	**4**	0	0	0	**5**
08:00 AM	1	**1**	**2**	0	0	0	0	0	0	2
Total Volume	2	1	3	0	7	7	1	0	1	11
% App. Total	66.7	33.3		0	100		100	0		
PHF	.500	.250	.375	.000	.438	.438	.250	.000	.250	.550

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File Name : 09_CVS_Clo_Teag AMC
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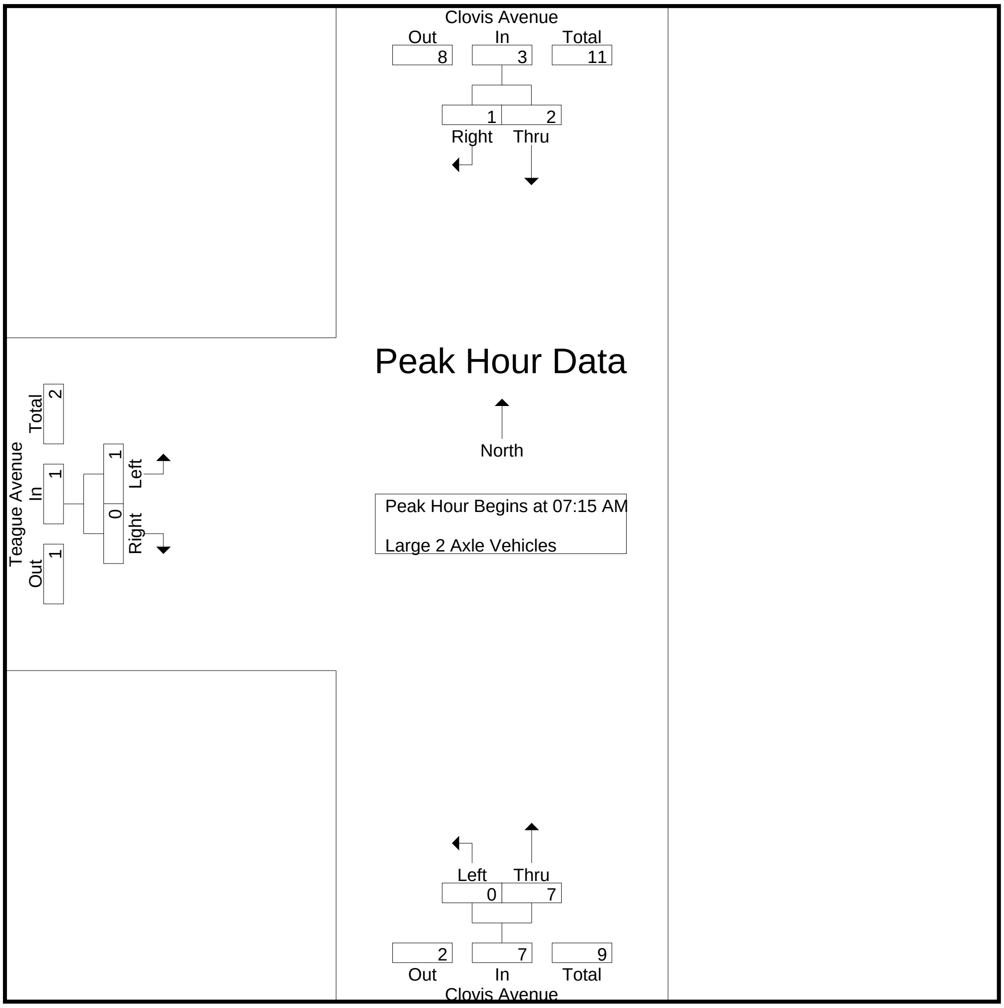

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	1	1	**1**	0	**1**
+15 mins.	0	0	0	0	2	2	0	0	0
+30 mins.	**1**	0	1	0	**4**	**4**	0	0	0
+45 mins.	1	**1**	**2**	0	0	0	0	0	0
Total Volume	2	1	3	0	7	7	1	0	1
% App. Total	66.7	33.3		0	100		100	0	
PHF	.500	.250	.375	.000	.438	.438	.250	.000	.250

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City of Clovis
N/S: Clovis Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 09_CVS_Clo_Teag AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- 3 Axle Vehicles

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	1	1	1
07:30 AM	1	0	1	0	0	0	0	0	0	1
07:45 AM	1	0	1	0	0	0	0	1	1	2
Total	2	0	2	0	0	0	0	2	2	4
08:00 AM	0	1	1	0	1	1	0	0	0	2
08:15 AM	0	0	0	0	1	1	0	0	0	1
08:30 AM	2	1	3	0	0	0	0	0	0	3
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	2	2	4	0	2	2	0	0	0	6
Grand Total	4	2	6	0	2	2	0	2	2	10
Apprch %	66.7	33.3		0	100		0	100		
Total %	40	20	60	0	20	20	0	20	20	

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	0	0	0	**1**	**1**	1
07:30 AM	**1**	0	**1**	0	0	0	0	0	0	1
07:45 AM	1	0	1	0	0	0	0	1	1	**2**
08:00 AM	0	**1**	1	0	**1**	**1**	0	0	0	2
Total Volume	2	1	3	0	1	1	0	2	2	6
% App. Total	66.7	33.3		0	100		0	100		
PHF	.500	.250	.750	.000	.250	.250	.000	.500	.500	.750

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City of Clovis
N/S: Clovis Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 09_CVS_Clo_Teag AMC
Site Code : 00322473
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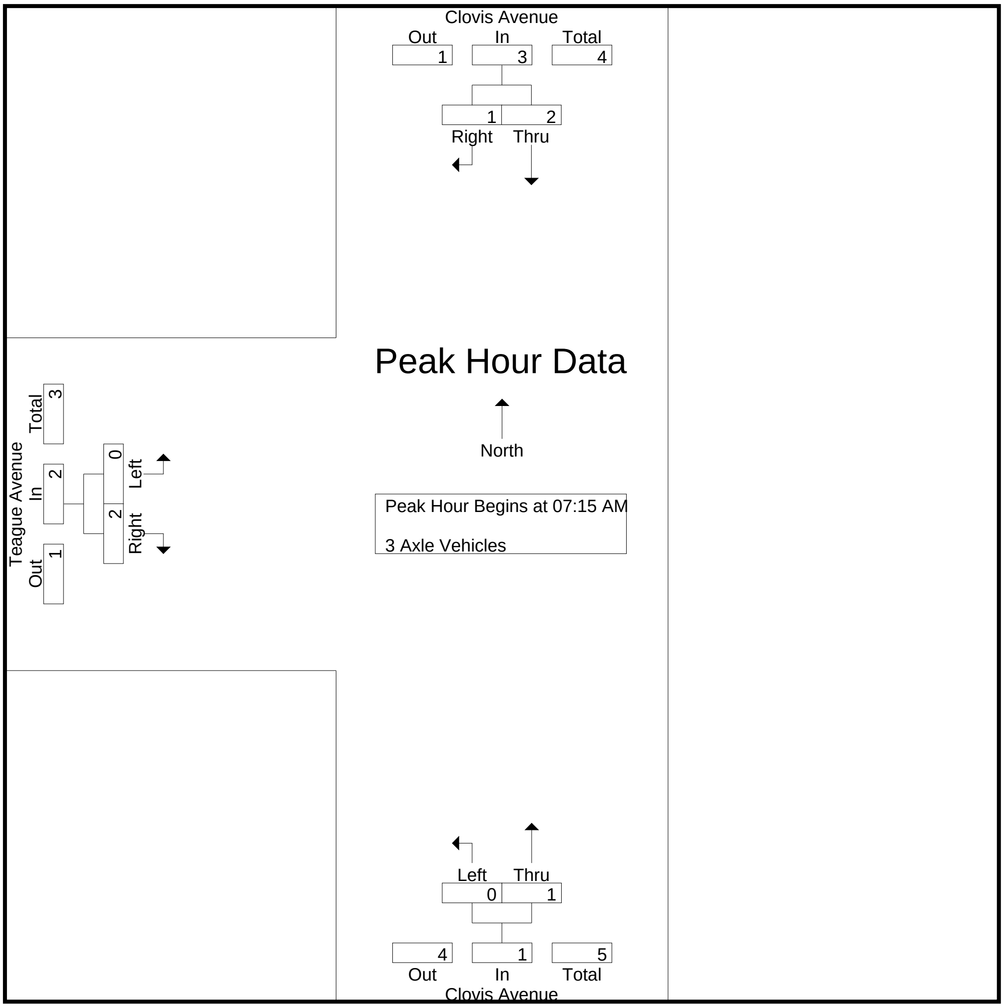

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	0	**1**	**1**
+15 mins.	**1**	0	**1**	0	0	0	0	0	0
+30 mins.	1	0	1	0	0	0	0	1	1
+45 mins.	0	**1**	1	0	**1**	**1**	0	0	0
Total Volume	2	1	3	0	1	1	0	2	2
% App. Total	66.7	33.3		0	100		0	100	
PHF	.500	.250	.750	.000	.250	.250	.000	.500	.500

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City of Clovis
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Weather: Clear

File Name : 09_CVS_Clo_Teag AMC
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Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	0	1	1	0	1	1	0	0	0	2
07:15 AM	1	0	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	1	1	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	1	1	2	0	2	2	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	1	2	0	1	1	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	1	0	1	0	0	0	0	0	0	1
Total	2	1	3	0	1	1	0	0	0	4
Grand Total	3	2	5	0	3	3	0	0	0	8
Apprch %	60	40		0	100		0	0		
Total %	37.5	25	62.5	0	37.5	37.5	0	0	0	

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**1**	0	**1**	0	0	0	0	0	0	**1**
07:30 AM	0	0	0	0	**1**	**1**	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	1	1	0	0	0	2
% App. Total	100	0		0	100		0	0		
PHF	.250	.000	.250	.000	.250	.250	.000	.000	.000	.500

City of Clovis
N/S: Clovis Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 09_CVS_Clo_Teag AMC
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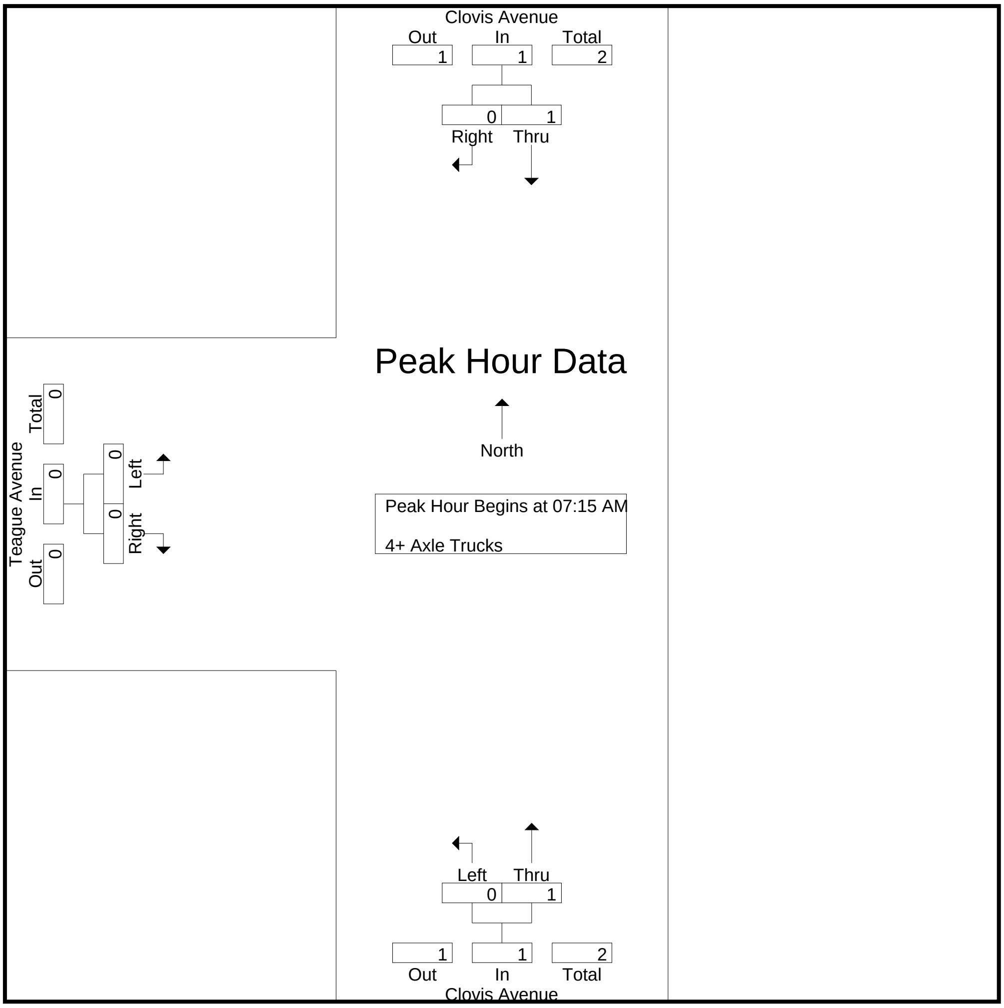

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	**1**	0	**1**	0	0	0	0	0	0
+15 mins.	0	0	0	0	**1**	**1**	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	1	1	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.250	.000	.250	.000	.250	.250	.000	.000	.000

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File Name : 09_CVS_Clo_Teag PMC
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	56	7	63	38	71	109	17	19	36	208
04:15 PM	52	7	59	19	68	87	13	21	34	180
04:30 PM	48	14	62	37	71	108	10	12	22	192
04:45 PM	54	16	70	29	73	102	14	22	36	208
Total	210	44	254	123	283	406	54	74	128	788
05:00 PM	78	15	93	54	72	126	23	31	54	273
05:15 PM	43	15	58	36	74	110	20	22	42	210
05:30 PM	45	7	52	28	67	95	14	25	39	186
05:45 PM	34	8	42	25	68	93	15	25	40	175
Total	200	45	245	143	281	424	72	103	175	844
Grand Total	410	89	499	266	564	830	126	177	303	1632
Apprch %	82.2	17.8		32	68		41.6	58.4		
Total %	25.1	5.5	30.6	16.3	34.6	50.9	7.7	10.8	18.6	
Passenger Vehicles	408	89	497	261	563	824	125	175	300	1621
% Passenger Vehicles	99.5	100	99.6	98.1	99.8	99.3	99.2	98.9	99	99.3
Large 2 Axle Vehicles	2	0	2	3	1	4	1	1	2	8
% Large 2 Axle Vehicles	0.5	0	0.4	1.1	0.2	0.5	0.8	0.6	0.7	0.5
3 Axle Vehicles	0	0	0	2	0	2	0	1	1	3
% 3 Axle Vehicles	0	0	0	0.8	0	0.2	0	0.6	0.3	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	48	14	62	37	71	108	10	12	22	192
04:45 PM	54	**16**	70	29	73	102	14	22	36	208
05:00 PM	**78**	15	**93**	**54**	72	**126**	**23**	**31**	**54**	**273**
05:15 PM	43	15	58	36	**74**	110	20	22	42	210
Total Volume	223	60	283	156	290	446	67	87	154	883
% App. Total	78.8	21.2		35	65		43.5	56.5		
PHF	.715	.938	.761	.722	.980	.885	.728	.702	.713	.809

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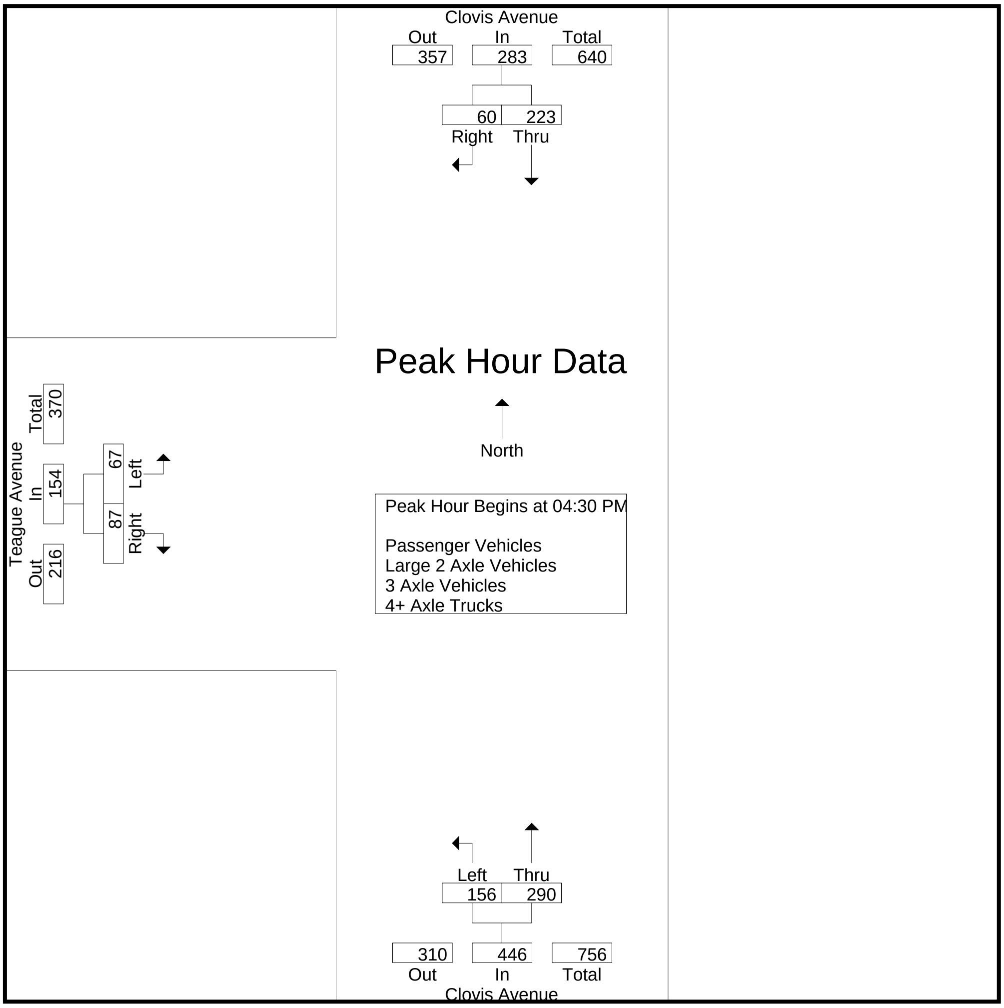

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:30 PM			05:00 PM		
+0 mins.	52	7	59	37	71	108	**23**	**31**	**54**
+15 mins.	48	14	62	29	73	102	20	22	42
+30 mins.	54	**16**	70	**54**	72	**126**	14	25	39
+45 mins.	**78**	15	**93**	36	**74**	110	15	25	40
Total Volume	232	52	284	156	290	446	72	103	175
% App. Total	81.7	18.3		35	65		41.1	58.9	
PHF	.744	.813	.763	.722	.980	.885	.783	.831	.810

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City of Clovis
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Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	55	7	62	36	71	107	17	17	34	203
04:15 PM	51	7	58	19	67	86	13	21	34	178
04:30 PM	48	14	62	37	71	108	10	12	22	192
04:45 PM	54	16	70	28	73	101	14	22	36	207
Total	208	44	252	120	282	402	54	72	126	780
05:00 PM	78	15	93	53	72	125	23	31	54	272
05:15 PM	43	15	58	35	74	109	19	22	41	208
05:30 PM	45	7	52	28	67	95	14	25	39	186
05:45 PM	34	8	42	25	68	93	15	25	40	175
Total	200	45	245	141	281	422	71	103	174	841
Grand Total	408	89	497	261	563	824	125	175	300	1621
Apprch %	82.1	17.9		31.7	68.3		41.7	58.3		
Total %	25.2	5.5	30.7	16.1	34.7	50.8	7.7	10.8	18.5	

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	48	14	62	37	71	108	10	12	22	192
04:45 PM	54	**16**	70	28	73	101	14	22	36	207
05:00 PM	**78**	15	**93**	**53**	72	**125**	**23**	**31**	**54**	**272**
05:15 PM	43	15	58	35	**74**	109	19	22	41	208
Total Volume	223	60	283	153	290	443	66	87	153	879
% App. Total	78.8	21.2		34.5	65.5		43.1	56.9		
PHF	.715	.938	.761	.722	.980	.886	.717	.702	.708	.808

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File Name : 09_CVS_Clo_Teag PMC
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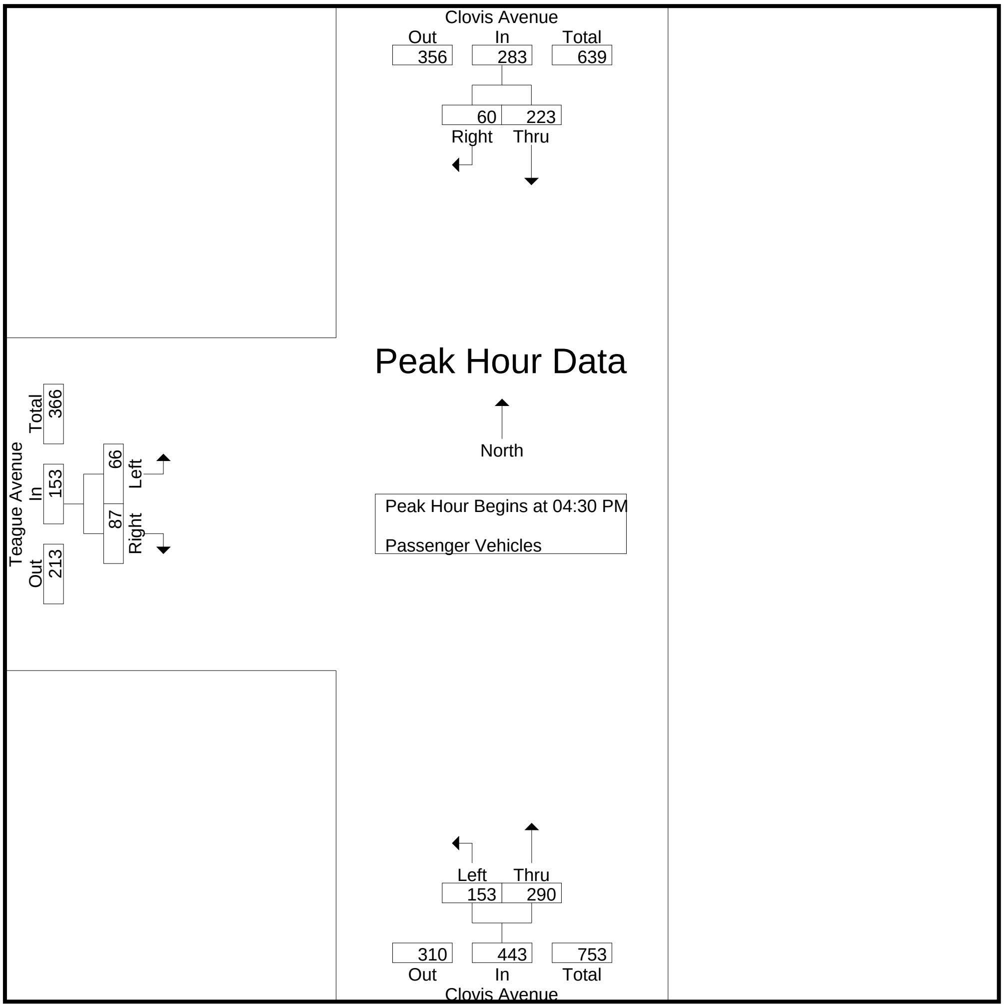

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	48	14	62	37	71	108	10	12	22
+15 mins.	54	**16**	70	28	73	101	14	22	36
+30 mins.	**78**	15	**93**	**53**	72	**125**	**23**	**31**	**54**
+45 mins.	43	15	58	35	**74**	109	19	22	41
Total Volume	223	60	283	153	290	443	66	87	153
% App. Total	78.8	21.2		34.5	65.5		43.1	56.9	
PHF	.715	.938	.761	.722	.980	.886	.717	.702	.708

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Weather: Clear

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Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	1	0	1	0	0	0	0	1	1	2
04:15 PM	1	0	1	0	1	1	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	0	1	0	0	0	1
Total	2	0	2	1	1	2	0	1	1	5
05:00 PM	0	0	0	1	0	1	0	0	0	1
05:15 PM	0	0	0	1	0	1	1	0	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	2	1	0	1	3
Grand Total	2	0	2	3	1	4	1	1	2	8
Apprch %	100	0		75	25		50	50		
Total %	25	0	25	37.5	12.5	50	12.5	12.5	25	

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	**1**	0	**1**	0	0	0	1
05:00 PM	0	0	0	1	0	1	0	0	0	1
05:15 PM	0	0	0	1	0	1	**1**	0	**1**	**2**
Total Volume	0	0	0	3	0	3	1	0	1	4
% App. Total	0	0		100	0		100	0		
PHF	.000	.000	.000	.750	.000	.750	.250	.000	.250	.500

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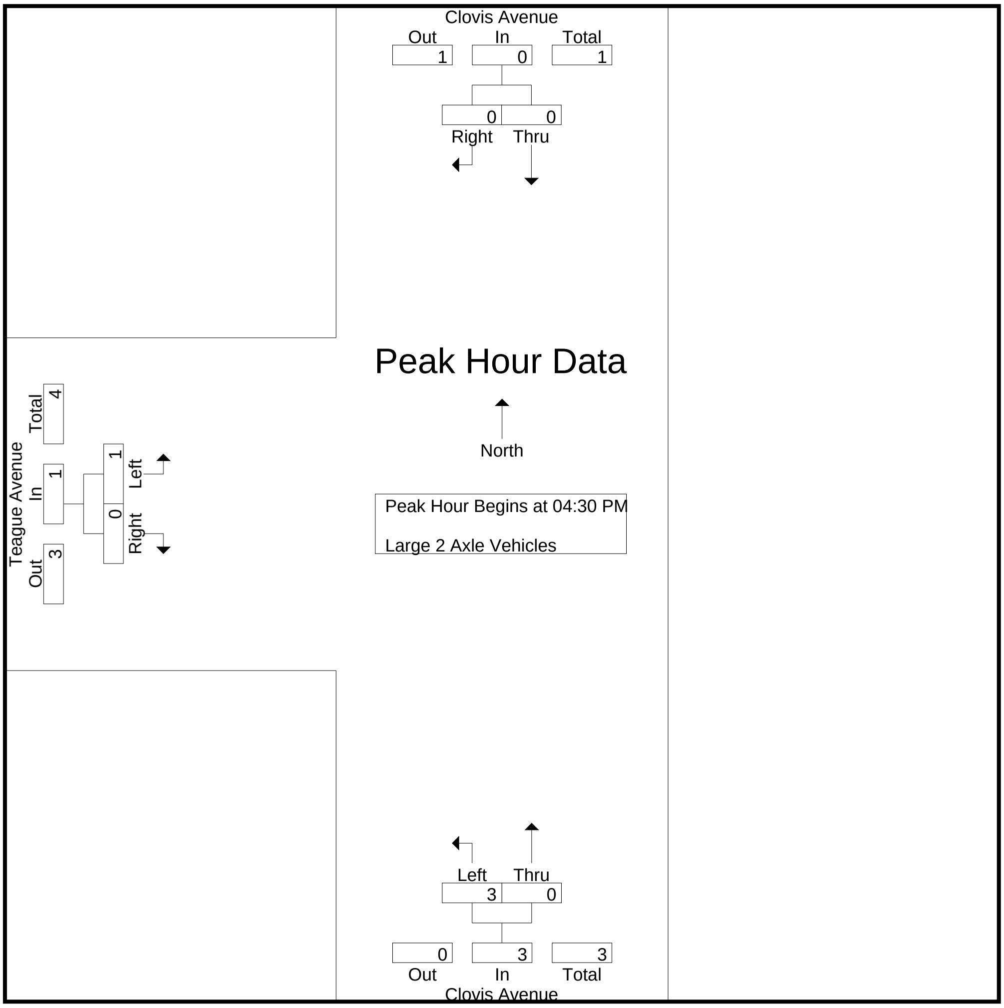

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	**1**	0	**1**	0	0	0
+30 mins.	0	0	0	1	0	1	0	0	0
+45 mins.	0	0	0	1	0	1	**1**	0	**1**
Total Volume	0	0	0	3	0	3	1	0	1
% App. Total	0	0		100	0		100	0	
PHF	.000	.000	.000	.750	.000	.750	.250	.000	.250

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Groups Printed- 3 Axle Vehicles

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	0	0	0	2	0	2	0	1	1	3
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	2	0	1	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	2	0	2	0	1	1	3
Apprch %	0	0		100	0		0	100		
Total %	0	0	0	66.7	0	66.7	0	33.3	33.3	

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Clovis
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Weather: Clear

File Name : 09_CVS_Clo_Teag PMC
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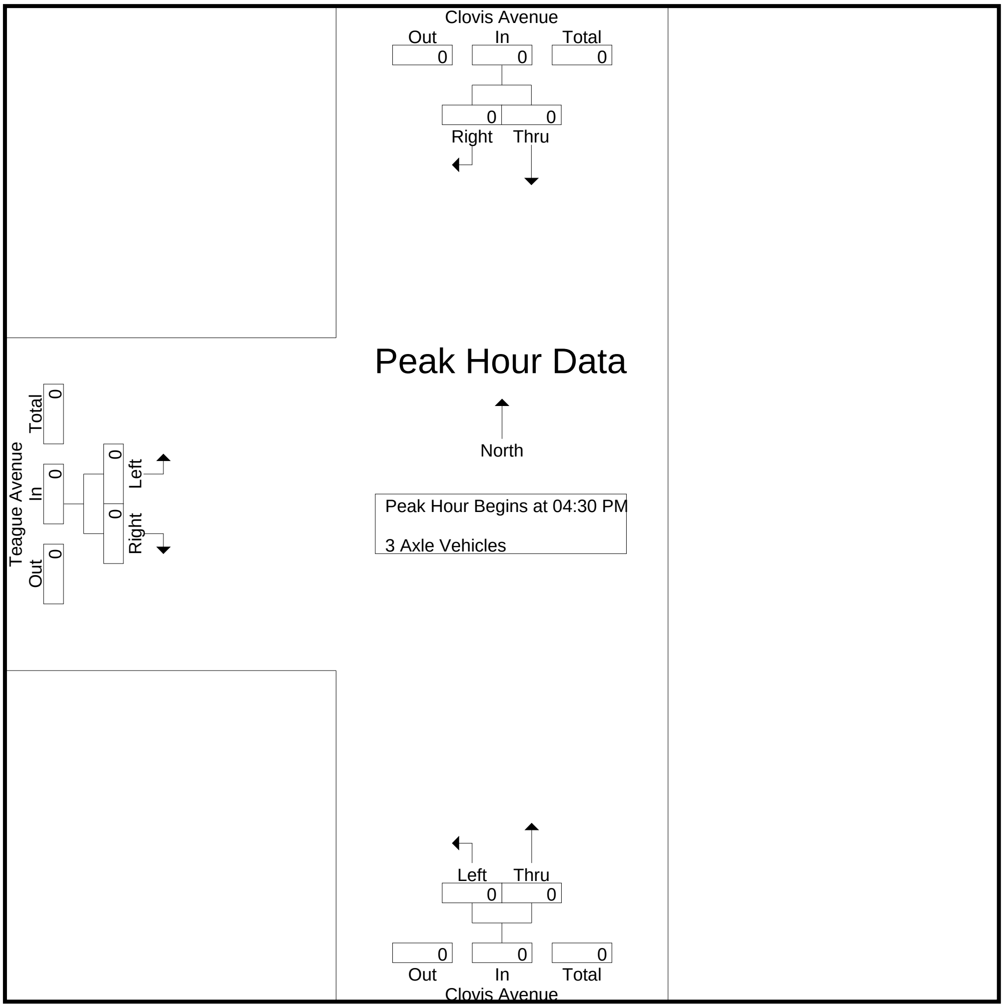

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

	Clovis Avenue Southbound			Clovis Avenue Northbound			Teague Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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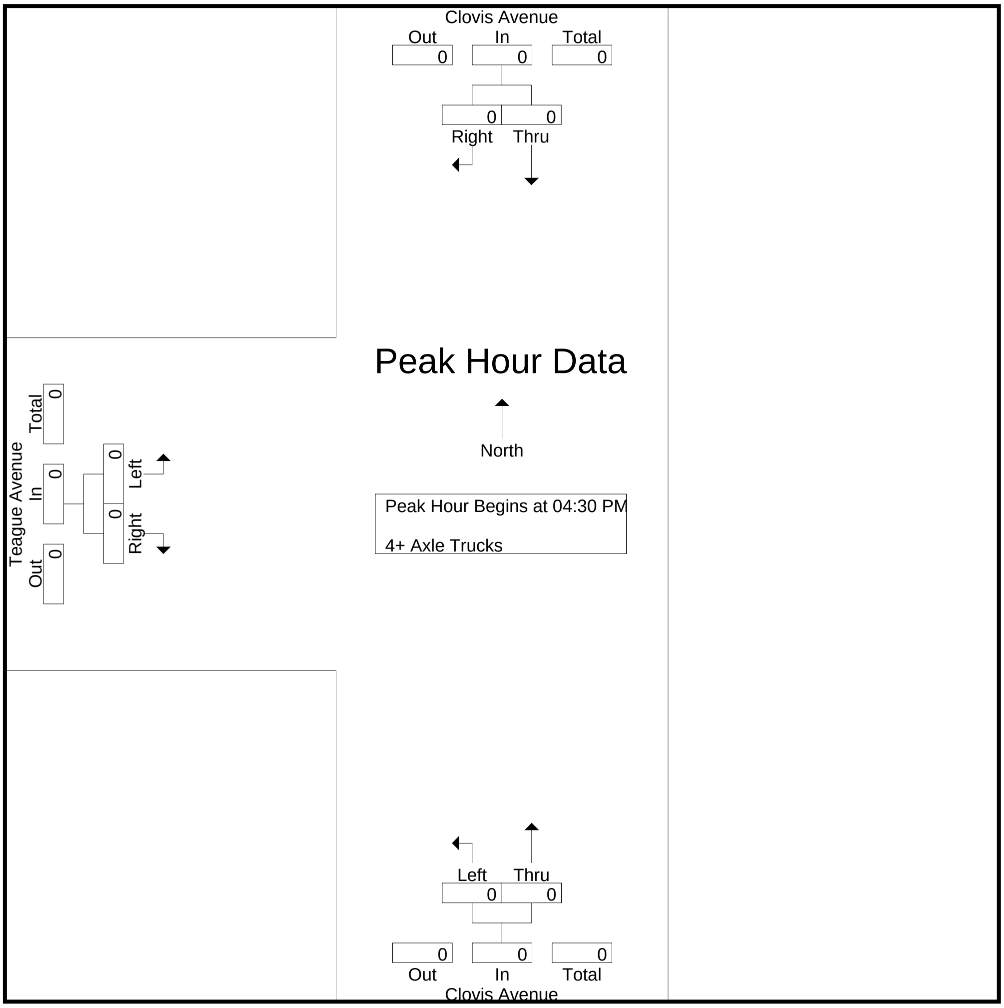

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Clovis Avenue
E/W: Teague Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Clovis Avenue	East Leg Teague Avenue	South Leg Clovis Avenue	West Leg Teague Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	1	0	1	0	2
7:15 AM	3	0	2	0	5
7:30 AM	0	0	0	1	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	9	30	39
8:15 AM	1	0	14	7	22
8:30 AM	2	0	0	0	2
8:45 AM	2	0	0	0	2
TOTAL VOLUMES:	9	0	26	38	73

	North Leg Clovis Avenue	East Leg Teague Avenue	South Leg Clovis Avenue	West Leg Teague Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	2	0	0	0	2
TOTAL VOLUMES:	2	0	0	1	3

Location: Clovis
N/S: Clovis Avenue
E/W: Teague Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Clovis Avenue			Westbound Teague Avenue			Northbound Clovis Avenue			Eastbound Teague Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	1	2	0	0	0	0	0	0	1	0	0	4
8:00 AM	0	0	2	0	0	0	1	1	0	3	0	0	7
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	2	0	0	0	1	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	10	0	0	0	2	1	0	4	0	0	18

	Southbound Clovis Avenue			Westbound Teague Avenue			Northbound Clovis Avenue			Eastbound Teague Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	1	0	0	2	0	1	4

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City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	76	5	82	6	52	16	74	7	53	5	65	1	42	18	61	282
07:15 AM	8	83	6	97	6	130	47	183	16	80	7	103	4	53	29	86	469
07:30 AM	27	128	6	161	15	88	86	189	16	81	3	100	8	71	54	133	583
07:45 AM	27	115	7	149	7	62	27	96	20	71	3	94	11	111	68	190	529
Total	63	402	24	489	34	332	176	542	59	285	18	362	24	277	169	470	1863
08:00 AM	8	90	23	121	7	83	20	110	18	62	7	87	7	71	43	121	439
08:15 AM	14	98	19	131	10	92	12	114	14	49	2	65	4	34	33	71	381
08:30 AM	8	82	12	102	4	65	9	78	17	46	5	68	4	48	32	84	332
08:45 AM	3	70	2	75	6	71	6	83	11	39	3	53	6	41	35	82	293
Total	33	340	56	429	27	311	47	385	60	196	17	273	21	194	143	358	1445
Grand Total	96	742	80	918	61	643	223	927	119	481	35	635	45	471	312	828	3308
Apprch %	10.5	80.8	8.7		6.6	69.4	24.1		18.7	75.7	5.5		5.4	56.9	37.7		
Total %	2.9	22.4	2.4	27.8	1.8	19.4	6.7	28	3.6	14.5	1.1	19.2	1.4	14.2	9.4	25	
Passenger Vehicles	94	732	78	904	61	635	223	919	117	466	34	617	44	464	305	813	3253
% Passenger Vehicles	97.9	98.7	97.5	98.5	100	98.8	100	99.1	98.3	96.9	97.1	97.2	97.8	98.5	97.8	98.2	98.3
Large 2 Axle Vehicles	2	5	1	8	0	7	0	7	1	13	1	15	1	6	7	14	44
% Large 2 Axle Vehicles	2.1	0.7	1.2	0.9	0	1.1	0	0.8	0.8	2.7	2.9	2.4	2.2	1.3	2.2	1.7	1.3
3 Axle Vehicles	0	2	1	3	0	1	0	1	1	0	0	1	0	1	0	1	6
% 3 Axle Vehicles	0	0.3	1.2	0.3	0	0.2	0	0.1	0.8	0	0	0.2	0	0.2	0	0.1	0.2
4+ Axle Trucks	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
% 4+ Axle Trucks	0	0.4	0	0.3	0	0	0	0	0	0.4	0	0.3	0	0	0	0	0.2

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	8	83	6	97	6	**130**	47	183	16	80	**7**	**103**	4	53	29	86	469
07:30 AM	**27**	**128**	6	**161**	**15**	88	**86**	**189**	16	**81**	3	100	8	71	54	133	**583**
07:45 AM	27	115	7	149	7	62	27	96	**20**	71	3	94	**11**	**111**	**68**	**190**	529
08:00 AM	8	90	**23**	121	7	83	20	110	18	62	7	87	7	71	43	121	439
Total Volume	70	416	42	528	35	363	180	578	70	294	20	384	30	306	194	530	2020
% App. Total	13.3	78.8	8		6.1	62.8	31.1		18.2	76.6	5.2		5.7	57.7	36.6		
PHF	.648	.813	.457	.820	.583	.698	.523	.765	.875	.907	.714	.932	.682	.689	.713	.697	.866

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City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees AMC
Site Code : 00322473
Start Date : 5/24/2022
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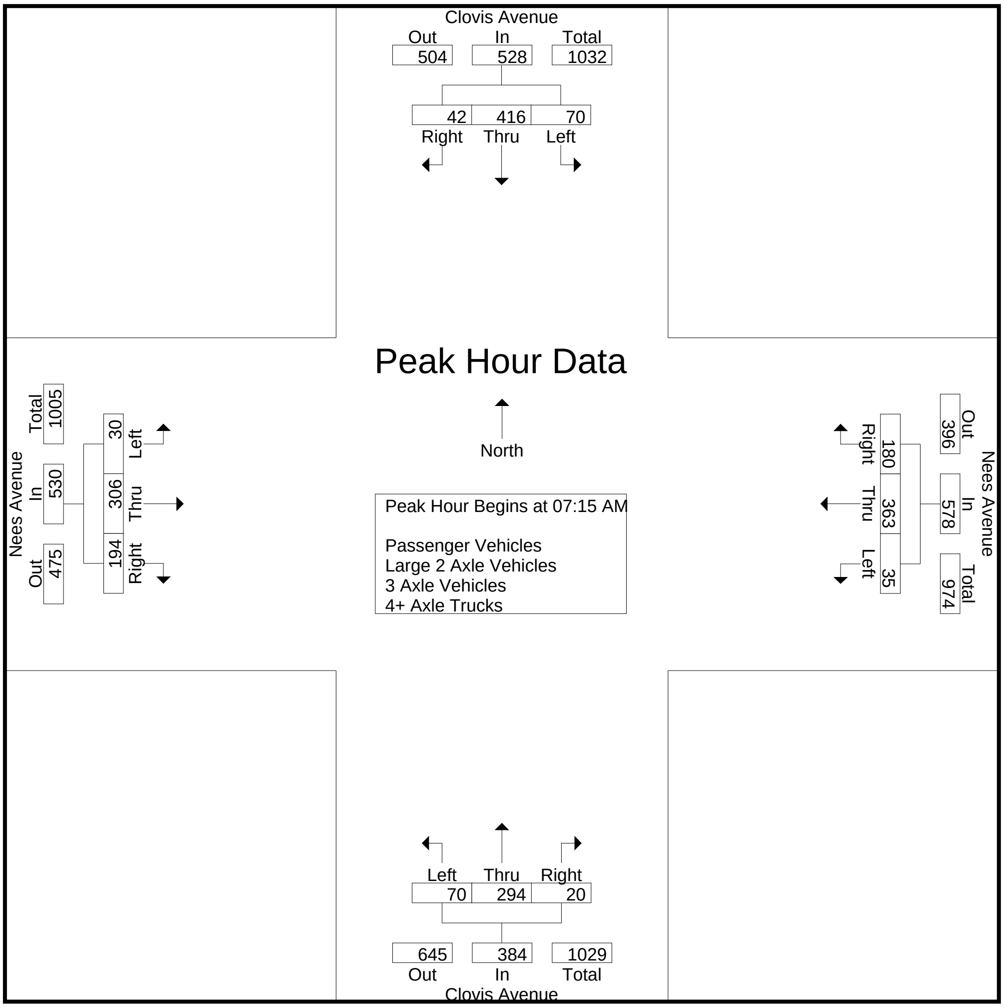

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**27**	**128**	6	**161**	6	**130**	47	183	16	80	**7**	**103**	4	53	29	86
+15 mins.	27	115	7	149	**15**	88	**86**	**189**	16	**81**	3	100	8	71	54	133
+30 mins.	8	90	**23**	121	7	62	27	96	**20**	71	3	94	**11**	**111**	**68**	**190**
+45 mins.	14	98	19	131	7	83	20	110	18	62	7	87	7	71	43	121
Total Volume	76	431	55	562	35	363	180	578	70	294	20	384	30	306	194	530
% App. Total	13.5	76.7	9.8		6.1	62.8	31.1		18.2	76.6	5.2		5.7	57.7	36.6	
PHF	.704	.842	.598	.873	.583	.698	.523	.765	.875	.907	.714	.932	.682	.689	.713	.697

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City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	75	5	81	6	52	16	74	7	52	5	64	1	41	18	60	279
07:15 AM	8	82	5	95	6	127	47	180	16	77	7	100	4	51	27	82	457
07:30 AM	27	127	6	160	15	88	86	189	15	79	3	97	8	70	53	131	577
07:45 AM	27	114	7	148	7	61	27	95	20	67	3	90	11	111	67	189	522
Total	63	398	23	484	34	328	176	538	58	275	18	351	24	273	165	462	1835
08:00 AM	7	88	22	117	7	83	20	110	18	61	6	85	7	70	42	119	431
08:15 AM	14	98	19	131	10	92	12	114	13	46	2	61	4	33	32	69	375
08:30 AM	8	81	12	101	4	63	9	76	17	45	5	67	4	48	32	84	328
08:45 AM	2	67	2	71	6	69	6	81	11	39	3	53	5	40	34	79	284
Total	31	334	55	420	27	307	47	381	59	191	16	266	20	191	140	351	1418
Grand Total	94	732	78	904	61	635	223	919	117	466	34	617	44	464	305	813	3253
Apprch %	10.4	81	8.6		6.6	69.1	24.3		19	75.5	5.5		5.4	57.1	37.5		
Total %	2.9	22.5	2.4	27.8	1.9	19.5	6.9	28.3	3.6	14.3	1	19	1.4	14.3	9.4	25	

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	8	82	5	95	6	**127**	47	180	16	77	**7**	**100**	4	51	27	82	457
07:30 AM	**27**	**127**	6	**160**	**15**	88	**86**	**189**	15	**79**	3	97	8	70	53	131	**577**
07:45 AM	27	114	7	148	7	61	27	95	**20**	67	3	90	**11**	**111**	**67**	**189**	522
08:00 AM	7	88	**22**	117	7	83	20	110	18	61	6	85	7	70	42	119	431
Total Volume	69	411	40	520	35	359	180	574	69	284	19	372	30	302	189	521	1987
% App. Total	13.3	79	7.7		6.1	62.5	31.4		18.5	76.3	5.1		5.8	58	36.3		
PHF	.639	.809	.455	.813	.583	.707	.523	.759	.863	.899	.679	.930	.682	.680	.705	.689	.861

City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees AMC
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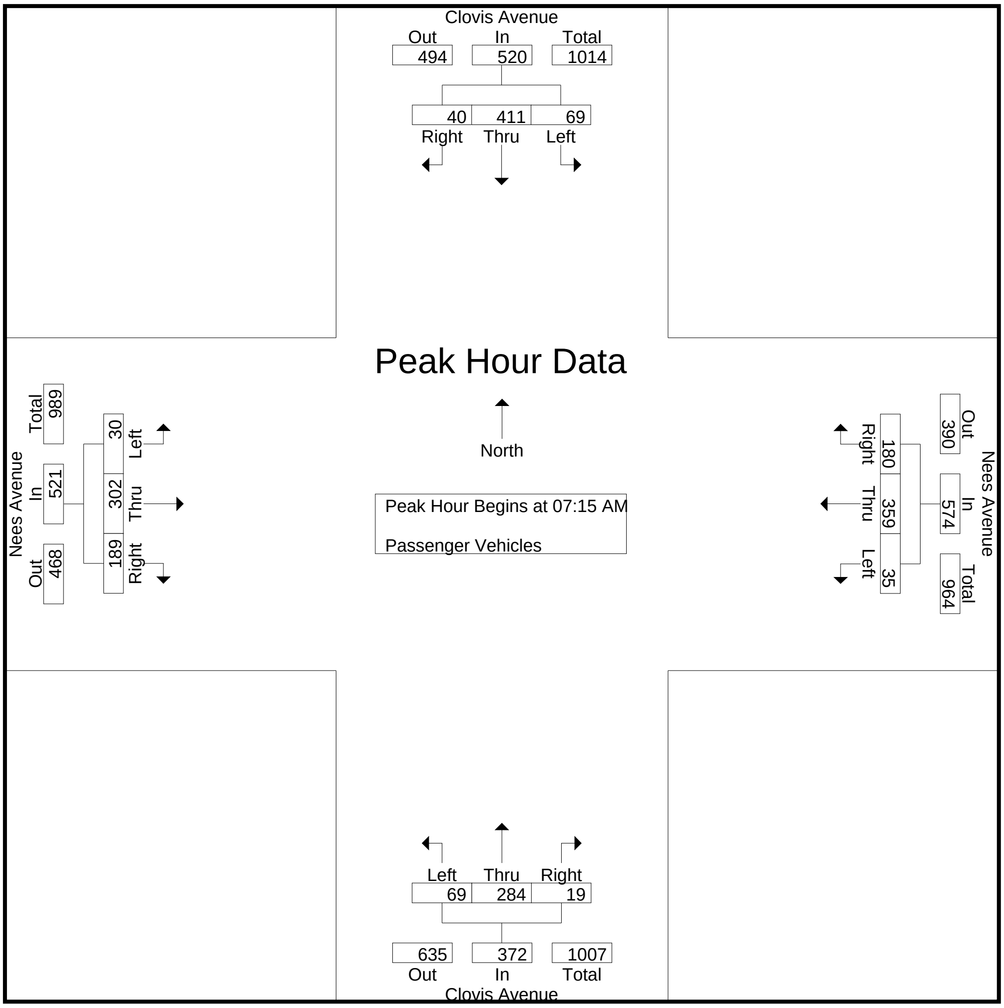

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	8	82	5	95	6	**127**	47	180	16	77	**7**	**100**	4	51	27	82
+15 mins.	**27**	**127**	6	**160**	**15**	88	**86**	**189**	15	**79**	3	97	8	70	53	131
+30 mins.	27	114	7	148	7	61	27	95	**20**	67	3	90	**11**	**111**	**67**	**189**
+45 mins.	7	88	**22**	117	7	83	20	110	18	61	6	85	7	70	42	119
Total Volume	69	411	40	520	35	359	180	574	69	284	19	372	30	302	189	521
% App. Total	13.3	79	7.7		6.1	62.5	31.4		18.5	76.3	5.1		5.8	58	36.3	
PHF	.639	.809	.455	.813	.583	.707	.523	.759	.863	.899	.679	.930	.682	.680	.705	.689

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City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue				Nees Avenue				Clovis Avenue				Nees Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:15 AM	0	0	0	0	0	3	0	3	0	3	0	3	0	2	2	4	10
07:30 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	1	1	2	4
07:45 AM	0	0	0	0	0	1	0	1	0	4	0	4	0	0	1	1	6
Total	0	1	0	1	0	4	0	4	1	9	0	10	0	3	4	7	22
08:00 AM	1	1	1	3	0	0	0	0	0	1	1	2	0	1	1	2	7
08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	1	2	4
08:30 AM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
08:45 AM	1	2	0	3	0	2	0	2	0	0	0	0	1	1	1	3	8
Total	2	4	1	7	0	3	0	3	0	4	1	5	1	3	3	7	22
Grand Total	2	5	1	8	0	7	0	7	1	13	1	15	1	6	7	14	44
Apprch %	25	62.5	12.5		0	100	0		6.7	86.7	6.7		7.1	42.9	50		
Total %	4.5	11.4	2.3	18.2	0	15.9	0	15.9	2.3	29.5	2.3	34.1	2.3	13.6	15.9	31.8	

	Clovis Avenue				Nees Avenue				Clovis Avenue				Nees Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**3**	0	**3**	0	3	0	3	0	**2**	**2**	**4**	**10**
07:30 AM	0	0	0	0	0	0	0	0	**1**	1	0	2	0	1	1	2	4
07:45 AM	0	0	0	0	0	1	0	1	0	**4**	0	**4**	0	0	1	1	6
08:00 AM	**1**	**1**	**1**	**3**	0	0	0	0	0	1	**1**	2	0	1	1	2	7
Total Volume	1	1	1	3	0	4	0	4	1	9	1	11	0	4	5	9	27
% App. Total	33.3	33.3	33.3		0	100	0		9.1	81.8	9.1		0	44.4	55.6		
PHF	.250	.250	.250	.250	.000	.333	.000	.333	.250	.563	.250	.688	.000	.500	.625	.563	.675

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City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees AMC
Site Code : 00322473
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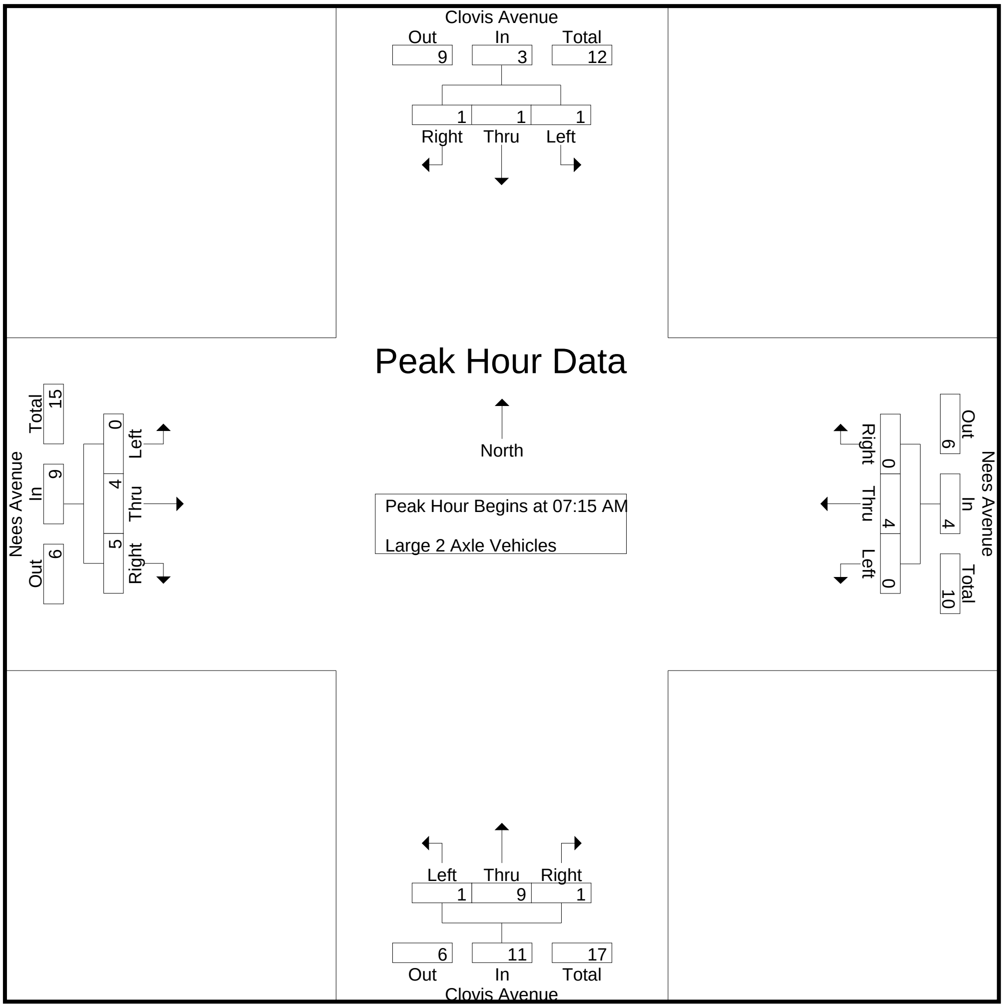

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	3	0	3	0	**2**	**2**	**4**
+15 mins.	0	0	0	0	0	0	0	0	**1**	1	0	2	0	1	1	2
+30 mins.	0	0	0	0	0	1	0	1	0	**4**	0	**4**	0	0	1	1
+45 mins.	**1**	**1**	**1**	**3**	0	0	0	0	0	1	**1**	2	0	1	1	2
Total Volume	1	1	1	3	0	4	0	4	1	9	1	11	0	4	5	9
% App. Total	33.3	33.3	33.3		0	100	0		9.1	81.8	9.1		0	44.4	55.6	
PHF	.250	.250	.250	.250	.000	.333	.000	.333	.250	.563	.250	.688	.000	.500	.625	.563

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City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- 3 Axle Vehicles

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	1	3	0	0	0	0	0	0	0	0	0	1	0	1	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
Grand Total	0	2	1	3	0	1	0	1	1	0	0	1	0	1	0	1	6
Apprch %	0	66.7	33.3		0	100	0		100	0	0		0	100	0		
Total %	0	33.3	16.7	50	0	16.7	0	16.7	16.7	0	0	16.7	0	16.7	0	16.7	

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
07:30 AM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
% App. Total	0	66.7	33.3		0	0	0		0	0	0		0	0	0		
PHF	.000	.500	.250	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.750

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City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees AMC
Site Code : 00322473
Start Date : 5/24/2022
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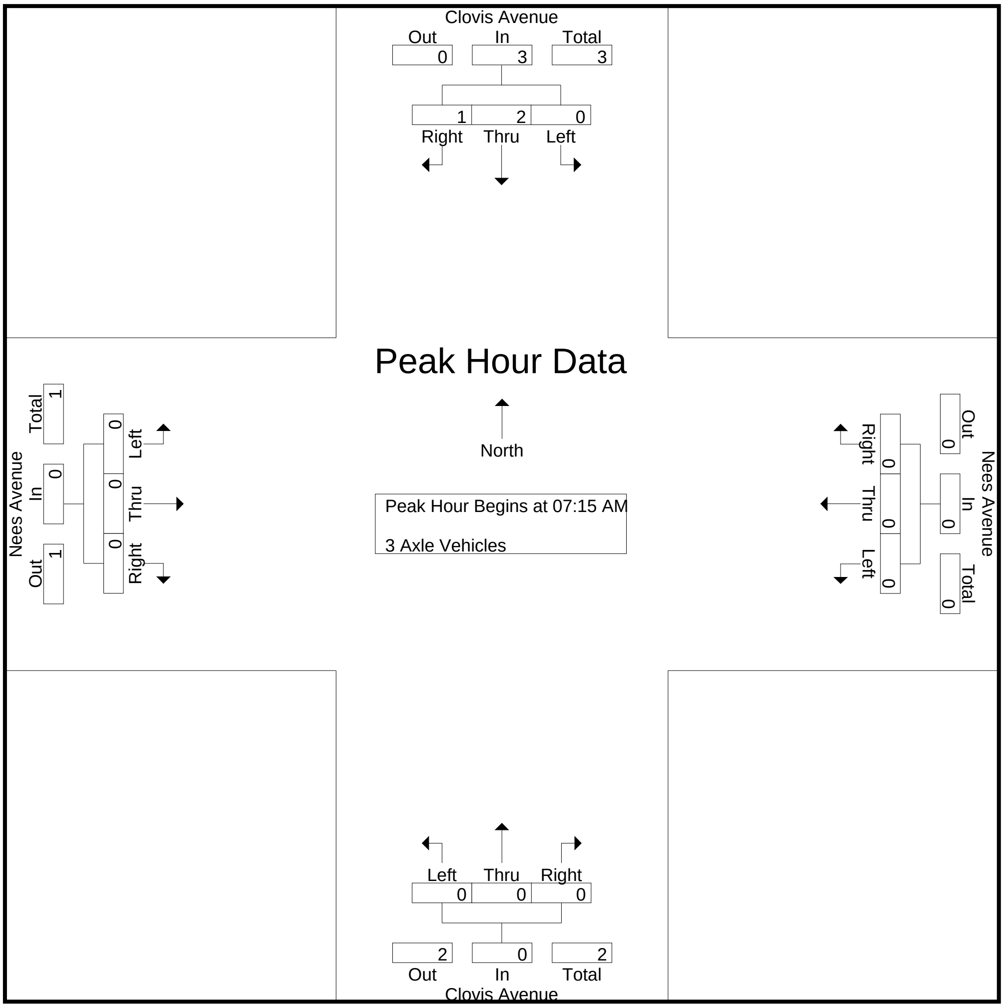

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	66.7	33.3		0	0	0		0	0	0		0	0	0	
PHF	.000	.500	.250	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
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Weather: Clear

File Name : 10_CVS_Clo_Nees AMC
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Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Grand Total	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	60	0	60	0	0	0	0	0	40	0	40	0	0	0	0	

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.750

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City of Clovis
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File Name : 10_CVS_Clo_Nees AMC
Site Code : 00322473
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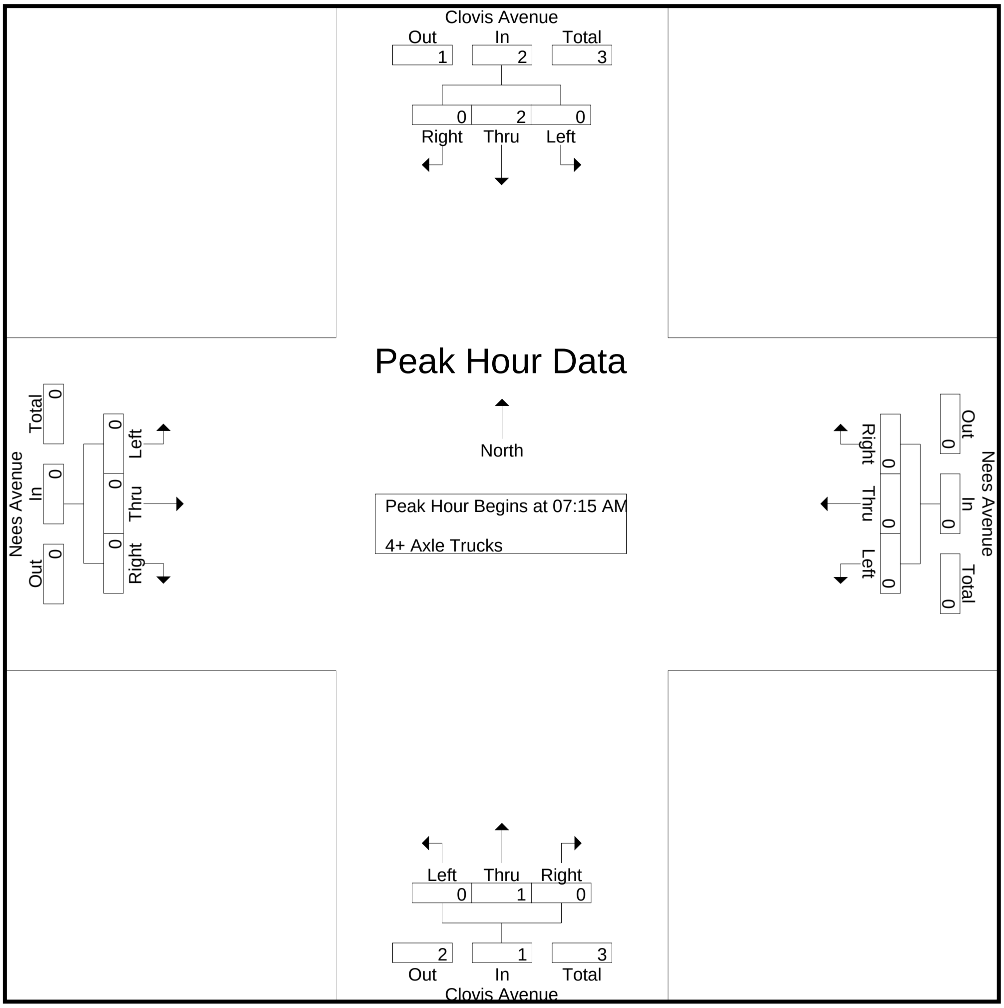

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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City of Clovis
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Weather: Clear

File Name : 10_CVS_Clo_Nees PMC
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	67	4	77	2	65	17	84	17	99	6	122	4	106	45	155	438
04:15 PM	7	75	8	90	4	56	9	69	41	84	6	131	4	88	41	133	423
04:30 PM	4	56	10	70	4	67	23	94	27	86	14	127	8	85	40	133	424
04:45 PM	8	55	10	73	3	79	19	101	32	86	10	128	6	103	77	186	488
Total	25	253	32	310	13	267	68	348	117	355	36	508	22	382	203	607	1773
05:00 PM	13	87	5	105	4	108	19	131	31	120	9	160	6	93	50	149	545
05:15 PM	11	55	3	69	9	111	16	136	26	116	16	158	3	110	61	174	537
05:30 PM	11	56	9	76	5	87	21	113	35	78	11	124	7	109	61	177	490
05:45 PM	12	44	5	61	5	74	13	92	18	73	11	102	9	88	44	141	396
Total	47	242	22	311	23	380	69	472	110	387	47	544	25	400	216	641	1968
Grand Total	72	495	54	621	36	647	137	820	227	742	83	1052	47	782	419	1248	3741
Apprch %	11.6	79.7	8.7		4.4	78.9	16.7		21.6	70.5	7.9		3.8	62.7	33.6		
Total %	1.9	13.2	1.4	16.6	1	17.3	3.7	21.9	6.1	19.8	2.2	28.1	1.3	20.9	11.2	33.4	
Passenger Vehicles	70	492	54	616	36	644	135	815	225	739	81	1045	47	774	417	1238	3714
% Passenger Vehicles	97.2	99.4	100	99.2	100	99.5	98.5	99.4	99.1	99.6	97.6	99.3	100	99	99.5	99.2	99.3
Large 2 Axle Vehicles	1	3	0	4	0	2	1	3	2	2	2	6	0	8	2	10	23
% Large 2 Axle Vehicles	1.4	0.6	0	0.6	0	0.3	0.7	0.4	0.9	0.3	2.4	0.6	0	1	0.5	0.8	0.6
3 Axle Vehicles	1	0	0	1	0	1	1	2	0	1	0	1	0	0	0	0	4
% 3 Axle Vehicles	1.4	0	0	0.2	0	0.2	0.7	0.2	0	0.1	0	0.1	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	8	55	**10**	73	3	79	19	101	32	86	10	128	6	103	**77**	**186**	488
05:00 PM	**13**	**87**	5	**105**	4	108	19	131	31	**120**	9	**160**	6	93	50	149	**545**
05:15 PM	11	55	3	69	**9**	**111**	16	**136**	26	116	**16**	158	3	**110**	61	174	537
05:30 PM	11	56	9	76	5	87	**21**	113	**35**	78	11	124	**7**	109	61	177	490
Total Volume	43	253	27	323	21	385	75	481	124	400	46	570	22	415	249	686	2060
% App. Total	13.3	78.3	8.4		4.4	80	15.6		21.8	70.2	8.1		3.2	60.5	36.3		
PHF	.827	.727	.675	.769	.583	.867	.893	.884	.886	.833	.719	.891	.786	.943	.808	.922	.945

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File Name : 10_CVS_Clo_Nees PMC
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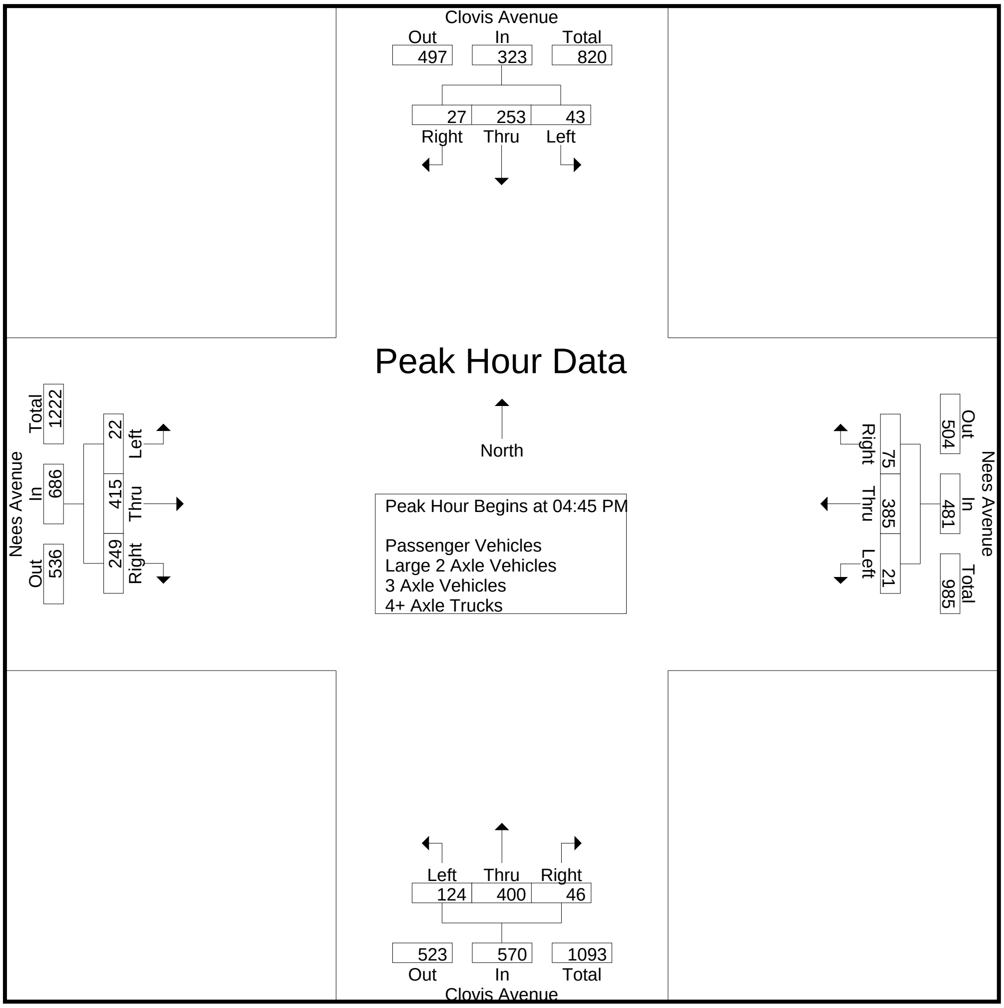

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:45 PM				04:30 PM				04:45 PM			
+0 mins.	7	75	8	90	3	79	19	101	27	86	14	127	6	103	**77**	**186**
+15 mins.	4	56	**10**	70	4	108	19	131	**32**	86	10	128	6	93	50	149
+30 mins.	8	55	10	73	**9**	**111**	16	**136**	31	**120**	9	**160**	3	**110**	61	174
+45 mins.	**13**	**87**	5	**105**	5	87	**21**	113	26	116	**16**	158	**7**	109	61	177
Total Volume	32	273	33	338	21	385	75	481	116	408	49	573	22	415	249	686
% App. Total	9.5	80.8	9.8		4.4	80	15.6		20.2	71.2	8.6		3.2	60.5	36.3	
PHF	.615	.784	.825	.805	.583	.867	.893	.884	.906	.850	.766	.895	.786	.943	.808	.922

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City of Clovis
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File Name : 10_CVS_Clo_Nees PMC
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Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	65	4	74	2	64	16	82	17	98	6	121	4	102	45	151	428
04:15 PM	6	74	8	88	4	56	9	69	41	84	6	131	4	88	40	132	420
04:30 PM	4	56	10	70	4	67	23	94	26	86	14	126	8	82	40	130	420
04:45 PM	8	55	10	73	3	78	18	99	32	86	10	128	6	103	76	185	485
Total	23	250	32	305	13	265	66	344	116	354	36	506	22	375	201	598	1753
05:00 PM	13	87	5	105	4	107	19	130	31	119	9	159	6	93	50	149	543
05:15 PM	11	55	3	69	9	111	16	136	26	115	14	155	3	109	61	173	533
05:30 PM	11	56	9	76	5	87	21	113	34	78	11	123	7	109	61	177	489
05:45 PM	12	44	5	61	5	74	13	92	18	73	11	102	9	88	44	141	396
Total	47	242	22	311	23	379	69	471	109	385	45	539	25	399	216	640	1961
Grand Total	70	492	54	616	36	644	135	815	225	739	81	1045	47	774	417	1238	3714
Apprch %	11.4	79.9	8.8		4.4	79	16.6		21.5	70.7	7.8		3.8	62.5	33.7		
Total %	1.9	13.2	1.5	16.6	1	17.3	3.6	21.9	6.1	19.9	2.2	28.1	1.3	20.8	11.2	33.3	

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	8	55	**10**	73	3	78	18	99	32	86	10	128	6	103	**76**	**185**	485
05:00 PM	**13**	**87**	5	**105**	4	107	19	130	31	**119**	9	**159**	6	93	50	149	**543**
05:15 PM	11	55	3	69	**9**	**111**	16	**136**	26	115	**14**	155	3	**109**	61	173	533
05:30 PM	11	56	9	76	5	87	**21**	113	**34**	78	11	123	**7**	109	61	177	489
Total Volume	43	253	27	323	21	383	74	478	123	398	44	565	22	414	248	684	2050
% App. Total	13.3	78.3	8.4		4.4	80.1	15.5		21.8	70.4	7.8		3.2	60.5	36.3		
PHF	.827	.727	.675	.769	.583	.863	.881	.879	.904	.836	.786	.888	.786	.950	.816	.924	.944

City of Clovis
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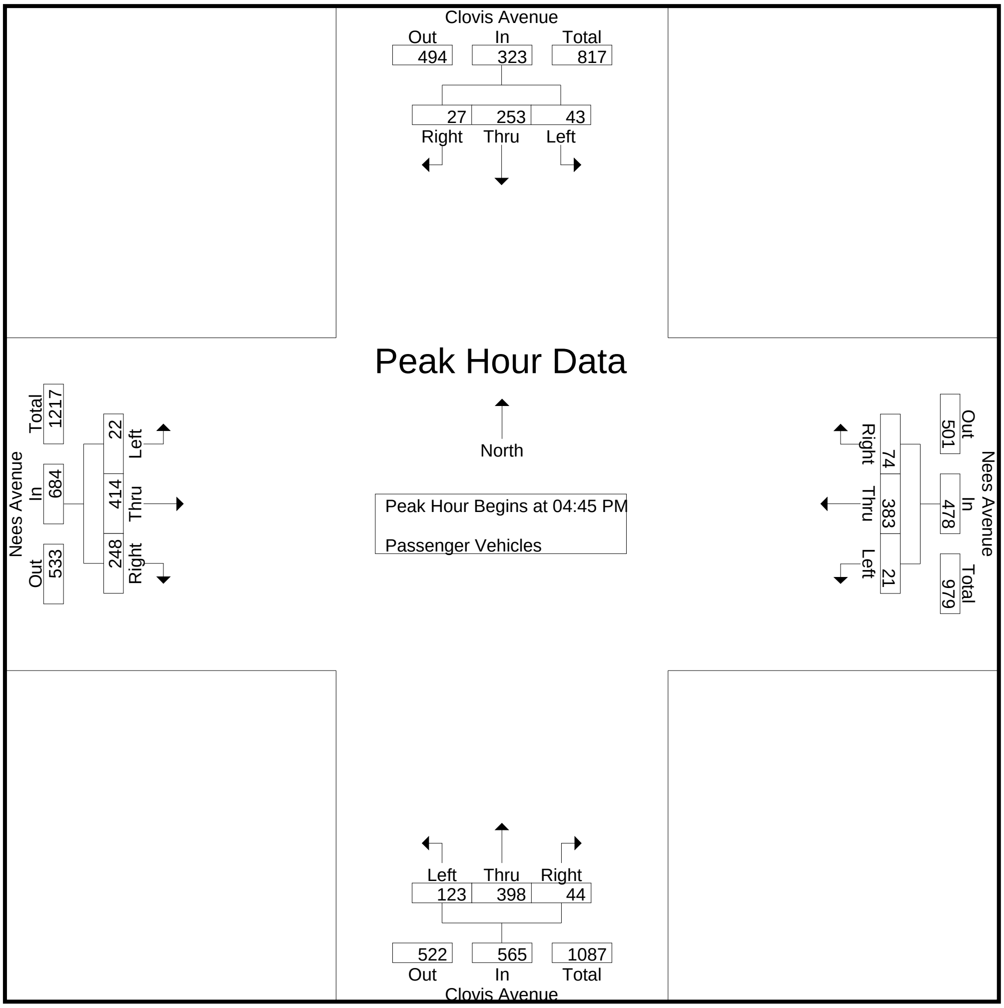

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	8	55	**10**	73	3	78	18	99	32	86	10	128	6	103	**76**	**185**
+15 mins.	**13**	**87**	5	**105**	4	107	19	130	31	**119**	9	**159**	6	93	50	149
+30 mins.	11	55	3	69	**9**	**111**	16	**136**	26	115	**14**	155	3	**109**	61	173
+45 mins.	11	56	9	76	5	87	**21**	113	**34**	78	11	123	**7**	109	61	177
Total Volume	43	253	27	323	21	383	74	478	123	398	44	565	22	414	248	684
% App. Total	13.3	78.3	8.4		4.4	80.1	15.5		21.8	70.4	7.8		3.2	60.5	36.3	
PHF	.827	.727	.675	.769	.583	.863	.881	.879	.904	.836	.786	.888	.786	.950	.816	.924

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Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	4	0	4	7
04:15 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
04:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	3	4
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
Total	1	3	0	4	0	1	1	2	1	0	0	1	0	7	2	9	16
05:00 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	1	0	1	4
05:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	1	2	2	5	0	1	0	1	7
Grand Total	1	3	0	4	0	2	1	3	2	2	2	6	0	8	2	10	23
Apprch %	25	75	0		0	66.7	33.3		33.3	33.3	33.3		0	80	20		
Total %	4.3	13	0	17.4	0	8.7	4.3	13	8.7	8.7	8.7	26.1	0	34.8	8.7	43.5	

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	**1**	**1**	2
05:00 PM	0	0	0	0	0	**1**	0	1	0	**1**	0	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	1	**2**	**3**	0	**1**	0	1	**4**
05:30 PM	0	0	0	0	0	0	0	0	**1**	0	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	1	1	2	1	2	2	5	0	1	1	2	9
% App. Total	0	0	0		0	50	50		20	40	40		0	50	50		
PHF	.000	.000	.000	.000	.000	.250	.250	.500	.250	.500	.250	.417	.000	.250	.250	.500	.563

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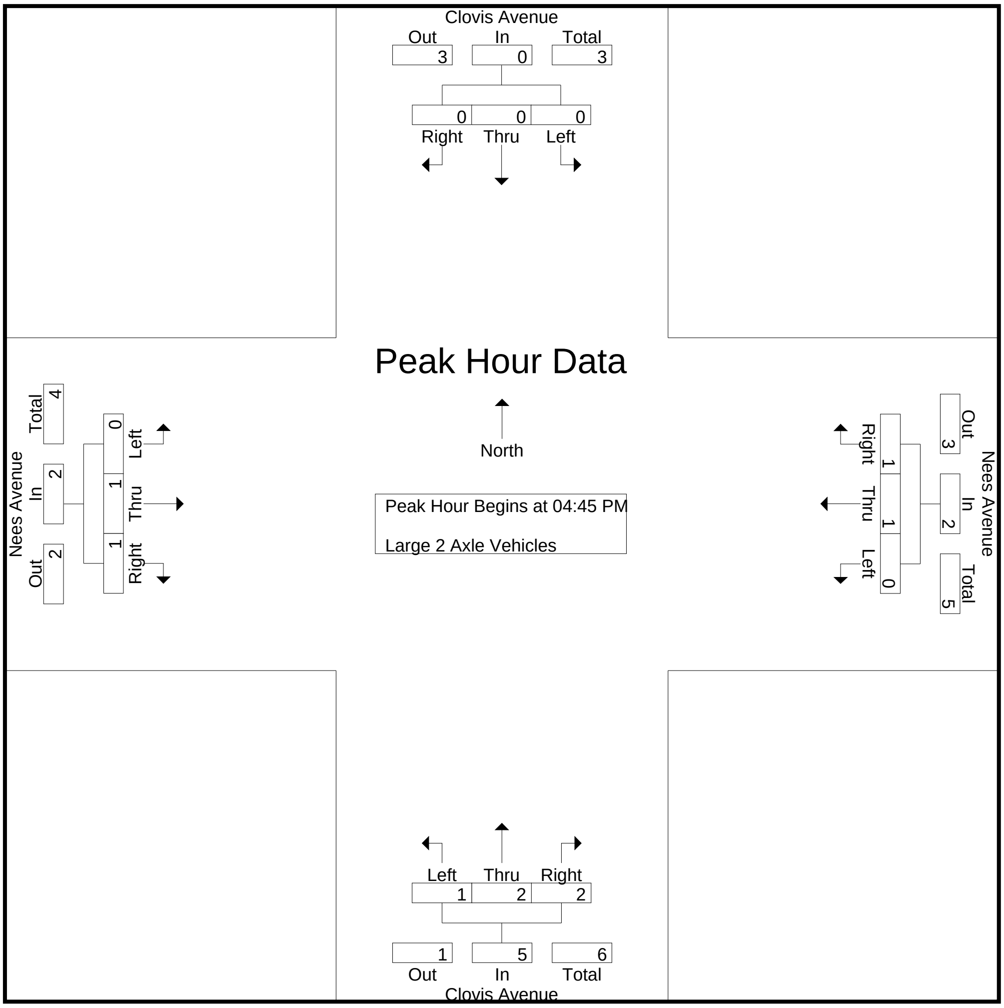

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	**1**	**1**
+15 mins.	0	0	0	0	0	**1**	0	1	0	**1**	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	**2**	**3**	0	**1**	0	1
+45 mins.	0	0	0	0	0	0	0	0	**1**	0	0	1	0	0	0	0
Total Volume	0	0	0	0	0	1	1	2	1	2	2	5	0	1	1	2
% App. Total	0	0	0		0	50	50		20	40	40		0	50	50	
PHF	.000	.000	.000	.000	.000	.250	.250	.500	.250	.500	.250	.417	.000	.250	.250	.500

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City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- 3 Axle Vehicles

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	1	1	2	0	1	0	1	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	1	0	1	1	2	0	1	0	1	0	0	0	0	4
Apprch %	100	0	0		0	50	50		0	100	0		0	0	0		
Total %	25	0	0	25	0	25	25	50	0	25	0	25	0	0	0	0	

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees PMC
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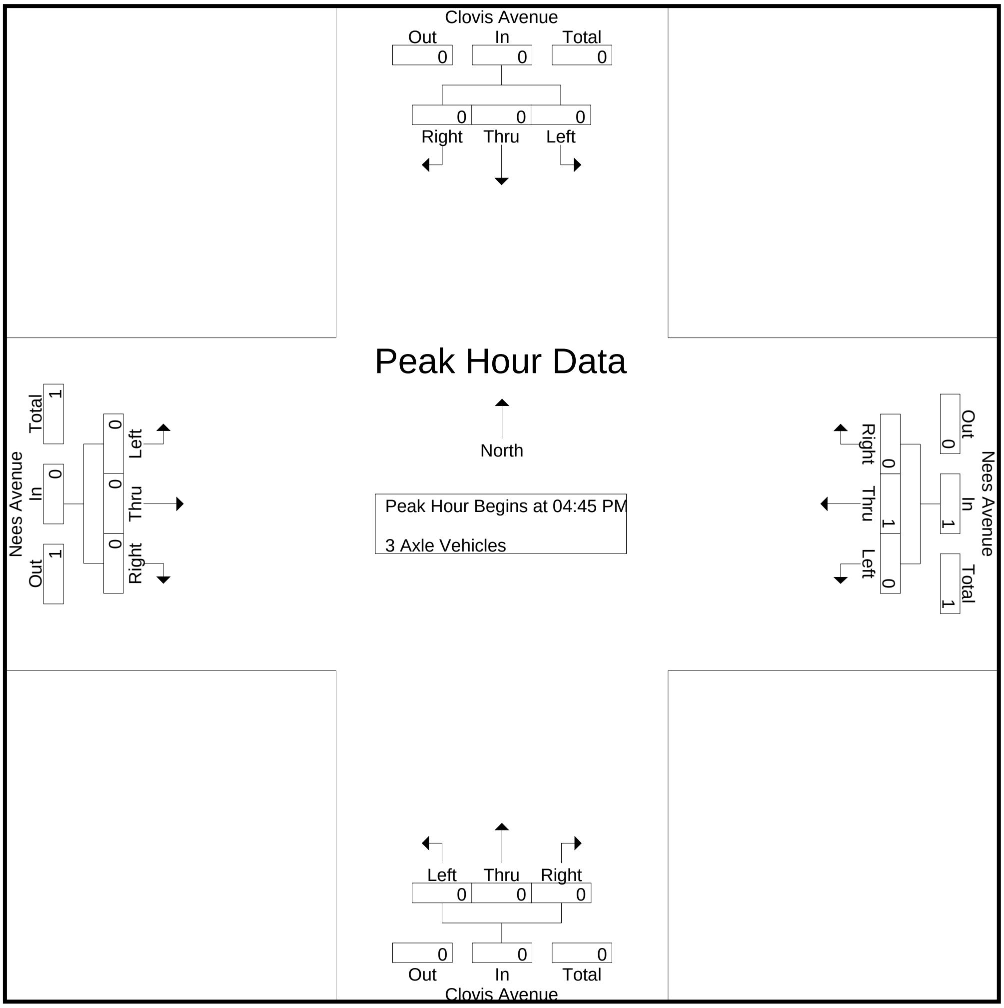

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Clovis Avenue Southbound				Nees Avenue Westbound				Clovis Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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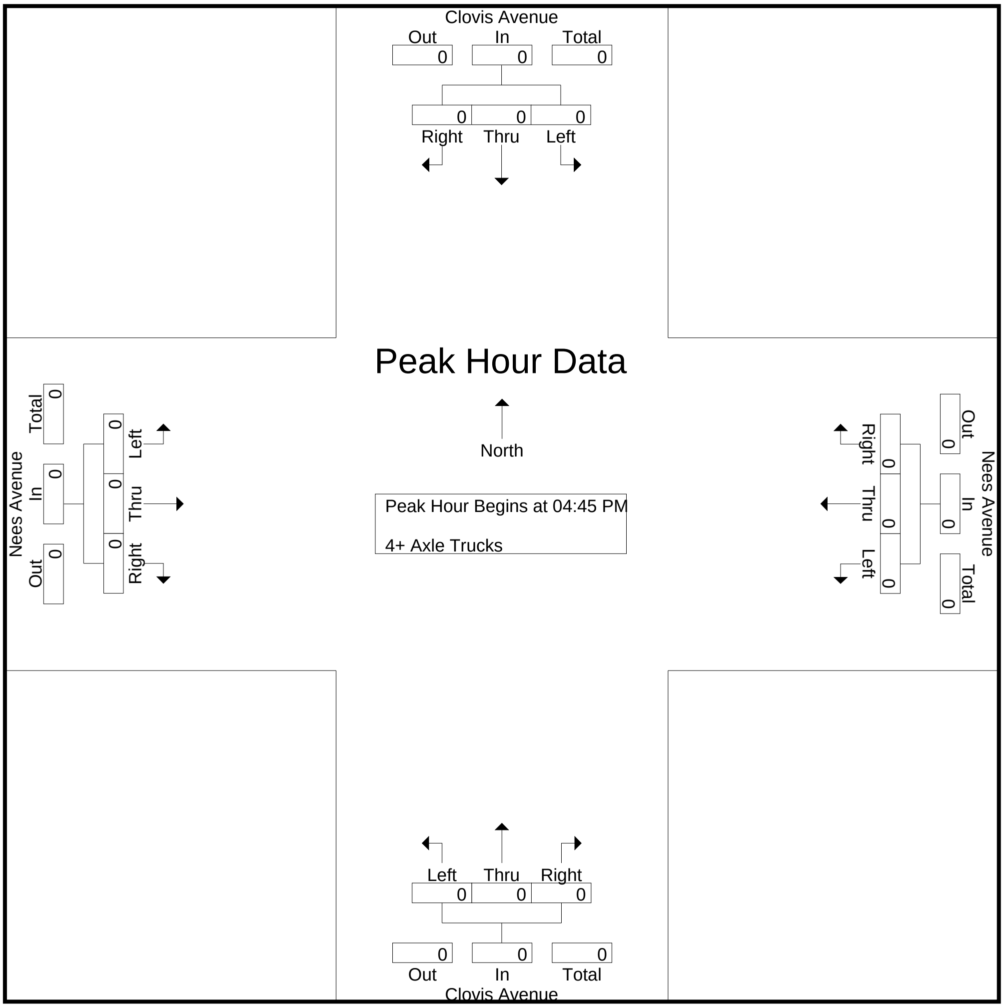
City of Clovis
N/S: Clovis Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 10_CVS_Clo_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Clovis Avenue
E/W: Nees Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Clovis Avenue	East Leg Nees Avenue	South Leg Clovis Avenue	West Leg Nees Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	2	1	0	3
7:15 AM	0	7	0	0	7
7:30 AM	0	5	1	0	6
7:45 AM	0	0	0	0	0
8:00 AM	0	7	2	0	9
8:15 AM	0	13	0	0	13
8:30 AM	4	9	4	4	21
8:45 AM	2	13	0	0	15
TOTAL VOLUMES:	6	56	8	4	74

	North Leg Clovis Avenue	East Leg Nees Avenue	South Leg Clovis Avenue	West Leg Nees Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	1	0	2
4:45 PM	0	2	0	0	2
5:00 PM	1	0	0	0	1
5:15 PM	0	0	0	2	2
5:30 PM	0	1	0	0	1
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	1	5	1	2	9

Location: Clovis
N/S: Clovis Avenue
E/W: Nees Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound			Westbound			Northbound			Eastbound			
	Clovis Avenue			Nees Avenue			Clovis Avenue			Nees Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	2	0	0	0	0	0	1	0	0	0	0	3
TOTAL VOLUMES:	0	3	0	0	1	0	1	3	0	0	0	0	8

	Southbound			Westbound			Northbound			Eastbound			
	Clovis Avenue			Nees Avenue			Clovis Avenue			Nees Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	3	0	0	1	0	0	3	0	0	1	0	8

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City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	12	98	6	116	8	53	9	70	14	71	5	90	3	27	26	56	332
07:15 AM	15	106	8	129	5	117	21	143	27	86	5	118	1	36	21	58	448
07:30 AM	27	152	17	196	4	145	30	179	34	90	10	134	3	60	42	105	614
07:45 AM	38	163	8	209	11	105	18	134	33	61	16	110	2	88	38	128	581
Total	92	519	39	650	28	420	78	526	108	308	36	452	9	211	127	347	1975
08:00 AM	32	129	5	166	9	89	24	122	27	78	15	120	5	59	46	110	518
08:15 AM	29	132	4	165	20	68	17	105	33	53	20	106	3	62	27	92	468
08:30 AM	14	123	3	140	11	68	10	89	17	70	9	96	3	41	26	70	395
08:45 AM	17	109	7	133	8	57	3	68	23	58	9	90	1	37	32	70	361
Total	92	493	19	604	48	282	54	384	100	259	53	412	12	199	131	342	1742
Grand Total	184	1012	58	1254	76	702	132	910	208	567	89	864	21	410	258	689	3717
Apprch %	14.7	80.7	4.6		8.4	77.1	14.5		24.1	65.6	10.3		3	59.5	37.4		
Total %	5	27.2	1.6	33.7	2	18.9	3.6	24.5	5.6	15.3	2.4	23.2	0.6	11	6.9	18.5	
Passenger Vehicles	181	1000	55	1236	76	693	129	898	205	547	86	838	20	387	250	657	3629
% Passenger Vehicles	98.4	98.8	94.8	98.6	100	98.7	97.7	98.7	98.6	96.5	96.6	97	95.2	94.4	96.9	95.4	97.6
Large 2 Axle Vehicles	2	9	2	13	0	9	3	12	3	17	1	21	1	21	8	30	76
% Large 2 Axle Vehicles	1.1	0.9	3.4	1	0	1.3	2.3	1.3	1.4	3	1.1	2.4	4.8	5.1	3.1	4.4	2
3 Axle Vehicles	1	1	1	3	0	0	0	0	0	1	1	2	0	2	0	2	7
% 3 Axle Vehicles	0.5	0.1	1.7	0.2	0	0	0	0	0	0.2	1.1	0.2	0	0.5	0	0.3	0.2
4+ Axle Trucks	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	5
% 4+ Axle Trucks	0	0.2	0	0.2	0	0	0	0	0	0.4	1.1	0.3	0	0	0	0	0.1

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	27	152	**17**	196	4	**145**	**30**	**179**	**34**	**90**	10	**134**	3	60	42	105	**614**
07:45 AM	**38**	**163**	8	**209**	11	105	18	134	33	61	16	110	2	**88**	38	**128**	581
08:00 AM	32	129	5	166	9	89	24	122	27	78	15	120	**5**	59	**46**	110	518
08:15 AM	29	132	4	165	**20**	68	17	105	33	53	**20**	106	3	62	27	92	468
Total Volume	126	576	34	736	44	407	89	540	127	282	61	470	13	269	153	435	2181
% App. Total	17.1	78.3	4.6		8.1	75.4	16.5		27	60	13		3	61.8	35.2		
PHF	.829	.883	.500	.880	.550	.702	.742	.754	.934	.783	.763	.877	.650	.764	.832	.850	.888

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City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All AMC
Site Code : 00322473
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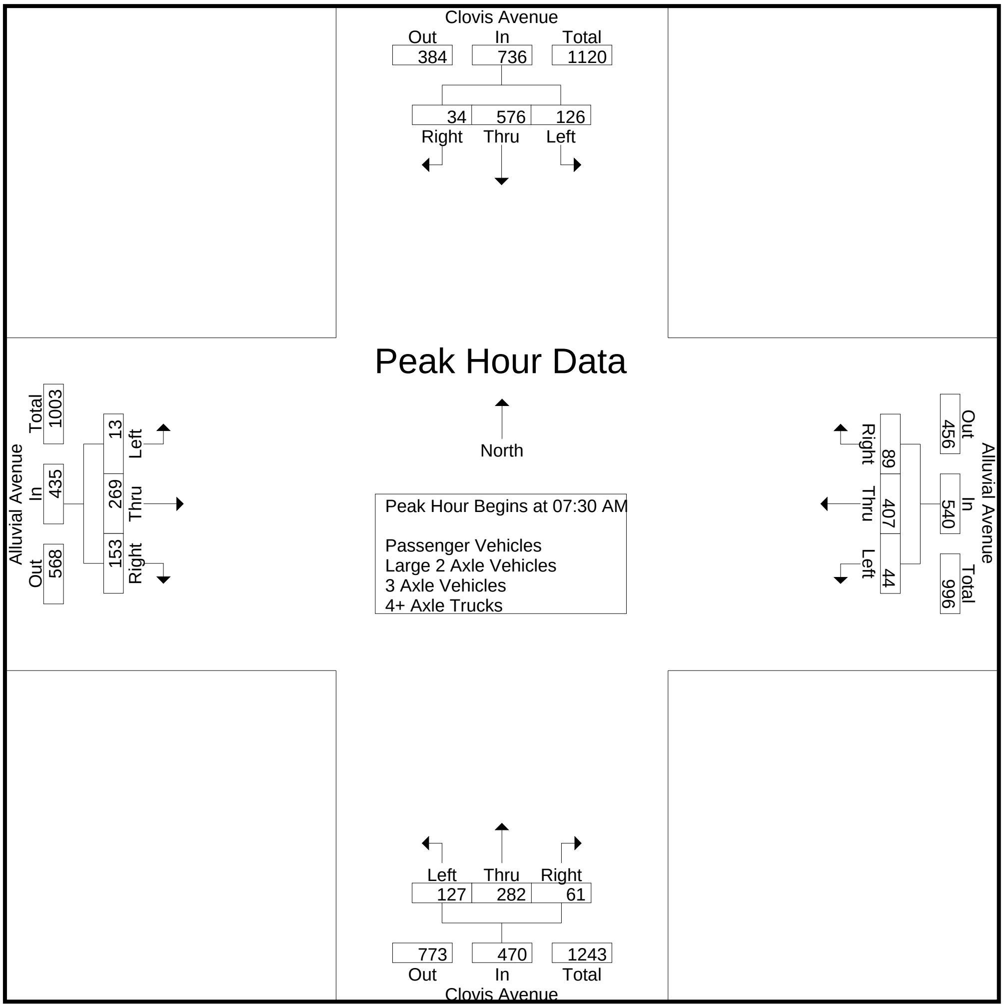

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	27	152	**17**	196	5	117	21	143	27	86	5	118	3	60	42	105
+15 mins.	**38**	**163**	8	**209**	4	**145**	**30**	**179**	**34**	**90**	10	**134**	2	**88**	38	**128**
+30 mins.	32	129	5	166	**11**	105	18	134	33	61	**16**	110	**5**	59	**46**	110
+45 mins.	29	132	4	165	9	89	24	122	27	78	15	120	3	62	27	92
Total Volume	126	576	34	736	29	456	93	578	121	315	46	482	13	269	153	435
% App. Total	17.1	78.3	4.6		5	78.9	16.1		25.1	65.4	9.5		3	61.8	35.2	
PHF	.829	.883	.500	.880	.659	.786	.775	.807	.890	.875	.719	.899	.650	.764	.832	.850

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City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	12	97	6	115	8	52	9	69	13	69	4	86	3	27	25	55	325
07:15 AM	15	103	8	126	5	115	21	141	27	83	5	115	1	35	21	57	439
07:30 AM	26	152	16	194	4	142	30	176	34	85	10	129	3	54	41	98	597
07:45 AM	38	162	7	207	11	104	17	132	33	59	14	106	2	85	38	125	570
Total	91	514	37	642	28	413	77	518	107	296	33	436	9	201	125	335	1931
08:00 AM	31	127	5	163	9	89	24	122	26	76	15	117	4	57	43	104	506
08:15 AM	28	132	4	164	20	66	16	102	32	50	20	102	3	56	27	86	454
08:30 AM	14	121	3	138	11	68	9	88	17	69	9	95	3	36	24	63	384
08:45 AM	17	106	6	129	8	57	3	68	23	56	9	88	1	37	31	69	354
Total	90	486	18	594	48	280	52	380	98	251	53	402	11	186	125	322	1698
Grand Total	181	1000	55	1236	76	693	129	898	205	547	86	838	20	387	250	657	3629
Apprch %	14.6	80.9	4.4		8.5	77.2	14.4		24.5	65.3	10.3		3	58.9	38.1		
Total %	5	27.6	1.5	34.1	2.1	19.1	3.6	24.7	5.6	15.1	2.4	23.1	0.6	10.7	6.9	18.1	

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	26	152	**16**	194	4	**142**	**30**	**176**	**34**	**85**	10	**129**	3	54	41	98	**597**
07:45 AM	**38**	**162**	7	**207**	11	104	17	132	33	59	14	106	2	**85**	38	**125**	570
08:00 AM	31	127	5	163	9	89	24	122	26	76	15	117	**4**	57	**43**	104	506
08:15 AM	28	132	4	164	**20**	66	16	102	32	50	**20**	102	3	56	27	86	454
Total Volume	123	573	32	728	44	401	87	532	125	270	59	454	12	252	149	413	2127
% App. Total	16.9	78.7	4.4		8.3	75.4	16.4		27.5	59.5	13		2.9	61	36.1		
PHF	.809	.884	.500	.879	.550	.706	.725	.756	.919	.794	.738	.880	.750	.741	.866	.826	.891

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City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All AMC
Site Code : 00322473
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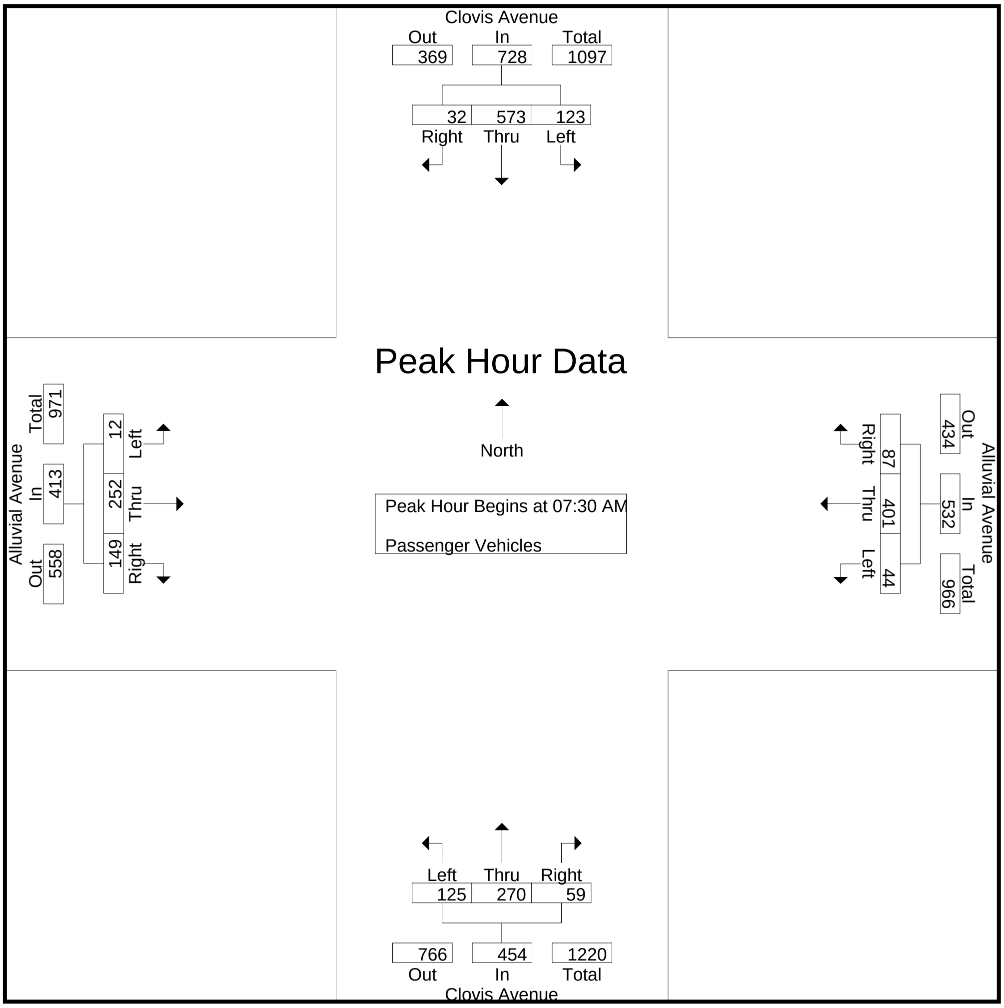

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	26	152	**16**	194	4	**142**	**30**	**176**	**34**	**85**	10	**129**	3	54	41	98
+15 mins.	**38**	**162**	7	**207**	11	104	17	132	33	59	14	106	2	**85**	38	**125**
+30 mins.	31	127	5	163	9	89	24	122	26	76	15	117	**4**	57	**43**	104
+45 mins.	28	132	4	164	**20**	66	16	102	32	50	**20**	102	3	56	27	86
Total Volume	123	573	32	728	44	401	87	532	125	270	59	454	12	252	149	413
% App. Total	16.9	78.7	4.4		8.3	75.4	16.4		27.5	59.5	13		2.9	61	36.1	
PHF	.809	.884	.500	.879	.550	.706	.725	.756	.919	.794	.738	.880	.750	.741	.866	.826

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City of Clovis
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Weather: Clear

File Name : 11_CVS_Clo_All AMC
Site Code : 00322473
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Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	1	0	1	1	2	0	3	0	0	1	1	6
07:15 AM	0	2	0	2	0	2	0	2	0	3	0	3	0	1	0	1	8
07:30 AM	1	0	0	1	0	3	0	3	0	4	0	4	0	4	1	5	13
07:45 AM	0	0	1	1	0	1	1	2	0	2	1	3	0	3	0	3	9
Total	1	3	1	5	0	7	1	8	1	11	1	13	0	8	2	10	36
08:00 AM	1	2	0	3	0	0	0	0	1	2	0	3	1	2	3	6	12
08:15 AM	0	0	0	0	0	2	1	3	1	1	0	2	0	6	0	6	11
08:30 AM	0	2	0	2	0	0	1	1	0	1	0	1	0	5	2	7	11
08:45 AM	0	2	1	3	0	0	0	0	0	2	0	2	0	0	1	1	6
Total	1	6	1	8	0	2	2	4	2	6	0	8	1	13	6	20	40
Grand Total	2	9	2	13	0	9	3	12	3	17	1	21	1	21	8	30	76
Apprch %	15.4	69.2	15.4		0	75	25		14.3	81	4.8		3.3	70	26.7		
Total %	2.6	11.8	2.6	17.1	0	11.8	3.9	15.8	3.9	22.4	1.3	27.6	1.3	27.6	10.5	39.5	

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**1**	0	0	1	0	**3**	0	**3**	0	**4**	0	**4**	0	4	1	5	**13**
07:45 AM	0	0	**1**	1	0	1	**1**	2	0	2	**1**	3	0	3	0	3	9
08:00 AM	1	**2**	0	**3**	0	0	0	0	**1**	2	0	3	**1**	2	**3**	**6**	12
08:15 AM	0	0	0	0	0	2	1	3	1	1	0	2	0	**6**	0	6	11
Total Volume	2	2	1	5	0	6	2	8	2	9	1	12	1	15	4	20	45
% App. Total	40	40	20		0	75	25		16.7	75	8.3		5	75	20		
PHF	.500	.250	.250	.417	.000	.500	.500	.667	.500	.563	.250	.750	.250	.625	.333	.833	.865

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City of Clovis
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File Name : 11_CVS_Clo_All AMC
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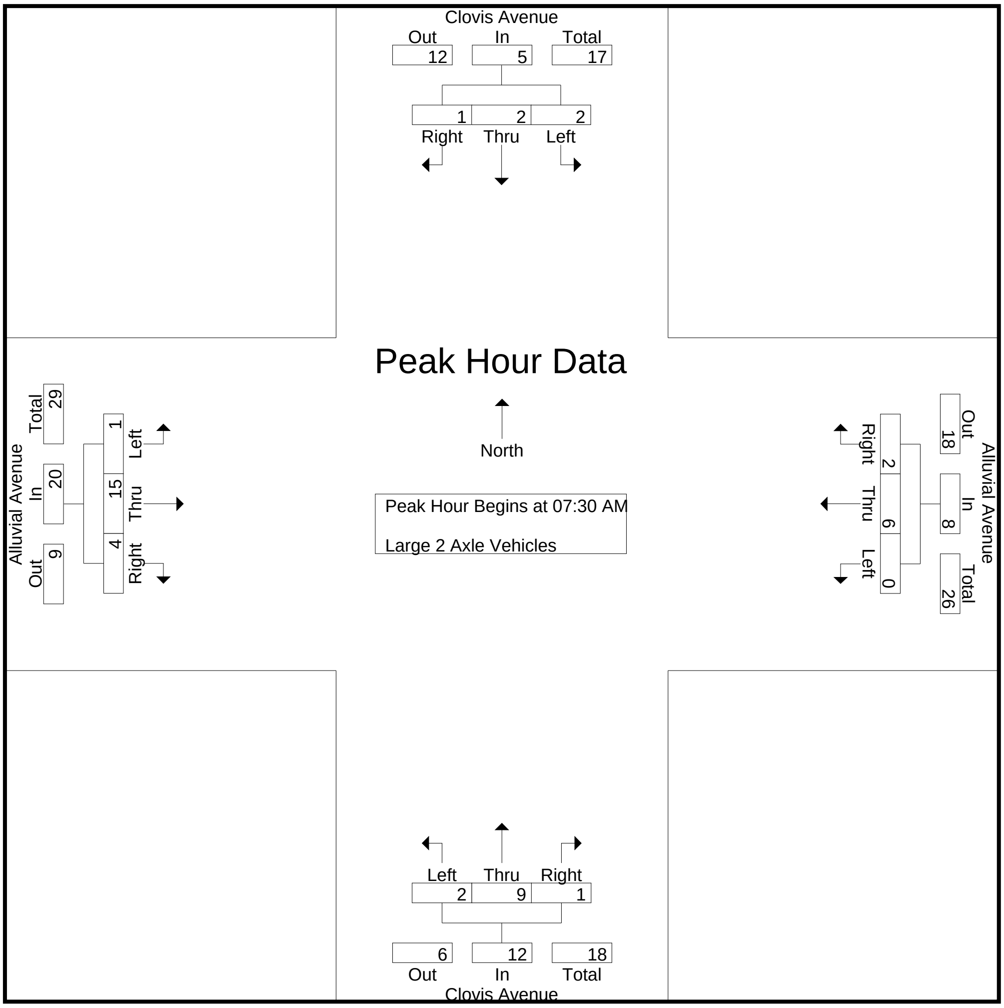

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**1**	0	0	1	0	**3**	0	**3**	0	**4**	0	**4**	0	4	1	5
+15 mins.	0	0	**1**	1	0	1	**1**	2	0	2	**1**	3	0	3	0	3
+30 mins.	1	**2**	0	**3**	0	0	0	0	**1**	2	0	3	**1**	2	**3**	**6**
+45 mins.	0	0	0	0	0	2	1	3	1	1	0	2	0	**6**	0	6
Total Volume	2	2	1	5	0	6	2	8	2	9	1	12	1	15	4	20
% App. Total	40	40	20		0	75	25		16.7	75	8.3		5	75	20	
PHF	.500	.250	.250	.417	.000	.500	.500	.667	.500	.563	.250	.750	.250	.625	.333	.833

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File Name : 11_CVS_Clo_All AMC
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Groups Printed- 3 Axle Vehicles

	Clovis Avenue				Alluvial Avenue				Clovis Avenue				Alluvial Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2	3
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	0	0	0	0	0	0	1	1	0	2	0	2	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Grand Total	1	1	1	3	0	0	0	0	0	1	1	2	0	2	0	2	7
Apprch %	33.3	33.3	33.3		0	0	0		0	50	50		0	100	0		
Total %	14.3	14.3	14.3	42.9	0	0	0	0	0	14.3	14.3	28.6	0	28.6	0	28.6	

	Clovis Avenue				Alluvial Avenue				Clovis Avenue				Alluvial Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**3**
07:45 AM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	**1**	0	0	1	0	0	0	0	0	**1**	0	**1**	0	0	0	0	2
Total Volume	1	1	1	3	0	0	0	0	0	1	0	1	0	2	0	2	6
% App. Total	33.3	33.3	33.3		0	0	0		0	100	0		0	100	0		
PHF	.250	.250	.250	.750	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.500

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File Name : 11_CVS_Clo_All AMC
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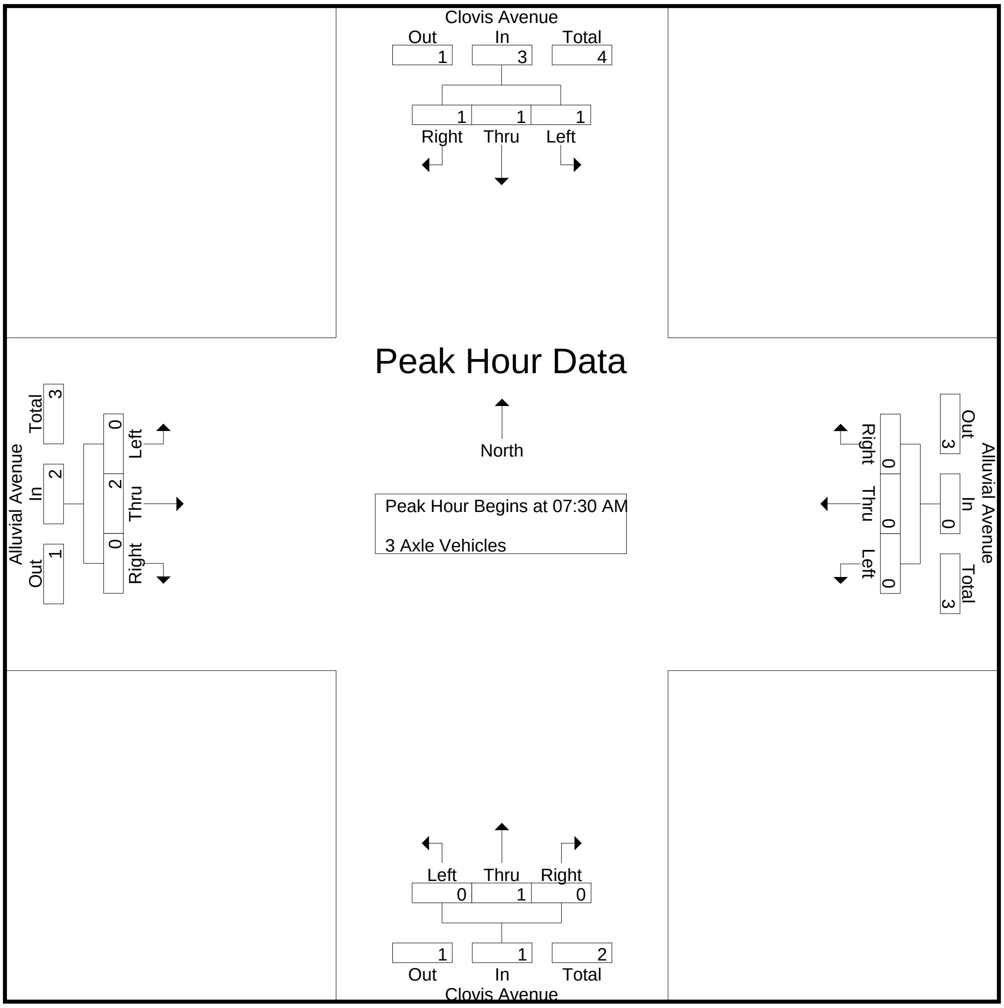

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+15 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	**1**	0	0	1	0	0	0	0	0	**1**	0	**1**	0	0	0	0
Total Volume	1	1	1	3	0	0	0	0	0	1	0	1	0	2	0	2
% App. Total	33.3	33.3	33.3		0	0	0		0	100	0		0	100	0	
PHF	.250	.250	.250	.750	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250

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City of Clovis
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File Name : 11_CVS_Clo_All AMC
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Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Grand Total	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	5
Apprch %	0	100	0		0	0	0		0	66.7	33.3		0	0	0		
Total %	0	40	0	40	0	0	0	0	0	40	20	60	0	0	0	0	

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	3
% App. Total	0	0	0		0	0	0		0	66.7	33.3		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.250	.750	.000	.000	.000	.000	.750

AGENDA ITEM NO. 6.

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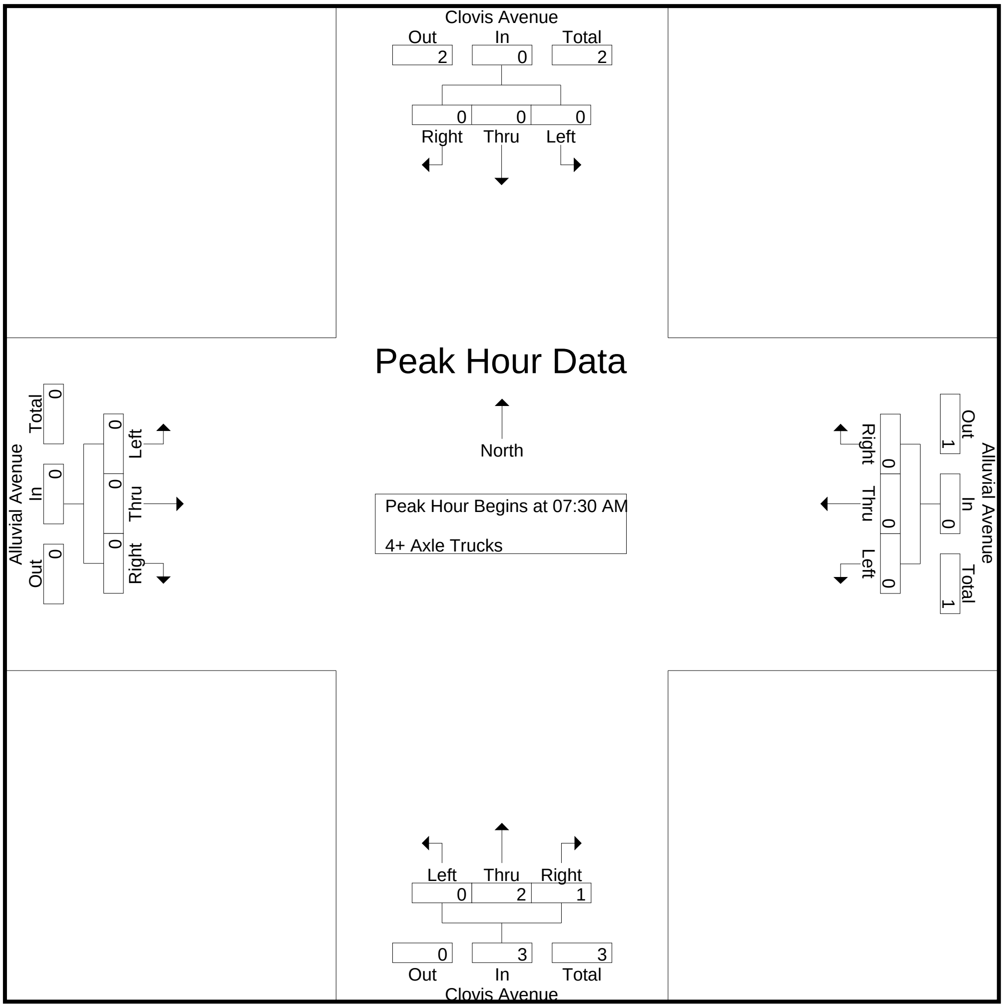

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0
% App. Total	0	0	0		0	0	0		0	66.7	33.3		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.250	.750	.000	.000	.000	.000

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	20	91	6	117	6	49	16	71	35	117	18	170	1	64	32	97	455
04:15 PM	21	111	3	135	14	49	16	79	43	134	23	200	1	79	33	113	527
04:30 PM	15	107	0	122	8	59	11	78	25	128	18	171	5	92	48	145	516
04:45 PM	24	116	3	143	10	71	22	103	35	125	10	170	3	67	40	110	526
Total	80	425	12	517	38	228	65	331	138	504	69	711	10	302	153	465	2024
05:00 PM	19	117	6	142	11	77	20	108	38	173	25	236	4	75	41	120	606
05:15 PM	19	114	4	137	7	95	24	126	48	132	14	194	3	108	46	157	614
05:30 PM	24	110	2	136	7	63	12	82	34	130	21	185	5	79	29	113	516
05:45 PM	18	83	3	104	9	54	8	71	31	120	25	176	3	75	43	121	472
Total	80	424	15	519	34	289	64	387	151	555	85	791	15	337	159	511	2208
Grand Total	160	849	27	1036	72	517	129	718	289	1059	154	1502	25	639	312	976	4232
Apprch %	15.4	81.9	2.6		10	72	18		19.2	70.5	10.3		2.6	65.5	32		
Total %	3.8	20.1	0.6	24.5	1.7	12.2	3	17	6.8	25	3.6	35.5	0.6	15.1	7.4	23.1	
Passenger Vehicles	159	845	27	1031	71	516	128	715	289	1054	154	1497	24	634	306	964	4207
% Passenger Vehicles	99.4	99.5	100	99.5	98.6	99.8	99.2	99.6	100	99.5	100	99.7	96	99.2	98.1	98.8	99.4
Large 2 Axle Vehicles	1	4	0	5	1	1	1	3	0	5	0	5	1	5	5	11	24
% Large 2 Axle Vehicles	0.6	0.5	0	0.5	1.4	0.2	0.8	0.4	0	0.5	0	0.3	4	0.8	1.6	1.1	0.6
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.1	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	107	0	122	8	59	11	78	25	128	18	171	**5**	92	**48**	145	516
04:45 PM	**24**	116	3	**143**	10	71	22	103	35	125	10	170	3	67	40	110	526
05:00 PM	19	**117**	**6**	142	**11**	77	20	108	38	**173**	**25**	**236**	4	75	41	120	606
05:15 PM	19	114	4	137	7	**95**	**24**	**126**	**48**	132	14	194	3	**108**	46	**157**	**614**
Total Volume	77	454	13	544	36	302	77	415	146	558	67	771	15	342	175	532	2262
% App. Total	14.2	83.5	2.4		8.7	72.8	18.6		18.9	72.4	8.7		2.8	64.3	32.9		
PHF	.802	.970	.542	.951	.818	.795	.802	.823	.760	.806	.670	.817	.750	.792	.911	.847	.921

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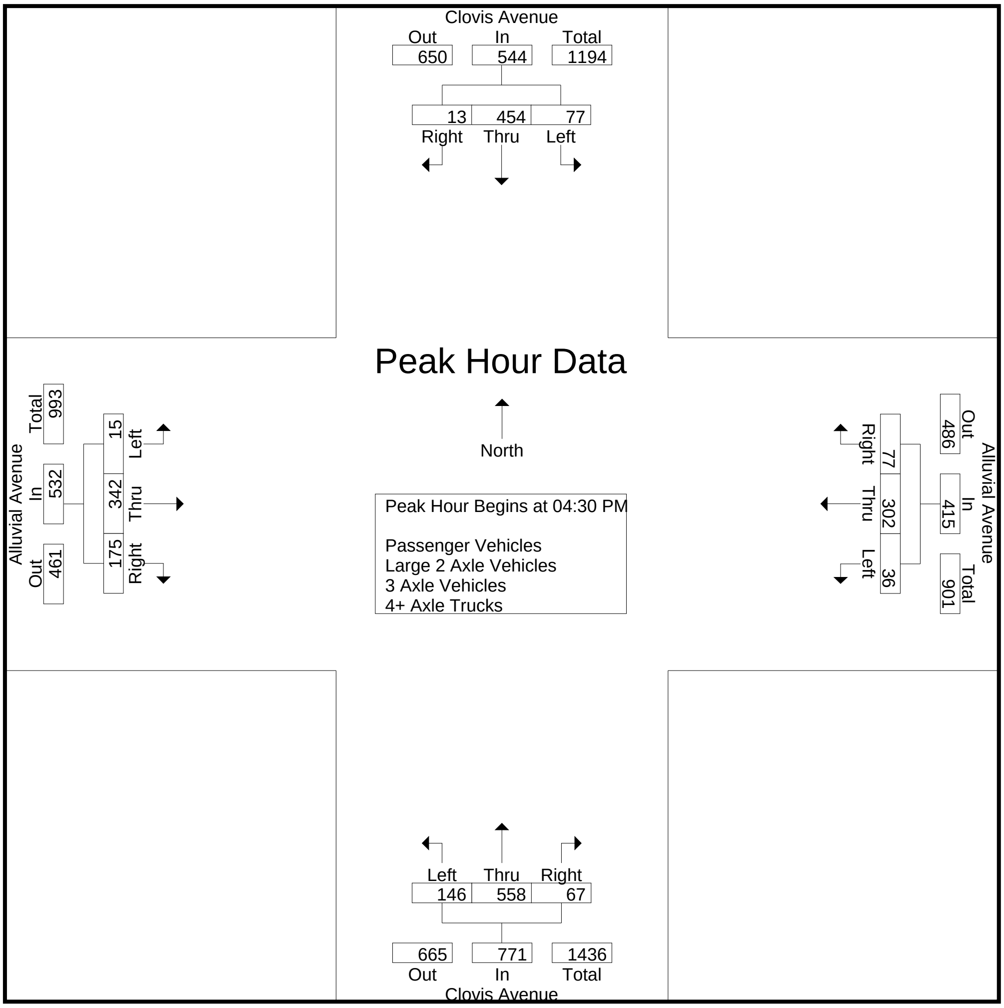

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				05:00 PM				04:30 PM			
+0 mins.	**24**	116	3	**143**	10	71	22	103	38	**173**	**25**	**236**	**5**	92	**48**	145
+15 mins.	19	**117**	**6**	142	**11**	77	20	108	**48**	132	14	194	3	67	40	110
+30 mins.	19	114	4	137	7	**95**	**24**	**126**	34	130	21	185	4	75	41	120
+45 mins.	24	110	2	136	7	63	12	82	31	120	25	176	3	**108**	46	**157**
Total Volume	86	457	15	558	35	306	78	419	151	555	85	791	15	342	175	532
% App. Total	15.4	81.9	2.7		8.4	73	18.6		19.1	70.2	10.7		2.8	64.3	32.9	
PHF	.896	.976	.625	.976	.795	.805	.813	.831	.786	.802	.850	.838	.750	.792	.911	.847

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All PMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	19	90	6	115	6	49	16	71	35	117	18	170	1	61	31	93	449
04:15 PM	21	109	3	133	14	49	16	79	43	133	23	199	1	79	32	112	523
04:30 PM	15	107	0	122	8	59	11	78	25	128	18	171	4	91	47	142	513
04:45 PM	24	115	3	142	9	70	22	101	35	125	10	170	3	67	40	110	523
Total	79	421	12	512	37	227	65	329	138	503	69	710	9	298	150	457	2008
05:00 PM	19	117	6	142	11	77	19	107	38	173	25	236	4	75	40	119	604
05:15 PM	19	114	4	137	7	95	24	126	48	129	14	191	3	108	45	156	610
05:30 PM	24	110	2	136	7	63	12	82	34	129	21	184	5	79	28	112	514
05:45 PM	18	83	3	104	9	54	8	71	31	120	25	176	3	74	43	120	471
Total	80	424	15	519	34	289	63	386	151	551	85	787	15	336	156	507	2199
Grand Total	159	845	27	1031	71	516	128	715	289	1054	154	1497	24	634	306	964	4207
Apprch %	15.4	82	2.6		9.9	72.2	17.9		19.3	70.4	10.3		2.5	65.8	31.7		
Total %	3.8	20.1	0.6	24.5	1.7	12.3	3	17	6.9	25.1	3.7	35.6	0.6	15.1	7.3	22.9	

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	107	0	122	8	59	11	78	25	128	18	171	**4**	91	**47**	142	513
04:45 PM	**24**	115	3	**142**	9	70	22	101	35	125	10	170	3	67	40	110	523
05:00 PM	19	**117**	**6**	142	**11**	77	19	107	38	**173**	**25**	**236**	4	75	40	119	604
05:15 PM	19	114	4	137	7	**95**	**24**	**126**	**48**	129	14	191	3	**108**	45	**156**	**610**
Total Volume	77	453	13	543	35	301	76	412	146	555	67	768	14	341	172	527	2250
% App. Total	14.2	83.4	2.4		8.5	73.1	18.4		19	72.3	8.7		2.7	64.7	32.6		
PHF	.802	.968	.542	.956	.795	.792	.792	.817	.760	.802	.670	.814	.875	.789	.915	.845	.922

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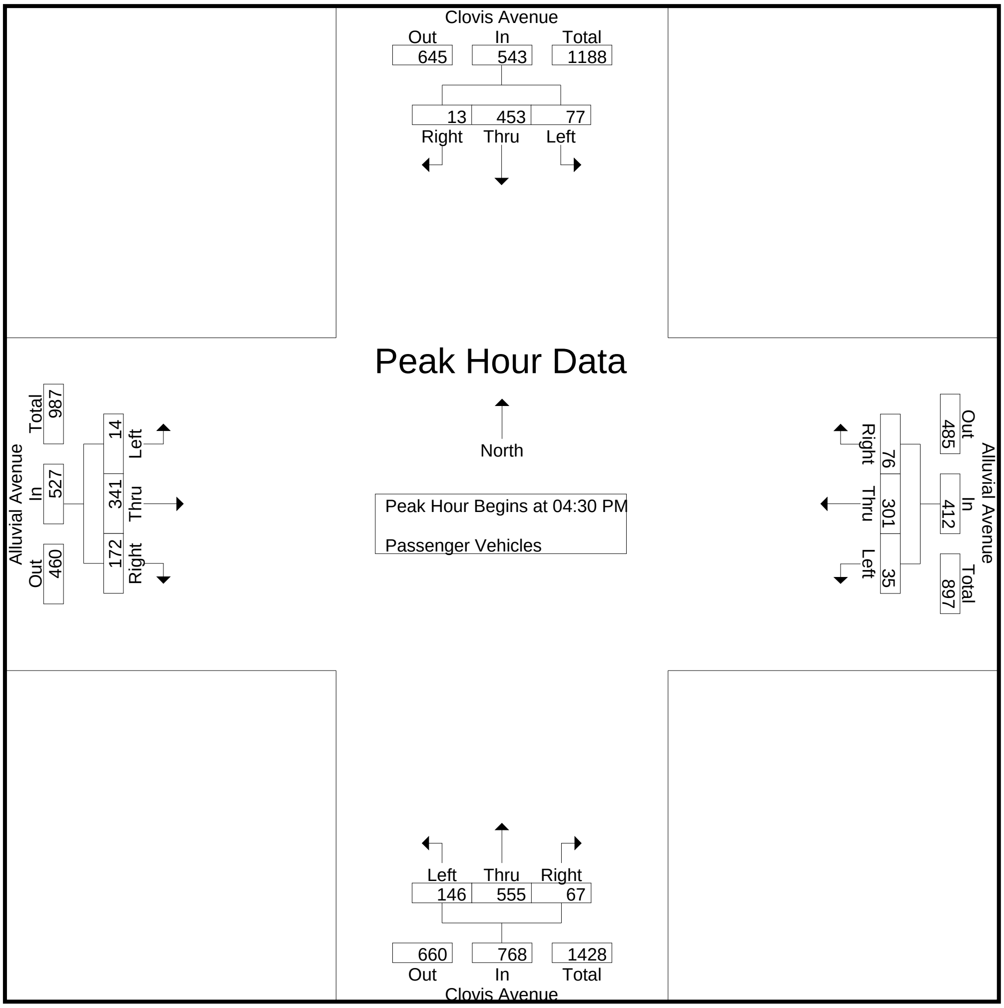
City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	15	107	0	122	8	59	11	78	25	128	18	171	**4**	91	**47**	142
+15 mins.	**24**	115	3	**142**	9	70	22	101	35	125	10	170	3	67	40	110
+30 mins.	19	**117**	**6**	142	**11**	77	19	107	38	**173**	**25**	**236**	4	75	40	119
+45 mins.	19	114	4	137	7	**95**	**24**	**126**	**48**	129	14	191	3	**108**	45	**156**
Total Volume	77	453	13	543	35	301	76	412	146	555	67	768	14	341	172	527
% App. Total	14.2	83.4	2.4		8.5	73.1	18.4		19	72.3	8.7		2.7	64.7	32.6	
PHF	.802	.968	.542	.956	.795	.792	.792	.817	.760	.802	.670	.814	.875	.789	.915	.845

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City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	3	1	4	6
04:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3	3
04:45 PM	0	1	0	1	1	1	0	2	0	0	0	0	0	0	0	0	3
Total	1	4	0	5	1	1	0	2	0	1	0	1	1	4	2	7	15
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	1	4
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	1	1	0	4	0	4	0	1	3	4	9
Grand Total	1	4	0	5	1	1	1	3	0	5	0	5	1	5	5	11	24
Apprch %	20	80	0		33.3	33.3	33.3		0	100	0		9.1	45.5	45.5		
Total %	4.2	16.7	0	20.8	4.2	4.2	4.2	12.5	0	20.8	0	20.8	4.2	20.8	20.8	45.8	

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**1**	**3**	3
04:45 PM	0	**1**	0	**1**	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	1	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	**3**	0	**3**	0	0	1	1	**4**
Total Volume	0	1	0	1	1	1	1	3	0	3	0	3	1	1	3	5	12
% App. Total	0	100	0		33.3	33.3	33.3		0	100	0		20	20	60		
PHF	.000	.250	.000	.250	.250	.250	.250	.375	.000	.250	.000	.250	.250	.250	.750	.417	.750

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City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All PMC
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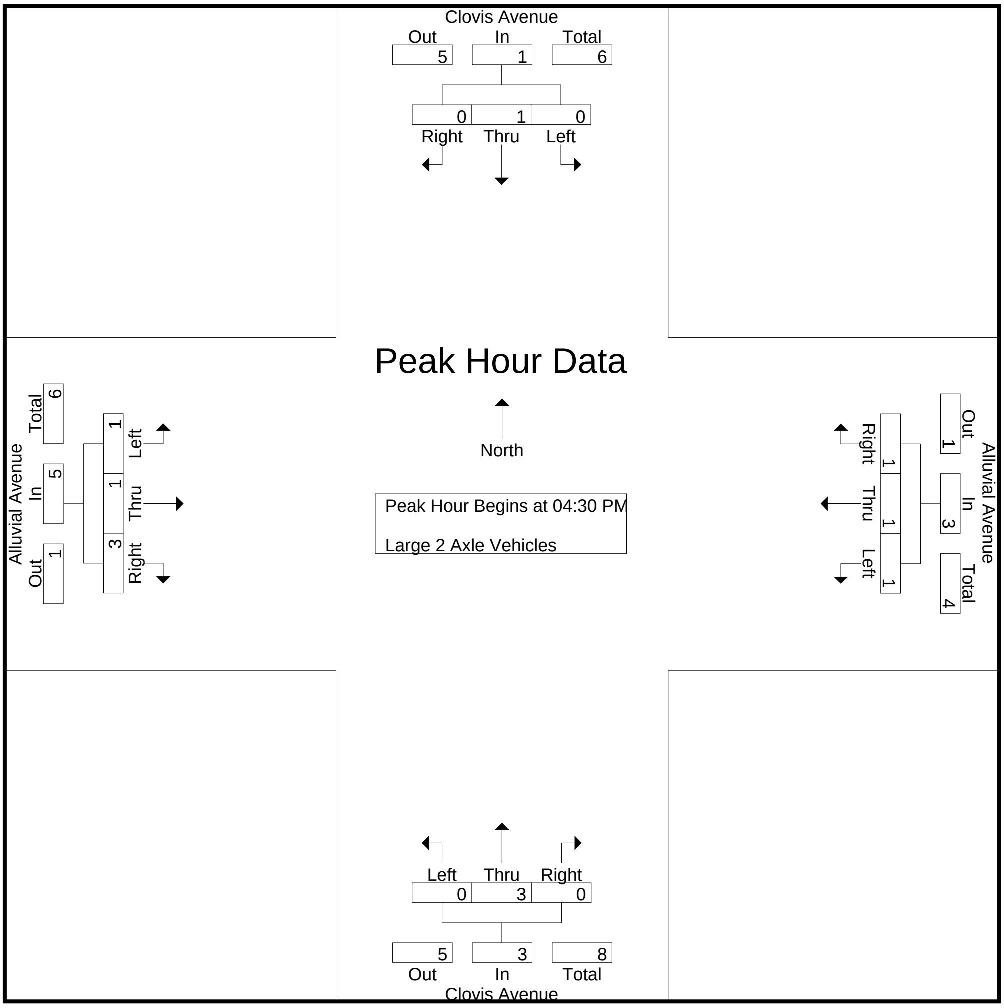

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**1**	**3**
+15 mins.	0	**1**	0	**1**	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0	**3**	0	**3**	0	0	1	1
Total Volume	0	1	0	1	1	1	1	3	0	3	0	3	1	1	3	5
% App. Total	0	100	0		33.3	33.3	33.3		0	100	0		20	20	60	
PHF	.000	.250	.000	.250	.250	.250	.250	.375	.000	.250	.000	.250	.250	.250	.750	.417

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City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All PMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- 3 Axle Vehicles

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Apprch %	0	0	0		0	0	0		0	0	0		0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited, Inc.
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City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All PMC
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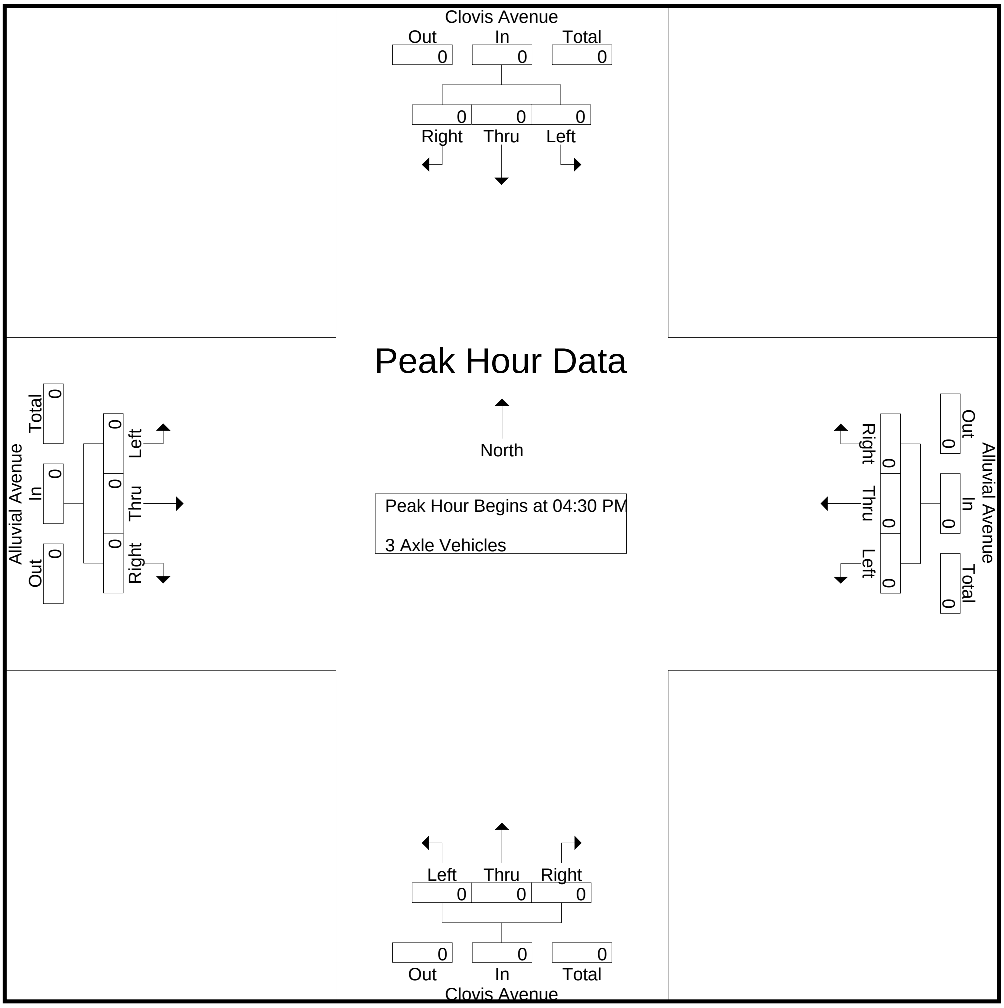

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Clovis Avenue Southbound				Alluvial Avenue Westbound				Clovis Avenue Northbound				Alluvial Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue
Weather: Clear

File Name : 11_CVS_Clo_All PMC
Site Code : 00322473
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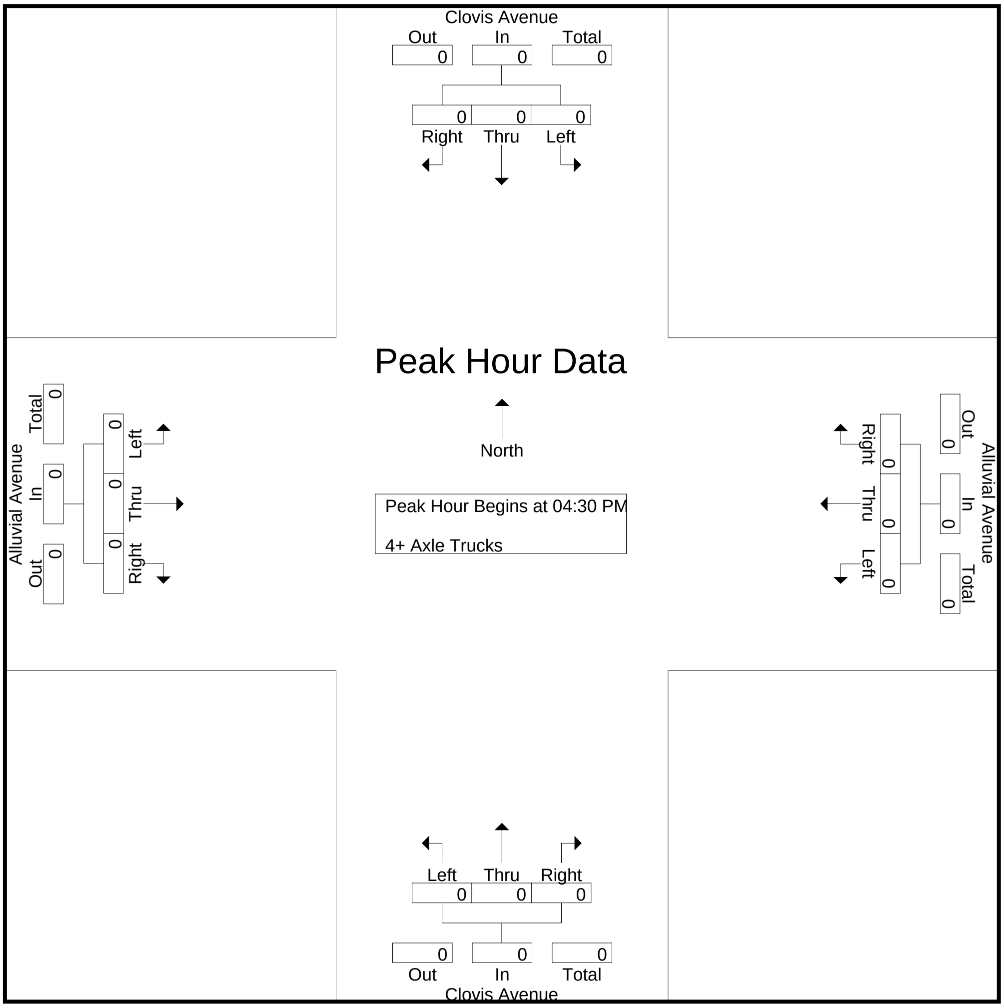

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Clovis Avenue	East Leg Alluvial Avenue	South Leg Clovis Avenue	West Leg Alluvial Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	2	0	0	0	2
7:15 AM	0	1	1	0	2
7:30 AM	2	0	2	3	7
7:45 AM	7	1	0	6	14
8:00 AM	2	1	4	3	10
8:15 AM	2	1	0	1	4
8:30 AM	1	0	2	2	5
8:45 AM	3	4	3	5	15
TOTAL VOLUMES:	19	8	12	20	59

	North Leg Clovis Avenue	East Leg Alluvial Avenue	South Leg Clovis Avenue	West Leg Alluvial Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	2	0	0	2	4
4:15 PM	1	0	0	0	1
4:30 PM	0	0	1	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	2	0	0	3
5:45 PM	1	1	0	0	2
TOTAL VOLUMES:	5	3	1	2	11

Location: Clovis
N/S: Clovis Avenue
E/W: Alluvial Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound			Westbound			Northbound			Eastbound			
	Clovis Avenue			Alluvial Avenue			Clovis Avenue			Alluvial Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	3	0	0	0	0	0	0	1	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	1	0	1	0	0	1	0	4
7:45 AM	0	0	0	0	1	0	0	1	2	0	0	0	4
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	1	1	0	0	1	0	0	2	0	5
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	2	0	0	1	0	1	0	0	1	0	5
TOTAL VOLUMES:	0	0	2	1	7	2	0	5	2	0	4	1	24

	Southbound			Westbound			Northbound			Eastbound			
	Clovis Avenue			Alluvial Avenue			Clovis Avenue			Alluvial Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
4:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	1	0	0	1	0	1	0	0	4
5:30 PM	0	0	0	0	0	0	0	1	0	0	1	1	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	1	3	0	1	2	0	0	4	0	1	2	1	15

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City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	0	112	122	0	281	118	399	0	0	0	0	0	111	101	212	733
07:15 AM	20	0	170	190	0	364	138	502	0	0	0	0	0	178	111	289	981
07:30 AM	14	0	215	229	0	387	140	527	0	0	0	0	0	220	148	368	1124
07:45 AM	14	0	177	191	0	392	163	555	0	0	0	0	0	253	128	381	1127
Total	58	0	674	732	0	1424	559	1983	0	0	0	0	0	762	488	1250	3965
08:00 AM	16	0	167	183	0	310	134	444	0	0	0	0	0	274	104	378	1005
08:15 AM	12	1	157	170	0	329	107	436	0	0	0	0	0	223	99	322	928
08:30 AM	14	0	121	135	0	330	126	456	0	0	0	0	0	235	72	307	898
08:45 AM	23	0	139	162	0	279	104	383	0	0	0	0	0	219	75	294	839
Total	65	1	584	650	0	1248	471	1719	0	0	0	0	0	951	350	1301	3670
Grand Total	123	1	1258	1382	0	2672	1030	3702	0	0	0	0	0	1713	838	2551	7635
Apprch %	8.9	0.1	91		0	72.2	27.8		0	0	0		0	67.2	32.8		
Total %	1.6	0	16.5	18.1	0	35	13.5	48.5	0	0	0	0	0	22.4	11	33.4	
Passenger Vehicles	122	1	1250	1373	0	2626	1009	3635	0	0	0	0	0	1680	816	2496	7504
% Passenger Vehicles	99.2	100	99.4	99.3	0	98.3	98	98.2	0	0	0	0	0	98.1	97.4	97.8	98.3
Large 2 Axle Vehicles	1	0	8	9	0	28	14	42	0	0	0	0	0	29	13	42	93
% Large 2 Axle Vehicles	0.8	0	0.6	0.7	0	1	1.4	1.1	0	0	0	0	0	1.7	1.6	1.6	1.2
3 Axle Vehicles	0	0	0	0	0	6	2	8	0	0	0	0	0	1	2	3	11
% 3 Axle Vehicles	0	0	0	0	0	0.2	0.2	0.2	0	0	0	0	0	0.1	0.2	0.1	0.1
4+ Axle Trucks	0	0	0	0	0	12	5	17	0	0	0	0	0	3	7	10	27
% 4+ Axle Trucks	0	0	0	0	0	0.4	0.5	0.5	0	0	0	0	0	0.2	0.8	0.4	0.4

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**20**	0	170	190	0	364	138	502	0	0	0	0	0	178	111	289	981
07:30 AM	14	0	**215**	**229**	0	387	140	527	0	0	0	0	0	220	**148**	368	1124
07:45 AM	14	0	177	191	0	**392**	**163**	**555**	0	0	0	0	0	253	128	**381**	**1127**
08:00 AM	16	0	167	183	0	310	134	444	0	0	0	0	0	**274**	104	378	1005
Total Volume	64	0	729	793	0	1453	575	2028	0	0	0	0	0	925	491	1416	4237
% App. Total	8.1	0	91.9		0	71.6	28.4		0	0	0		0	65.3	34.7		
PHF	.800	.000	.848	.866	.000	.927	.882	.914	.000	.000	.000	.000	.000	.844	.829	.929	.940

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City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern AMC
Site Code : 00322473
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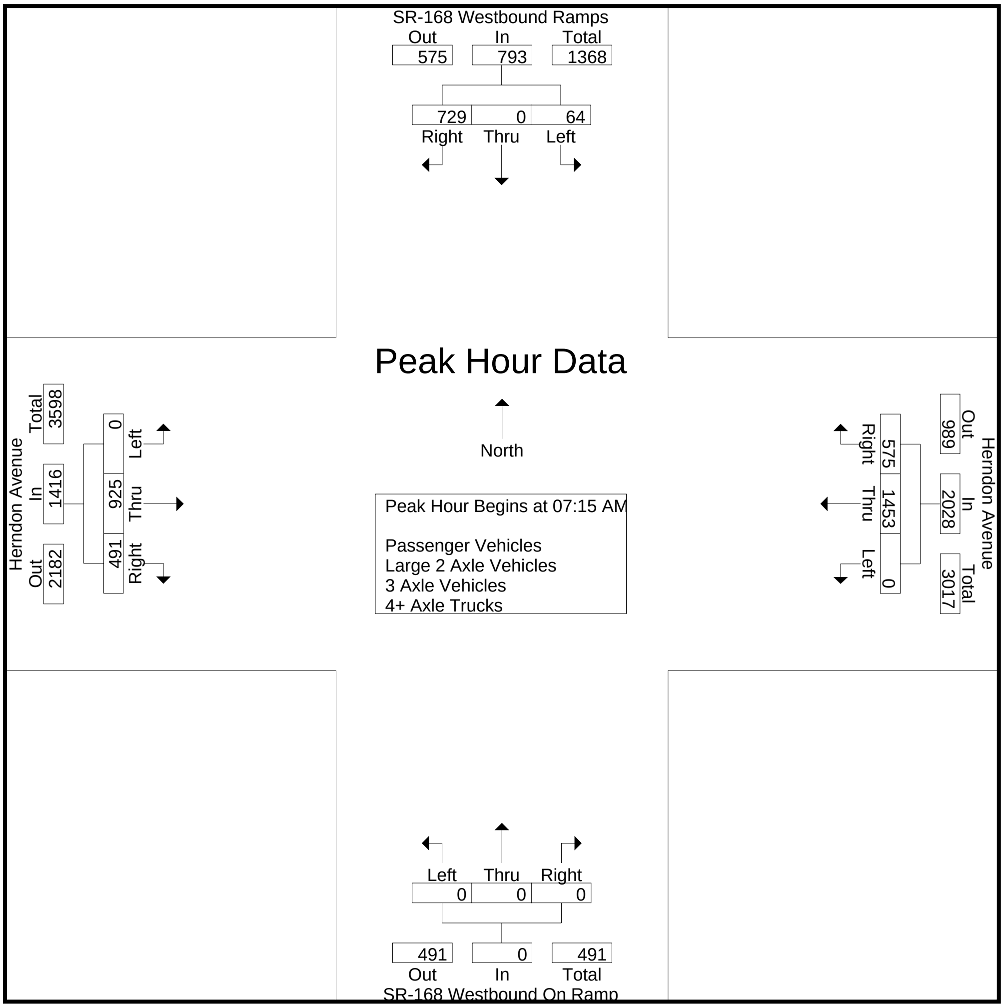

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:00 AM				07:30 AM			
+0 mins.	**20**	0	170	190	0	364	138	502	0	0	0	0	0	220	**148**	368
+15 mins.	14	0	**215**	**229**	0	387	140	527	0	0	0	0	0	253	128	**381**
+30 mins.	14	0	177	191	0	**392**	**163**	**555**	0	0	0	0	0	**274**	104	378
+45 mins.	16	0	167	183	0	310	134	444	0	0	0	0	0	223	99	322
Total Volume	64	0	729	793	0	1453	575	2028	0	0	0	0	0	970	479	1449
% App. Total	8.1	0	91.9		0	71.6	28.4		0	0	0		0	66.9	33.1	
PHF	.800	.000	.848	.866	.000	.927	.882	.914	.000	.000	.000	.000	.000	.885	.809	.951

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City of Clovis
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Weather: Clear

File Name : 12_CVS_168W_Hern AMC
Site Code : 00322473
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Page No : 1

Groups Printed- Passenger Vehicles

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	0	111	121	0	278	117	395	0	0	0	0	0	109	98	207	723
07:15 AM	19	0	169	188	0	361	136	497	0	0	0	0	0	176	110	286	971
07:30 AM	14	0	214	228	0	374	140	514	0	0	0	0	0	214	145	359	1101
07:45 AM	14	0	176	190	0	391	158	549	0	0	0	0	0	250	125	375	1114
Total	57	0	670	727	0	1404	551	1955	0	0	0	0	0	749	478	1227	3909
08:00 AM	16	0	167	183	0	305	130	435	0	0	0	0	0	268	102	370	988
08:15 AM	12	1	155	168	0	324	105	429	0	0	0	0	0	217	91	308	905
08:30 AM	14	0	120	134	0	320	122	442	0	0	0	0	0	232	71	303	879
08:45 AM	23	0	138	161	0	273	101	374	0	0	0	0	0	214	74	288	823
Total	65	1	580	646	0	1222	458	1680	0	0	0	0	0	931	338	1269	3595
Grand Total	122	1	1250	1373	0	2626	1009	3635	0	0	0	0	0	1680	816	2496	7504
Apprch %	8.9	0.1	91		0	72.2	27.8		0	0	0		0	67.3	32.7		
Total %	1.6	0	16.7	18.3	0	35	13.4	48.4	0	0	0	0	0	22.4	10.9	33.3	

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**19**	0	169	188	0	361	136	497	0	0	0	0	0	176	110	286	971
07:30 AM	14	0	**214**	**228**	0	374	140	514	0	0	0	0	0	214	**145**	359	1101
07:45 AM	14	0	176	190	0	**391**	**158**	**549**	0	0	0	0	0	250	125	**375**	**1114**
08:00 AM	16	0	167	183	0	305	130	435	0	0	0	0	0	**268**	102	370	988
Total Volume	63	0	726	789	0	1431	564	1995	0	0	0	0	0	908	482	1390	4174
% App. Total	8	0	92		0	71.7	28.3		0	0	0		0	65.3	34.7		
PHF	.829	.000	.848	.865	.000	.915	.892	.908	.000	.000	.000	.000	.000	.847	.831	.927	.937

City of Clovis
N/S: SR-168 Westbound Ramps
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Weather: Clear

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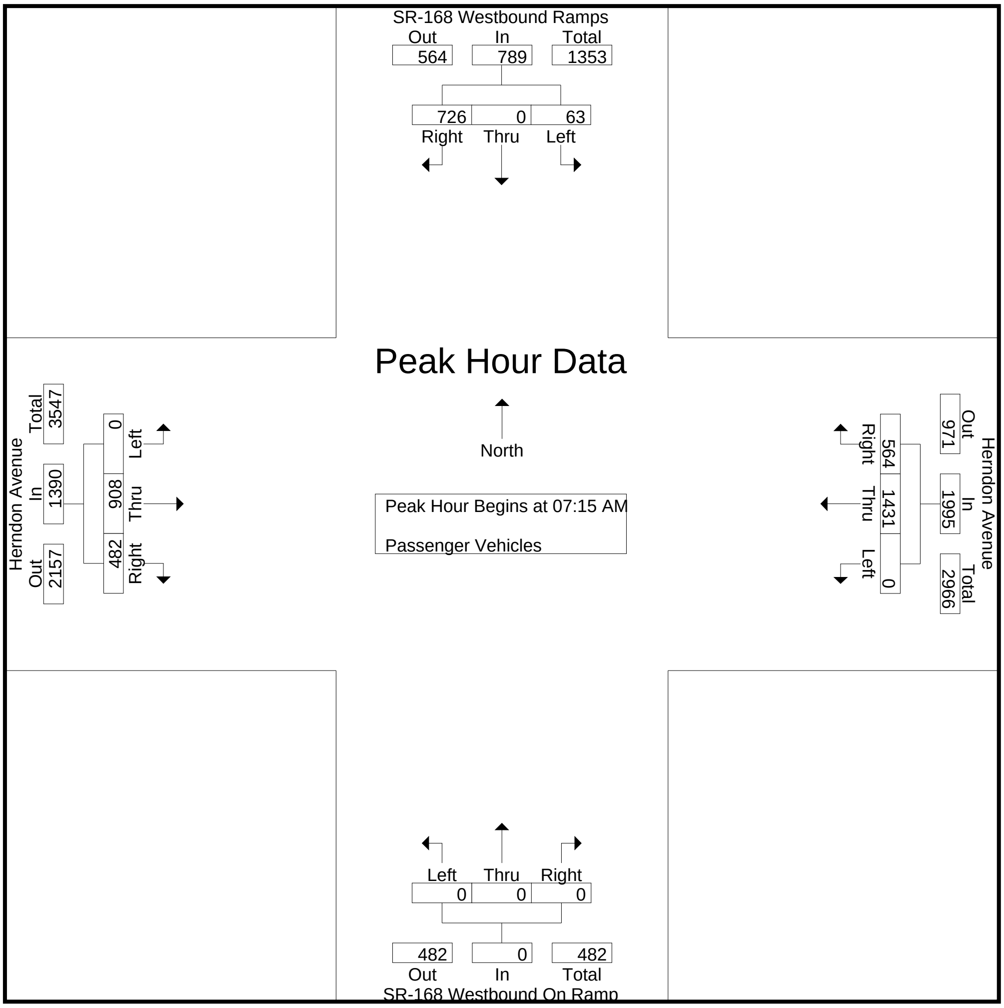

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**19**	0	169	188	0	361	136	497	0	0	0	0	0	176	110	286
+15 mins.	14	0	**214**	**228**	0	374	140	514	0	0	0	0	0	214	**145**	359
+30 mins.	14	0	176	190	0	**391**	**158**	**549**	0	0	0	0	0	250	125	**375**
+45 mins.	16	0	167	183	0	305	130	435	0	0	0	0	0	**268**	102	370
Total Volume	63	0	726	789	0	1431	564	1995	0	0	0	0	0	908	482	1390
% App. Total	8	0	92		0	71.7	28.3		0	0	0		0	65.3	34.7	
PHF	.829	.000	.848	.865	.000	.915	.892	.908	.000	.000	.000	.000	.000	.847	.831	.927

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City of Clovis
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File Name : 12_CVS_168W_Hern AMC
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Groups Printed- Large 2 Axle Vehicles

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	0	2	1	3	0	0	0	0	0	1	2	3	7
07:15 AM	1	0	1	2	0	2	2	4	0	0	0	0	0	2	0	2	8
07:30 AM	0	0	1	1	0	6	0	6	0	0	0	0	0	5	1	6	13
07:45 AM	0	0	1	1	0	0	1	1	0	0	0	0	0	2	1	3	5
Total	1	0	4	5	0	10	4	14	0	0	0	0	0	10	4	14	33
08:00 AM	0	0	0	0	0	5	4	9	0	0	0	0	0	5	0	5	14
08:15 AM	0	0	2	2	0	5	2	7	0	0	0	0	0	6	7	13	22
08:30 AM	0	0	1	1	0	4	1	5	0	0	0	0	0	3	1	4	10
08:45 AM	0	0	1	1	0	4	3	7	0	0	0	0	0	5	1	6	14
Total	0	0	4	4	0	18	10	28	0	0	0	0	0	19	9	28	60
Grand Total	1	0	8	9	0	28	14	42	0	0	0	0	0	29	13	42	93
Apprch %	11.1	0	88.9		0	66.7	33.3		0	0	0		0	69	31		
Total %	1.1	0	8.6	9.7	0	30.1	15.1	45.2	0	0	0	0	0	31.2	14	45.2	

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	0	**1**	**2**	0	2	2	4	0	0	0	0	0	2	0	2	8
07:30 AM	0	0	1	1	0	**6**	0	6	0	0	0	0	0	**5**	**1**	**6**	13
07:45 AM	0	0	1	1	0	0	1	1	0	0	0	0	0	2	1	3	5
08:00 AM	0	0	0	0	0	5	**4**	**9**	0	0	0	0	0	5	0	5	**14**
Total Volume	1	0	3	4	0	13	7	20	0	0	0	0	0	14	2	16	40
% App. Total	25	0	75		0	65	35		0	0	0		0	87.5	12.5		
PHF	.250	.000	.750	.500	.000	.542	.438	.556	.000	.000	.000	.000	.000	.700	.500	.667	.714

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City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern AMC
Site Code : 00322473
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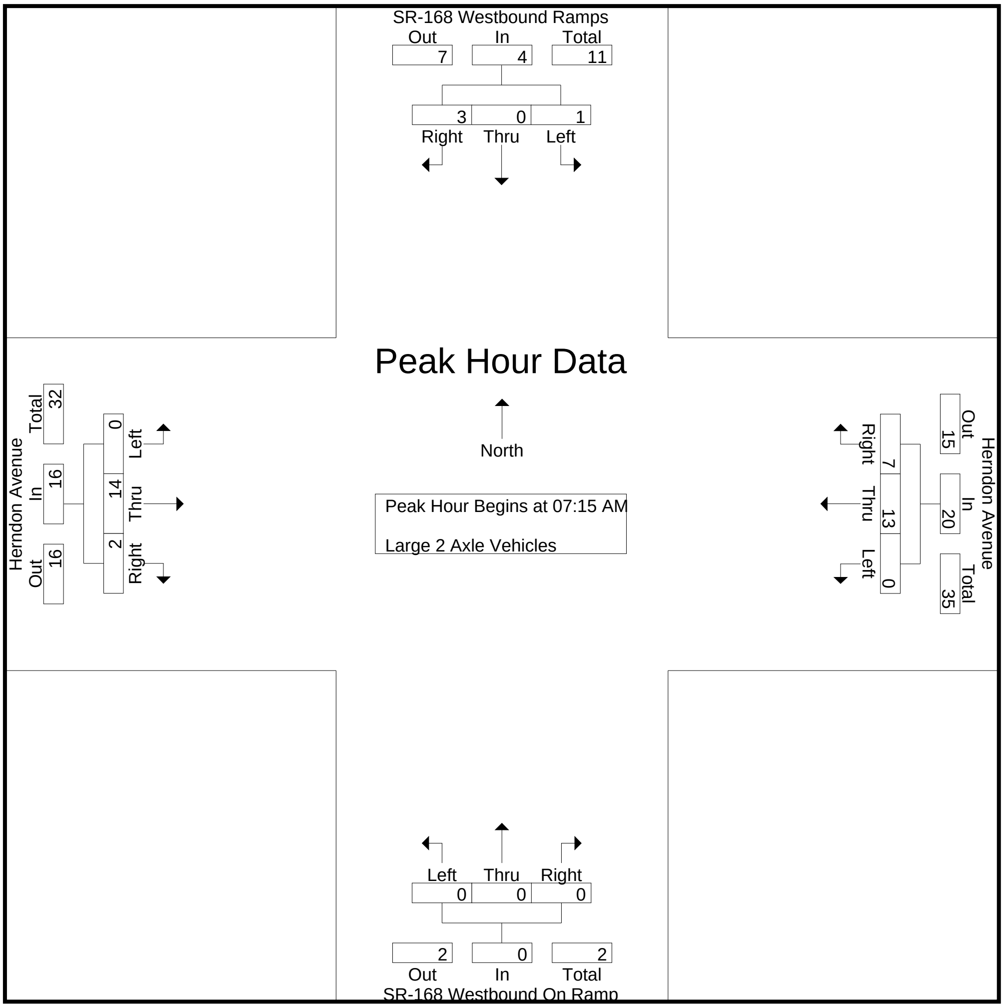

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**1**	0	**1**	**2**	0	2	2	4	0	0	0	0	0	2	0	2
+15 mins.	0	0	1	1	0	**6**	0	6	0	0	0	0	0	**5**	**1**	**6**
+30 mins.	0	0	1	1	0	0	1	1	0	0	0	0	0	2	1	3
+45 mins.	0	0	0	0	0	5	**4**	**9**	0	0	0	0	0	5	0	5
Total Volume	1	0	3	4	0	13	7	20	0	0	0	0	0	14	2	16
% App. Total	25	0	75		0	65	35		0	0	0		0	87.5	12.5	
PHF	.250	.000	.750	.500	.000	.542	.438	.556	.000	.000	.000	.000	.000	.700	.500	.667

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City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- 3 Axle Vehicles

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
07:45 AM	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	3	2	5	0	0	0	0	0	1	2	3	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Grand Total	0	0	0	0	0	6	2	8	0	0	0	0	0	1	2	3	11
Apprch %	0	0	0		0	75	25		0	0	0		0	33.3	66.7		
Total %	0	0	0	0	0	54.5	18.2	72.7	0	0	0	0	0	9.1	18.2	27.3	

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**1**	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	**1**	**1**	2
07:45 AM	0	0	0	0	0	1	**2**	**3**	0	0	0	0	0	0	0	0	**3**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	2	5	0	0	0	0	0	0	1	1	6
% App. Total	0	0	0		0	60	40		0	0	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.750	.250	.417	.000	.000	.000	.000	.000	.000	.250	.250	.500

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City of Clovis
N/S: SR-168 Westbound Ramps
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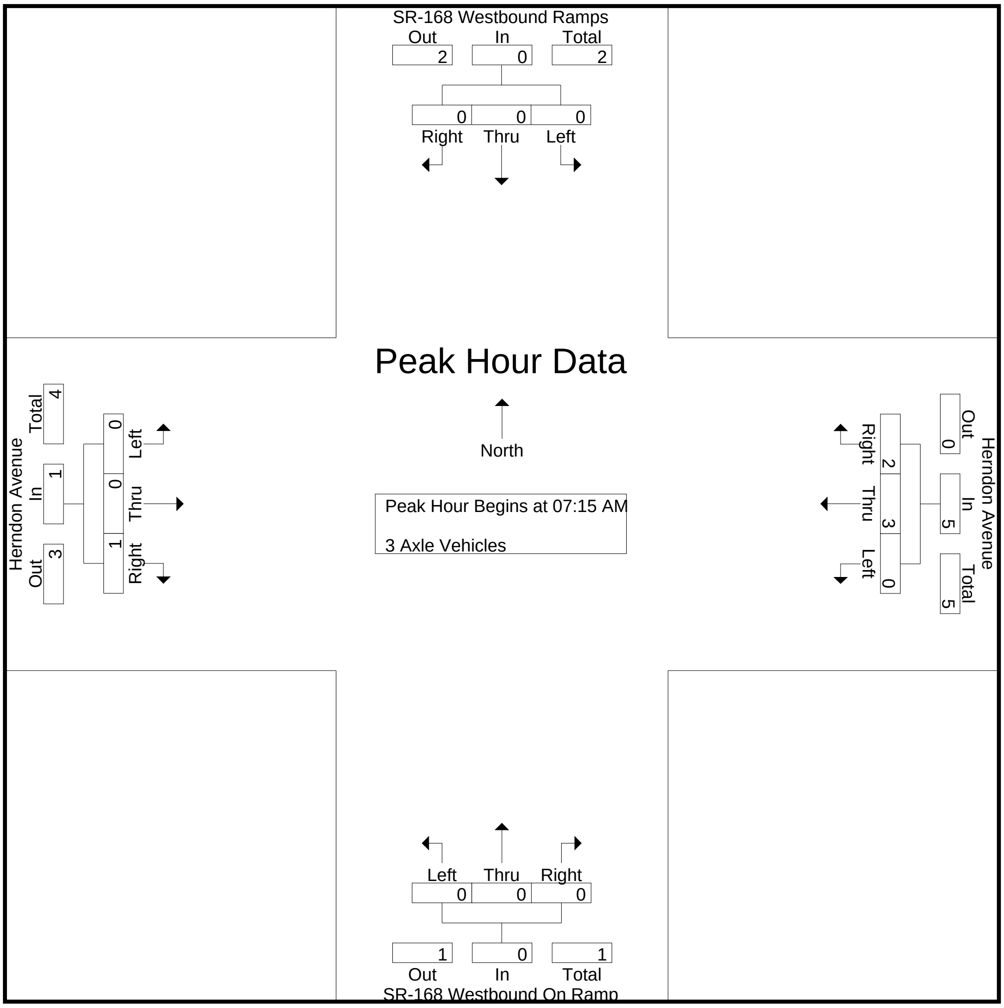

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	**1**	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	**1**	**1**
+30 mins.	0	0	0	0	0	1	**2**	**3**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	2	5	0	0	0	0	0	0	1	1
% App. Total	0	0	0		0	60	40		0	0	0		0	0	100	
PHF	.000	.000	.000	.000	.000	.750	.250	.417	.000	.000	.000	.000	.000	.000	.250	.250

City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern AMC
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Groups Printed- 4+ Axle Trucks

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	1	1	2	8
07:45 AM	0	0	0	0	0	0	2	2	0	0	0	0	0	1	2	3	5
Total	0	0	0	0	0	7	2	9	0	0	0	0	0	2	4	6	15
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	4	3	7	0	0	0	0	0	0	0	0	7
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	5	3	8	0	0	0	0	0	1	3	4	12
Grand Total	0	0	0	0	0	12	5	17	0	0	0	0	0	3	7	10	27
Apprch %	0	0	0		0	70.6	29.4		0	0	0		0	30	70		
Total %	0	0	0	0	0	44.4	18.5	63	0	0	0	0	0	11.1	25.9	37	

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	0	0	**6**	0	**6**	0	0	0	0	0	**1**	1	2	**8**
07:45 AM	0	0	0	0	0	0	**2**	2	0	0	0	0	0	1	**2**	**3**	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3
Total Volume	0	0	0	0	0	6	2	8	0	0	0	0	0	3	6	9	17
% App. Total	0	0	0		0	75	25		0	0	0		0	33.3	66.7		
PHF	.000	.000	.000	.000	.000	.250	.250	.333	.000	.000	.000	.000	.000	.750	.750	.750	.531

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City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern AMC
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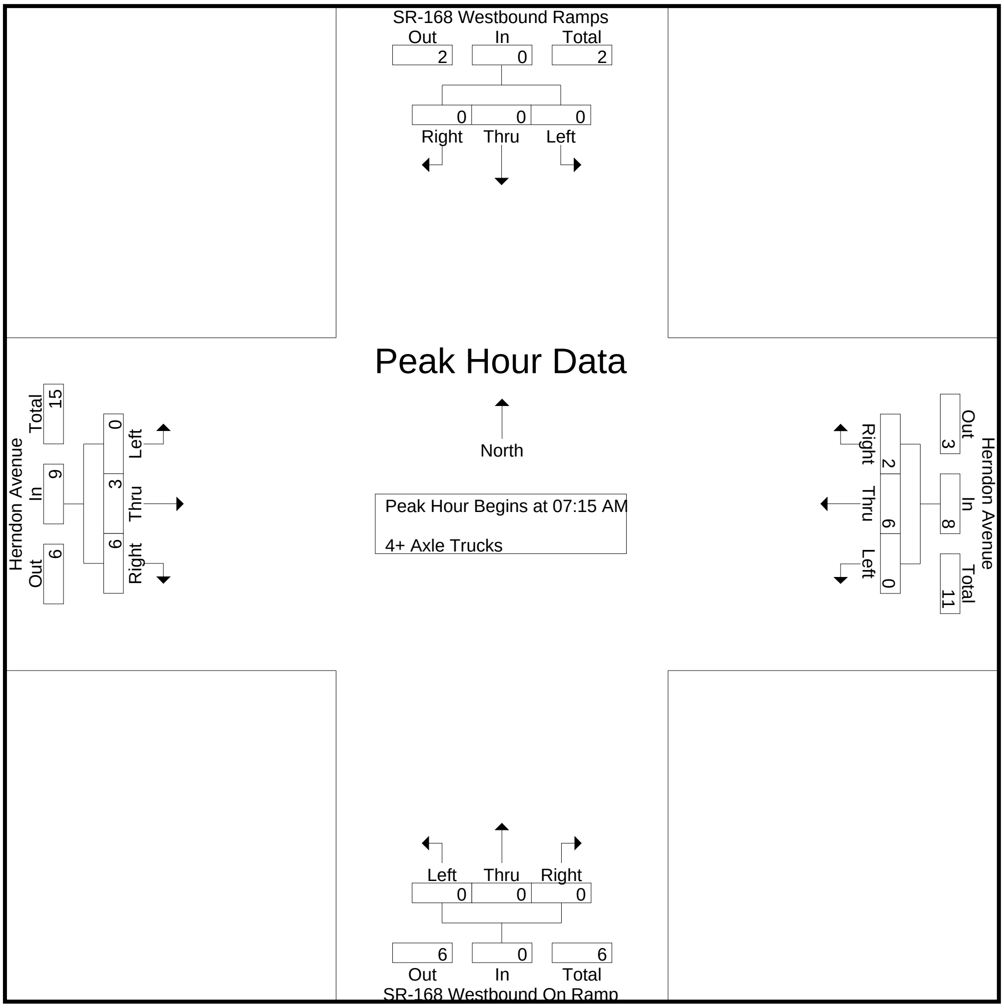

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+15 mins.	0	0	0	0	0	**6**	0	**6**	0	0	0	0	0	**1**	1	2
+30 mins.	0	0	0	0	0	0	**2**	2	0	0	0	0	0	1	**2**	**3**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
Total Volume	0	0	0	0	0	6	2	8	0	0	0	0	0	3	6	9
% App. Total	0	0	0		0	75	25		0	0	0		0	33.3	66.7	
PHF	.000	.000	.000	.000	.000	.250	.250	.333	.000	.000	.000	.000	.000	.750	.750	.750

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City of Clovis
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	16	0	76	92	0	318	118	436	0	0	0	0	0	298	99	397	925
04:15 PM	22	0	89	111	0	358	119	477	0	0	0	0	0	421	128	549	1137
04:30 PM	15	1	82	98	0	374	137	511	0	0	0	0	0	407	135	542	1151
04:45 PM	17	0	90	107	0	359	124	483	0	0	0	0	0	414	122	536	1126
Total	70	1	337	408	0	1409	498	1907	0	0	0	0	0	1540	484	2024	4339
05:00 PM	15	0	87	102	0	356	144	500	0	0	0	0	0	399	150	549	1151
05:15 PM	18	0	82	100	0	378	141	519	0	0	0	0	0	409	122	531	1150
05:30 PM	22	0	77	99	0	325	114	439	0	0	0	0	0	407	116	523	1061
05:45 PM	16	0	73	89	0	297	125	422	0	0	0	0	0	349	95	444	955
Total	71	0	319	390	0	1356	524	1880	0	0	0	0	0	1564	483	2047	4317
Grand Total	141	1	656	798	0	2765	1022	3787	0	0	0	0	0	3104	967	4071	8656
Apprch %	17.7	0.1	82.2		0	73	27		0	0	0		0	76.2	23.8		
Total %	1.6	0	7.6	9.2	0	31.9	11.8	43.8	0	0	0	0	0	35.9	11.2	47	
Passenger Vehicles	141	1	651	793	0	2747	1007	3754	0	0	0	0	0	3091	955	4046	8593
% Passenger Vehicles	100	100	99.2	99.4	0	99.3	98.5	99.1	0	0	0	0	0	99.6	98.8	99.4	99.3
Large 2 Axle Vehicles	0	0	5	5	0	14	10	24	0	0	0	0	0	12	8	20	49
% Large 2 Axle Vehicles	0	0	0.8	0.6	0	0.5	1	0.6	0	0	0	0	0	0.4	0.8	0.5	0.6
3 Axle Vehicles	0	0	0	0	0	1	2	3	0	0	0	0	0	1	3	4	7
% 3 Axle Vehicles	0	0	0	0	0	0	0.2	0.1	0	0	0	0	0	0	0.3	0.1	0.1
4+ Axle Trucks	0	0	0	0	0	3	3	6	0	0	0	0	0	0	1	1	7
% 4+ Axle Trucks	0	0	0	0	0	0.1	0.3	0.2	0	0	0	0	0	0	0.1	0	0.1

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	**1**	82	98	0	374	137	511	0	0	0	0	0	407	135	542	**1151**
04:45 PM	17	0	**90**	**107**	0	359	124	483	0	0	0	0	0	**414**	122	536	1126
05:00 PM	15	0	87	102	0	356	**144**	500	0	0	0	0	0	399	**150**	**549**	1151
05:15 PM	**18**	0	82	100	0	**378**	141	**519**	0	0	0	0	0	409	122	531	1150
Total Volume	65	1	341	407	0	1467	546	2013	0	0	0	0	0	1629	529	2158	4578
% App. Total	16	0.2	83.8		0	72.9	27.1		0	0	0		0	75.5	24.5		
PHF	.903	.250	.947	.951	.000	.970	.948	.970	.000	.000	.000	.000	.000	.984	.882	.983	.994

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City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

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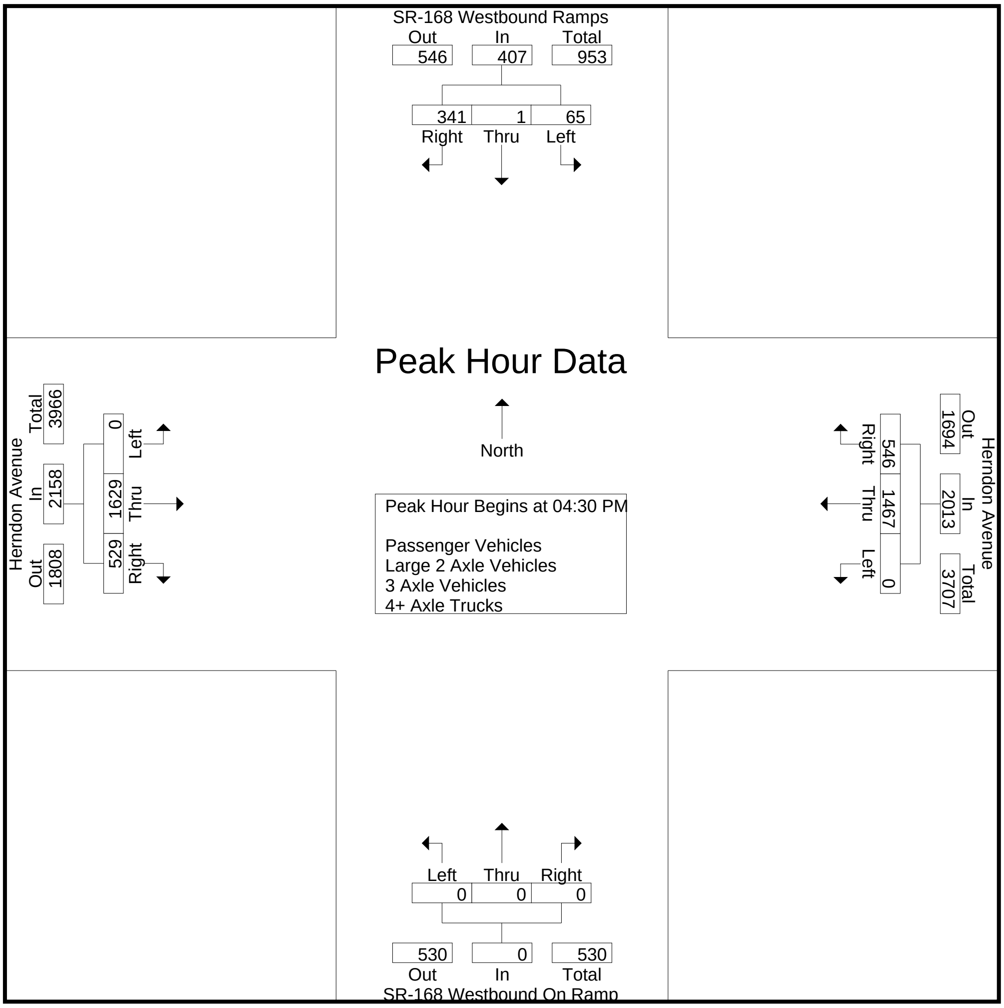

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:30 PM				04:00 PM				04:15 PM			
+0 mins.	**22**	0	89	**111**	0	374	137	511	0	0	0	0	0	**421**	128	**549**
+15 mins.	15	**1**	82	98	0	359	124	483	0	0	0	0	0	407	135	542
+30 mins.	17	0	**90**	107	0	356	**144**	500	0	0	0	0	0	414	122	536
+45 mins.	15	0	87	102	0	**378**	141	**519**	0	0	0	0	0	399	**150**	549
Total Volume	69	1	348	418	0	1467	546	2013	0	0	0	0	0	1641	535	2176
% App. Total	16.5	0.2	83.3		0	72.9	27.1		0	0	0		0	75.4	24.6	
PHF	.784	.250	.967	.941	.000	.970	.948	.970	.000	.000	.000	.000	.000	.974	.892	.991

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Groups Printed- Passenger Vehicles

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	16	0	75	91	0	316	115	431	0	0	0	0	0	296	96	392	914
04:15 PM	22	0	88	110	0	353	117	470	0	0	0	0	0	419	125	544	1124
04:30 PM	15	1	81	97	0	372	133	505	0	0	0	0	0	405	132	537	1139
04:45 PM	17	0	89	106	0	357	122	479	0	0	0	0	0	412	120	532	1117
Total	70	1	333	404	0	1398	487	1885	0	0	0	0	0	1532	473	2005	4294
05:00 PM	15	0	87	102	0	356	143	499	0	0	0	0	0	399	149	548	1149
05:15 PM	18	0	82	100	0	377	140	517	0	0	0	0	0	407	122	529	1146
05:30 PM	22	0	76	98	0	323	113	436	0	0	0	0	0	404	116	520	1054
05:45 PM	16	0	73	89	0	293	124	417	0	0	0	0	0	349	95	444	950
Total	71	0	318	389	0	1349	520	1869	0	0	0	0	0	1559	482	2041	4299
Grand Total	141	1	651	793	0	2747	1007	3754	0	0	0	0	0	3091	955	4046	8593
Apprch %	17.8	0.1	82.1		0	73.2	26.8		0	0	0		0	76.4	23.6		
Total %	1.6	0	7.6	9.2	0	32	11.7	43.7	0	0	0	0	0	36	11.1	47.1	

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	**1**	81	97	0	372	133	505	0	0	0	0	0	405	132	537	1139
04:45 PM	17	0	**89**	**106**	0	357	122	479	0	0	0	0	0	**412**	120	532	1117
05:00 PM	15	0	87	102	0	356	**143**	499	0	0	0	0	0	399	**149**	**548**	**1149**
05:15 PM	**18**	0	82	100	0	**377**	140	**517**	0	0	0	0	0	407	122	529	1146
Total Volume	65	1	339	405	0	1462	538	2000	0	0	0	0	0	1623	523	2146	4551
% App. Total	16	0.2	83.7		0	73.1	26.9		0	0	0		0	75.6	24.4		
PHF	.903	.250	.952	.955	.000	.969	.941	.967	.000	.000	.000	.000	.000	.985	.878	.979	.990

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City of Clovis
N/S: SR-168 Westbound Ramps
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File Name : 12_CVS_168W_Hern PMC
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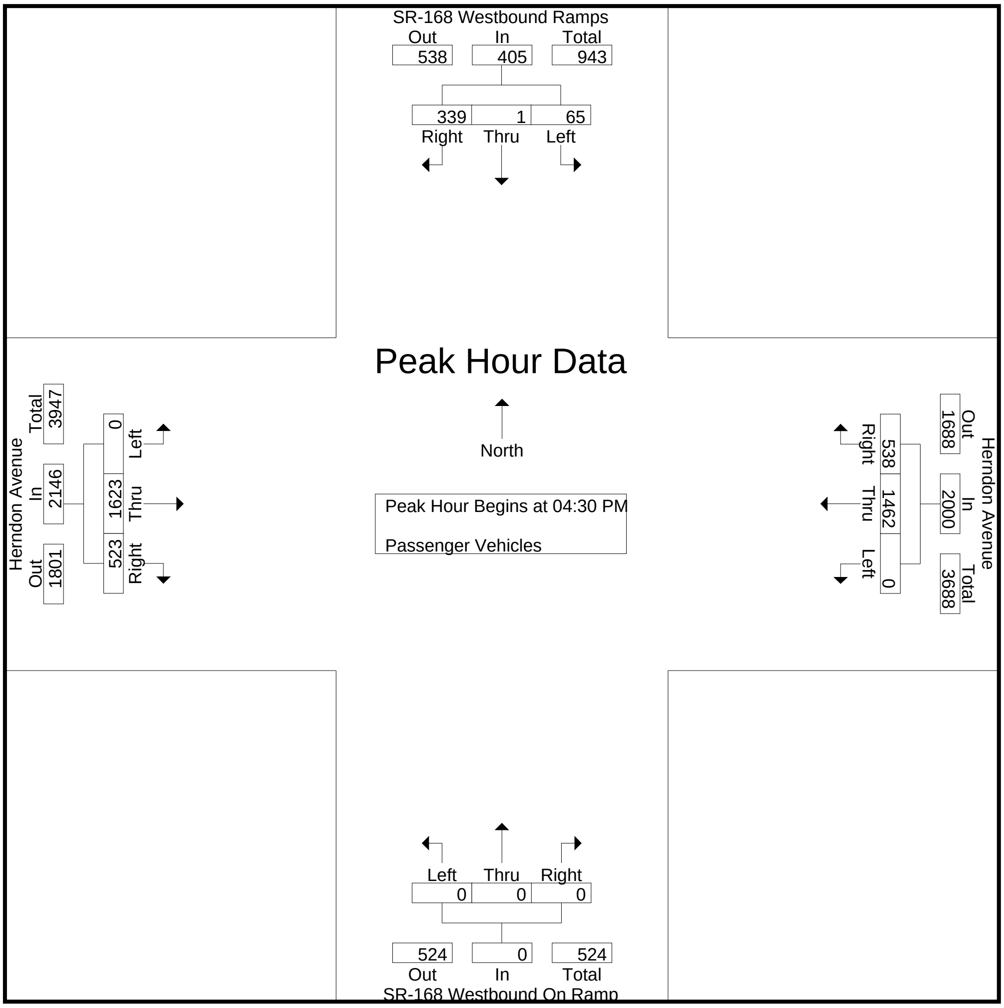

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	15	**1**	81	97	0	372	133	505	0	0	0	0	0	405	132	537
+15 mins.	17	0	**89**	**106**	0	357	122	479	0	0	0	0	0	**412**	120	532
+30 mins.	15	0	87	102	0	356	**143**	499	0	0	0	0	0	399	**149**	**548**
+45 mins.	**18**	0	82	100	0	**377**	140	**517**	0	0	0	0	0	407	122	529
Total Volume	65	1	339	405	0	1462	538	2000	0	0	0	0	0	1623	523	2146
% App. Total	16	0.2	83.7		0	73.1	26.9		0	0	0		0	75.6	24.4	
PHF	.903	.250	.952	.955	.000	.969	.941	.967	.000	.000	.000	.000	.000	.985	.878	.979

City of Clovis
N/S: SR-168 Westbound Ramps
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Weather: Clear

File Name : 12_CVS_168W_Hern PMC
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Groups Printed- Large 2 Axle Vehicles

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	0	2	2	4	0	0	0	0	0	2	2	4	9
04:15 PM	0	0	1	1	0	3	2	5	0	0	0	0	0	2	2	4	10
04:30 PM	0	0	1	1	0	2	2	4	0	0	0	0	0	2	1	3	8
04:45 PM	0	0	1	1	0	2	1	3	0	0	0	0	0	1	2	3	7
Total	0	0	4	4	0	9	7	16	0	0	0	0	0	7	7	14	34
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
05:30 PM	0	0	1	1	0	1	1	2	0	0	0	0	0	3	0	3	6
05:45 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	4
Total	0	0	1	1	0	5	3	8	0	0	0	0	0	5	1	6	15
Grand Total	0	0	5	5	0	14	10	24	0	0	0	0	0	12	8	20	49
Apprch %	0	0	100		0	58.3	41.7		0	0	0		0	60	40		
Total %	0	0	10.2	10.2	0	28.6	20.4	49	0	0	0	0	0	24.5	16.3	40.8	

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**1**	**1**	0	**2**	**2**	**4**	0	0	0	0	0	**2**	1	**3**	**8**
04:45 PM	0	0	1	1	0	2	1	3	0	0	0	0	0	1	**2**	3	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
Total Volume	0	0	2	2	0	5	4	9	0	0	0	0	0	5	4	9	20
% App. Total	0	0	100		0	55.6	44.4		0	0	0		0	55.6	44.4		
PHF	.000	.000	.500	.500	.000	.625	.500	.563	.000	.000	.000	.000	.000	.625	.500	.750	.625

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City of Clovis
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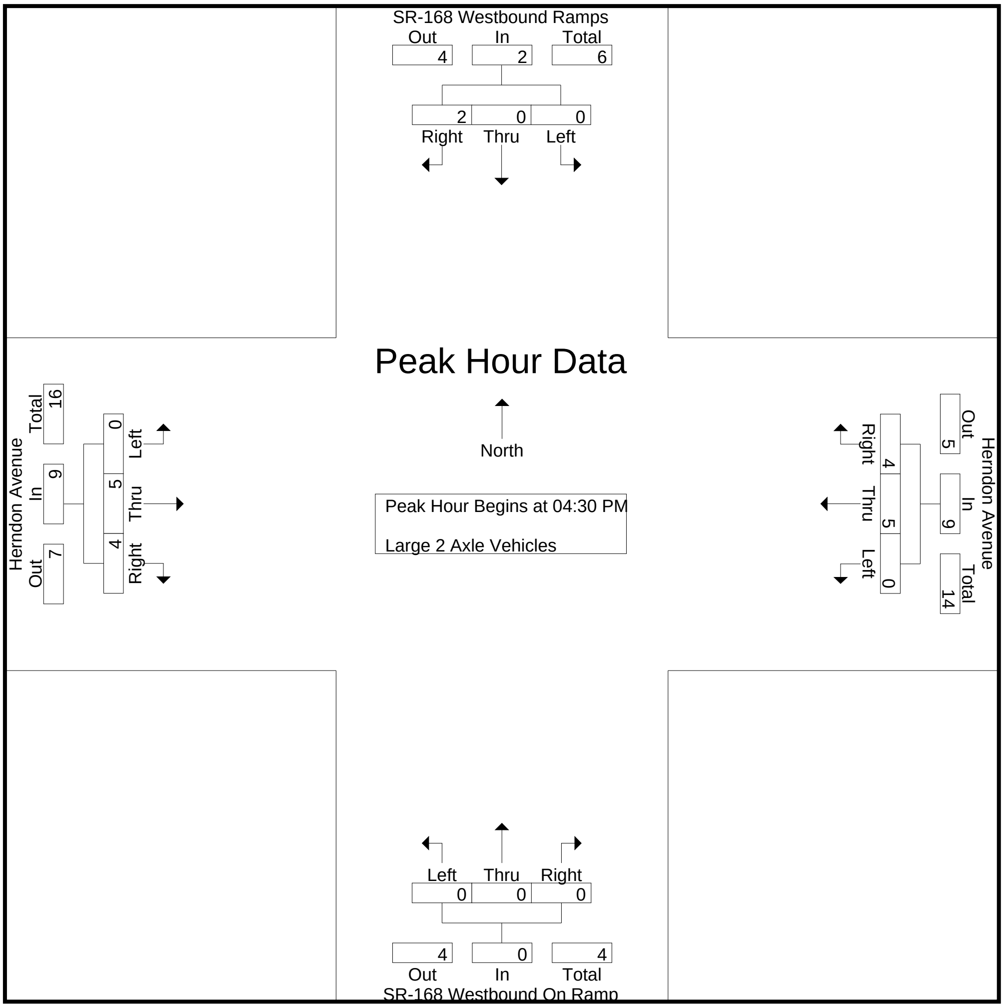

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	**1**	**1**	0	**2**	**2**	**4**	0	0	0	0	0	**2**	1	**3**
+15 mins.	0	0	1	1	0	2	1	3	0	0	0	0	0	1	**2**	3
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2
Total Volume	0	0	2	2	0	5	4	9	0	0	0	0	0	5	4	9
% App. Total	0	0	100		0	55.6	44.4		0	0	0		0	55.6	44.4	
PHF	.000	.000	.500	.500	.000	.625	.500	.563	.000	.000	.000	.000	.000	.625	.500	.750

City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern PMC
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Groups Printed- 3 Axle Vehicles

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	2	2	0	0	0	0	0	1	3	4	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	2	3	0	0	0	0	0	1	3	4	7
Apprch %	0	0	0		0	33.3	66.7		0	0	0		0	25	75		
Total %	0	0	0	0	0	14.3	28.6	42.9	0	0	0	0	0	14.3	42.9	57.1	

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:30 PM

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:30 PM	0	0	0	0	0	0	**2**	**2**	0	0	0	0	0	0	**2**	**2**	**4**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	2	0	0	0	0	0	1	2	3	5
% App. Total	0	0	0		0	0	100		0	0	0		0	33.3	66.7		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.250	.375	.313

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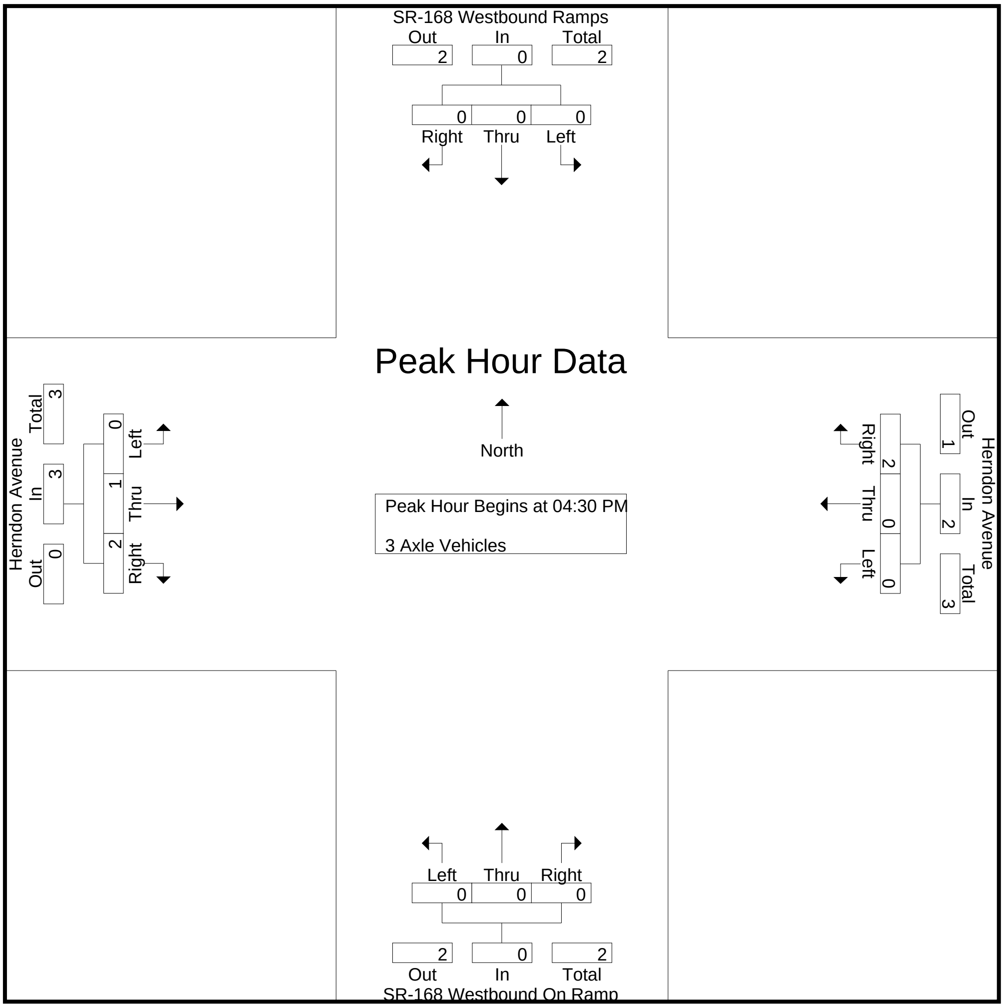
City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	2	0	0	0	0	0	1	2	3
% App. Total	0	0	0		0	0	100		0	0	0		0	33.3	66.7	
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.250	.375

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City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
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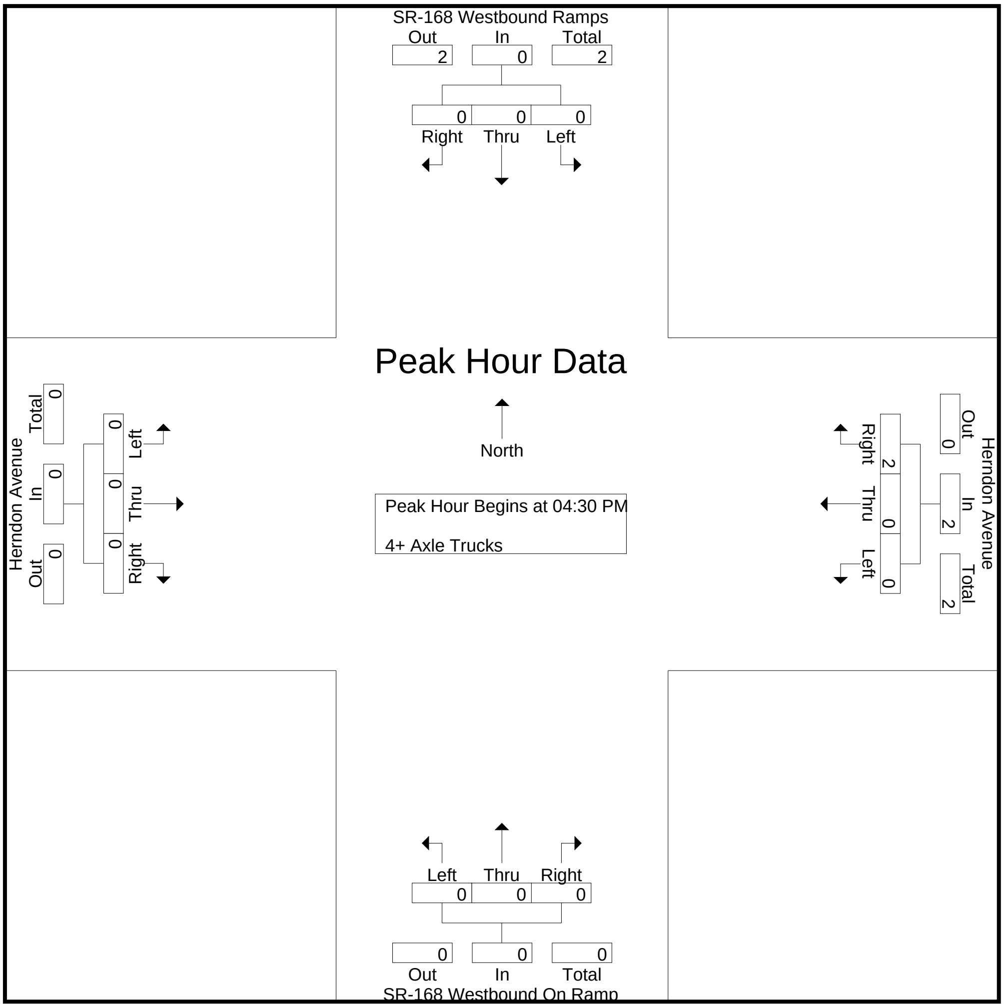
Groups Printed- 4+ Axle Trucks

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
04:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	2	4	0	0	0	0	0	0	1	1	5
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	3	3	6	0	0	0	0	0	0	1	1	7
Apprch %	0	0	0		0	50	50		0	0	0		0	0	100		
Total %	0	0	0	0	0	42.9	42.9	85.7	0	0	0	0	0	0	14.3	14.3	

	SR-168 Westbound Ramps Southbound				Herndon Avenue Westbound				SR-168 Westbound On Ramp Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

City of Clovis
N/S: SR-168 Westbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 12_CVS_168W_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.500	.500	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: SR-168 WB Ramps
E/W: Herndon Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg SR-168 WB Ramps	East Leg Herndon Avenue	South Leg SR-168 WB Ramps	West Leg Herndon Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg SR-168 WB Ramps	East Leg Herndon Avenue	South Leg SR-168 WB Ramps	West Leg Herndon Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: SR-168 WB Ramps
E/W: Herndon Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound SR-168 WB Ramps			Westbound Herndon Avenue			Northbound SR-168 WB Ramps			Eastbound Herndon Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

	Southbound SR-168 WB Ramps			Westbound Herndon Avenue			Northbound SR-168 WB Ramps			Eastbound Herndon Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Clovis	File Name : 13_CVS_168E_Hern AMC
N/S: SR-168 Eastbound Ramps	Site Code : 00322473
E/W: Herndon Avenue	Start Date : 5/24/2022
Weather: Clear	Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	318	10	328	81	0	83	164	0	97	24	121	613
07:15 AM	0	0	0	0	0	389	19	408	116	0	99	215	0	147	53	200	823
07:30 AM	0	0	0	0	0	409	27	436	113	0	105	218	0	180	44	224	878
07:45 AM	0	0	0	0	0	421	15	436	137	0	136	273	0	212	65	277	986
Total	0	0	0	0	0	1537	71	1608	447	0	423	870	0	636	186	822	3300
08:00 AM	0	0	0	0	0	349	18	367	88	0	122	210	0	241	51	292	869
08:15 AM	0	0	0	0	0	363	23	386	78	0	107	185	0	189	50	239	810
08:30 AM	0	0	0	0	0	366	17	383	88	0	102	190	0	207	45	252	825
08:45 AM	0	0	0	0	0	302	12	314	79	0	116	195	0	201	47	248	757
Total	0	0	0	0	0	1380	70	1450	333	0	447	780	0	838	193	1031	3261
Grand Total	0	0	0	0	0	2917	141	3058	780	0	870	1650	0	1474	379	1853	6561
Apprch %	0	0	0		0	95.4	4.6		47.3	0	52.7		0	79.5	20.5		
Total %	0	0	0	0	0	44.5	2.1	46.6	11.9	0	13.3	25.1	0	22.5	5.8	28.2	
Passenger Vehicles	0	0	0	0	0	2878	141	3019	749	0	832	1581	0	1441	372	1813	6413
% Passenger Vehicles	0	0	0	0	0	98.7	100	98.7	96	0	95.6	95.8	0	97.8	98.2	97.8	97.7
Large 2 Axle Vehicles	0	0	0	0	0	27	0	27	16	0	27	43	0	29	7	36	106
% Large 2 Axle Vehicles	0	0	0	0	0	0.9	0	0.9	2.1	0	3.1	2.6	0	2	1.8	1.9	1.6
3 Axle Vehicles	0	0	0	0	0	4	0	4	5	0	2	7	0	1	0	1	12
% 3 Axle Vehicles	0	0	0	0	0	0.1	0	0.1	0.6	0	0.2	0.4	0	0.1	0	0.1	0.2
4+ Axle Trucks	0	0	0	0	0	8	0	8	10	0	9	19	0	3	0	3	30
% 4+ Axle Trucks	0	0	0	0	0	0.3	0	0.3	1.3	0	1	1.2	0	0.2	0	0.2	0.5

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	389	19	408	116	0	99	215	0	147	53	200	823
07:30 AM	0	0	0	0	0	409	**27**	**436**	113	0	105	218	0	180	44	224	878
07:45 AM	0	0	0	0	0	**421**	15	436	**137**	0	**136**	**273**	0	212	**65**	277	**986**
08:00 AM	0	0	0	0	0	349	18	367	88	0	122	210	0	**241**	51	**292**	869
Total Volume	0	0	0	0	0	1568	79	1647	454	0	462	916	0	780	213	993	3556
% App. Total	0	0	0		0	95.2	4.8		49.6	0	50.4		0	78.5	21.5		
PHF	.000	.000	.000	.000	.000	.931	.731	.944	.828	.000	.849	.839	.000	.809	.819	.850	.902

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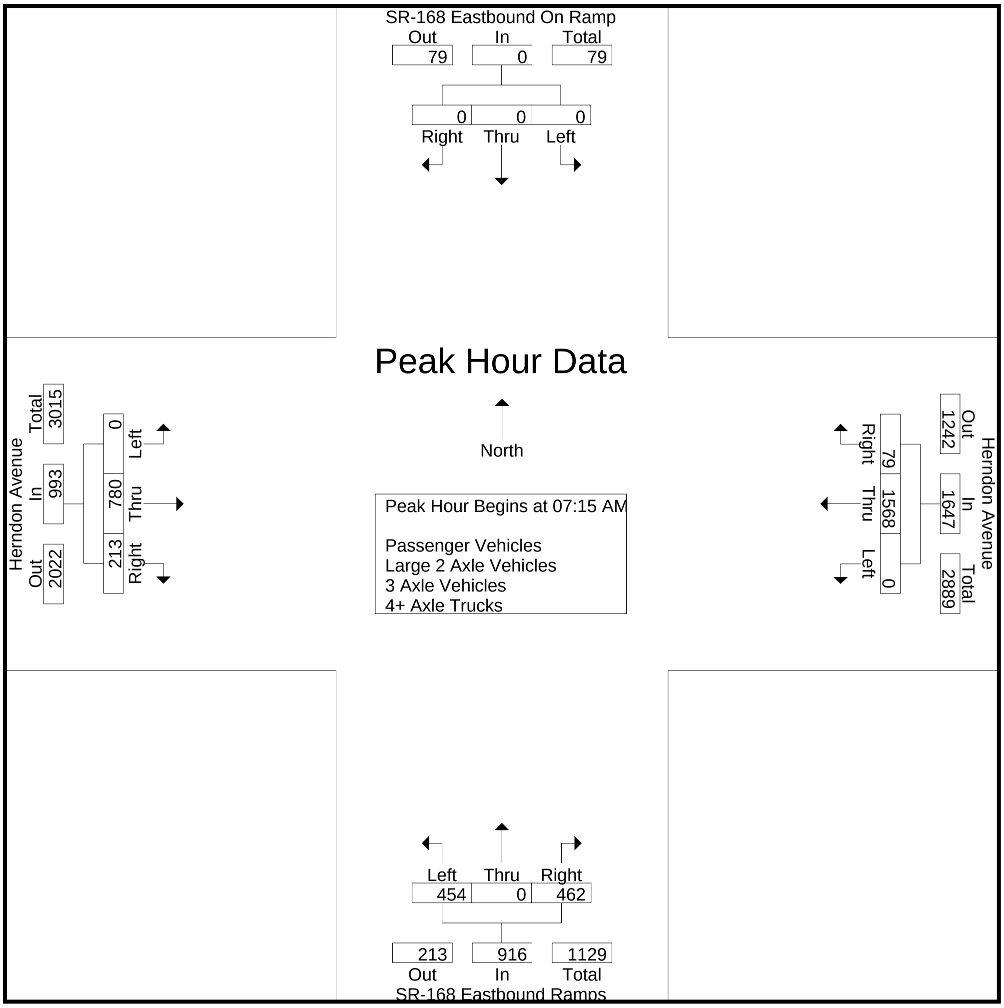
City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:15 AM				07:45 AM			
+0 mins.	0	0	0	0	0	389	19	408	116	0	99	215	0	212	**65**	277
+15 mins.	0	0	0	0	0	409	**27**	**436**	113	0	105	218	0	**241**	51	**292**
+30 mins.	0	0	0	0	0	**421**	15	436	**137**	0	**136**	**273**	0	189	50	239
+45 mins.	0	0	0	0	0	349	18	367	88	0	122	210	0	207	45	252
Total Volume	0	0	0	0	0	1568	79	1647	454	0	462	916	0	849	211	1060
% App. Total	0	0	0		0	95.2	4.8		49.6	0	50.4		0	80.1	19.9	
PHF	.000	.000	.000	.000	.000	.931	.731	.944	.828	.000	.849	.839	.000	.881	.812	.908

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City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	314	10	324	80	0	78	158	0	94	24	118	600
07:15 AM	0	0	0	0	0	387	19	406	109	0	93	202	0	145	52	197	805
07:30 AM	0	0	0	0	0	404	27	431	108	0	101	209	0	175	44	219	859
07:45 AM	0	0	0	0	0	416	15	431	135	0	132	267	0	208	64	272	970
Total	0	0	0	0	0	1521	71	1592	432	0	404	836	0	622	184	806	3234
08:00 AM	0	0	0	0	0	342	18	360	85	0	117	202	0	234	51	285	847
08:15 AM	0	0	0	0	0	359	23	382	75	0	105	180	0	184	47	231	793
08:30 AM	0	0	0	0	0	359	17	376	81	0	96	177	0	205	44	249	802
08:45 AM	0	0	0	0	0	297	12	309	76	0	110	186	0	196	46	242	737
Total	0	0	0	0	0	1357	70	1427	317	0	428	745	0	819	188	1007	3179
Grand Total	0	0	0	0	0	2878	141	3019	749	0	832	1581	0	1441	372	1813	6413
Apprch %	0	0	0		0	95.3	4.7		47.4	0	52.6		0	79.5	20.5		
Total %	0	0	0	0	0	44.9	2.2	47.1	11.7	0	13	24.7	0	22.5	5.8	28.3	

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	387	19	406	109	0	93	202	0	145	52	197	805
07:30 AM	0	0	0	0	0	404	**27**	**431**	108	0	101	209	0	175	44	219	859
07:45 AM	0	0	0	0	0	**416**	15	431	**135**	0	**132**	**267**	0	208	**64**	272	**970**
08:00 AM	0	0	0	0	0	342	18	360	85	0	117	202	0	**234**	51	**285**	847
Total Volume	0	0	0	0	0	1549	79	1628	437	0	443	880	0	762	211	973	3481
% App. Total	0	0	0		0	95.1	4.9		49.7	0	50.3		0	78.3	21.7		
PHF	.000	.000	.000	.000	.000	.931	.731	.944	.809	.000	.839	.824	.000	.814	.824	.854	.897

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City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern AMC
Site Code : 00322473
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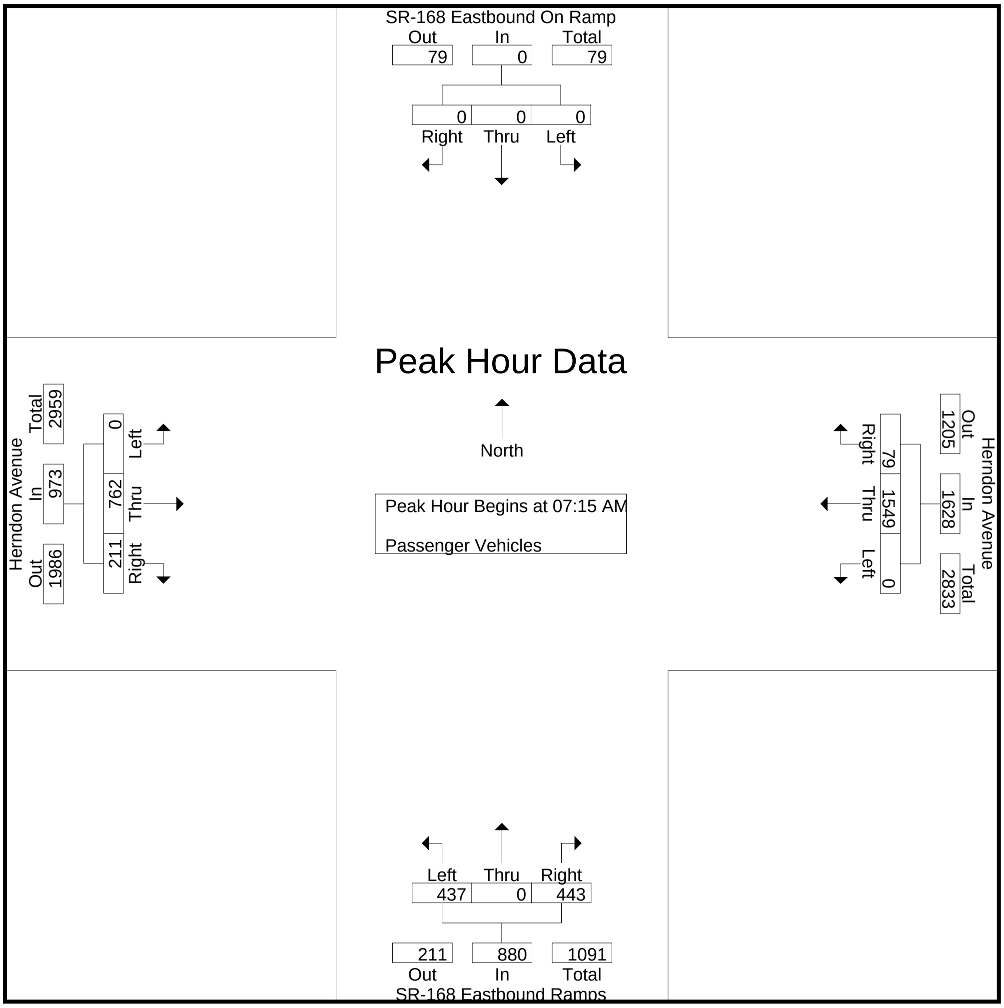

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	387	19	406	109	0	93	202	0	145	52	197
+15 mins.	0	0	0	0	0	404	**27**	**431**	108	0	101	209	0	175	44	219
+30 mins.	0	0	0	0	0	**416**	15	431	**135**	0	**132**	**267**	0	208	**64**	272
+45 mins.	0	0	0	0	0	342	18	360	85	0	117	202	0	**234**	51	**285**
Total Volume	0	0	0	0	0	1549	79	1628	437	0	443	880	0	762	211	973
% App. Total	0	0	0		0	95.1	4.9		49.7	0	50.3		0	78.3	21.7	
PHF	.000	.000	.000	.000	.000	.931	.731	.944	.809	.000	.839	.824	.000	.814	.824	.854

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City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	0	2	2	0	2	0	2	7
07:15 AM	0	0	0	0	0	2	0	2	3	0	3	6	0	2	1	3	11
07:30 AM	0	0	0	0	0	3	0	3	2	0	4	6	0	4	0	4	13
07:45 AM	0	0	0	0	0	1	0	1	2	0	3	5	0	3	1	4	10
Total	0	0	0	0	0	9	0	9	7	0	12	19	0	11	2	13	41
08:00 AM	0	0	0	0	0	6	0	6	3	0	5	8	0	6	0	6	20
08:15 AM	0	0	0	0	0	4	0	4	3	0	0	3	0	5	3	8	15
08:30 AM	0	0	0	0	0	3	0	3	2	0	5	7	0	2	1	3	13
08:45 AM	0	0	0	0	0	5	0	5	1	0	5	6	0	5	1	6	17
Total	0	0	0	0	0	18	0	18	9	0	15	24	0	18	5	23	65
Grand Total	0	0	0	0	0	27	0	27	16	0	27	43	0	29	7	36	106
Apprch %	0	0	0		0	100	0		37.2	0	62.8		0	80.6	19.4		
Total %	0	0	0	0	0	25.5	0	25.5	15.1	0	25.5	40.6	0	27.4	6.6	34	

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	2	0	2	**3**	0	3	6	0	2	**1**	3	11
07:30 AM	0	0	0	0	0	3	0	3	2	0	4	6	0	4	0	4	13
07:45 AM	0	0	0	0	0	1	0	1	2	0	3	5	0	3	1	4	10
08:00 AM	0	0	0	0	0	**6**	0	**6**	3	0	**5**	**8**	0	**6**	0	**6**	**20**
Total Volume	0	0	0	0	0	12	0	12	10	0	15	25	0	15	2	17	54
% App. Total	0	0	0		0	100	0		40	0	60		0	88.2	11.8		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.833	.000	.750	.781	.000	.625	.500	.708	.675

Counts Unlimited, Inc.
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City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
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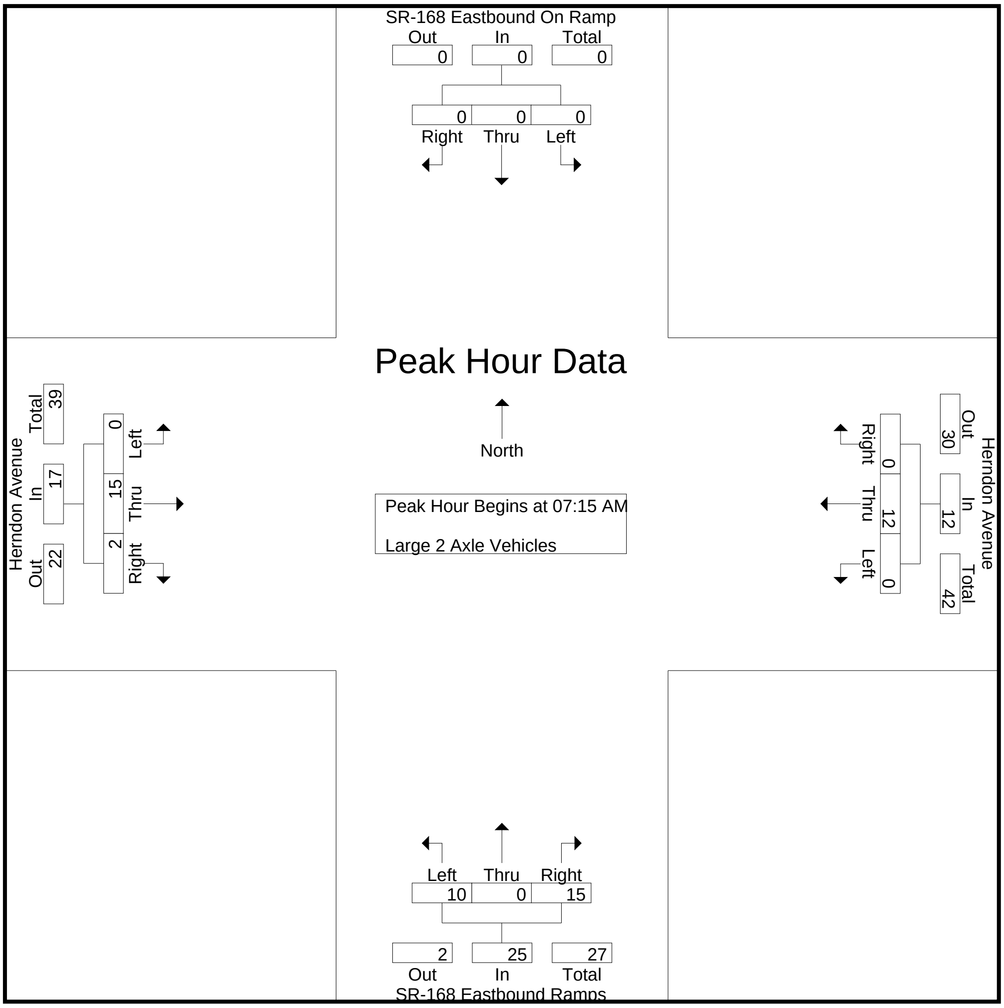

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	2	0	2	**3**	0	3	6	0	2	**1**	3
+15 mins.	0	0	0	0	0	3	0	3	2	0	4	6	0	4	0	4
+30 mins.	0	0	0	0	0	1	0	1	2	0	3	5	0	3	1	4
+45 mins.	0	0	0	0	0	**6**	0	**6**	3	0	**5**	**8**	0	**6**	0	**6**
Total Volume	0	0	0	0	0	12	0	12	10	0	15	25	0	15	2	17
% App. Total	0	0	0		0	100	0		40	0	60		0	88.2	11.8	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.833	.000	.750	.781	.000	.625	.500	.708

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City of Clovis
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Weather: Clear

File Name : 13_CVS_168E_Hern AMC
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Groups Printed- 3 Axle Vehicles

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
Total	0	0	0	0	0	3	0	3	2	0	1	3	0	1	0	1	7
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	2
Total	0	0	0	0	0	1	0	1	3	0	1	4	0	0	0	0	5
Grand Total	0	0	0	0	0	4	0	4	5	0	2	7	0	1	0	1	12
Apprch %	0	0	0		0	100	0		71.4	0	28.6		0	100	0		
Total %	0	0	0	0	0	33.3	0	33.3	41.7	0	16.7	58.3	0	8.3	0	8.3	

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	**2**	0	**2**	0	0	**1**	1	0	0	0	0	**3**
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	3	0	3	2	0	1	3	0	0	0	0	6
% App. Total	0	0	0		0	100	0		66.7	0	33.3		0	0	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.500	.000	.250	.750	.000	.000	.000	.000	.500

AGENDA ITEM NO. 6.

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City of Clovis
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File Name : 13_CVS_168E_Hern AMC
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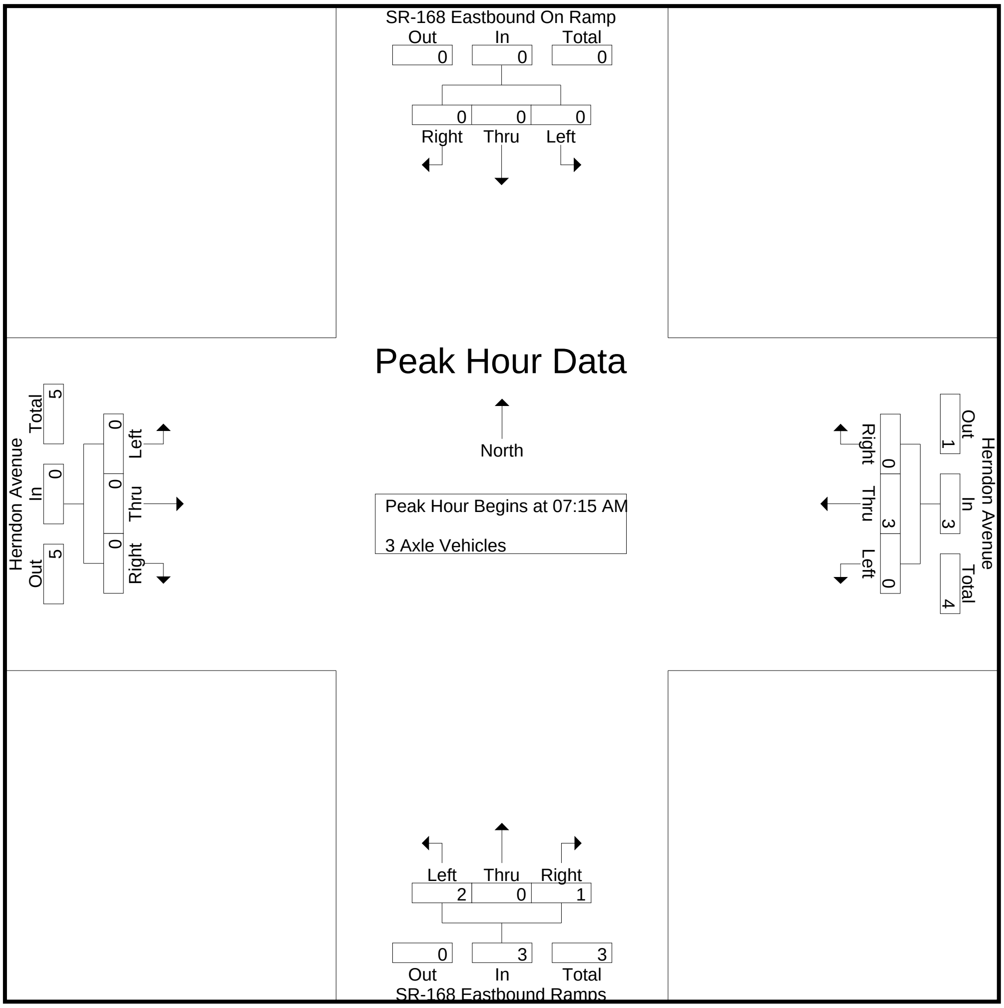

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	**2**	0	**2**	0	0	**1**	1	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	0	3	2	0	1	3	0	0	0	0
% App. Total	0	0	0		0	100	0		66.7	0	33.3		0	0	0	
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.500	.000	.250	.750	.000	.000	.000	.000

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Weather: Clear

File Name : 13_CVS_168E_Hern AMC
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Groups Printed- 4+ Axle Trucks

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	1	0	3	4	0	0	0	0	4
07:15 AM	0	0	0	0	0	0	0	0	3	0	3	6	0	0	0	0	6
07:30 AM	0	0	0	0	0	2	0	2	2	0	0	2	0	1	0	1	5
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	4	0	4	6	0	6	12	0	2	0	2	18
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
08:30 AM	0	0	0	0	0	4	0	4	3	0	1	4	0	0	0	0	8
08:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	4	0	4	4	0	3	7	0	1	0	1	12
Grand Total	0	0	0	0	0	8	0	8	10	0	9	19	0	3	0	3	30
Apprch %	0	0	0		0	100	0		52.6	0	47.4		0	100	0		
Total %	0	0	0	0	0	26.7	0	26.7	33.3	0	30	63.3	0	10	0	10	

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	**3**	0	**3**	**6**	0	0	0	0	**6**
07:30 AM	0	0	0	0	0	**2**	0	**2**	2	0	0	2	0	**1**	0	**1**	5
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	4	0	4	5	0	3	8	0	3	0	3	15
% App. Total	0	0	0		0	100	0		62.5	0	37.5		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.417	.000	.250	.333	.000	.750	.000	.750	.625

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City of Clovis
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File Name : 13_CVS_168E_Hern AMC
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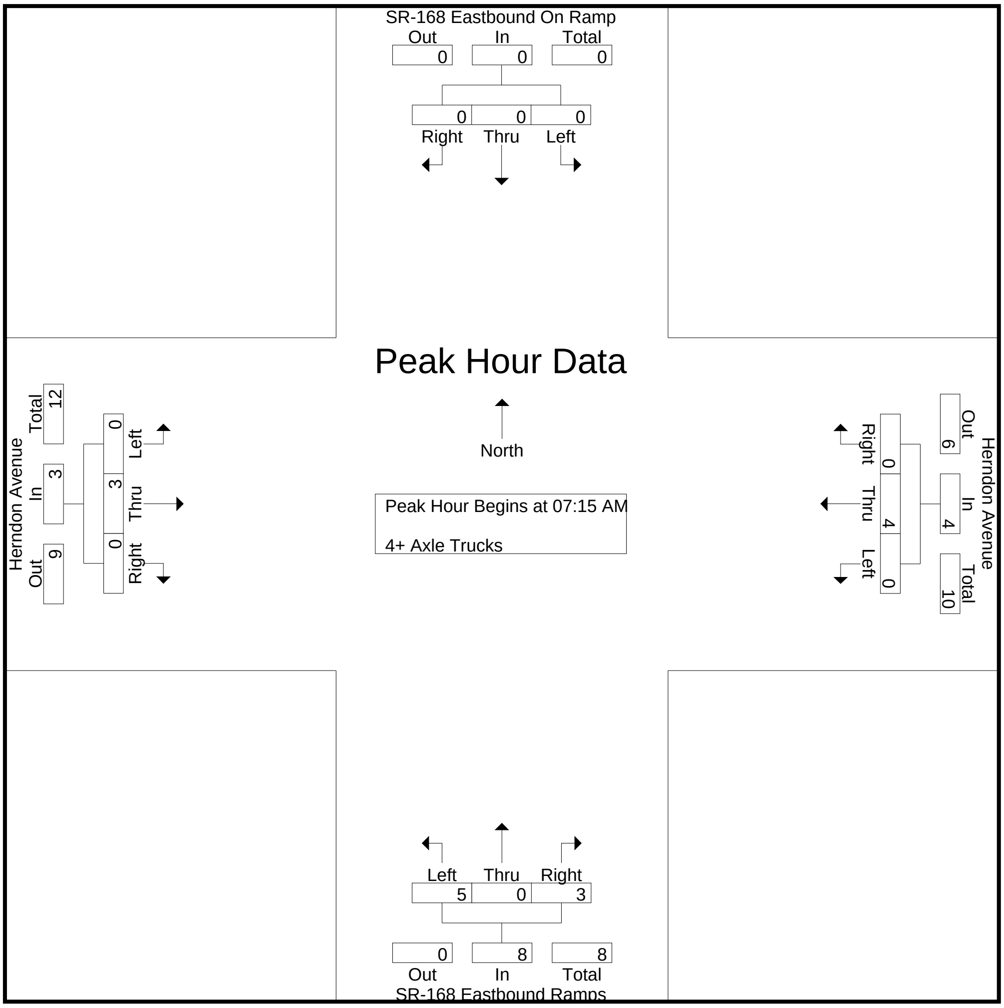

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	**3**	0	**3**	**6**	0	0	0	0
+15 mins.	0	0	0	0	0	**2**	0	**2**	2	0	0	2	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	4	0	4	5	0	3	8	0	3	0	3
% App. Total	0	0	0		0	100	0		62.5	0	37.5		0	100	0	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.417	.000	.250	.333	.000	.750	.000	.750

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City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	337	30	367	104	0	132	236	0	255	72	327	930
04:15 PM	0	0	0	0	0	358	45	403	114	0	185	299	0	358	87	445	1147
04:30 PM	0	0	0	0	0	385	40	425	114	0	142	256	0	355	81	436	1117
04:45 PM	0	0	0	0	0	344	44	388	127	0	195	322	0	340	104	444	1154
Total	0	0	0	0	0	1424	159	1583	459	0	654	1113	0	1308	344	1652	4348
05:00 PM	0	0	0	0	0	390	48	438	102	0	174	276	0	334	74	408	1122
05:15 PM	0	0	0	0	0	365	51	416	154	0	168	322	0	333	101	434	1172
05:30 PM	0	0	0	0	0	325	47	372	120	1	176	297	0	325	114	439	1108
05:45 PM	0	0	0	0	0	321	41	362	96	0	162	258	0	278	90	368	988
Total	0	0	0	0	0	1401	187	1588	472	1	680	1153	0	1270	379	1649	4390
Grand Total	0	0	0	0	0	2825	346	3171	931	1	1334	2266	0	2578	723	3301	8738
Apprch %	0	0	0		0	89.1	10.9		41.1	0	58.9		0	78.1	21.9		
Total %	0	0	0	0	0	32.3	4	36.3	10.7	0	15.3	25.9	0	29.5	8.3	37.8	
Passenger Vehicles	0	0	0	0	0	2802	343	3145	918	1	1314	2233	0	2567	718	3285	8663
% Passenger Vehicles	0	0	0	0	0	99.2	99.1	99.2	98.6	100	98.5	98.5	0	99.6	99.3	99.5	99.1
Large 2 Axle Vehicles	0	0	0	0	0	18	3	21	10	0	17	27	0	11	2	13	61
% Large 2 Axle Vehicles	0	0	0	0	0	0.6	0.9	0.7	1.1	0	1.3	1.2	0	0.4	0.3	0.4	0.7
3 Axle Vehicles	0	0	0	0	0	2	0	2	0	0	1	1	0	0	3	3	6
% 3 Axle Vehicles	0	0	0	0	0	0.1	0	0.1	0	0	0.1	0	0	0	0.4	0.1	0.1
4+ Axle Trucks	0	0	0	0	0	3	0	3	3	0	2	5	0	0	0	0	8
% 4+ Axle Trucks	0	0	0	0	0	0.1	0	0.1	0.3	0	0.1	0.2	0	0	0	0	0.1

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	385	40	425	114	0	142	256	0	**355**	81	436	1117
04:45 PM	0	0	0	0	0	344	44	388	127	0	**195**	**322**	0	340	**104**	**444**	1154
05:00 PM	0	0	0	0	0	**390**	48	**438**	102	0	174	276	0	334	74	408	1122
05:15 PM	0	0	0	0	0	365	**51**	416	**154**	0	168	322	0	333	101	434	**1172**
Total Volume	0	0	0	0	0	1484	183	1667	497	0	679	1176	0	1362	360	1722	4565
% App. Total	0	0	0		0	89	11		42.3	0	57.7		0	79.1	20.9		
PHF	.000	.000	.000	.000	.000	.951	.897	.951	.807	.000	.871	.913	.000	.959	.865	.970	.974

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City of Clovis
N/S: SR-168 Eastbound Ramps
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File Name : 13_CVS_168E_Hern PMC
Site Code : 00322473
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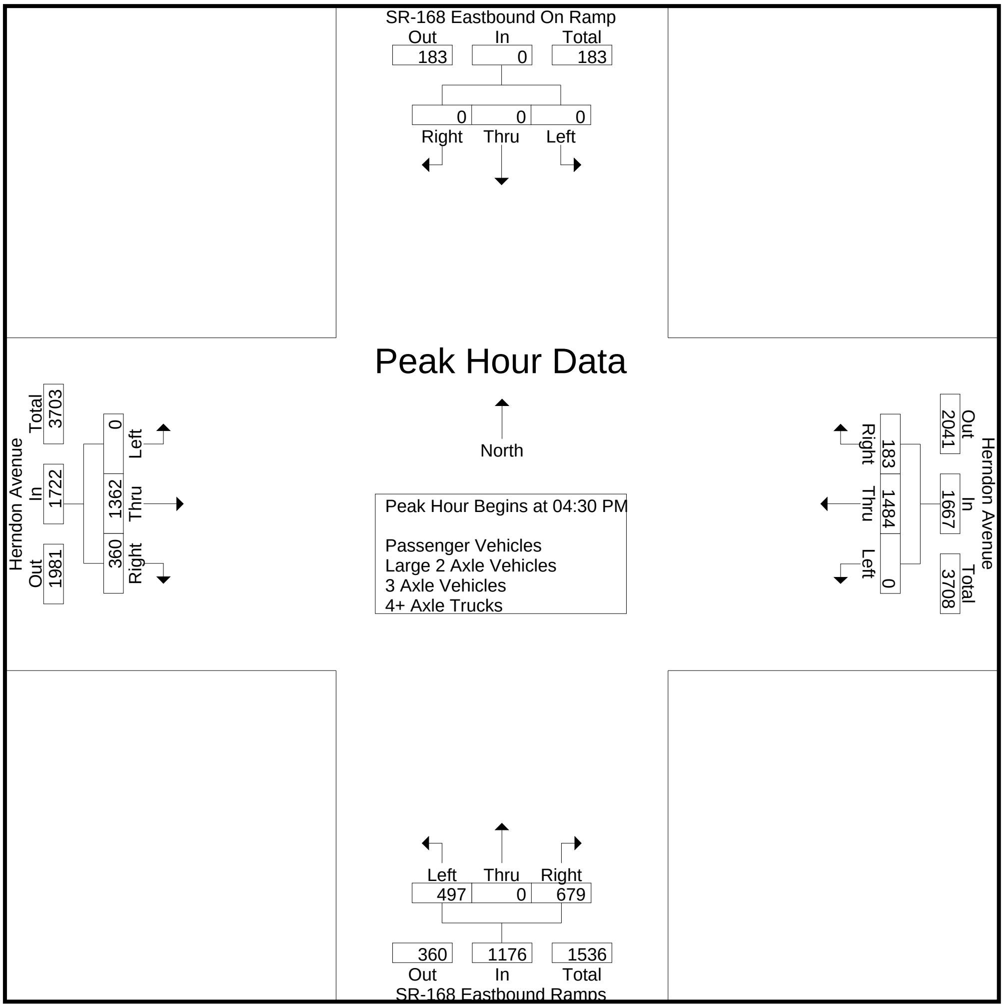

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:45 PM				04:15 PM			
+0 mins.	0	0	0	0	0	385	40	425	127	0	**195**	**322**	0	**358**	87	**445**
+15 mins.	0	0	0	0	0	344	44	388	102	0	174	276	0	355	81	436
+30 mins.	0	0	0	0	0	**390**	48	**438**	**154**	0	168	322	0	340	**104**	444
+45 mins.	0	0	0	0	0	365	**51**	416	120	**1**	176	297	0	334	74	408
Total Volume	0	0	0	0	0	1484	183	1667	503	1	713	1217	0	1387	346	1733
% App. Total	0	0	0		0	89	11		41.3	0.1	58.6		0	80	20	
PHF	.000	.000	.000	.000	.000	.951	.897	.951	.817	.250	.914	.945	.000	.969	.832	.974

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Groups Printed- Passenger Vehicles

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	332	30	362	101	0	127	228	0	253	71	324	914
04:15 PM	0	0	0	0	0	355	43	398	110	0	182	292	0	356	87	443	1133
04:30 PM	0	0	0	0	0	380	40	420	114	0	139	253	0	353	81	434	1107
04:45 PM	0	0	0	0	0	342	44	386	125	0	194	319	0	339	101	440	1145
Total	0	0	0	0	0	1409	157	1566	450	0	642	1092	0	1301	340	1641	4299
05:00 PM	0	0	0	0	0	389	47	436	102	0	171	273	0	334	74	408	1117
05:15 PM	0	0	0	0	0	363	51	414	153	0	166	319	0	332	100	432	1165
05:30 PM	0	0	0	0	0	323	47	370	119	1	174	294	0	322	114	436	1100
05:45 PM	0	0	0	0	0	318	41	359	94	0	161	255	0	278	90	368	982
Total	0	0	0	0	0	1393	186	1579	468	1	672	1141	0	1266	378	1644	4364
Grand Total	0	0	0	0	0	2802	343	3145	918	1	1314	2233	0	2567	718	3285	8663
Apprch %	0	0	0		0	89.1	10.9		41.1	0	58.8		0	78.1	21.9		
Total %	0	0	0	0	0	32.3	4	36.3	10.6	0	15.2	25.8	0	29.6	8.3	37.9	

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	380	40	420	114	0	139	253	0	**353**	81	434	1107
04:45 PM	0	0	0	0	0	342	44	386	125	0	**194**	**319**	0	339	**101**	**440**	1145
05:00 PM	0	0	0	0	0	**389**	47	**436**	102	0	171	273	0	334	74	408	1117
05:15 PM	0	0	0	0	0	363	**51**	414	**153**	0	166	319	0	332	100	432	**1165**
Total Volume	0	0	0	0	0	1474	182	1656	494	0	670	1164	0	1358	356	1714	4534
% App. Total	0	0	0		0	89	11		42.4	0	57.6		0	79.2	20.8		
PHF	.000	.000	.000	.000	.000	.947	.892	.950	.807	.000	.863	.912	.000	.962	.881	.974	.973

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PO Box 1178
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City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
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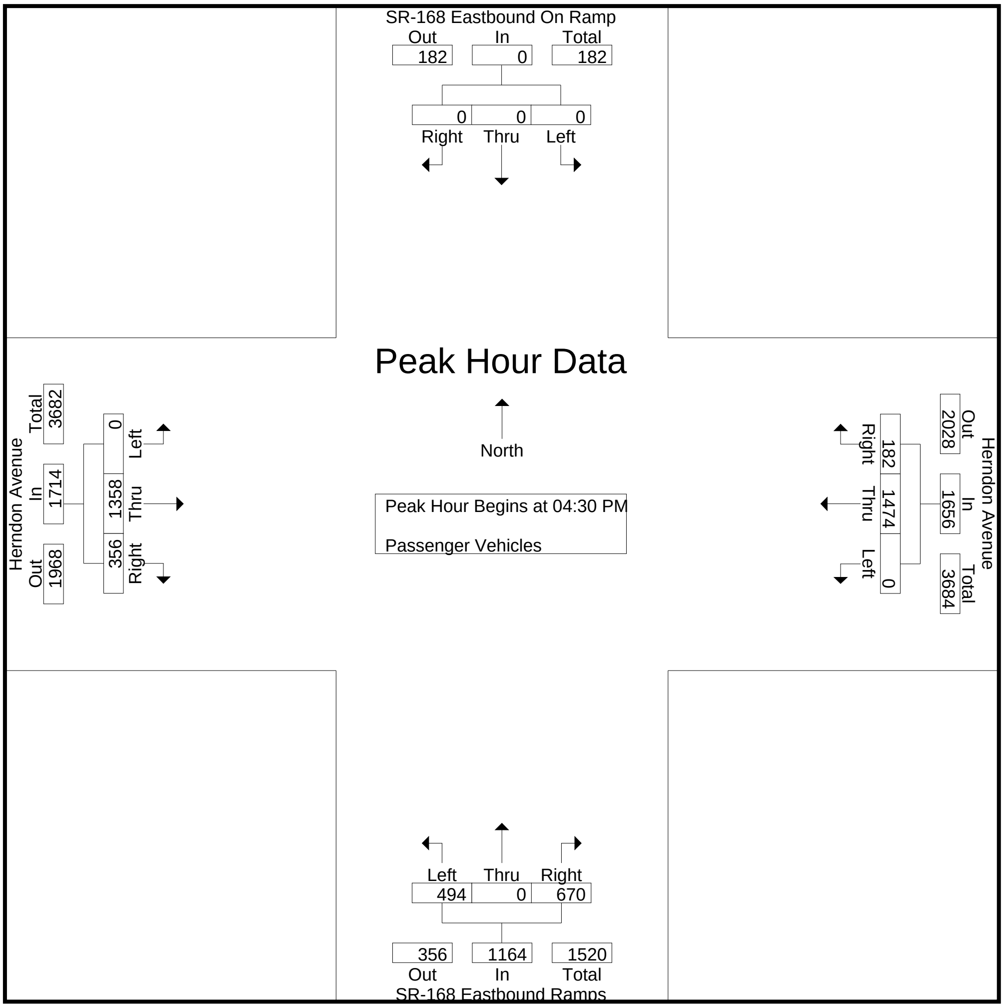

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	380	40	420	114	0	139	253	0	**353**	81	434
+15 mins.	0	0	0	0	0	342	44	386	125	0	**194**	**319**	0	339	**101**	**440**
+30 mins.	0	0	0	0	0	**389**	47	**436**	102	0	171	273	0	334	74	408
+45 mins.	0	0	0	0	0	363	**51**	414	**153**	0	166	319	0	332	100	432
Total Volume	0	0	0	0	0	1474	182	1656	494	0	670	1164	0	1358	356	1714
% App. Total	0	0	0		0	89	11		42.4	0	57.6		0	79.2	20.8	
PHF	.000	.000	.000	.000	.000	.947	.892	.950	.807	.000	.863	.912	.000	.962	.881	.974

City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Large 2 Axle Vehicles

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	4	0	4	2	0	5	7	0	2	1	3	14
04:15 PM	0	0	0	0	0	3	2	5	3	0	3	6	0	2	0	2	13
04:30 PM	0	0	0	0	0	3	0	3	0	0	1	1	0	2	0	2	6
04:45 PM	0	0	0	0	0	1	0	1	2	0	1	3	0	1	0	1	5
Total	0	0	0	0	0	11	2	13	7	0	10	17	0	7	1	8	38
05:00 PM	0	0	0	0	0	0	1	1	0	0	2	2	0	0	0	0	3
05:15 PM	0	0	0	0	0	2	0	2	1	0	2	3	0	1	1	2	7
05:30 PM	0	0	0	0	0	2	0	2	1	0	2	3	0	3	0	3	8
05:45 PM	0	0	0	0	0	3	0	3	1	0	1	2	0	0	0	0	5
Total	0	0	0	0	0	7	1	8	3	0	7	10	0	4	1	5	23
Grand Total	0	0	0	0	0	18	3	21	10	0	17	27	0	11	2	13	61
Apprch %	0	0	0		0	85.7	14.3		37	0	63		0	84.6	15.4		
Total %	0	0	0	0	0	29.5	4.9	34.4	16.4	0	27.9	44.3	0	18	3.3	21.3	

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**3**	0	**3**	0	0	1	1	0	**2**	0	**2**	6
04:45 PM	0	0	0	0	0	1	0	1	**2**	0	1	**3**	0	1	0	1	5
05:00 PM	0	0	0	0	0	0	**1**	1	0	0	**2**	2	0	0	0	0	3
05:15 PM	0	0	0	0	0	2	0	2	1	0	2	3	0	1	**1**	2	**7**
Total Volume	0	0	0	0	0	6	1	7	3	0	6	9	0	4	1	5	21
% App. Total	0	0	0		0	85.7	14.3		33.3	0	66.7		0	80	20		
PHF	.000	.000	.000	.000	.000	.500	.250	.583	.375	.000	.750	.750	.000	.500	.250	.625	.750

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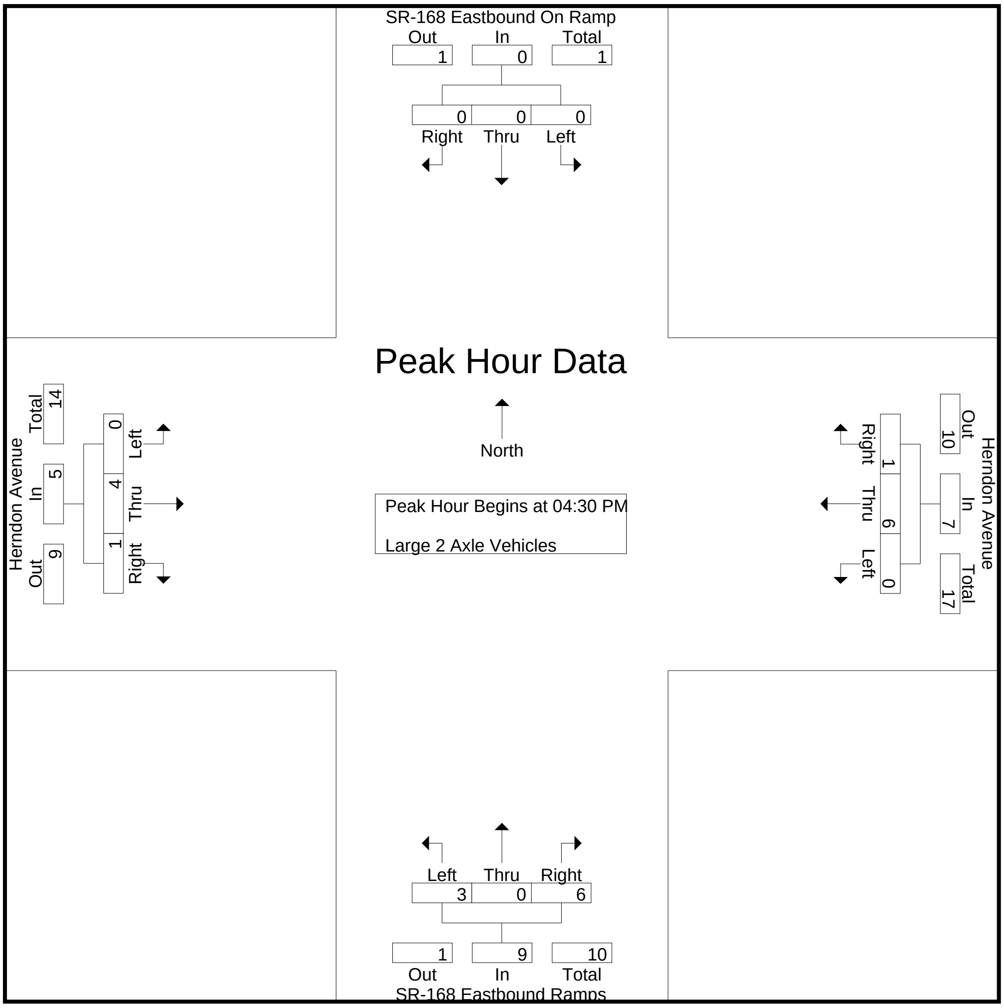
City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	0	1	1	0	**2**	0	**2**
+15 mins.	0	0	0	0	0	1	0	1	**2**	0	1	**3**	0	1	0	1
+30 mins.	0	0	0	0	0	0	**1**	1	0	0	**2**	2	0	0	0	0
+45 mins.	0	0	0	0	0	2	0	2	1	0	2	3	0	1	**1**	2
Total Volume	0	0	0	0	0	6	1	7	3	0	6	9	0	4	1	5
% App. Total	0	0	0		0	85.7	14.3		33.3	0	66.7		0	80	20	
PHF	.000	.000	.000	.000	.000	.500	.250	.583	.375	.000	.750	.750	.000	.500	.250	.625

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City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
Total	0	0	0	0	0	2	0	2	0	0	1	1	0	0	3	3	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	2	0	2	0	0	1	1	0	0	3	3	6
Apprch %	0	0	0		0	100	0		0	0	100		0	0	100		
Total %	0	0	0	0	0	33.3	0	33.3	0	0	16.7	16.7	0	0	50	50	

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**2**	0	**2**	0	0	**1**	**1**	0	0	0	0	**3**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	**3**	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	1	1	0	0	3	3	6
% App. Total	0	0	0		0	100	0		0	0	100		0	0	100		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.250	.250	.000	.000	.250	.250	.500

City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
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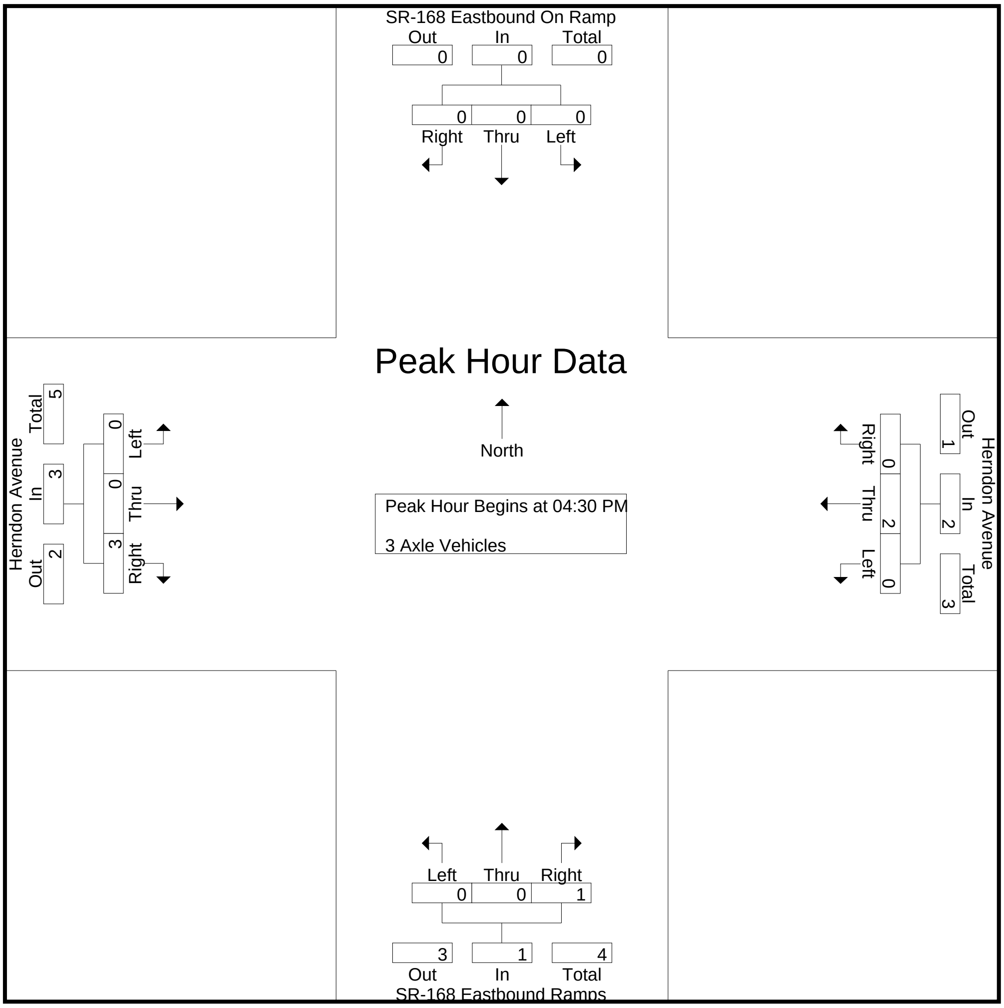

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	**1**	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	**3**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	1	1	0	0	3	3
% App. Total	0	0	0		0	100	0		0	0	100		0	0	100	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.250	.250	.000	.000	.250	.250

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City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
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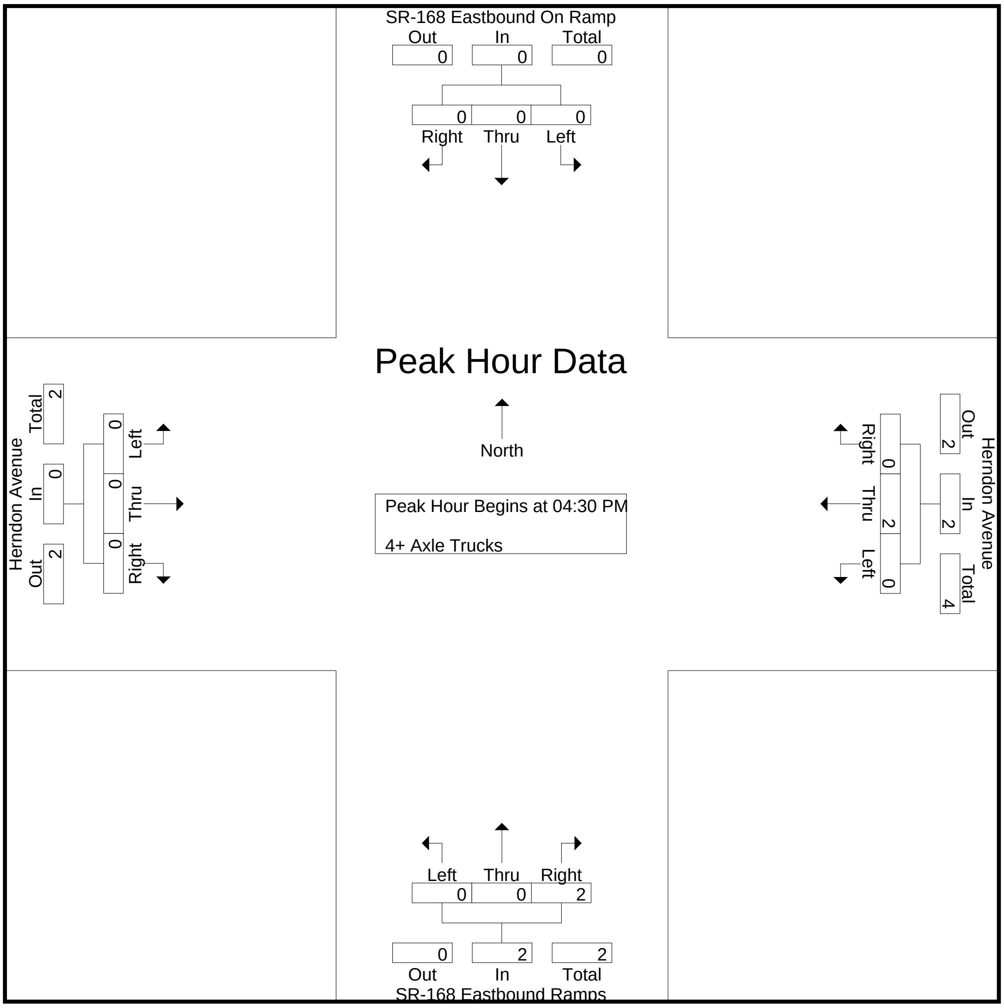
Groups Printed- 4+ Axle Trucks

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	2	0	1	3	0	0	0	0	5
05:00 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	1	0	1	2	0	0	0	0	3
Grand Total	0	0	0	0	0	3	0	3	3	0	2	5	0	0	0	0	8
Apprch %	0	0	0		0	100	0		60	0	40		0	0	0		
Total %	0	0	0	0	0	37.5	0	37.5	37.5	0	25	62.5	0	0	0	0	

	SR-168 Eastbound On Ramp Southbound				Herndon Avenue Westbound				SR-168 Eastbound Ramps Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	1
04:45 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	**2**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	2	2	0	0	0	0	4
% App. Total	0	0	0		0	100	0		0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.500	.500	.000	.000	.000	.000	.500

City of Clovis
N/S: SR-168 Eastbound Ramps
E/W: Herndon Avenue
Weather: Clear

File Name : 13_CVS_168E_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	2	2	0	0	0	0
% App. Total	0	0	0		0	100	0		0	0	100		0	0	0	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.500	.500	.000	.000	.000	.000

Location: Clovis
N/S: SR-168 EB Ramps
E/W: Herndon Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg SR-168 EB Ramps	East Leg Herndon Avenue	South Leg SR-168 EB Ramps	West Leg Herndon Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg SR-168 EB Ramps	East Leg Herndon Avenue	South Leg SR-168 EB Ramps	West Leg Herndon Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: SR-168 EB Ramps
E/W: Herndon Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound SR-168 EB Ramps			Westbound Herndon Avenue			Northbound SR-168 EB Ramps			Eastbound Herndon Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound SR-168 EB Ramps			Westbound Herndon Avenue			Northbound SR-168 EB Ramps			Eastbound Herndon Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	29	28	89	146	21	208	24	253	38	37	7	82	42	116	22	180	661
07:15 AM	37	36	81	154	21	270	39	330	54	61	24	139	53	130	51	234	857
07:30 AM	35	64	120	219	34	264	50	348	58	74	27	159	59	189	46	294	1020
07:45 AM	51	92	98	241	47	274	39	360	66	63	25	154	64	214	60	338	1093
Total	152	220	388	760	123	1016	152	1291	216	235	83	534	218	649	179	1046	3631
08:00 AM	41	61	89	191	34	237	32	303	53	64	39	156	62	249	57	368	1018
08:15 AM	34	66	95	195	33	246	36	315	55	54	29	138	58	180	51	289	937
08:30 AM	51	65	73	189	50	264	29	343	56	55	30	141	53	204	60	317	990
08:45 AM	51	76	64	191	62	202	28	292	54	46	38	138	72	182	66	320	941
Total	177	268	321	766	179	949	125	1253	218	219	136	573	245	815	234	1294	3886
Grand Total	329	488	709	1526	302	1965	277	2544	434	454	219	1107	463	1464	413	2340	7517
Apprch %	21.6	32	46.5		11.9	77.2	10.9		39.2	41	19.8		19.8	62.6	17.6		
Total %	4.4	6.5	9.4	20.3	4	26.1	3.7	33.8	5.8	6	2.9	14.7	6.2	19.5	5.5	31.1	
Passenger Vehicles	320	482	702	1504	297	1928	272	2497	431	440	213	1084	449	1429	398	2276	7361
% Passenger Vehicles	97.3	98.8	99	98.6	98.3	98.1	98.2	98.2	99.3	96.9	97.3	97.9	97	97.6	96.4	97.3	97.9
Large 2 Axle Vehicles	9	4	6	19	4	28	3	35	0	11	5	16	8	29	11	48	118
% Large 2 Axle Vehicles	2.7	0.8	0.8	1.2	1.3	1.4	1.1	1.4	0	2.4	2.3	1.4	1.7	2	2.7	2.1	1.6
3 Axle Vehicles	0	0	1	1	0	4	1	5	0	1	0	1	3	3	1	7	14
% 3 Axle Vehicles	0	0	0.1	0.1	0	0.2	0.4	0.2	0	0.2	0	0.1	0.6	0.2	0.2	0.3	0.2
4+ Axle Trucks	0	2	0	2	1	5	1	7	3	2	1	6	3	3	3	9	24
% 4+ Axle Trucks	0	0.4	0	0.1	0.3	0.3	0.4	0.3	0.7	0.4	0.5	0.5	0.6	0.2	0.7	0.4	0.3

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	35	64	**120**	219	34	264	**50**	348	58	**74**	27	**159**	59	189	46	294	1020
07:45 AM	**51**	**92**	98	**241**	**47**	**274**	39	**360**	**66**	63	25	154	**64**	214	**60**	338	**1093**
08:00 AM	41	61	89	191	34	237	32	303	53	64	**39**	156	62	**249**	57	**368**	1018
08:15 AM	34	66	95	195	33	246	36	315	55	54	29	138	58	180	51	289	937
Total Volume	161	283	402	846	148	1021	157	1326	232	255	120	607	243	832	214	1289	4068
% App. Total	19	33.5	47.5		11.2	77	11.8		38.2	42	19.8		18.9	64.5	16.6		
PHF	.789	.769	.838	.878	.787	.932	.785	.921	.879	.861	.769	.954	.949	.835	.892	.876	.930

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City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
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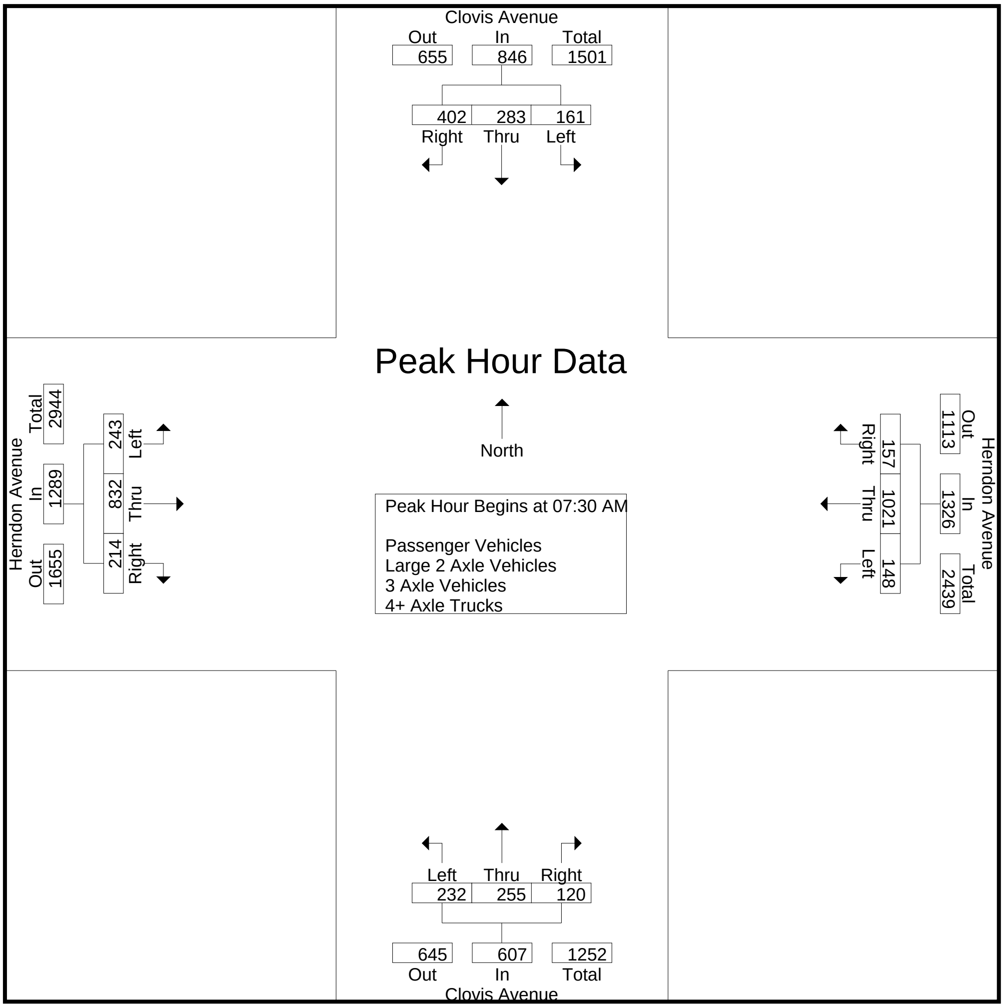

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:15 AM				07:45 AM			
+0 mins.	35	64	**120**	219	21	270	39	330	54	61	24	139	**64**	214	**60**	338
+15 mins.	**51**	**92**	98	**241**	34	264	**50**	348	58	**74**	27	**159**	62	**249**	57	**368**
+30 mins.	41	61	89	191	**47**	**274**	39	**360**	**66**	63	25	154	58	180	51	289
+45 mins.	34	66	95	195	34	237	32	303	53	64	**39**	156	53	204	60	317
Total Volume	161	283	402	846	136	1045	160	1341	231	262	115	608	237	847	228	1312
% App. Total	19	33.5	47.5		10.1	77.9	11.9		38	43.1	18.9		18.1	64.6	17.4	
PHF	.789	.769	.838	.878	.723	.953	.800	.931	.875	.885	.737	.956	.926	.850	.950	.891

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City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	28	28	89	145	20	204	23	247	38	34	7	79	41	113	20	174	645
07:15 AM	36	35	80	151	21	265	39	325	54	59	23	136	49	130	49	228	840
07:30 AM	33	64	120	217	33	259	49	341	58	74	26	158	54	185	45	284	1000
07:45 AM	51	92	97	240	47	271	39	357	64	60	25	149	63	209	59	331	1077
Total	148	219	386	753	121	999	150	1270	214	227	81	522	207	637	173	1017	3562
08:00 AM	40	59	88	187	33	231	31	295	53	64	38	155	61	240	54	355	992
08:15 AM	34	66	94	194	33	242	35	310	55	52	28	135	56	176	50	282	921
08:30 AM	48	63	73	184	49	257	28	334	55	54	30	139	53	198	59	310	967
08:45 AM	50	75	61	186	61	199	28	288	54	43	36	133	72	178	62	312	919
Total	172	263	316	751	176	929	122	1227	217	213	132	562	242	792	225	1259	3799
Grand Total	320	482	702	1504	297	1928	272	2497	431	440	213	1084	449	1429	398	2276	7361
Apprch %	21.3	32	46.7		11.9	77.2	10.9		39.8	40.6	19.6		19.7	62.8	17.5		
Total %	4.3	6.5	9.5	20.4	4	26.2	3.7	33.9	5.9	6	2.9	14.7	6.1	19.4	5.4	30.9	

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	33	64	**120**	217	33	259	**49**	341	58	**74**	26	**158**	54	185	45	284	1000
07:45 AM	**51**	**92**	97	**240**	**47**	**271**	39	**357**	**64**	60	25	149	**63**	209	**59**	331	**1077**
08:00 AM	40	59	88	187	33	231	31	295	53	64	**38**	155	61	**240**	54	**355**	992
08:15 AM	34	66	94	194	33	242	35	310	55	52	28	135	56	176	50	282	921
Total Volume	158	281	399	838	146	1003	154	1303	230	250	117	597	234	810	208	1252	3990
% App. Total	18.9	33.5	47.6		11.2	77	11.8		38.5	41.9	19.6		18.7	64.7	16.6		
PHF	.775	.764	.831	.873	.777	.925	.786	.912	.898	.845	.770	.945	.929	.844	.881	.882	.926

City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
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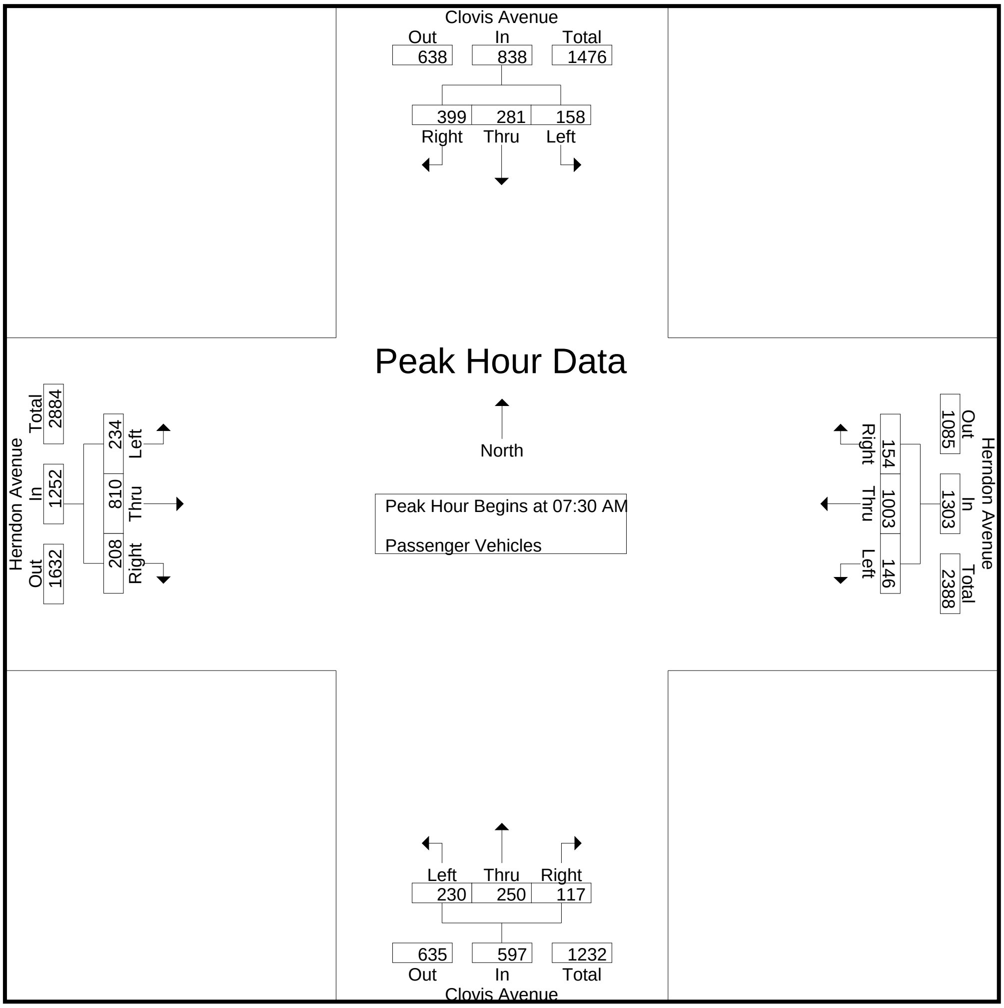

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	33	64	**120**	217	33	259	**49**	341	58	**74**	26	**158**	54	185	45	284
+15 mins.	**51**	**92**	97	**240**	**47**	**271**	39	**357**	**64**	60	25	149	**63**	209	**59**	331
+30 mins.	40	59	88	187	33	231	31	295	53	64	**38**	155	61	**240**	54	**355**
+45 mins.	34	66	94	194	33	242	35	310	55	52	28	135	56	176	50	282
Total Volume	158	281	399	838	146	1003	154	1303	230	250	117	597	234	810	208	1252
% App. Total	18.9	33.5	47.6		11.2	77	11.8		38.5	41.9	19.6		18.7	64.7	16.6	
PHF	.775	.764	.831	.873	.777	.925	.786	.912	.898	.845	.770	.945	.929	.844	.881	.882

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City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	1	3	1	5	0	2	0	2	0	2	0	2	10
07:15 AM	1	0	1	2	0	4	0	4	0	2	0	2	1	0	2	3	11
07:30 AM	2	0	0	2	1	4	0	5	0	0	1	1	4	4	1	9	17
07:45 AM	0	0	0	0	0	2	0	2	0	3	0	3	1	4	0	5	10
Total	4	0	1	5	2	13	1	16	0	7	1	8	6	10	3	19	48
08:00 AM	1	2	1	4	1	5	1	7	0	0	1	1	1	8	3	12	24
08:15 AM	0	0	1	1	0	4	0	4	0	2	1	3	1	3	1	5	13
08:30 AM	3	2	0	5	1	3	1	5	0	1	0	1	0	5	0	5	16
08:45 AM	1	0	3	4	0	3	0	3	0	1	2	3	0	3	4	7	17
Total	5	4	5	14	2	15	2	19	0	4	4	8	2	19	8	29	70
Grand Total	9	4	6	19	4	28	3	35	0	11	5	16	8	29	11	48	118
Apprch %	47.4	21.1	31.6		11.4	80	8.6		0	68.8	31.2		16.7	60.4	22.9		
Total %	7.6	3.4	5.1	16.1	3.4	23.7	2.5	29.7	0	9.3	4.2	13.6	6.8	24.6	9.3	40.7	

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**2**	0	0	2	**1**	4	0	5	0	0	**1**	1	**4**	4	1	9	17
07:45 AM	0	0	0	0	0	2	0	2	0	**3**	0	**3**	1	4	0	5	10
08:00 AM	1	**2**	**1**	**4**	1	**5**	**1**	**7**	0	0	1	1	1	**8**	**3**	**12**	**24**
08:15 AM	0	0	1	1	0	4	0	4	0	2	1	3	1	3	1	5	13
Total Volume	3	2	2	7	2	15	1	18	0	5	3	8	7	19	5	31	64
% App. Total	42.9	28.6	28.6		11.1	83.3	5.6		0	62.5	37.5		22.6	61.3	16.1		
PHF	.375	.250	.500	.438	.500	.750	.250	.643	.000	.417	.750	.667	.438	.594	.417	.646	.667

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City of Clovis
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E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
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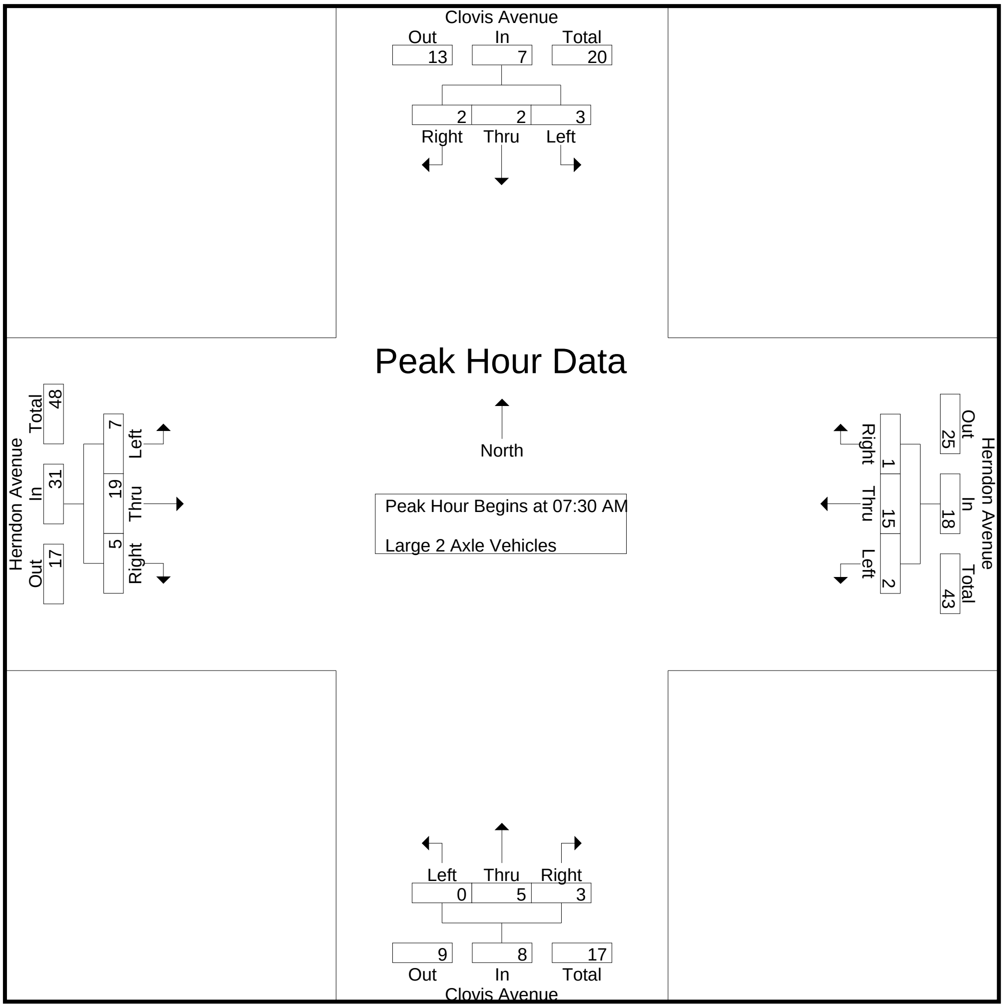

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**2**	0	0	2	**1**	4	0	5	0	0	**1**	1	**4**	4	1	9
+15 mins.	0	0	0	0	0	2	0	2	0	**3**	0	**3**	1	4	0	5
+30 mins.	1	**2**	**1**	**4**	1	**5**	**1**	**7**	0	0	1	1	1	**8**	**3**	**12**
+45 mins.	0	0	1	1	0	4	0	4	0	2	1	3	1	3	1	5
Total Volume	3	2	2	7	2	15	1	18	0	5	3	8	7	19	5	31
% App. Total	42.9	28.6	28.6		11.1	83.3	5.6		0	62.5	37.5		22.6	61.3	16.1	
PHF	.375	.250	.500	.438	.500	.750	.250	.643	.000	.417	.750	.667	.438	.594	.417	.646

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City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
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Page No : 1

Groups Printed- 3 Axle Vehicles

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	1	1	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	0	1	1	0	2	0	2	0	1	0	1	3	1	1	5	9
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	2	1	3	0	0	0	0	0	2	0	2	5
Grand Total	0	0	1	1	0	4	1	5	0	1	0	1	3	3	1	7	14
Apprch %	0	0	100		0	80	20		0	100	0		42.9	42.9	14.3		
Total %	0	0	7.1	7.1	0	28.6	7.1	35.7	0	7.1	0	7.1	21.4	21.4	7.1	50	

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	**1**	**1**	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	**3**
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	0	2	1	3	0	0	0	0	0	1	0	1	5
% App. Total	0	0	100		0	66.7	33.3		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.500	.250	.750	.000	.000	.000	.000	.000	.250	.000	.250	.417

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City of Clovis
N/S: Clovis Avenue
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Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
Site Code : 00322473
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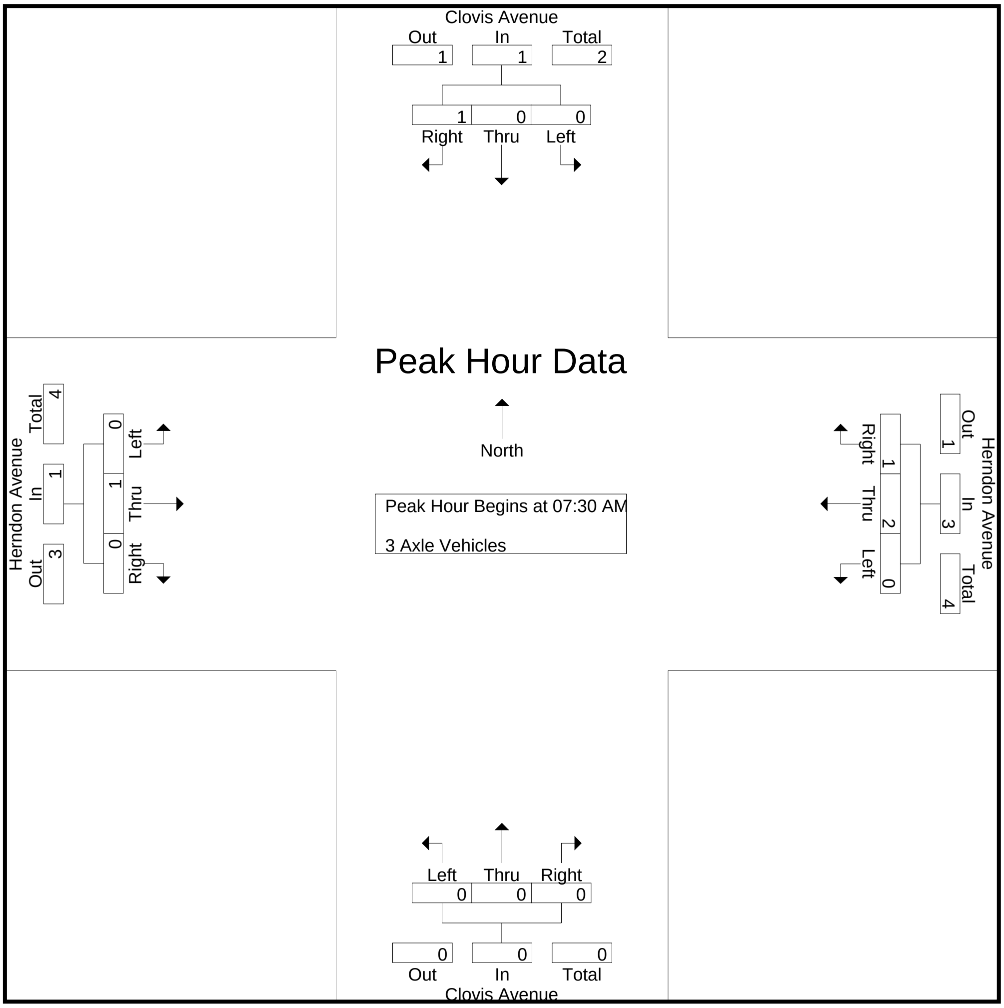

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	**1**	**1**	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	**1**	1	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	2	1	3	0	0	0	0	0	1	0	1
% App. Total	0	0	100		0	66.7	33.3		0	0	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.500	.250	.750	.000	.000	.000	.000	.000	.250	.000	.250

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City of Clovis
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Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
Site Code : 00322473
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Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3	3
07:15 AM	0	1	0	1	0	1	0	1	0	0	1	1	0	0	0	0	3
07:30 AM	0	0	0	0	0	1	1	2	0	0	0	0	1	0	0	1	3
07:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	1	3
Total	0	1	0	1	0	2	1	3	2	0	1	3	2	1	2	5	12
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
08:30 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	0	1	1	5
08:45 AM	0	1	0	1	1	0	0	1	0	2	0	2	0	0	0	0	4
Total	0	1	0	1	1	3	0	4	1	2	0	3	1	2	1	4	12
Grand Total	0	2	0	2	1	5	1	7	3	2	1	6	3	3	3	9	24
Apprch %	0	100	0		14.3	71.4	14.3		50	33.3	16.7		33.3	33.3	33.3		
Total %	0	8.3	0	8.3	4.2	20.8	4.2	29.2	12.5	8.3	4.2	25	12.5	12.5	12.5	37.5	

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	**1**	0	0	1	**3**
07:45 AM	0	0	0	0	0	0	0	0	**2**	0	0	**2**	0	0	**1**	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	**2**	2
Total Volume	0	0	0	0	0	1	1	2	2	0	0	2	2	2	1	5	9
% App. Total	0	0	0		0	50	50		100	0	0		40	40	20		
PHF	.000	.000	.000	.000	.000	.250	.250	.250	.250	.000	.000	.250	.500	.500	.250	.625	.750

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City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern AMC
Site Code : 00322473
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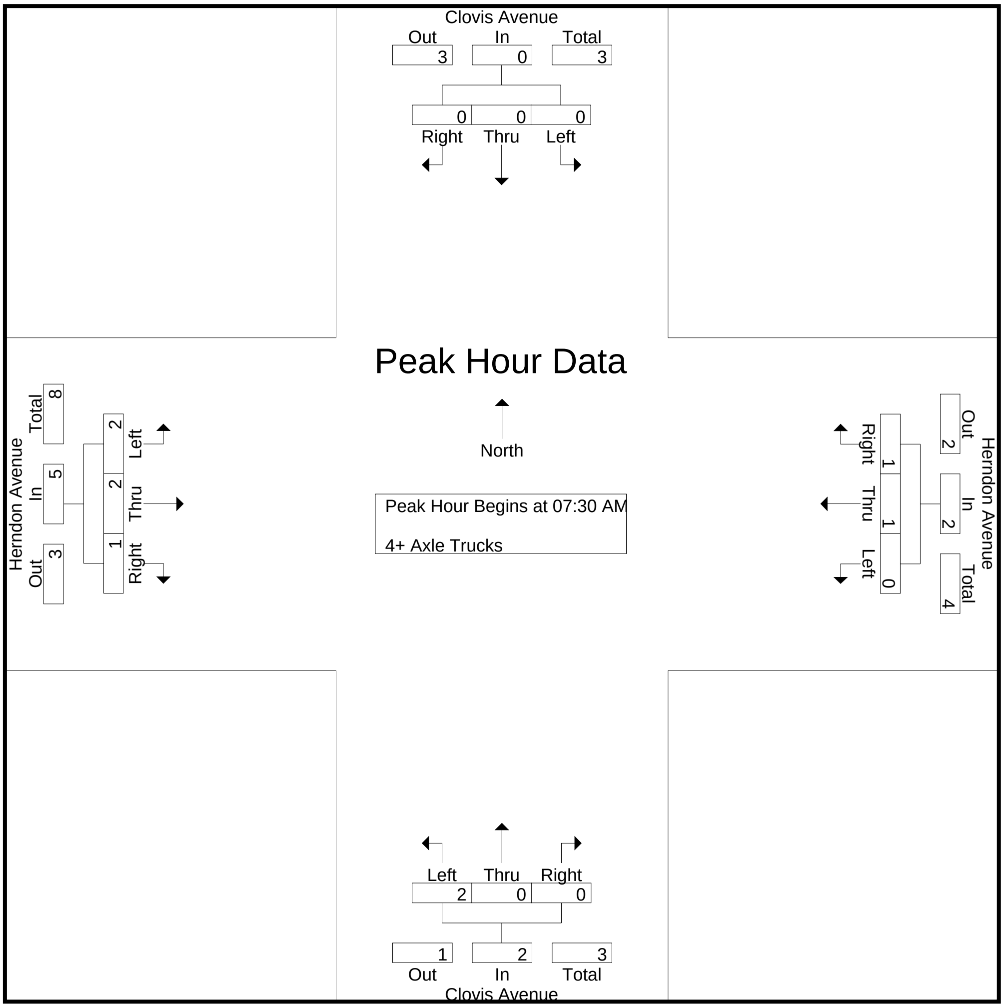

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	**1**	0	0	1
+15 mins.	0	0	0	0	0	0	0	0	**2**	0	0	**2**	0	0	**1**	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	**2**
Total Volume	0	0	0	0	0	1	1	2	2	0	0	2	2	2	1	5
% App. Total	0	0	0		0	50	50		100	0	0		40	40	20	
PHF	.000	.000	.000	.000	.000	.250	.250	.250	.250	.000	.000	.250	.500	.500	.250	.625

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City of Clovis
N/S: Clovis Avenue
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Weather: Clear

File Name : 14_CVS_Clo_Hern PMC
Site Code : 00322473
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	46	51	59	156	57	246	32	335	74	99	68	241	62	257	73	392	1124
04:15 PM	56	49	56	161	63	251	38	352	103	110	67	280	110	353	81	544	1337
04:30 PM	71	57	71	199	71	270	24	365	84	71	68	223	81	338	77	496	1283
04:45 PM	52	65	62	179	77	253	40	370	79	88	79	246	90	351	90	531	1326
Total	225	222	248	695	268	1020	134	1422	340	368	282	990	343	1299	321	1963	5070
05:00 PM	63	58	69	190	90	288	37	415	89	125	73	287	94	344	70	508	1400
05:15 PM	85	82	64	231	78	251	31	360	98	118	56	272	101	335	65	501	1364
05:30 PM	76	70	57	203	57	231	35	323	91	87	60	238	90	316	94	500	1264
05:45 PM	48	64	56	168	79	216	34	329	95	94	61	250	76	306	70	452	1199
Total	272	274	246	792	304	986	137	1427	373	424	250	1047	361	1301	299	1961	5227
Grand Total	497	496	494	1487	572	2006	271	2849	713	792	532	2037	704	2600	620	3924	10297
Apprch %	33.4	33.4	33.2		20.1	70.4	9.5		35	38.9	26.1		17.9	66.3	15.8		
Total %	4.8	4.8	4.8	14.4	5.6	19.5	2.6	27.7	6.9	7.7	5.2	19.8	6.8	25.3	6	38.1	
Passenger Vehicles	490	492	489	1471	566	1993	270	2829	710	789	532	2031	695	2579	617	3891	10222
% Passenger Vehicles	98.6	99.2	99	98.9	99	99.4	99.6	99.3	99.6	99.6	100	99.7	98.7	99.2	99.5	99.2	99.3
Large 2 Axle Vehicles	6	4	5	15	5	9	1	15	1	3	0	4	9	17	2	28	62
% Large 2 Axle Vehicles	1.2	0.8	1	1	0.9	0.4	0.4	0.5	0.1	0.4	0	0.2	1.3	0.7	0.3	0.7	0.6
3 Axle Vehicles	1	0	0	1	0	2	0	2	1	0	0	1	0	2	0	2	6
% 3 Axle Vehicles	0.2	0	0	0.1	0	0.1	0	0.1	0.1	0	0	0	0	0.1	0	0.1	0.1
4+ Axle Trucks	0	0	0	0	1	2	0	3	1	0	0	1	0	2	1	3	7
% 4+ Axle Trucks	0	0	0	0	0.2	0.1	0	0.1	0.1	0	0	0	0	0.1	0.2	0.1	0.1

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	71	57	**71**	199	71	270	24	365	84	71	68	223	81	338	77	496	1283
04:45 PM	52	65	62	179	77	253	**40**	370	79	88	**79**	246	90	**351**	**90**	**531**	1326
05:00 PM	63	58	69	190	**90**	**288**	37	**415**	89	**125**	73	**287**	94	344	70	508	**1400**
05:15 PM	**85**	**82**	64	**231**	78	251	31	360	**98**	118	56	272	**101**	335	65	501	1364
Total Volume	271	262	266	799	316	1062	132	1510	350	402	276	1028	366	1368	302	2036	5373
% App. Total	33.9	32.8	33.3		20.9	70.3	8.7		34	39.1	26.8		18	67.2	14.8		
PHF	.797	.799	.937	.865	.878	.922	.825	.910	.893	.804	.873	.895	.906	.974	.839	.959	.959

City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern PMC
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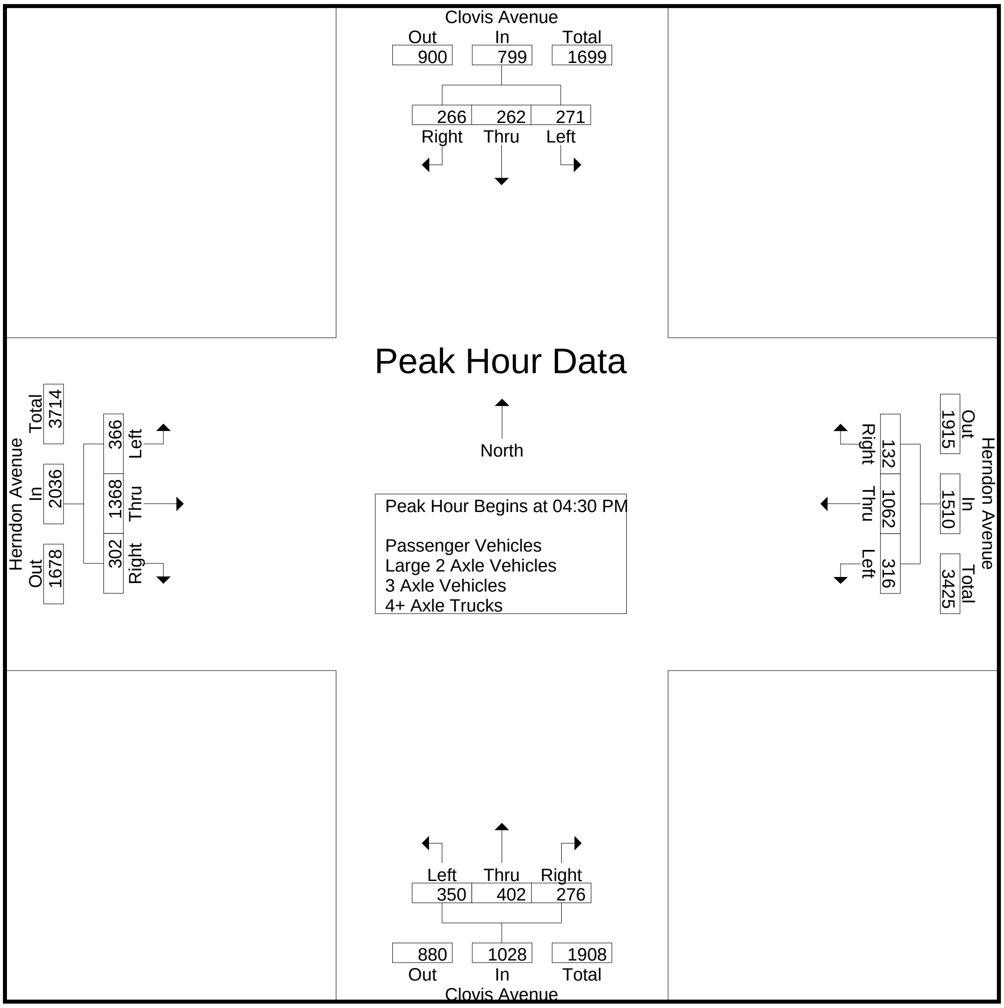

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				05:00 PM				04:15 PM			
+0 mins.	52	65	62	179	71	270	24	365	89	**125**	**73**	**287**	**110**	**353**	81	**544**
+15 mins.	63	58	**69**	190	77	253	**40**	370	**98**	118	56	272	81	338	77	496
+30 mins.	**85**	**82**	64	**231**	**90**	**288**	37	**415**	91	87	60	238	90	351	**90**	531
+45 mins.	76	70	57	203	78	251	31	360	95	94	61	250	94	344	70	508
Total Volume	276	275	252	803	316	1062	132	1510	373	424	250	1047	375	1386	318	2079
% App. Total	34.4	34.2	31.4		20.9	70.3	8.7		35.6	40.5	23.9		18	66.7	15.3	
PHF	.812	.838	.913	.869	.878	.922	.825	.910	.952	.848	.856	.912	.852	.982	.883	.955

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City of Clovis
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File Name : 14_CVS_Clo_Hern PMC
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Groups Printed- Passenger Vehicles

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	45	51	57	153	56	244	32	332	74	98	68	240	61	251	72	384	1109
04:15 PM	55	48	55	158	62	248	38	348	102	110	67	279	108	350	80	538	1323
04:30 PM	69	57	71	197	69	269	24	362	83	70	68	221	79	335	77	491	1271
04:45 PM	51	65	62	178	77	252	40	369	78	88	79	245	89	349	90	528	1320
Total	220	221	245	686	264	1013	134	1411	337	366	282	985	337	1285	319	1941	5023
05:00 PM	62	57	68	187	89	287	37	413	89	125	73	287	94	342	69	505	1392
05:15 PM	85	82	64	231	78	250	31	359	98	118	56	272	98	334	65	497	1359
05:30 PM	75	69	56	200	56	230	34	320	91	86	60	237	90	315	94	499	1256
05:45 PM	48	63	56	167	79	213	34	326	95	94	61	250	76	303	70	449	1192
Total	270	271	244	785	302	980	136	1418	373	423	250	1046	358	1294	298	1950	5199
Grand Total	490	492	489	1471	566	1993	270	2829	710	789	532	2031	695	2579	617	3891	10222
Apprch %	33.3	33.4	33.2		20	70.4	9.5		35	38.8	26.2		17.9	66.3	15.9		
Total %	4.8	4.8	4.8	14.4	5.5	19.5	2.6	27.7	6.9	7.7	5.2	19.9	6.8	25.2	6	38.1	

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	69	57	**71**	197	69	269	24	362	83	70	68	221	79	335	77	491	1271
04:45 PM	51	65	62	178	77	252	**40**	369	78	88	**79**	245	89	**349**	**90**	**528**	1320
05:00 PM	62	57	68	187	**89**	**287**	37	**413**	89	**125**	73	**287**	94	342	69	505	**1392**
05:15 PM	**85**	**82**	64	**231**	78	250	31	359	**98**	118	56	272	**98**	334	65	497	1359
Total Volume	267	261	265	793	313	1058	132	1503	348	401	276	1025	360	1360	301	2021	5342
% App. Total	33.7	32.9	33.4		20.8	70.4	8.8		34	39.1	26.9		17.8	67.3	14.9		
PHF	.785	.796	.933	.858	.879	.922	.825	.910	.888	.802	.873	.893	.918	.974	.836	.957	.959

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File Name : 14_CVS_Clo_Hern PMC
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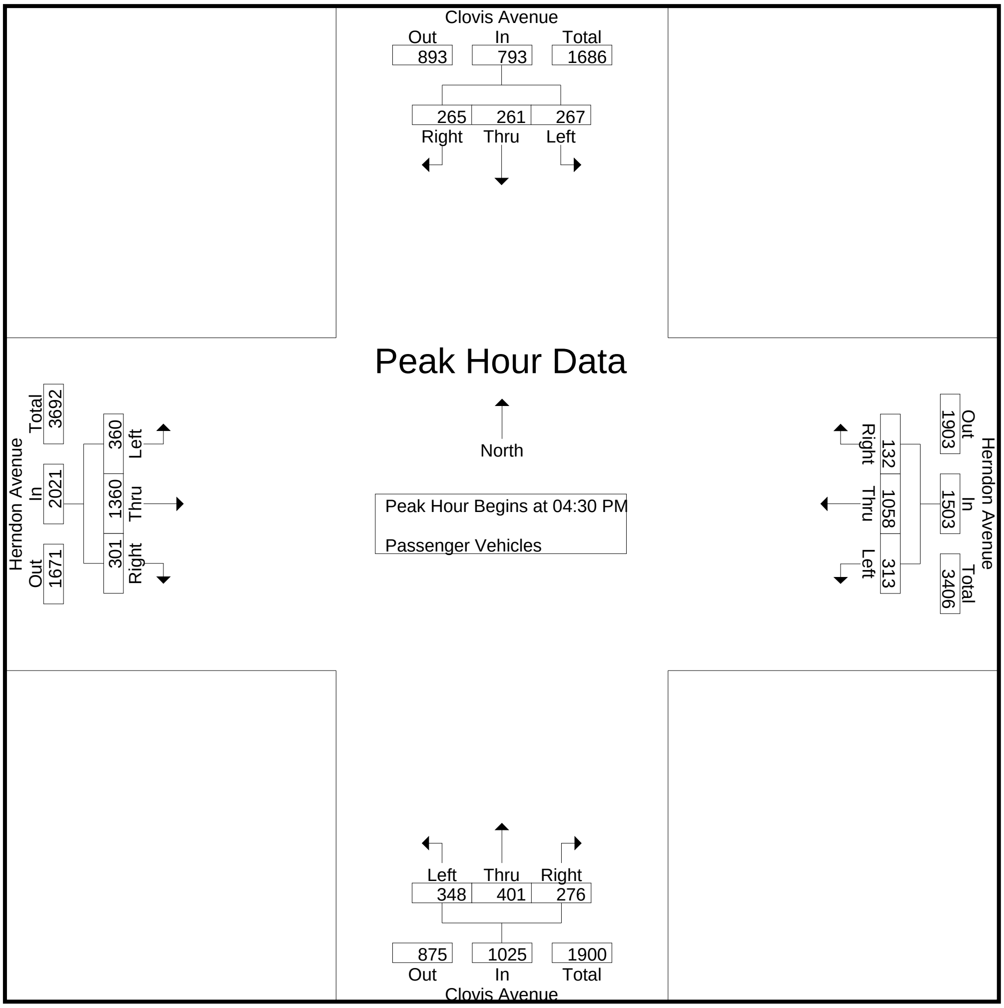

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	69	57	**71**	197	69	269	24	362	83	70	68	221	79	335	77	491
+15 mins.	51	65	62	178	77	252	**40**	369	78	88	**79**	245	89	**349**	**90**	**528**
+30 mins.	62	57	68	187	**89**	**287**	37	**413**	89	**125**	73	**287**	94	342	69	505
+45 mins.	**85**	**82**	64	**231**	78	250	31	359	**98**	118	56	272	**98**	334	65	497
Total Volume	267	261	265	793	313	1058	132	1503	348	401	276	1025	360	1360	301	2021
% App. Total	33.7	32.9	33.4		20.8	70.4	8.8		34	39.1	26.9		17.8	67.3	14.9	
PHF	.785	.796	.933	.858	.879	.922	.825	.910	.888	.802	.873	.893	.918	.974	.836	.957

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City of Clovis
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Weather: Clear

File Name : 14_CVS_Clo_Hern PMC
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Groups Printed- Large 2 Axle Vehicles

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	2	3	1	1	0	2	0	1	0	1	1	5	0	6	12
04:15 PM	0	1	1	2	1	3	0	4	1	0	0	1	2	3	1	6	13
04:30 PM	2	0	0	2	1	0	0	1	0	1	0	1	2	1	0	3	7
04:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	1	2	0	3	5
Total	4	1	3	8	3	5	0	8	1	2	0	3	6	11	1	18	37
05:00 PM	1	1	1	3	1	0	0	1	0	0	0	0	0	1	1	2	6
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	3	1	0	4	5
05:30 PM	1	1	1	3	1	0	1	2	0	1	0	1	0	1	0	1	7
05:45 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	3	0	3	7
Total	2	3	2	7	2	4	1	7	0	1	0	1	3	6	1	10	25
Grand Total	6	4	5	15	5	9	1	15	1	3	0	4	9	17	2	28	62
Apprch %	40	26.7	33.3		33.3	60	6.7		25	75	0		32.1	60.7	7.1		
Total %	9.7	6.5	8.1	24.2	8.1	14.5	1.6	24.2	1.6	4.8	0	6.5	14.5	27.4	3.2	45.2	

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**2**	0	0	2	**1**	0	0	**1**	0	**1**	0	**1**	2	1	0	3	**7**
04:45 PM	1	0	0	1	0	**1**	0	1	0	0	0	0	1	**2**	0	3	5
05:00 PM	1	**1**	**1**	**3**	1	0	0	1	0	0	0	0	0	1	**1**	2	6
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	**3**	1	0	**4**	5
Total Volume	4	1	1	6	2	2	0	4	0	1	0	1	6	5	1	12	23
% App. Total	66.7	16.7	16.7		50	50	0		0	100	0		50	41.7	8.3		
PHF	.500	.250	.250	.500	.500	.500	.000	1.00	.000	.250	.000	.250	.500	.625	.250	.750	.821

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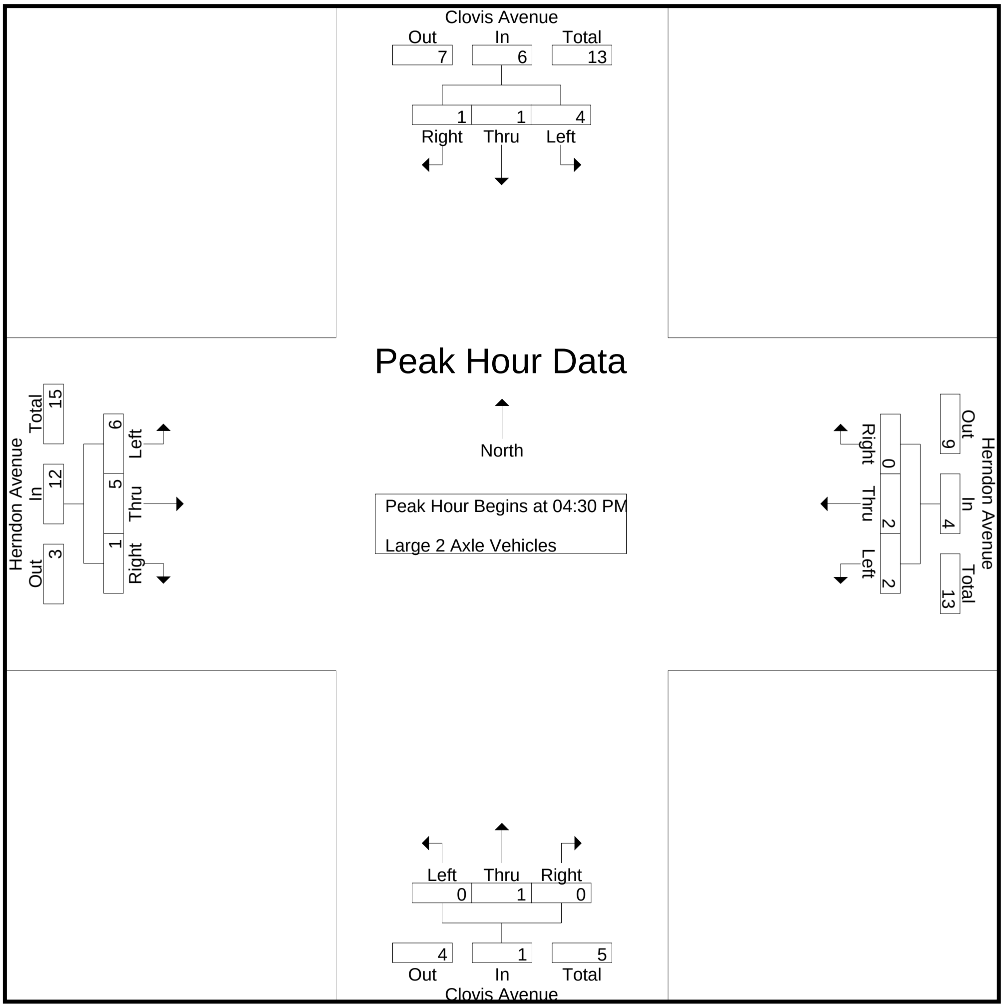

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**2**	0	0	2	**1**	0	0	**1**	0	**1**	0	**1**	2	1	0	3
+15 mins.	1	0	0	1	0	**1**	0	1	0	0	0	0	1	**2**	0	3
+30 mins.	1	**1**	**1**	**3**	1	0	0	1	0	0	0	0	0	1	**1**	2
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	**3**	1	0	**4**
Total Volume	4	1	1	6	2	2	0	4	0	1	0	1	6	5	1	12
% App. Total	66.7	16.7	16.7		50	50	0		0	100	0		50	41.7	8.3	
PHF	.500	.250	.250	.500	.500	.500	.000	1.000	.000	.250	.000	.250	.500	.625	.250	.750

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City of Clovis
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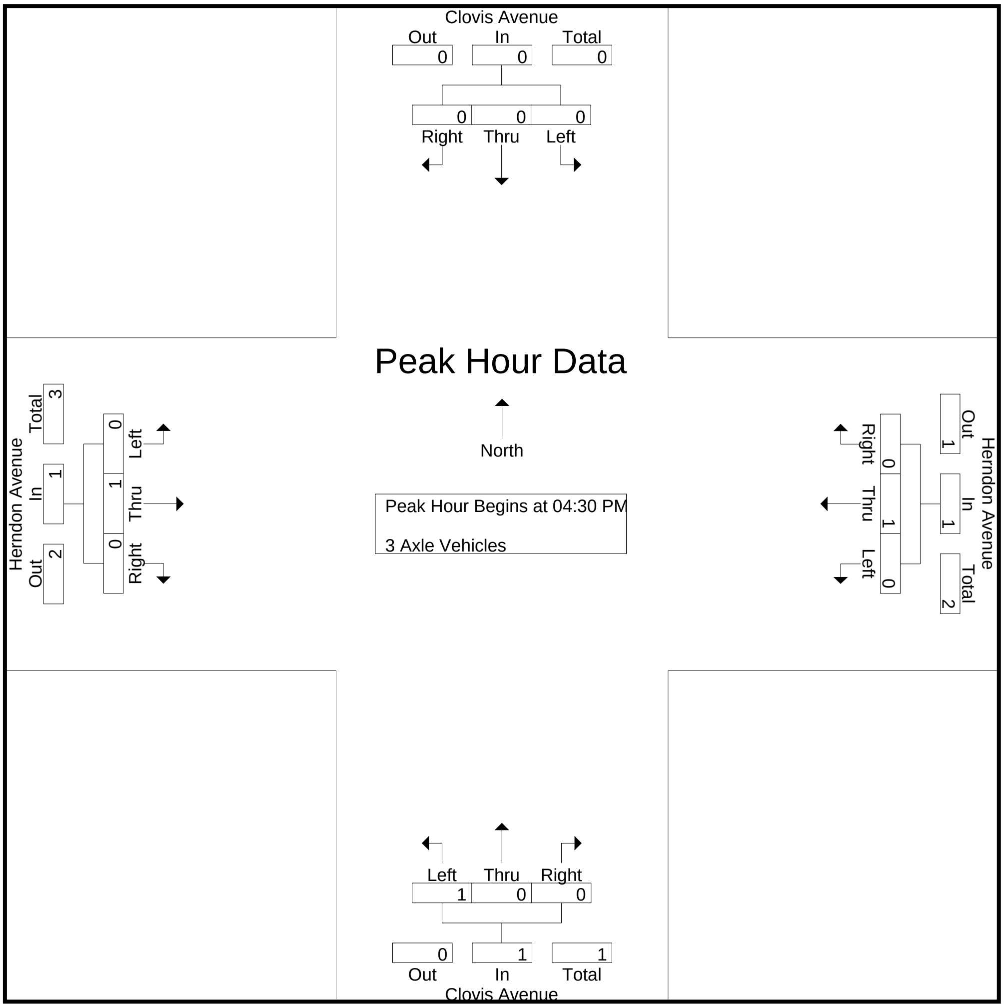
Groups Printed- 3 Axle Vehicles

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	1	0	1	1	0	0	1	0	2	0	2	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	1	0	2	0	2	1	0	0	1	0	2	0	2	6
Apprch %	100	0	0		0	100	0		100	0	0		0	100	0		
Total %	16.7	0	0	16.7	0	33.3	0	33.3	16.7	0	0	16.7	0	33.3	0	33.3	

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**1**	0	**1**	**1**	0	0	**1**	0	**1**	0	**1**	**3**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
% App. Total	0	0	0		0	100	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250	.000	.250	.000	.250	.250

City of Clovis		File Name	: 14_CVS_Clo_Hern PMC
N/S: Clovis Avenue		Site Code	: 00322473
E/W: Herndon Avenue		Start Date	: 5/24/2022
Weather: Clear		Page No	: 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	**1**	0	0	**1**	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1
% App. Total	0	0	0		0	100	0		100	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250	.000	.250	.000	.250

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City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

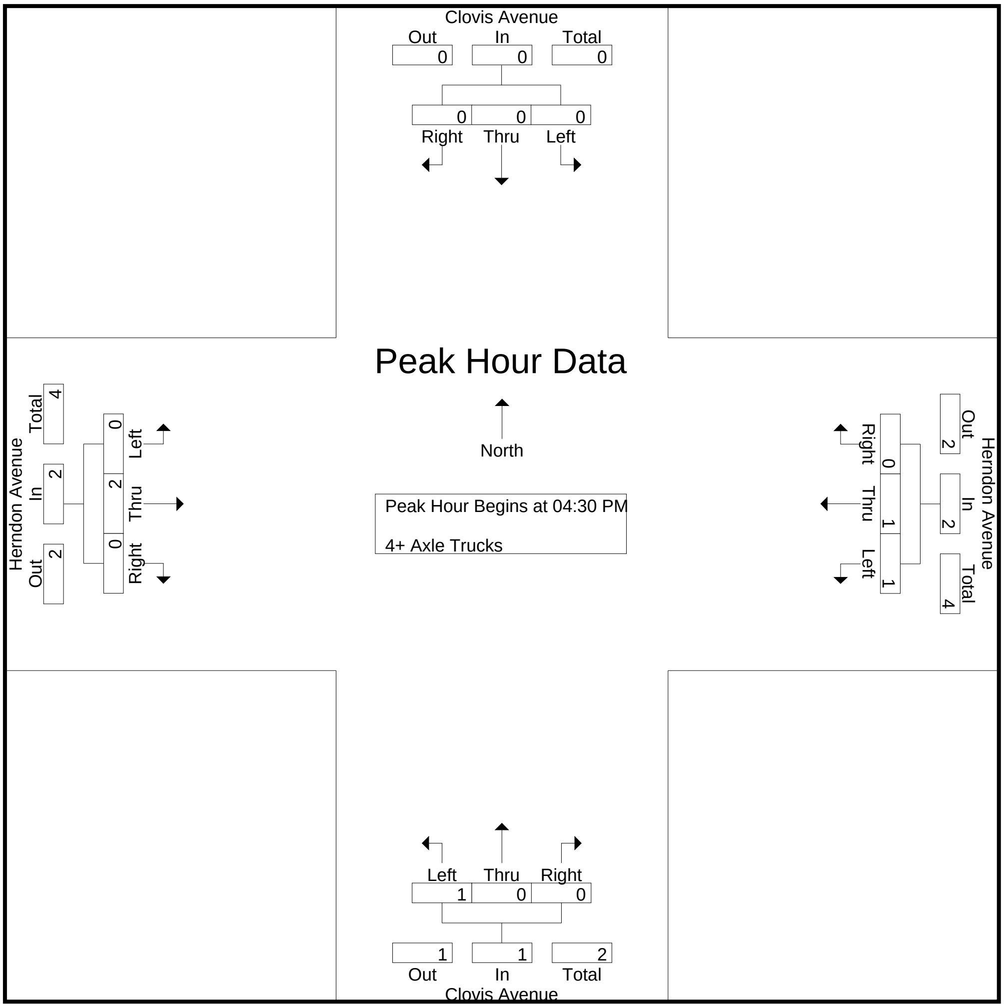
Groups Printed- 4+ Axle Trucks

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	1	1	0	2	1	0	0	1	0	1	1	2	5
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	0	0	0	0	1	2	0	3	1	0	0	1	0	2	1	3	7
Apprch %	0	0	0		33.3	66.7	0		100	0	0		0	66.7	33.3		
Total %	0	0	0	0	14.3	28.6	0	42.9	14.3	0	0	14.3	0	28.6	14.3	42.9	

	Clovis Avenue Southbound				Herndon Avenue Westbound				Clovis Avenue Northbound				Herndon Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	**1**	0	**1**	**2**
04:45 PM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	1
05:00 PM	0	0	0	0	0	**1**	0	1	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	1	0	0	1	0	2	0	2	5
% App. Total	0	0	0		50	50	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.250	.000	.000	.250	.000	.500	.000	.500	.625

City of Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue
Weather: Clear

File Name : 14_CVS_Clo_Hern PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	**1**	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	1	0	0	1	0	2	0	2
% App. Total	0	0	0		50	50	0		100	0	0		0	100	0	
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.250	.000	.000	.250	.000	.500	.000	.500

Location: Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Clovis Avenue	East Leg Herndon Avenue	South Leg Clovis Avenue	West Leg Herndon Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	0	2	0	0	2

	North Leg Clovis Avenue	East Leg Herndon Avenue	South Leg Clovis Avenue	West Leg Herndon Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	4	0	0	4
4:45 PM	0	0	0	0	0
5:00 PM	1	1	0	0	2
5:15 PM	0	1	0	0	1
5:30 PM	0	2	0	0	2
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	1	9	0	0	10

Location: Clovis
N/S: Clovis Avenue
E/W: Herndon Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Clovis Avenue			Westbound Herndon Avenue			Northbound Clovis Avenue			Eastbound Herndon Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	1	0	0	2	0	0	0	0	3

	Southbound Clovis Avenue			Westbound Herndon Avenue			Northbound Clovis Avenue			Eastbound Herndon Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	0	1	0	0	0	3	0	0	0	0	7

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City of Clovis
N/S: Sunnyside Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_AM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	16	0	16	0	0	0	0	0	27	0	27	43
07:15 AM	0	0	0	0	0	37	0	37	0	0	0	0	0	19	0	19	56
07:30 AM	1	0	0	1	0	67	0	67	0	0	0	0	0	24	0	24	92
07:45 AM	0	0	0	0	0	81	0	81	0	0	0	0	0	40	0	40	121
Total	1	0	0	1	0	201	0	201	0	0	0	0	0	110	0	110	312
08:00 AM	0	0	0	0	0	57	0	57	0	0	1	1	0	44	0	44	102
08:15 AM	0	0	0	0	0	59	0	59	1	0	0	1	0	44	1	45	105
08:30 AM	0	0	0	0	0	50	0	50	0	0	0	0	0	26	0	26	76
08:45 AM	0	0	0	0	0	68	0	68	1	0	0	1	0	40	0	40	109
Total	0	0	0	0	0	234	0	234	2	0	1	3	0	154	1	155	392
Grand Total	1	0	0	1	0	435	0	435	2	0	1	3	0	264	1	265	704
Apprch %	100	0	0		0	100	0		66.7	0	33.3		0	99.6	0.4		
Total %	0.1	0	0	0.1	0	61.8	0	61.8	0.3	0	0.1	0.4	0	37.5	0.1	37.6	
Passenger Vehicles	1	0	0	1	0	418	0	418	2	0	1	3	0	252	1	253	675
% Passenger Vehicles	100	0	0	100	0	96.1	0	96.1	100	0	100	100	0	95.5	100	95.5	95.9
Large 2 Axle Vehicles	0	0	0	0	0	7	0	7	0	0	0	0	0	3	0	3	10
% Large 2 Axle Vehicles	0	0	0	0	0	1.6	0	1.6	0	0	0	0	0	1.1	0	1.1	1.4
3 Axle Vehicles	0	0	0	0	0	7	0	7	0	0	0	0	0	7	0	7	14
% 3 Axle Vehicles	0	0	0	0	0	1.6	0	1.6	0	0	0	0	0	2.7	0	2.6	2
4+ Axle Trucks	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
% 4+ Axle Trucks	0	0	0	0	0	0.7	0	0.7	0	0	0	0	0	0.8	0	0.8	0.7

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**1**	0	0	**1**	0	67	0	67	0	0	0	0	0	24	0	24	92
07:45 AM	0	0	0	0	0	**81**	0	**81**	0	0	0	0	0	40	0	40	**121**
08:00 AM	0	0	0	0	0	57	0	57	0	0	**1**	**1**	0	**44**	0	44	102
08:15 AM	0	0	0	0	0	59	0	59	**1**	0	0	1	0	44	**1**	**45**	105
Total Volume	1	0	0	1	0	264	0	264	1	0	1	2	0	152	1	153	420
% App. Total	100	0	0		0	100	0		50	0	50		0	99.3	0.7		
PHF	.250	.000	.000	.250	.000	.815	.000	.815	.250	.000	.250	.500	.000	.864	.250	.850	.868

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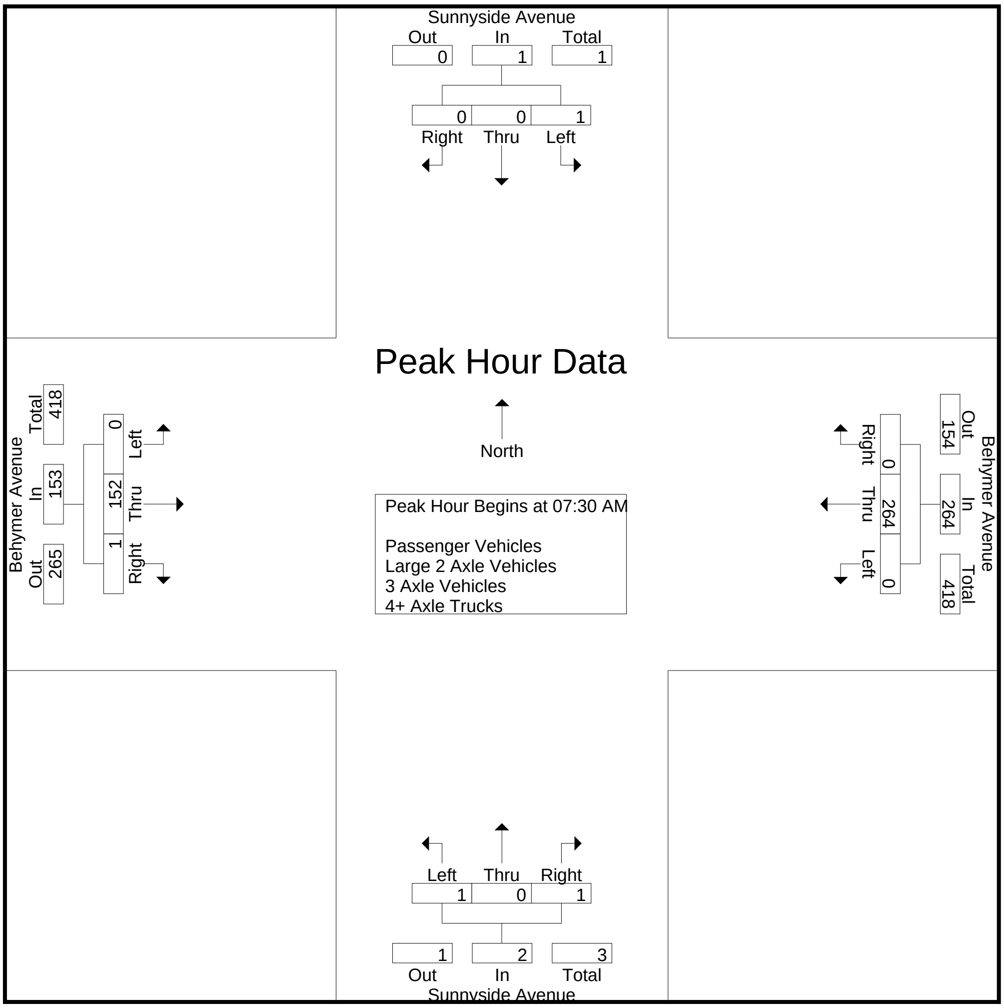
City of Clovis
N/S: Sunnyside Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_AM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				08:00 AM				07:45 AM			
+0 mins.	0	0	0	0	0	67	0	67	0	0	**1**	**1**	0	40	0	40
+15 mins.	0	0	0	0	0	**81**	0	**81**	**1**	0	0	1	0	**44**	0	44
+30 mins.	**1**	0	0	**1**	0	57	0	57	0	0	0	0	0	44	**1**	**45**
+45 mins.	0	0	0	0	0	59	0	59	1	0	0	1	0	26	0	26
Total Volume	1	0	0	1	0	264	0	264	2	0	1	3	0	154	1	155
% App. Total	100	0	0		0	100	0		66.7	0	33.3		0	99.4	0.6	
PHF	.250	.000	.000	.250	.000	.815	.000	.815	.500	.000	.250	.750	.000	.875	.250	.861

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City of Clovis
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Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_AM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	15	0	15	0	0	0	0	0	26	0	26	41
07:15 AM	0	0	0	0	0	35	0	35	0	0	0	0	0	18	0	18	53
07:30 AM	1	0	0	1	0	66	0	66	0	0	0	0	0	24	0	24	91
07:45 AM	0	0	0	0	0	75	0	75	0	0	0	0	0	38	0	38	113
Total	1	0	0	1	0	191	0	191	0	0	0	0	0	106	0	106	298
08:00 AM	0	0	0	0	0	56	0	56	0	0	1	1	0	42	0	42	99
08:15 AM	0	0	0	0	0	56	0	56	1	0	0	1	0	42	1	43	100
08:30 AM	0	0	0	0	0	48	0	48	0	0	0	0	0	25	0	25	73
08:45 AM	0	0	0	0	0	67	0	67	1	0	0	1	0	37	0	37	105
Total	0	0	0	0	0	227	0	227	2	0	1	3	0	146	1	147	377
Grand Total	1	0	0	1	0	418	0	418	2	0	1	3	0	252	1	253	675
Apprch %	100	0	0		0	100	0		66.7	0	33.3		0	99.6	0.4		
Total %	0.1	0	0	0.1	0	61.9	0	61.9	0.3	0	0.1	0.4	0	37.3	0.1	37.5	

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**1**	0	0	**1**	0	66	0	66	0	0	0	0	0	24	0	24	91
07:45 AM	0	0	0	0	0	**75**	0	**75**	0	0	0	0	0	38	0	38	**113**
08:00 AM	0	0	0	0	0	56	0	56	0	0	**1**	**1**	0	**42**	0	42	99
08:15 AM	0	0	0	0	0	56	0	56	**1**	0	0	1	0	42	**1**	**43**	100
Total Volume	1	0	0	1	0	253	0	253	1	0	1	2	0	146	1	147	403
% App. Total	100	0	0		0	100	0		50	0	50		0	99.3	0.7		
PHF	.250	.000	.000	.250	.000	.843	.000	.843	.250	.000	.250	.500	.000	.869	.250	.855	.892

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City of Clovis
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File Name : 02_CVS_Sunnyside_Behymer_AM
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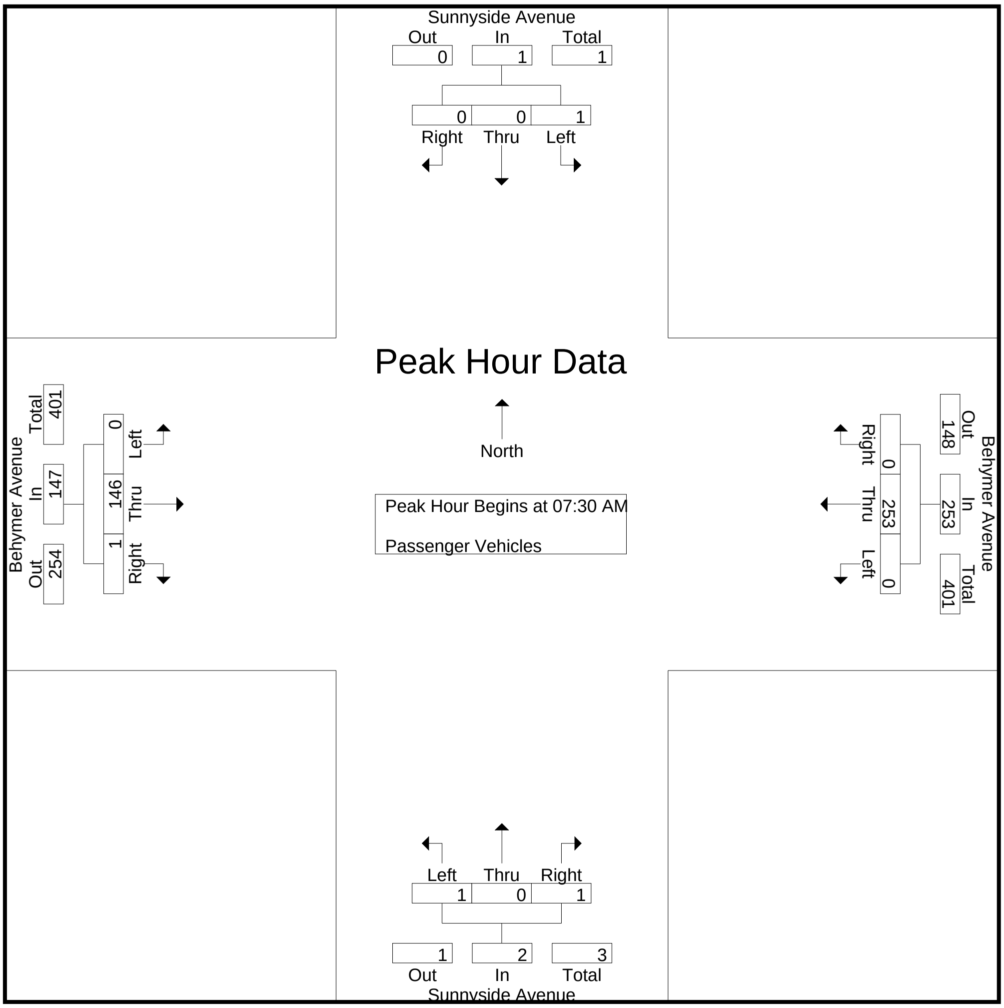

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**1**	0	0	**1**	0	66	0	66	0	0	0	0	0	24	0	24
+15 mins.	0	0	0	0	0	**75**	0	**75**	0	0	0	0	0	38	0	38
+30 mins.	0	0	0	0	0	56	0	56	0	0	**1**	**1**	0	**42**	0	42
+45 mins.	0	0	0	0	0	56	0	56	**1**	0	0	1	0	42	**1**	**43**
Total Volume	1	0	0	1	0	253	0	253	1	0	1	2	0	146	1	147
% App. Total	100	0	0		0	100	0		50	0	50		0	99.3	0.7	
PHF	.250	.000	.000	.250	.000	.843	.000	.843	.250	.000	.250	.500	.000	.869	.250	.855

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City of Clovis
N/S: Sunnyside Avenue
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Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_AM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	5
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
Grand Total	0	0	0	0	0	7	0	7	0	0	0	0	0	3	0	3	10
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	70	0	70	0	0	0	0	0	30	0	30	

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0	**3**
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2	8
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.667

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City of Clovis
N/S: Sunnyside Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_AM
Site Code : 00322602
Start Date : 6/22/2022
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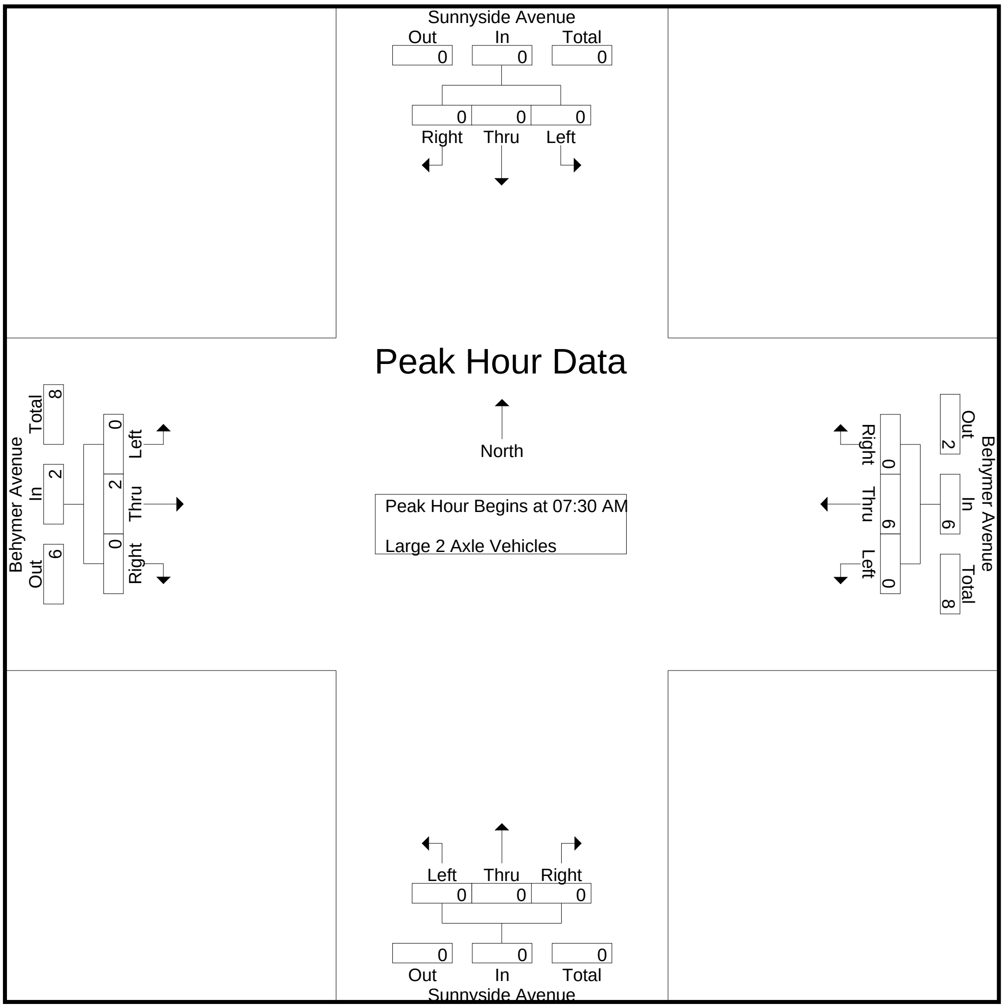

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500

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Site Code : 00322602
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Groups Printed- 3 Axle Vehicles

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
Grand Total	0	0	0	0	0	7	0	7	0	0	0	0	0	7	0	7	14
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**	**5**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	4	0	4	7
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.350

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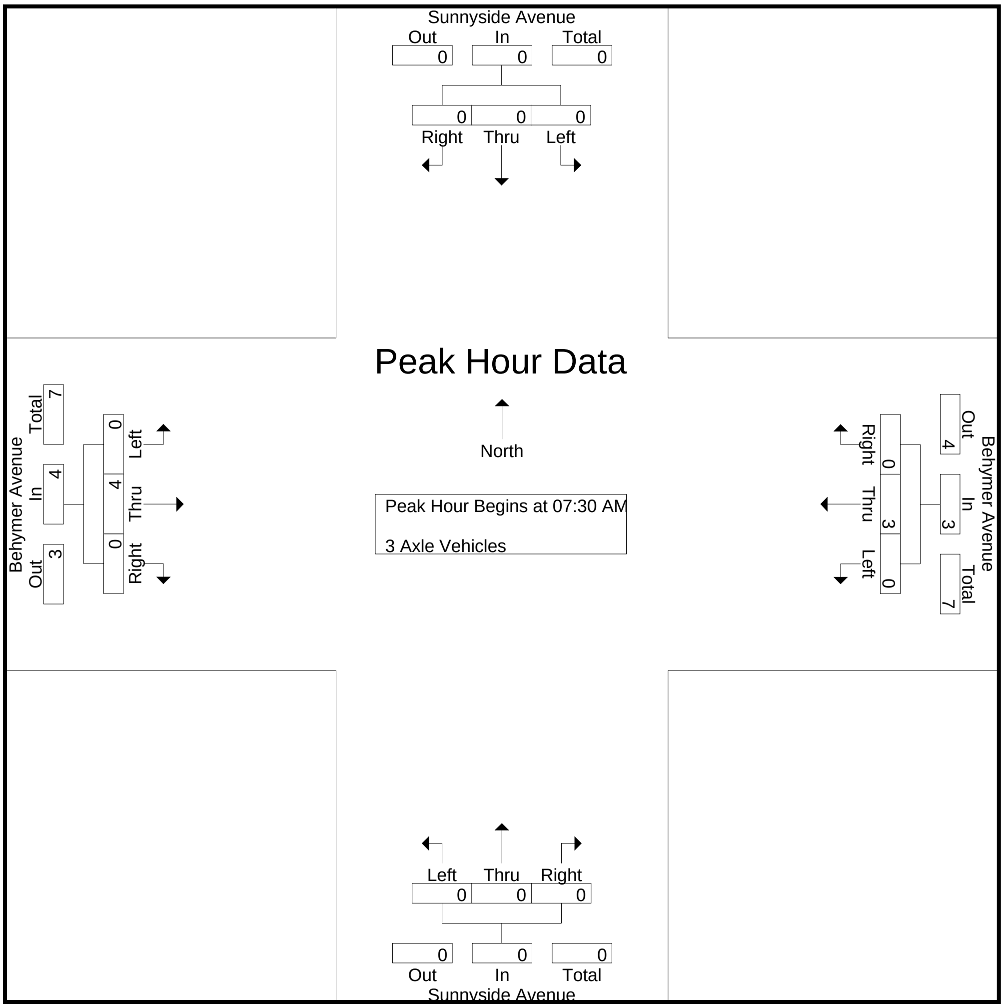

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	4	0	4
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500

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Groups Printed- 4+ Axle Trucks

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Grand Total	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	60	0	60	0	0	0	0	0	40	0	40	

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	**2**
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

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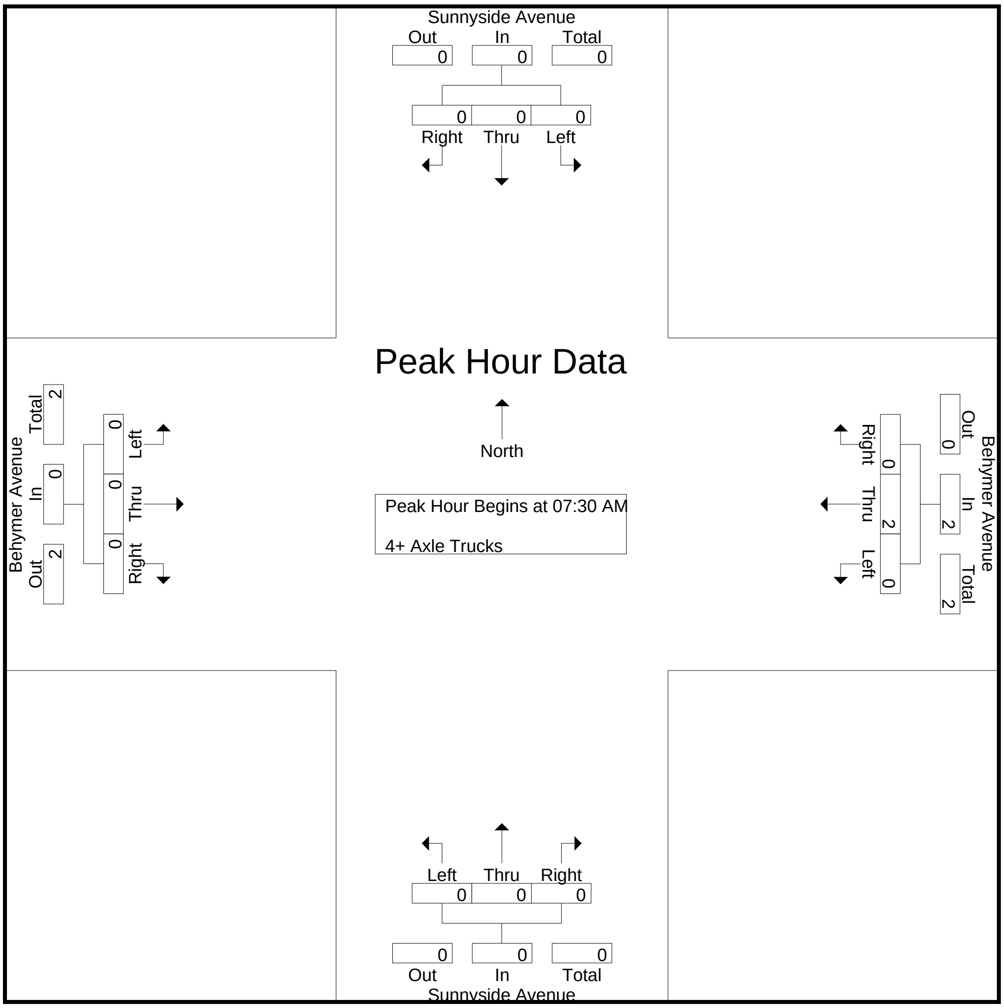

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

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File Name : 02_CVS_Sunnyside_Behymer_PM
Site Code : 00322602
Start Date : 6/22/2022
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	34	0	34	0	0	0	0	0	45	1	46	80
04:15 PM	0	0	0	0	0	36	0	36	0	0	0	0	0	33	0	33	69
04:30 PM	0	0	0	0	0	35	0	35	0	0	0	0	1	36	0	37	72
04:45 PM	0	0	1	1	0	47	1	48	1	0	0	1	0	35	0	35	85
Total	0	0	1	1	0	152	1	153	1	0	0	1	1	149	1	151	306
05:00 PM	0	0	0	0	0	48	0	48	0	0	0	0	0	33	0	33	81
05:15 PM	0	0	0	0	0	55	0	55	2	0	0	2	0	47	0	47	104
05:30 PM	0	0	0	0	0	38	0	38	0	0	0	0	0	59	0	59	97
05:45 PM	0	0	0	0	0	55	0	55	0	0	0	0	0	39	1	40	95
Total	0	0	0	0	0	196	0	196	2	0	0	2	0	178	1	179	377
Grand Total	0	0	1	1	0	348	1	349	3	0	0	3	1	327	2	330	683
Apprch %	0	0	100		0	99.7	0.3		100	0	0		0.3	99.1	0.6		
Total %	0	0	0.1	0.1	0	51	0.1	51.1	0.4	0	0	0.4	0.1	47.9	0.3	48.3	
Passenger Vehicles	0	0	1	1	0	347	1	348	3	0	0	3	1	324	2	327	679
% Passenger Vehicles	0	0	100	100	0	99.7	100	99.7	100	0	0	100	100	99.1	100	99.1	99.4
Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
% Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0	0.9	0.4
3 Axle Vehicles	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	48	0	48	0	0	0	0	0	33	0	33	81
05:15 PM	0	0	0	0	0	**55**	0	**55**	**2**	0	0	**2**	0	47	0	47	**104**
05:30 PM	0	0	0	0	0	38	0	38	0	0	0	0	0	**59**	0	**59**	97
05:45 PM	0	0	0	0	0	55	0	55	0	0	0	0	0	39	**1**	40	95
Total Volume	0	0	0	0	0	196	0	196	2	0	0	2	0	178	1	179	377
% App. Total	0	0	0		0	100	0		100	0	0		0	99.4	0.6		
PHF	.000	.000	.000	.000	.000	.891	.000	.891	.250	.000	.000	.250	.000	.754	.250	.758	.906

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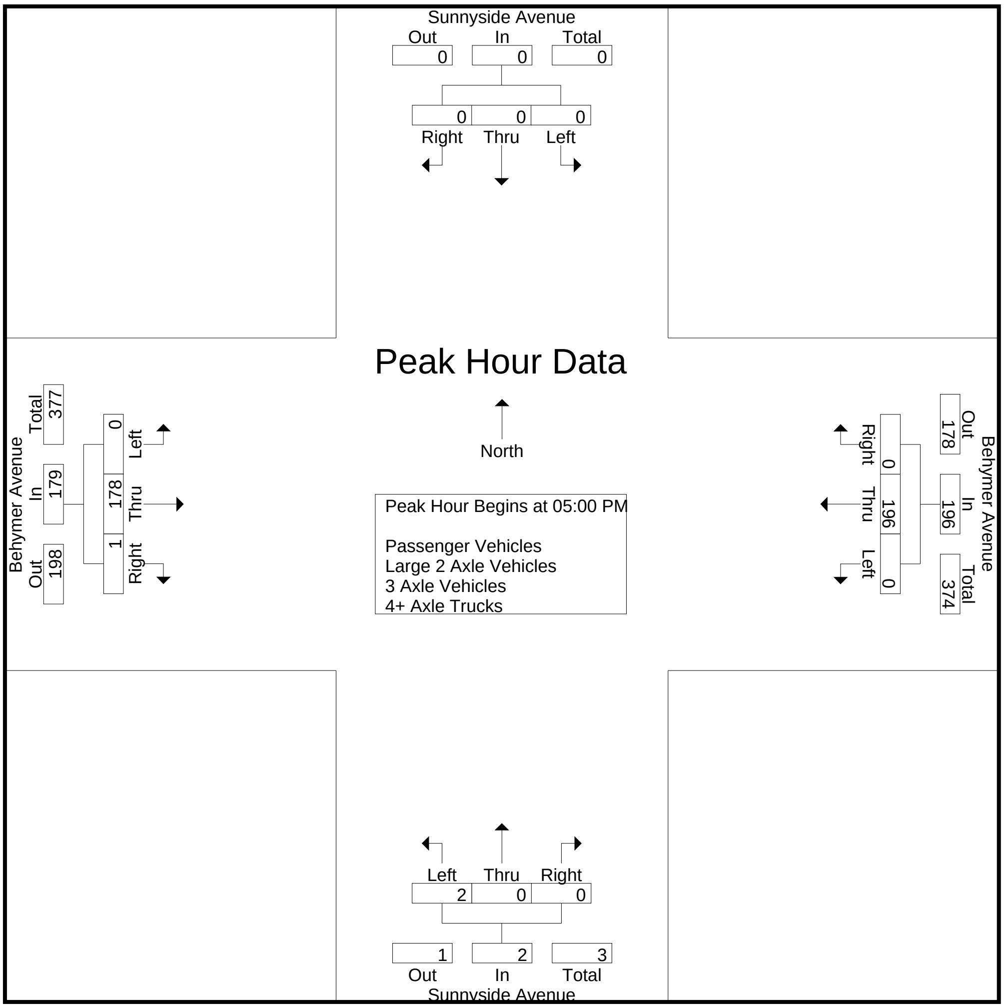

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:30 PM				05:00 PM			
+0 mins.	0	0	0	0	0	48	0	48	0	0	0	0	0	33	0	33
+15 mins.	0	0	0	0	0	**55**	0	**55**	1	0	0	1	0	47	0	47
+30 mins.	0	0	0	0	0	38	0	38	0	0	0	0	0	**59**	0	**59**
+45 mins.	0	0	**1**	**1**	0	55	0	55	**2**	0	0	**2**	0	39	**1**	40
Total Volume	0	0	1	1	0	196	0	196	3	0	0	3	0	178	1	179
% App. Total	0	0	100		0	100	0		100	0	0		0	99.4	0.6	
PHF	.000	.000	.250	.250	.000	.891	.000	.891	.375	.000	.000	.375	.000	.754	.250	.758

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Groups Printed- Passenger Vehicles

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	34	0	34	0	0	0	0	0	44	1	45	79
04:15 PM	0	0	0	0	0	35	0	35	0	0	0	0	0	32	0	32	67
04:30 PM	0	0	0	0	0	35	0	35	0	0	0	0	1	36	0	37	72
04:45 PM	0	0	1	1	0	47	1	48	1	0	0	1	0	34	0	34	84
Total	0	0	1	1	0	151	1	152	1	0	0	1	1	146	1	148	302
05:00 PM	0	0	0	0	0	48	0	48	0	0	0	0	0	33	0	33	81
05:15 PM	0	0	0	0	0	55	0	55	2	0	0	2	0	47	0	47	104
05:30 PM	0	0	0	0	0	38	0	38	0	0	0	0	0	59	0	59	97
05:45 PM	0	0	0	0	0	55	0	55	0	0	0	0	0	39	1	40	95
Total	0	0	0	0	0	196	0	196	2	0	0	2	0	178	1	179	377
Grand Total	0	0	1	1	0	347	1	348	3	0	0	3	1	324	2	327	679
Apprch %	0	0	100		0	99.7	0.3		100	0	0		0.3	99.1	0.6		
Total %	0	0	0.1	0.1	0	51.1	0.1	51.3	0.4	0	0	0.4	0.1	47.7	0.3	48.2	

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	48	0	48	0	0	0	0	0	33	0	33	81
05:15 PM	0	0	0	0	0	**55**	0	**55**	**2**	0	0	**2**	0	47	0	47	**104**
05:30 PM	0	0	0	0	0	38	0	38	0	0	0	0	0	**59**	0	**59**	97
05:45 PM	0	0	0	0	0	55	0	55	0	0	0	0	0	39	**1**	40	95
Total Volume	0	0	0	0	0	196	0	196	2	0	0	2	0	178	1	179	377
% App. Total	0	0	0		0	100	0		100	0	0		0	99.4	0.6		
PHF	.000	.000	.000	.000	.000	.891	.000	.891	.250	.000	.000	.250	.000	.754	.250	.758	.906

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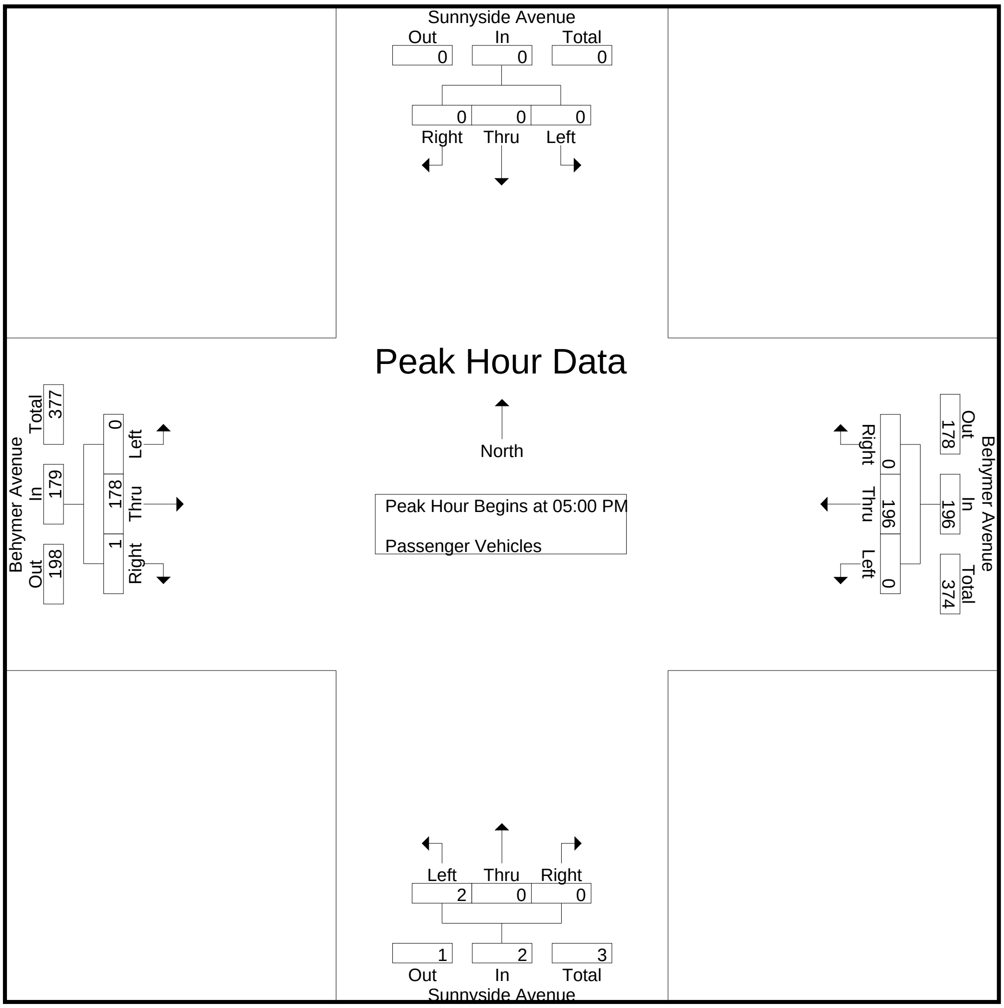

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	48	0	48	0	0	0	0	0	33	0	33
+15 mins.	0	0	0	0	0	**55**	0	**55**	**2**	0	0	**2**	0	47	0	47
+30 mins.	0	0	0	0	0	38	0	38	0	0	0	0	0	**59**	0	**59**
+45 mins.	0	0	0	0	0	55	0	55	0	0	0	0	0	39	**1**	40
Total Volume	0	0	0	0	0	196	0	196	2	0	0	2	0	178	1	179
% App. Total	0	0	0		0	100	0		100	0	0		0	99.4	0.6	
PHF	.000	.000	.000	.000	.000	.891	.000	.891	.250	.000	.000	.250	.000	.754	.250	.758

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City of Clovis
N/S: Sunnyside Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_PM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Apprch %	0	0	0		0	0	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Sunnyside Avenue
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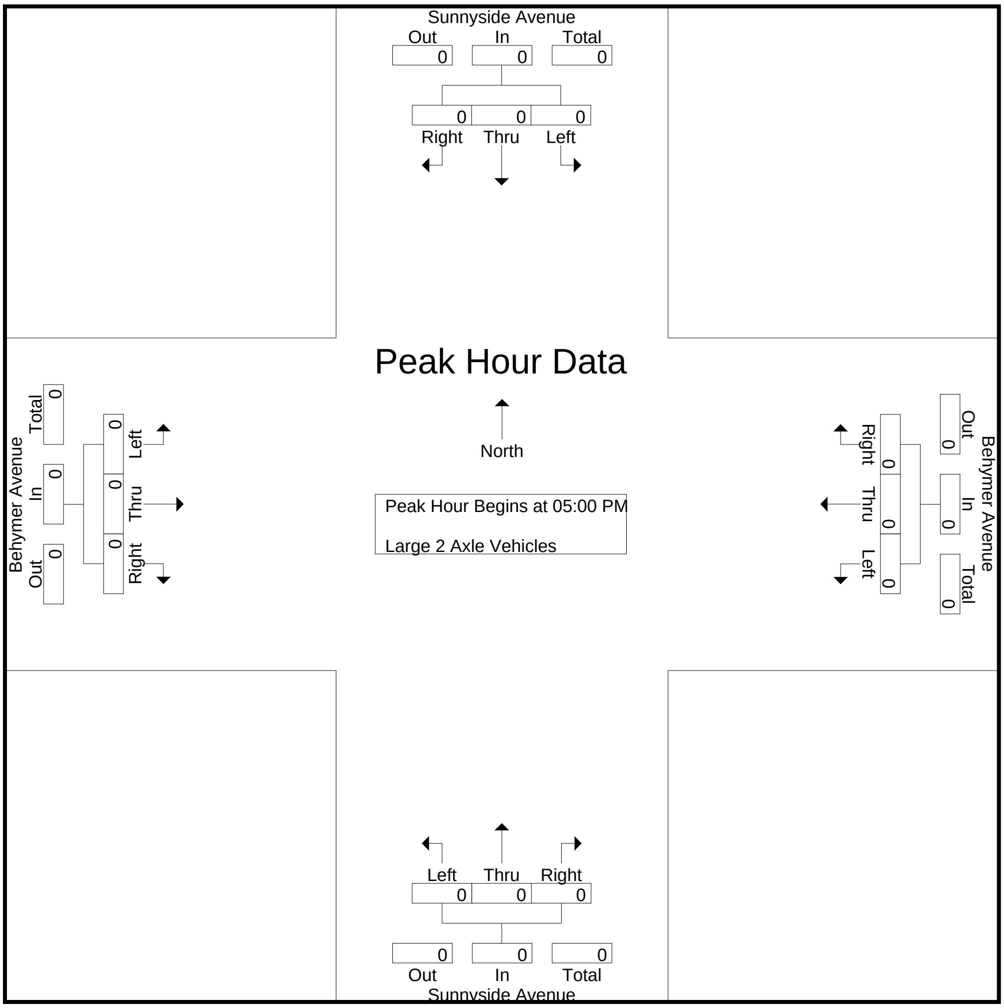
Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_PM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Sunnyside Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_PM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0		0	100	0		0	0	0		0	0	0		
Total %	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0	

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Sunnyside Avenue
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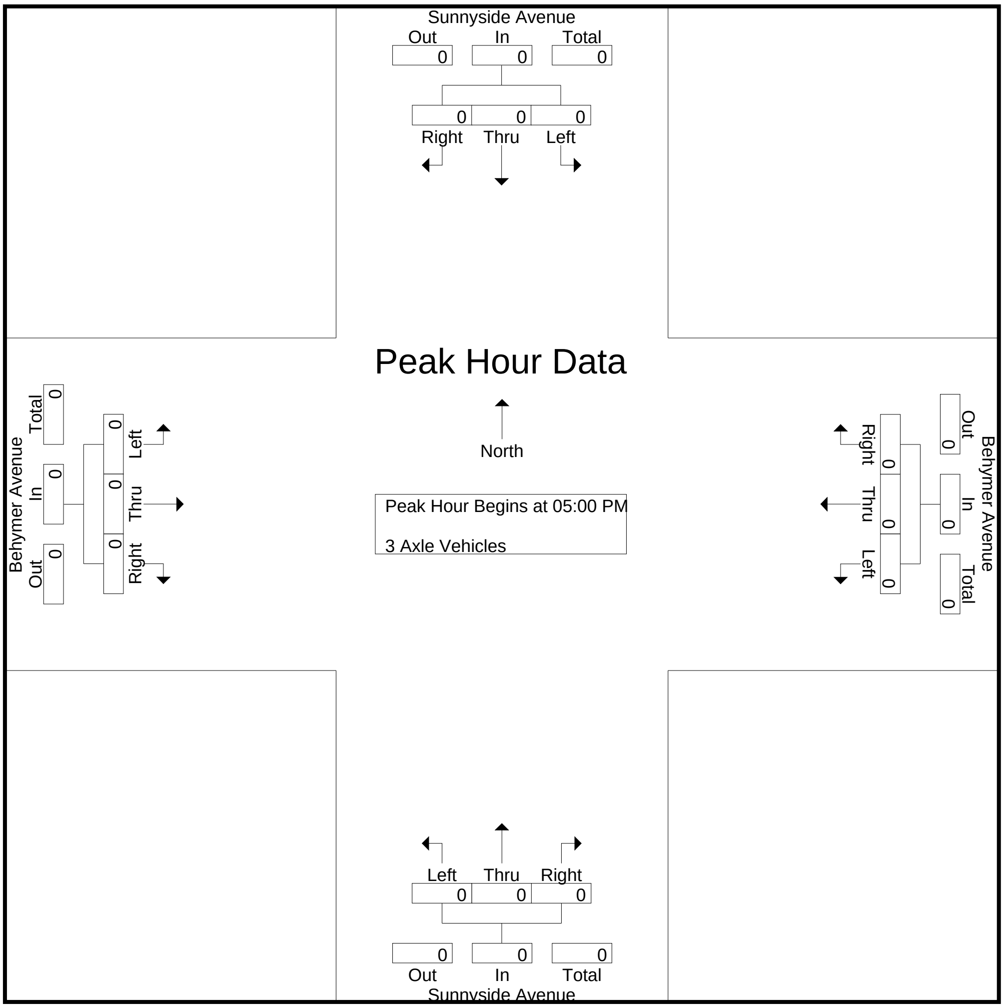
File Name : 02_CVS_Sunnyside_Behymer_PM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Sunnyside Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_PM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 1

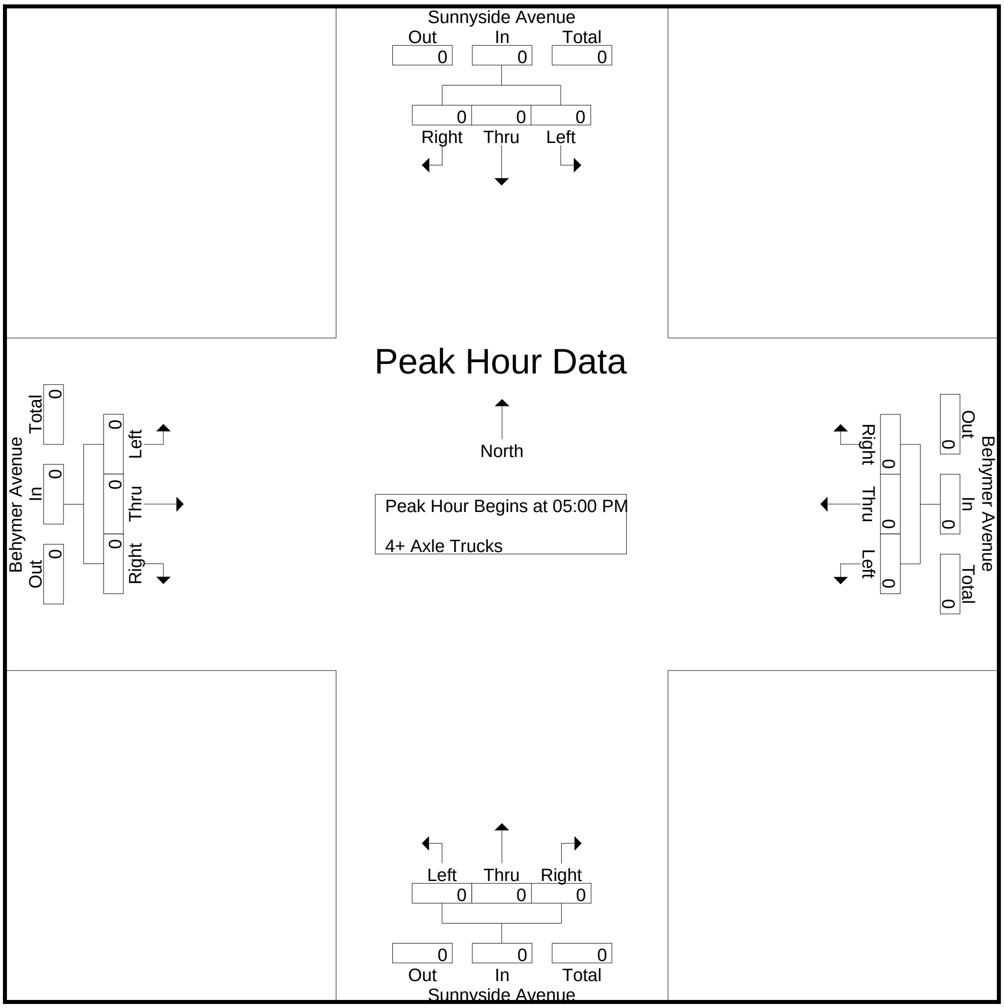
Groups Printed- 4+ Axle Trucks

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Sunnyside Avenue Southbound				Behymer Avenue Westbound				Sunnyside Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Clovis
N/S: Sunnyside Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 02_CVS_Sunnyside_Behymer_PM
Site Code : 00322602
Start Date : 6/22/2022
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Sunnyside Avenue
E/W: Behymer Avenue

Date: 6/22/2022
Day: Wednesday

PEDESTRIANS

	North Leg Sunnyside Avenue	East Leg Behymer Avenue	South Leg Sunnyside Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Sunnyside Avenue	East Leg Behymer Avenue	South Leg Sunnyside Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Sunnyside Avenue
E/W: Behymer Avenue

Date: 6/22/2022
Day: Wednesday

BICYCLES

	Southbound Sunnyside Avenue			Westbound Behymer Avenue			Northbound Sunnyside Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	0	0	3

	Southbound Sunnyside Avenue			Westbound Behymer Avenue			Northbound Sunnyside Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Sunnyside Avenue				Shepherd Avenue				Sunnyside Avenue				Shepherd Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	2	3	5	74	1	80	10	1	2	13	0	30	10	40	136
07:15 AM	0	2	1	3	3	133	1	137	11	3	4	18	3	63	22	88	246
07:30 AM	1	4	4	9	7	107	0	114	16	4	2	22	0	76	23	99	244
07:45 AM	0	2	1	3	7	60	2	69	13	1	5	19	2	102	34	138	229
Total	1	9	8	18	22	374	4	400	50	9	13	72	5	271	89	365	855
08:00 AM	1	6	3	10	14	71	0	85	14	3	16	33	3	84	27	114	242
08:15 AM	0	6	3	9	5	83	3	91	12	4	4	20	5	49	25	79	199
08:30 AM	0	3	2	5	3	68	0	71	12	3	5	20	3	47	20	70	166
08:45 AM	0	3	3	6	7	66	1	74	20	3	4	27	3	43	18	64	171
Total	1	18	11	30	29	288	4	321	58	13	29	100	14	223	90	327	778
Grand Total	2	27	19	48	51	662	8	721	108	22	42	172	19	494	179	692	1633
Apprch %	4.2	56.2	39.6		7.1	91.8	1.1		62.8	12.8	24.4		2.7	71.4	25.9		
Total %	0.1	1.7	1.2	2.9	3.1	40.5	0.5	44.2	6.6	1.3	2.6	10.5	1.2	30.3	11	42.4	
Passenger Vehicles	2	23	18	43	50	655	7	712	98	20	38	156	19	486	162	667	1578
% Passenger Vehicles	100	85.2	94.7	89.6	98	98.9	87.5	98.8	90.7	90.9	90.5	90.7	100	98.4	90.5	96.4	96.6
Large 2 Axle Vehicles	0	2	1	3	1	6	1	8	6	1	3	10	0	4	11	15	36
% Large 2 Axle Vehicles	0	7.4	5.3	6.2	2	0.9	12.5	1.1	5.6	4.5	7.1	5.8	0	0.8	6.1	2.2	2.2
3 Axle Vehicles	0	0	0	0	0	1	0	1	4	0	1	5	0	2	4	6	12
% 3 Axle Vehicles	0	0	0	0	0	0.2	0	0.1	3.7	0	2.4	2.9	0	0.4	2.2	0.9	0.7
4+ Axle Trucks	0	2	0	2	0	0	0	0	0	1	0	1	0	2	2	4	7
% 4+ Axle Trucks	0	7.4	0	4.2	0	0	0	0	0	4.5	0	0.6	0	0.4	1.1	0.6	0.4

	Sunnyside Avenue				Shepherd Avenue				Sunnyside Avenue				Shepherd Avenue				
	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	1	3	3	**133**	1	**137**	11	3	4	18	**3**	63	22	88	**246**
07:30 AM	**1**	4	**4**	9	7	107	0	114	**16**	**4**	2	22	0	76	23	99	244
07:45 AM	0	2	1	3	7	60	**2**	69	13	1	5	19	2	**102**	**34**	**138**	229
08:00 AM	1	**6**	3	**10**	**14**	71	0	85	14	3	**16**	**33**	3	84	27	114	242
Total Volume	2	14	9	25	31	371	3	405	54	11	27	92	8	325	106	439	961
% App. Total	8	56	36		7.7	91.6	0.7		58.7	12	29.3		1.8	74	24.1		
PHF	.500	.583	.563	.625	.554	.697	.375	.739	.844	.688	.422	.697	.667	.797	.779	.795	.977

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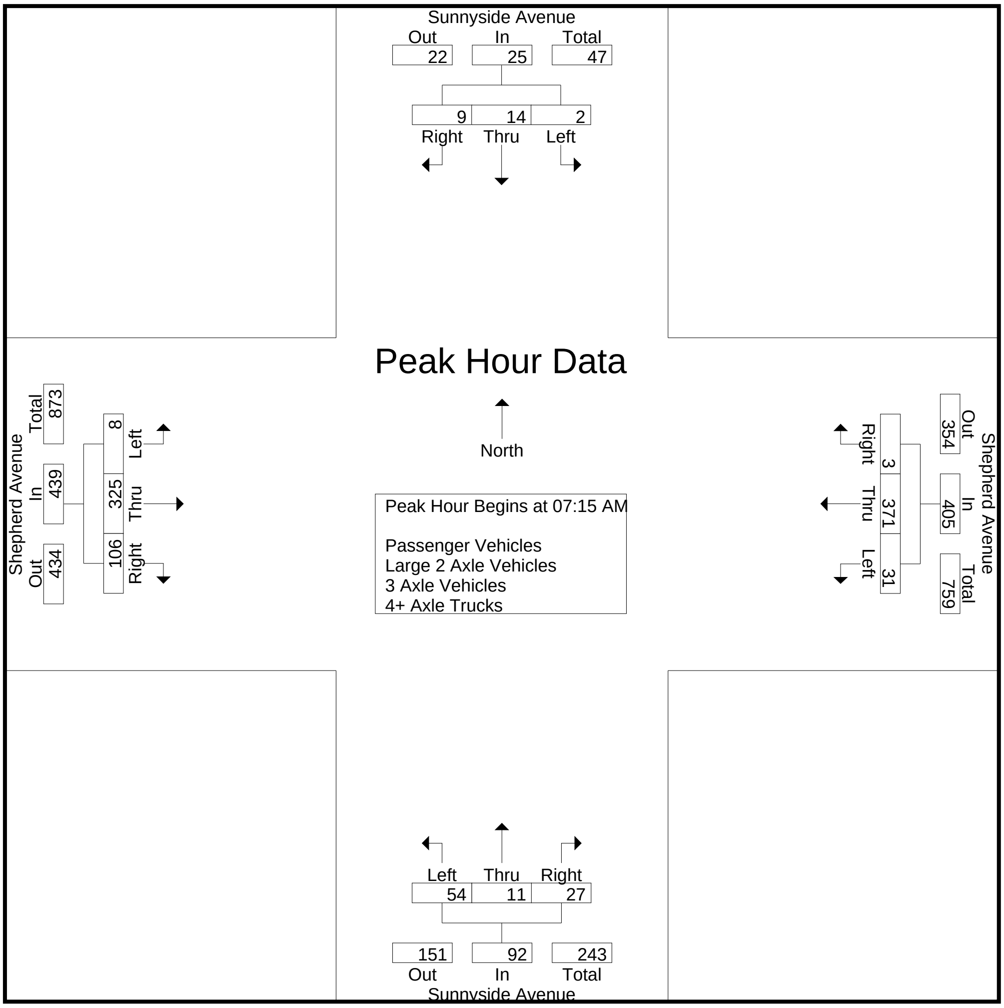
City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				08:00 AM				07:15 AM			
+0 mins.	**1**	4	**4**	9	3	**133**	1	**137**	14	3	**16**	**33**	**3**	63	22	88
+15 mins.	0	2	1	3	7	107	0	114	12	**4**	4	20	0	76	23	99
+30 mins.	1	**6**	3	**10**	7	60	**2**	69	12	3	5	20	2	**102**	**34**	**138**
+45 mins.	0	6	3	9	**14**	71	0	85	**20**	3	4	27	3	84	27	114
Total Volume	2	18	11	31	31	371	3	405	58	13	29	100	8	325	106	439
% App. Total	6.5	58.1	35.5		7.7	91.6	0.7		58	13	29		1.8	74	24.1	
PHF	.500	.750	.688	.775	.554	.697	.375	.739	.725	.813	.453	.758	.667	.797	.779	.795

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

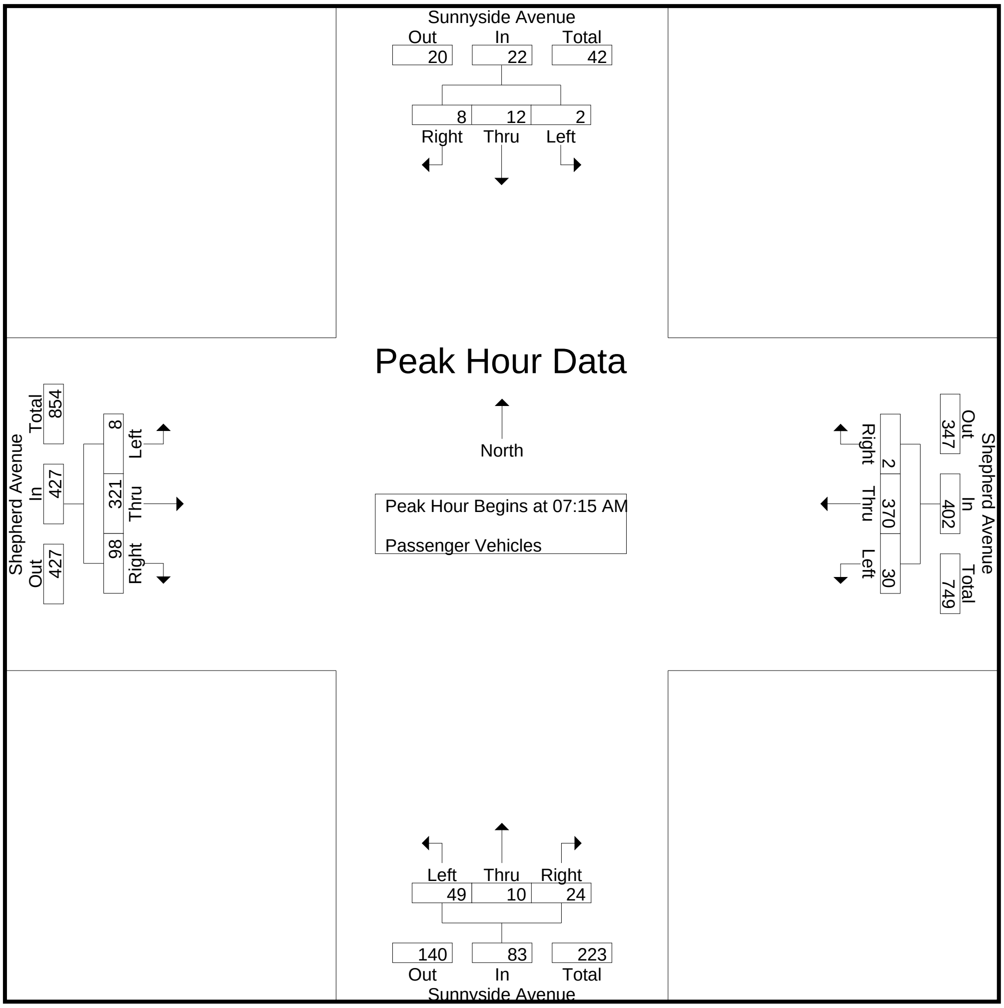
File Name : 16_CVS_Sun_SHep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	2	3	5	70	1	76	9	1	1	11	0	29	10	39	129
07:15 AM	0	1	1	2	3	133	1	137	11	3	1	15	3	62	21	86	240
07:30 AM	1	3	4	8	6	107	0	113	15	3	2	20	0	76	20	96	237
07:45 AM	0	2	0	2	7	59	1	67	11	1	5	17	2	100	31	133	219
Total	1	7	7	15	21	369	3	393	46	8	9	63	5	267	82	354	825
08:00 AM	1	6	3	10	14	71	0	85	12	3	16	31	3	83	26	112	238
08:15 AM	0	6	3	9	5	82	3	90	11	3	4	18	5	48	21	74	191
08:30 AM	0	1	2	3	3	68	0	71	11	3	5	19	3	46	19	68	161
08:45 AM	0	3	3	6	7	65	1	73	18	3	4	25	3	42	14	59	163
Total	1	16	11	28	29	286	4	319	52	12	29	93	14	219	80	313	753
Grand Total	2	23	18	43	50	655	7	712	98	20	38	156	19	486	162	667	1578
Apprch %	4.7	53.5	41.9		7	92	1		62.8	12.8	24.4		2.8	72.9	24.3		
Total %	0.1	1.5	1.1	2.7	3.2	41.5	0.4	45.1	6.2	1.3	2.4	9.9	1.2	30.8	10.3	42.3	

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	1	1	2	3	**133**	**1**	**137**	11	**3**	1	15	**3**	62	21	86	**240**
07:30 AM	**1**	3	**4**	8	6	107	0	113	**15**	3	2	20	0	76	20	96	237
07:45 AM	0	2	0	2	7	59	1	67	11	1	5	17	2	**100**	**31**	**133**	219
08:00 AM	1	**6**	3	**10**	**14**	71	0	85	12	3	**16**	**31**	3	83	26	112	238
Total Volume	2	12	8	22	30	370	2	402	49	10	24	83	8	321	98	427	934
% App. Total	9.1	54.5	36.4		7.5	92	0.5		59	12	28.9		1.9	75.2	23		
PHF	.500	.500	.500	.550	.536	.695	.500	.734	.817	.833	.375	.669	.667	.803	.790	.803	.973

City of Clovis		File Name	: 16_CVS_Sun_SHep AMC
N/S: Sunnyside Avenue		Site Code	: 00322473
E/W: Shepherd Avenue		Start Date	: 5/24/2022
Weather: Clear		Page No	: 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	1	1	2	3	**133**	**1**	**137**	11	**3**	1	15	**3**	62	21	86
+15 mins.	**1**	3	**4**	8	6	107	0	113	**15**	3	2	20	0	76	20	96
+30 mins.	0	2	0	2	7	59	1	67	11	1	5	17	2	**100**	**31**	**133**
+45 mins.	1	**6**	3	**10**	**14**	71	0	85	12	3	**16**	**31**	3	83	26	112
Total Volume	2	12	8	22	30	370	2	402	49	10	24	83	8	321	98	427
% App. Total	9.1	54.5	36.4		7.5	92	0.5		59	12	28.9		1.9	75.2	23	
PHF	.500	.500	.500	.550	.536	.695	.500	.734	.817	.833	.375	.669	.667	.803	.790	.803

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	1	0	1	5
07:15 AM	0	0	0	0	0	0	0	0	0	0	3	3	0	1	1	2	5
07:30 AM	0	1	0	1	1	0	0	1	1	1	0	2	0	0	3	3	7
07:45 AM	0	0	1	1	0	1	1	2	1	0	0	1	0	0	3	3	7
Total	0	1	1	2	1	4	1	6	3	1	3	7	0	2	7	9	24
08:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	1	3	4	6
08:30 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	1	1	3
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	1	0	1	0	2	0	2	3	0	0	3	0	2	4	6	12
Grand Total	0	2	1	3	1	6	1	8	6	1	3	10	0	4	11	15	36
Apprch %	0	66.7	33.3		12.5	75	12.5		60	10	30		0	26.7	73.3		
Total %	0	5.6	2.8	8.3	2.8	16.7	2.8	22.2	16.7	2.8	8.3	27.8	0	11.1	30.6	41.7	

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	**3**	**3**	0	**1**	1	2	5
07:30 AM	0	**1**	0	**1**	**1**	0	0	1	**1**	**1**	0	2	0	0	**3**	**3**	**7**
07:45 AM	0	0	**1**	1	0	**1**	**1**	**2**	1	0	0	1	0	0	3	3	7
08:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	0	1	1	2	1	1	1	3	3	1	3	7	0	1	7	8	20
% App. Total	0	50	50		33.3	33.3	33.3		42.9	14.3	42.9		0	12.5	87.5		
PHF	.000	.250	.250	.500	.250	.250	.250	.375	.750	.250	.250	.583	.000	.250	.583	.667	.714

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep AMC
Site Code : 00322473
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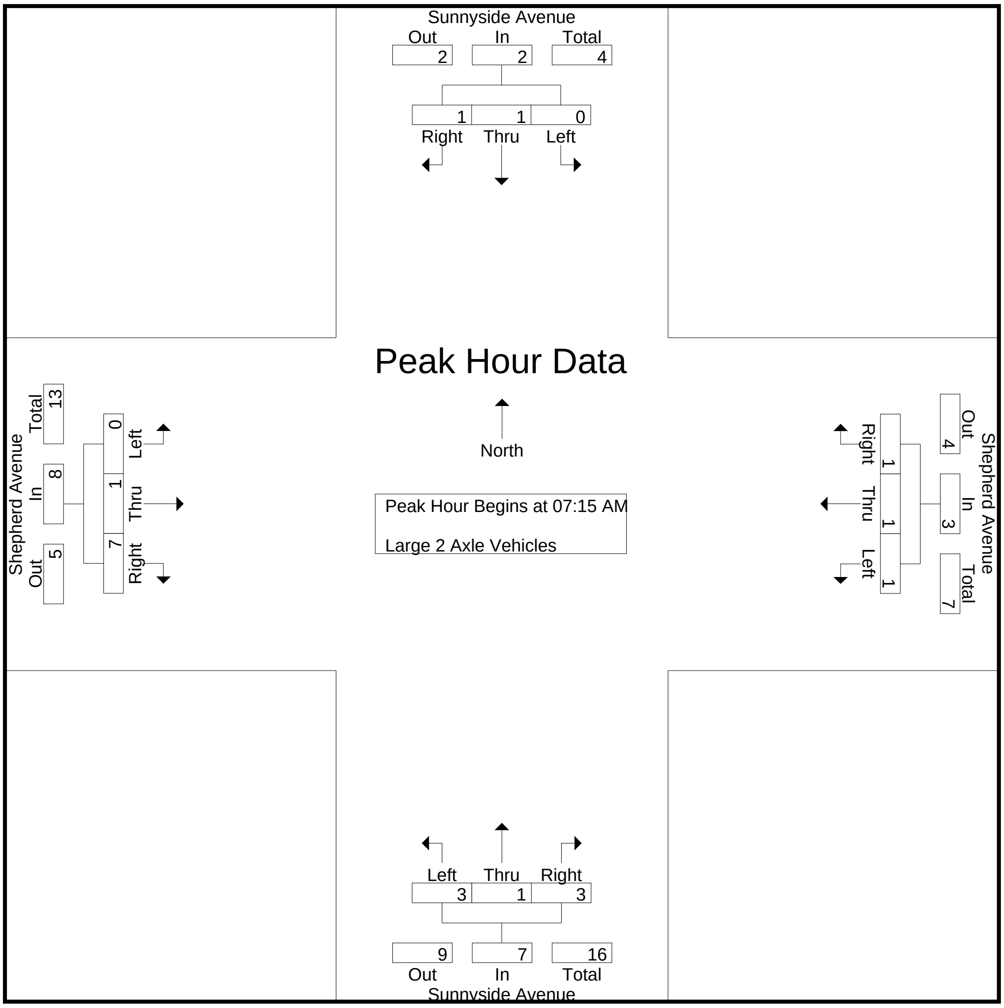

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	**3**	**3**	0	**1**	1	2
+15 mins.	0	**1**	0	**1**	**1**	0	0	1	**1**	**1**	0	2	0	0	**3**	**3**
+30 mins.	0	0	**1**	1	0	**1**	**1**	**2**	1	0	0	1	0	0	3	3
+45 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Total Volume	0	1	1	2	1	1	1	3	3	1	3	7	0	1	7	8
% App. Total	0	50	50		33.3	33.3	33.3		42.9	14.3	42.9		0	12.5	87.5	
PHF	.000	.250	.250	.500	.250	.250	.250	.375	.750	.250	.250	.583	.000	.250	.583	.667

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	1	0	1	2	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	3	3	5
Total	0	0	0	0	0	0	0	0	3	0	0	3	0	2	4	6	9
Grand Total	0	0	0	0	0	1	0	1	4	0	1	5	0	2	4	6	12
Apprch %	0	0	0		0	100	0		80	0	20		0	33.3	66.7		
Total %	0	0	0	0	0	8.3	0	8.3	33.3	0	8.3	41.7	0	16.7	33.3	50	

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	**1**	0	**1**	**2**
Total Volume	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	3
% App. Total	0	0	0		0	0	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.250	.000	.250	.375

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep AMC
Site Code : 00322473
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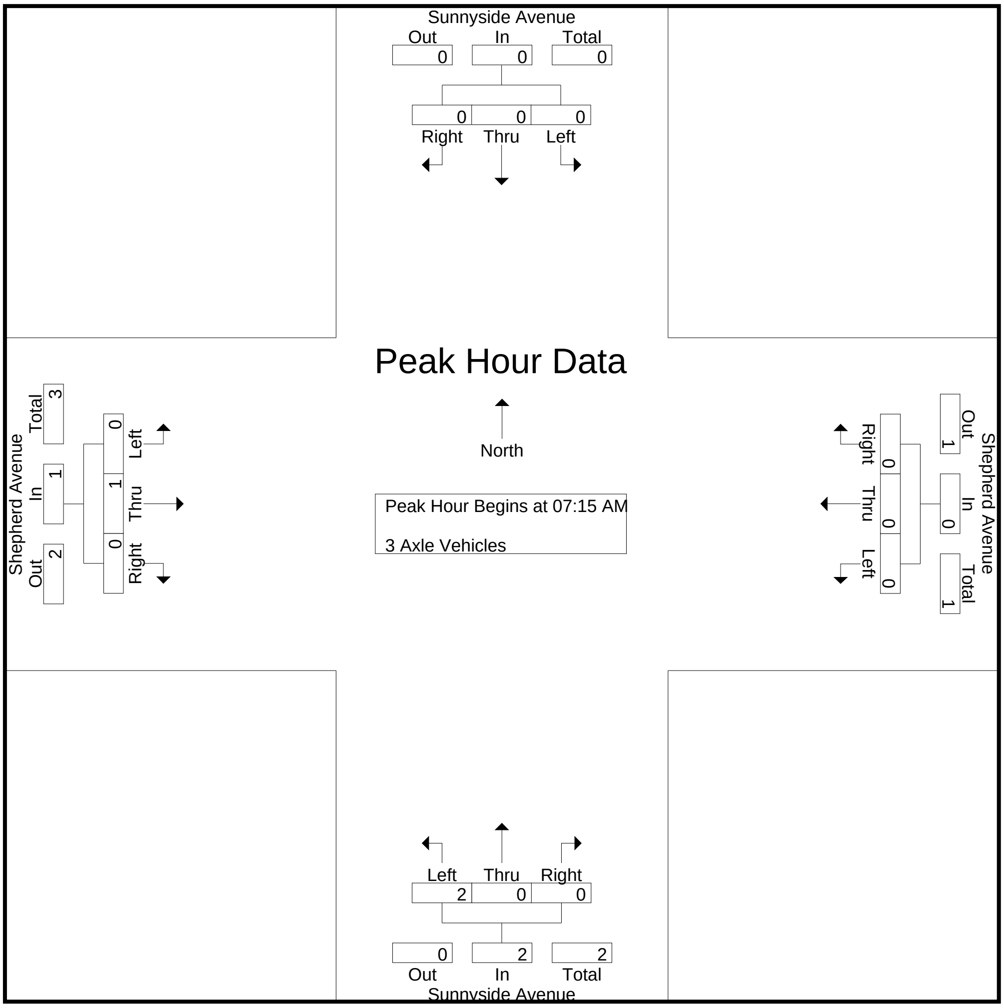

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	**1**	0	**1**
Total Volume	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1
% App. Total	0	0	0		0	0	0		100	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.250	.000	.250

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep AMC
Site Code : 00322473
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Groups Printed- 4+ Axle Trucks

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	2	2	4
Grand Total	0	2	0	2	0	0	0	0	0	1	0	1	0	2	2	4	7
Apprch %	0	100	0		0	0	0		0	100	0		0	50	50		
Total %	0	28.6	0	28.6	0	0	0	0	0	14.3	0	14.3	0	28.6	28.6	57.1	

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	**2**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	1
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	3	4
% App. Total	0	100	0		0	0	0		0	0	0		0	66.7	33.3		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.375	.500

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep AMC
Site Code : 00322473
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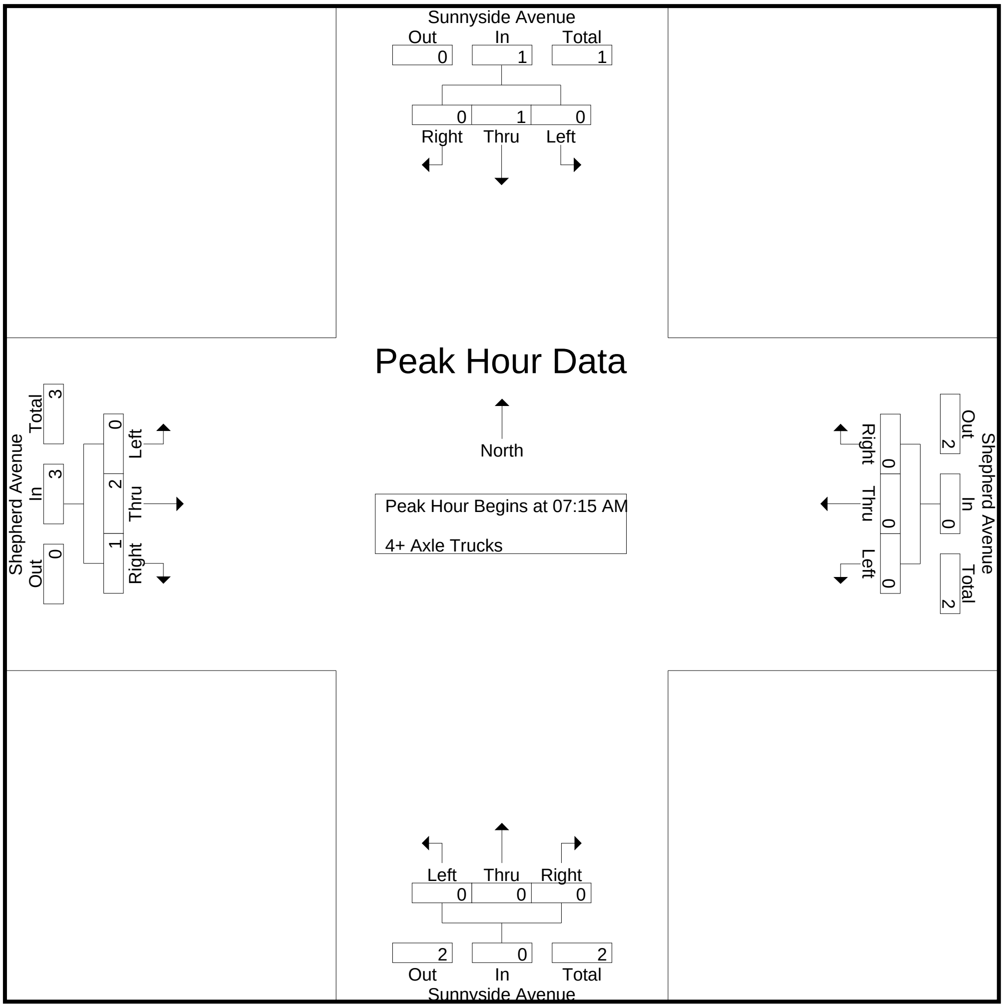

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	3
% App. Total	0	100	0		0	0	0		0	0	0		0	66.7	33.3	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.375

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep PMC
Site Code : 00322473
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	4	3	10	5	71	0	76	11	3	10	24	3	67	15	85	195
04:15 PM	0	2	4	6	4	77	0	81	19	1	10	30	4	67	18	89	206
04:30 PM	3	3	4	10	7	68	1	76	16	5	6	27	3	65	12	80	193
04:45 PM	0	3	2	5	6	66	1	73	23	1	12	36	2	80	21	103	217
Total	6	12	13	31	22	282	2	306	69	10	38	117	12	279	66	357	811
05:00 PM	2	3	2	7	6	68	2	76	23	4	8	35	2	86	17	105	223
05:15 PM	0	5	2	7	10	82	1	93	19	5	4	28	4	92	15	111	239
05:30 PM	2	2	3	7	7	80	2	89	15	1	7	23	1	84	17	102	221
05:45 PM	1	1	1	3	4	70	0	74	14	4	6	24	6	80	20	106	207
Total	5	11	8	24	27	300	5	332	71	14	25	110	13	342	69	424	890
Grand Total	11	23	21	55	49	582	7	638	140	24	63	227	25	621	135	781	1701
Apprch %	20	41.8	38.2		7.7	91.2	1.1		61.7	10.6	27.8		3.2	79.5	17.3		
Total %	0.6	1.4	1.2	3.2	2.9	34.2	0.4	37.5	8.2	1.4	3.7	13.3	1.5	36.5	7.9	45.9	
Passenger Vehicles	11	23	20	54	48	578	7	633	139	24	61	224	25	615	130	770	1681
% Passenger Vehicles	100	100	95.2	98.2	98	99.3	100	99.2	99.3	100	96.8	98.7	100	99	96.3	98.6	98.8
Large 2 Axle Vehicles	0	0	1	1	1	4	0	5	1	0	2	3	0	6	5	11	20
% Large 2 Axle Vehicles	0	0	4.8	1.8	2	0.7	0	0.8	0.7	0	3.2	1.3	0	1	3.7	1.4	1.2
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	3	2	5	6	66	1	73	**23**	1	**12**	**36**	2	80	**21**	103	217
05:00 PM	**2**	3	2	**7**	6	68	**2**	76	23	4	8	35	2	86	17	105	223
05:15 PM	0	**5**	2	7	**10**	**82**	1	**93**	19	**5**	4	28	**4**	**92**	15	**111**	**239**
05:30 PM	2	2	**3**	7	7	80	2	89	15	1	7	23	1	84	17	102	221
Total Volume	4	13	9	26	29	296	6	331	80	11	31	122	9	342	70	421	900
% App. Total	15.4	50	34.6		8.8	89.4	1.8		65.6	9	25.4		2.1	81.2	16.6		
PHF	.500	.650	.750	.929	.725	.902	.750	.890	.870	.550	.646	.847	.563	.929	.833	.948	.941

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep PMC
Site Code : 00322473
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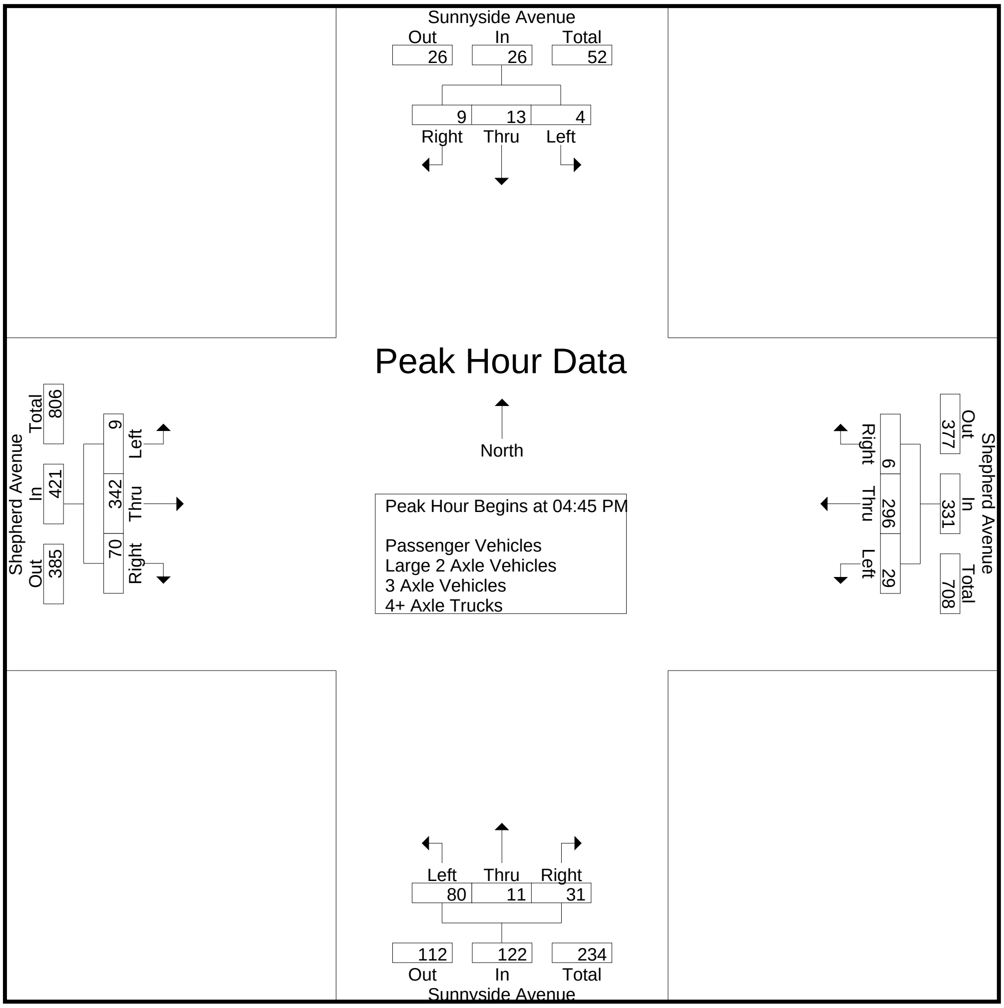

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:15 PM				05:00 PM			
+0 mins.	**3**	**4**	3	**10**	6	68	**2**	76	19	1	10	30	2	86	17	105
+15 mins.	0	2	**4**	6	**10**	**82**	1	**93**	16	**5**	6	27	4	**92**	15	**111**
+30 mins.	3	3	4	10	7	80	2	89	**23**	1	**12**	**36**	1	84	17	102
+45 mins.	0	3	2	5	4	70	0	74	23	4	8	35	**6**	80	**20**	106
Total Volume	6	12	13	31	27	300	5	332	81	11	36	128	13	342	69	424
% App. Total	19.4	38.7	41.9		8.1	90.4	1.5		63.3	8.6	28.1		3.1	80.7	16.3	
PHF	.500	.750	.813	.775	.675	.915	.625	.892	.880	.550	.750	.889	.542	.929	.863	.955

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City of Clovis
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File Name : 16_CVS_Sun_SHep PMC
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Groups Printed- Passenger Vehicles

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	4	2	9	4	68	0	72	10	3	10	23	3	66	13	82	186
04:15 PM	0	2	4	6	4	76	0	80	19	1	10	30	4	66	16	86	202
04:30 PM	3	3	4	10	7	68	1	76	16	5	5	26	3	65	12	80	192
04:45 PM	0	3	2	5	6	66	1	73	23	1	12	36	2	78	20	100	214
Total	6	12	12	30	21	278	2	301	68	10	37	115	12	275	61	348	794
05:00 PM	2	3	2	7	6	68	2	76	23	4	8	35	2	86	17	105	223
05:15 PM	0	5	2	7	10	82	1	93	19	5	4	28	4	91	15	110	238
05:30 PM	2	2	3	7	7	80	2	89	15	1	7	23	1	83	17	101	220
05:45 PM	1	1	1	3	4	70	0	74	14	4	5	23	6	80	20	106	206
Total	5	11	8	24	27	300	5	332	71	14	24	109	13	340	69	422	887
Grand Total	11	23	20	54	48	578	7	633	139	24	61	224	25	615	130	770	1681
Apprch %	20.4	42.6	37		7.6	91.3	1.1		62.1	10.7	27.2		3.2	79.9	16.9		
Total %	0.7	1.4	1.2	3.2	2.9	34.4	0.4	37.7	8.3	1.4	3.6	13.3	1.5	36.6	7.7	45.8	

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	3	2	5	6	66	1	73	**23**	1	**12**	**36**	2	78	**20**	100	214
05:00 PM	**2**	3	2	**7**	6	68	**2**	76	23	4	8	35	2	86	17	105	223
05:15 PM	0	**5**	2	7	**10**	**82**	1	**93**	19	**5**	4	28	**4**	**91**	15	**110**	**238**
05:30 PM	2	2	**3**	7	7	80	2	89	15	1	7	23	1	83	17	101	220
Total Volume	4	13	9	26	29	296	6	331	80	11	31	122	9	338	69	416	895
% App. Total	15.4	50	34.6		8.8	89.4	1.8		65.6	9	25.4		2.2	81.2	16.6		
PHF	.500	.650	.750	.929	.725	.902	.750	.890	.870	.550	.646	.847	.563	.929	.863	.945	.940

City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep PMC
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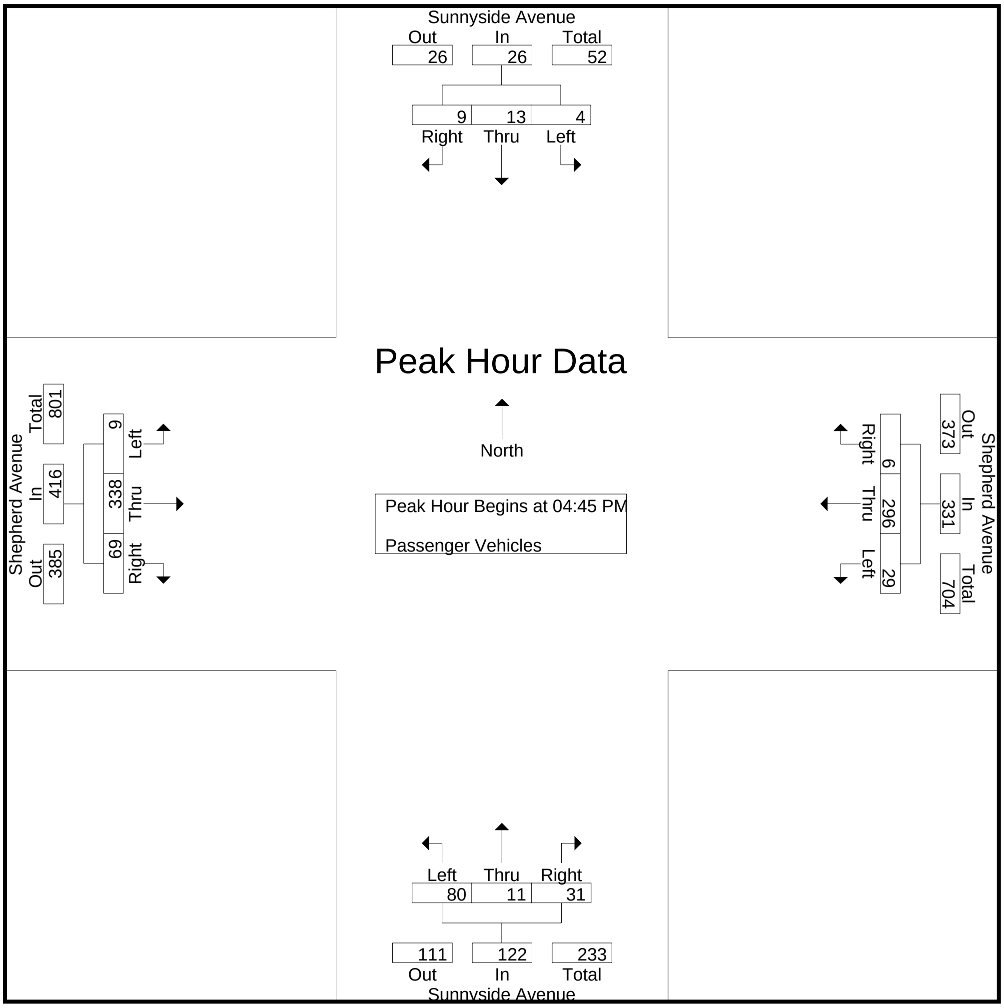

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	3	2	5	6	66	1	73	**23**	1	**12**	**36**	2	78	**20**	100
+15 mins.	**2**	3	2	**7**	6	68	**2**	76	23	4	8	35	2	86	17	105
+30 mins.	0	**5**	2	7	**10**	**82**	1	**93**	19	**5**	4	28	**4**	**91**	15	**110**
+45 mins.	2	2	**3**	7	7	80	2	89	15	1	7	23	1	83	17	101
Total Volume	4	13	9	26	29	296	6	331	80	11	31	122	9	338	69	416
% App. Total	15.4	50	34.6		8.8	89.4	1.8		65.6	9	25.4		2.2	81.2	16.6	
PHF	.500	.650	.750	.929	.725	.902	.750	.890	.870	.550	.646	.847	.563	.929	.863	.945

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City of Clovis
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Weather: Clear

File Name : 16_CVS_Sun_SHep PMC
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Groups Printed- Large 2 Axle Vehicles

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	1	3	0	4	1	0	0	1	0	1	2	3	9
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	3	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	3
Total	0	0	1	1	1	4	0	5	1	0	1	2	0	4	5	9	17
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2	3
Grand Total	0	0	1	1	1	4	0	5	1	0	2	3	0	6	5	11	20
Apprch %	0	0	100		20	80	0		33.3	0	66.7		0	54.5	45.5		
Total %	0	0	5	5	5	20	0	25	5	0	10	15	0	30	25	55	

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**1**	**3**	**3**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5	5
% App. Total	0	0	0		0	0	0		0	0	0		0	80	20		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.250	.417	.417

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep PMC
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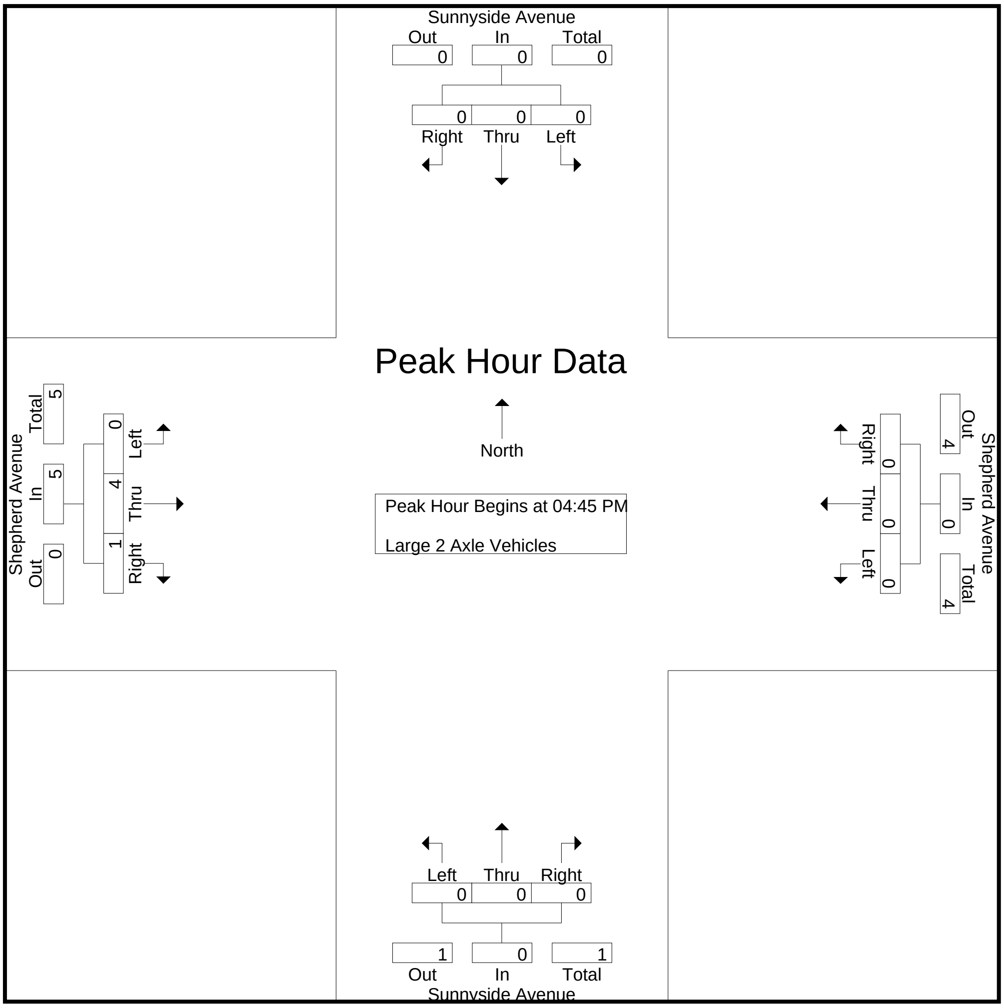

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**1**	**3**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5
% App. Total	0	0	0		0	0	0		0	0	0		0	80	20	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.250	.417

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City of Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 16_CVS_Sun_SHep PMC
Site Code : 00322473
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Groups Printed- 3 Axle Vehicles

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Sunnyside Avenue
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File Name : 16_CVS_Sun_SHep PMC
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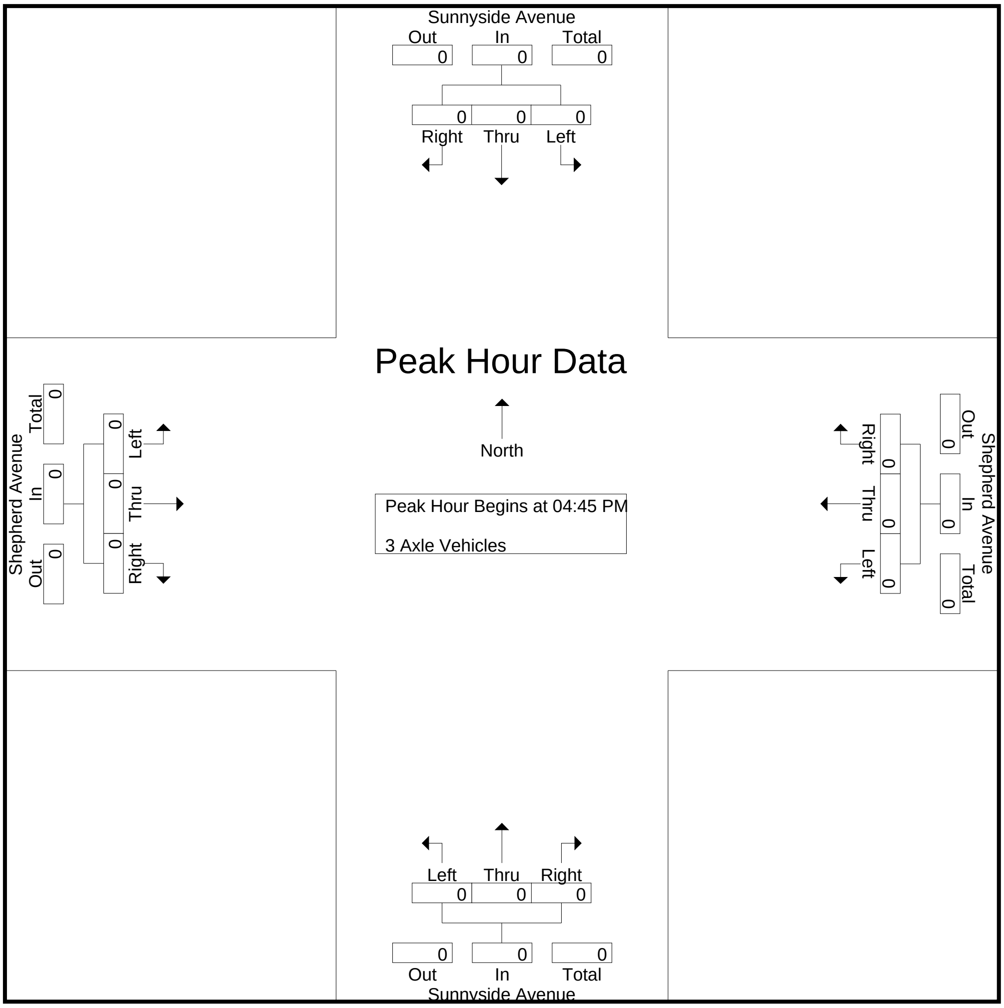

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Sunnyside Avenue
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File Name : 16_CVS_Sun_SHep PMC
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Groups Printed- 4+ Axle Trucks

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Sunnyside Avenue Southbound				Shepherd Avenue Westbound				Sunnyside Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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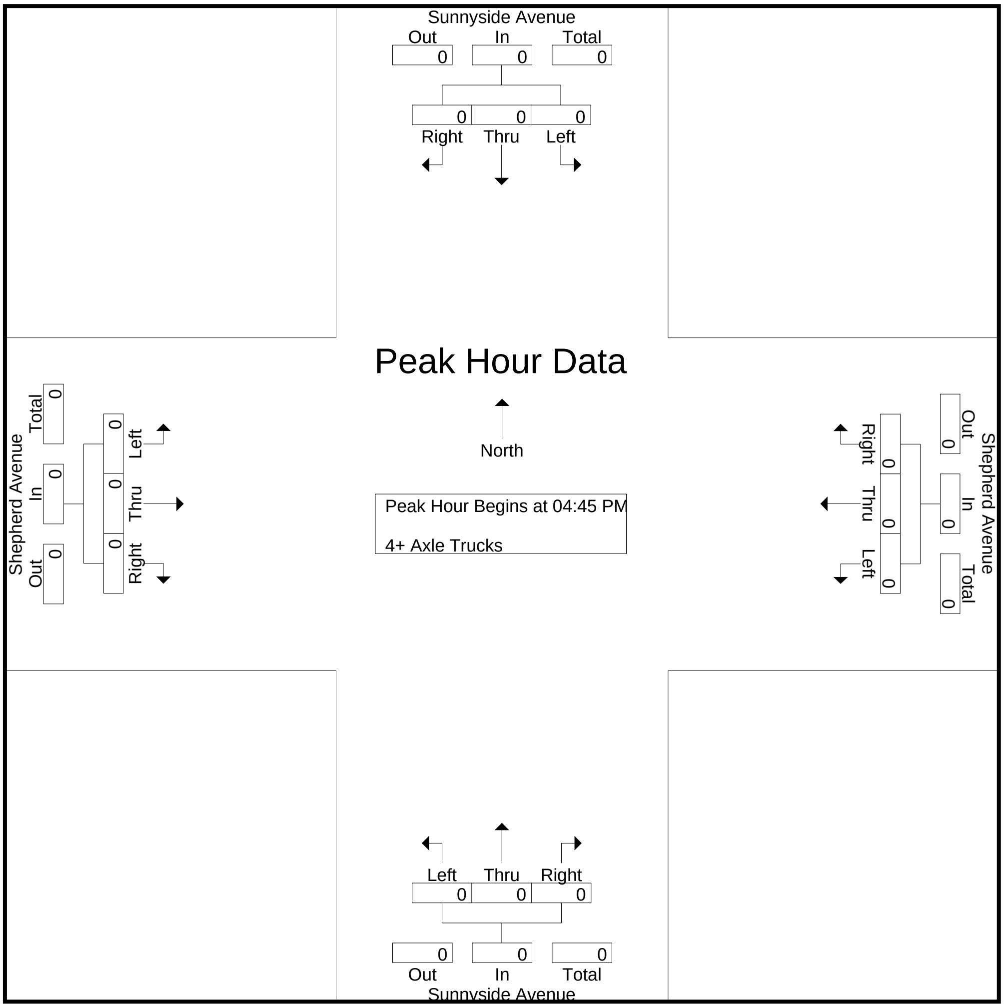

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Sunnyside Avenue	East Leg Shepherd Avenue	South Leg Sunnyside Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	1	0	0	1	2
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	2	2	4	2	10
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	3	2	4	3	12

	North Leg Sunnyside Avenue	East Leg Shepherd Avenue	South Leg Sunnyside Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	1	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Location: Clovis
N/S: Sunnyside Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Sunnyside Avenue			Westbound Shepherd Avenue			Northbound Sunnyside Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	2	0	0	0	0	0	0	1	3
7:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	0	1	1	0	0	0	1	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	1	0	0	0	0	1	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	4	1	2	0	1	0	2	1	12

	Southbound Sunnyside Avenue			Westbound Shepherd Avenue			Northbound Sunnyside Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	1	0	2
4:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	0	0	1	1	0	4

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City of Clovis
N/S: Sunnyside Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 17_CVS_Sun_Tea AM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Total Volume

	Sunnyside Avenue Southbound				Teague Avenue Westbound				Sunnyside Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	17	0	17	4	0	0	4	0	8	2	10	0	0	0	0	31
07:15 AM	1	26	0	27	2	3	4	9	1	22	2	25	0	0	0	0	61
07:30 AM	1	34	0	35	6	3	4	13	1	10	1	12	1	0	1	2	62
07:45 AM	2	35	0	37	2	0	0	2	0	15	1	16	4	4	0	8	63
Total	4	112	0	116	14	6	8	28	2	55	6	63	5	4	1	10	217
08:00 AM	1	44	0	45	7	0	2	9	0	27	1	28	0	0	0	0	82
08:15 AM	1	29	0	30	2	0	1	3	0	20	2	22	0	0	0	0	55
08:30 AM	0	27	3	30	1	0	2	3	1	18	0	19	0	0	1	1	53
08:45 AM	2	30	0	32	3	1	6	10	2	15	1	18	3	0	1	4	64
Total	4	130	3	137	13	1	11	25	3	80	4	87	3	0	2	5	254
Grand Total	8	242	3	253	27	7	19	53	5	135	10	150	8	4	3	15	471
Apprch %	3.2	95.7	1.2		50.9	13.2	35.8		3.3	90	6.7		53.3	26.7	20		
Total %	1.7	51.4	0.6	53.7	5.7	1.5	4	11.3	1.1	28.7	2.1	31.8	1.7	0.8	0.6	3.2	

	Sunnyside Avenue Southbound				Teague Avenue Westbound				Sunnyside Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	26	0	27	2	**3**	**4**	9	**1**	22	**2**	25	0	0	0	0	61
07:30 AM	1	34	0	35	6	3	4	**13**	1	10	1	12	1	0	**1**	2	62
07:45 AM	**2**	35	0	37	2	0	0	2	0	15	1	16	**4**	**4**	0	**8**	63
08:00 AM	1	**44**	0	**45**	**7**	0	2	9	0	**27**	1	**28**	0	0	0	0	**82**
Total Volume	5	139	0	144	17	6	10	33	2	74	5	81	5	4	1	10	268
% App. Total	3.5	96.5	0		51.5	18.2	30.3		2.5	91.4	6.2		50	40	10		
PHF	.625	.790	.000	.800	.607	.500	.625	.635	.500	.685	.625	.723	.313	.250	.250	.313	.817

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City of Clovis
N/S: Sunnyside Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 17_CVS_Sun_Tea AM
Site Code : 00322473
Start Date : 5/24/2022
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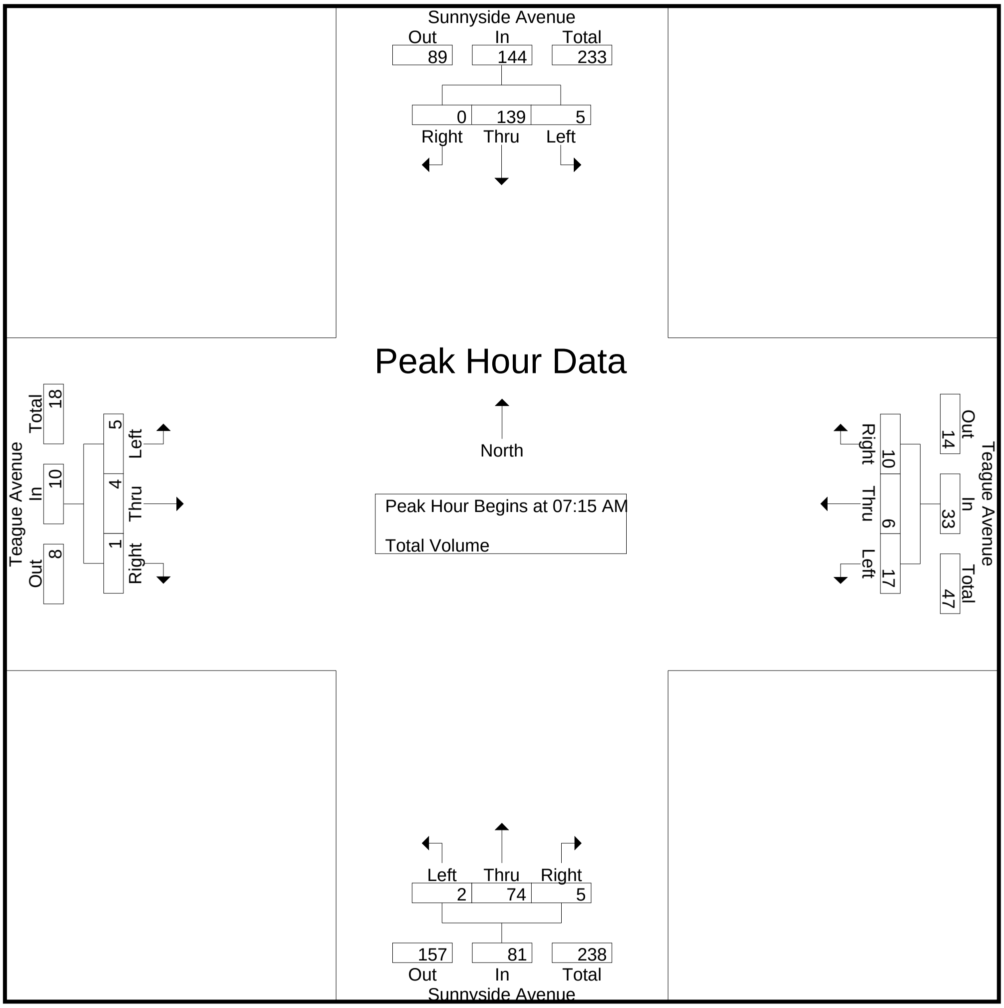

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				08:00 AM				07:00 AM			
+0 mins.	1	34	0	35	2	**3**	**4**	9	0	**27**	1	**28**	0	0	0	0
+15 mins.	**2**	35	0	37	6	3	4	**13**	0	20	**2**	22	0	0	0	0
+30 mins.	1	**44**	0	**45**	2	0	0	2	1	18	0	19	1	0	**1**	2
+45 mins.	1	29	0	30	**7**	0	2	9	**2**	15	1	18	**4**	**4**	0	**8**
Total Volume	5	142	0	147	17	6	10	33	3	80	4	87	5	4	1	10
% App. Total	3.4	96.6	0		51.5	18.2	30.3		3.4	92	4.6		50	40	10	
PHF	.625	.807	.000	.817	.607	.500	.625	.635	.375	.741	.500	.777	.313	.250	.250	.313

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City of Clovis
N/S: Sunnyside Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 17_CVS_Sun_Tea PM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Total Volume

	Sunnyside Avenue Southbound				Teague Avenue Westbound				Sunnyside Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	23	0	23	1	0	2	3	0	25	1	26	1	2	0	3	55
04:15 PM	1	24	0	25	3	1	3	7	0	25	1	26	0	2	1	3	61
04:30 PM	2	15	0	17	1	1	1	3	0	28	2	30	0	0	0	0	50
04:45 PM	1	30	0	31	1	0	8	9	0	26	4	30	0	0	1	1	71
Total	4	92	0	96	6	2	14	22	0	104	8	112	1	4	2	7	237
05:00 PM	1	24	1	26	1	1	2	4	0	46	1	47	0	0	1	1	78
05:15 PM	0	33	0	33	5	2	1	8	0	22	1	23	1	1	1	3	67
05:30 PM	0	25	0	25	1	0	1	2	0	26	1	27	0	0	0	0	54
05:45 PM	2	22	1	25	4	2	1	7	0	24	2	26	1	1	0	2	60
Total	3	104	2	109	11	5	5	21	0	118	5	123	2	2	2	6	259
Grand Total	7	196	2	205	17	7	19	43	0	222	13	235	3	6	4	13	496
Apprch %	3.4	95.6	1		39.5	16.3	44.2		0	94.5	5.5		23.1	46.2	30.8		
Total %	1.4	39.5	0.4	41.3	3.4	1.4	3.8	8.7	0	44.8	2.6	47.4	0.6	1.2	0.8	2.6	

	Sunnyside Avenue Southbound				Teague Avenue Westbound				Sunnyside Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	30	0	31	1	0	**8**	**9**	0	26	**4**	30	0	0	**1**	1	71
05:00 PM	1	24	**1**	26	1	1	2	4	0	**46**	1	**47**	0	0	1	1	**78**
05:15 PM	0	**33**	0	**33**	**5**	**2**	1	8	0	22	1	23	**1**	**1**	1	**3**	67
05:30 PM	0	25	0	25	1	0	1	2	0	26	1	27	0	0	0	0	54
Total Volume	2	112	1	115	8	3	12	23	0	120	7	127	1	1	3	5	270
% App. Total	1.7	97.4	0.9		34.8	13	52.2		0	94.5	5.5		20	20	60		
PHF	.500	.848	.250	.871	.400	.375	.375	.639	.000	.652	.438	.676	.250	.250	.750	.417	.865

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City of Clovis
N/S: Sunnyside Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 17_CVS_Sun_Tea PM
Site Code : 00322473
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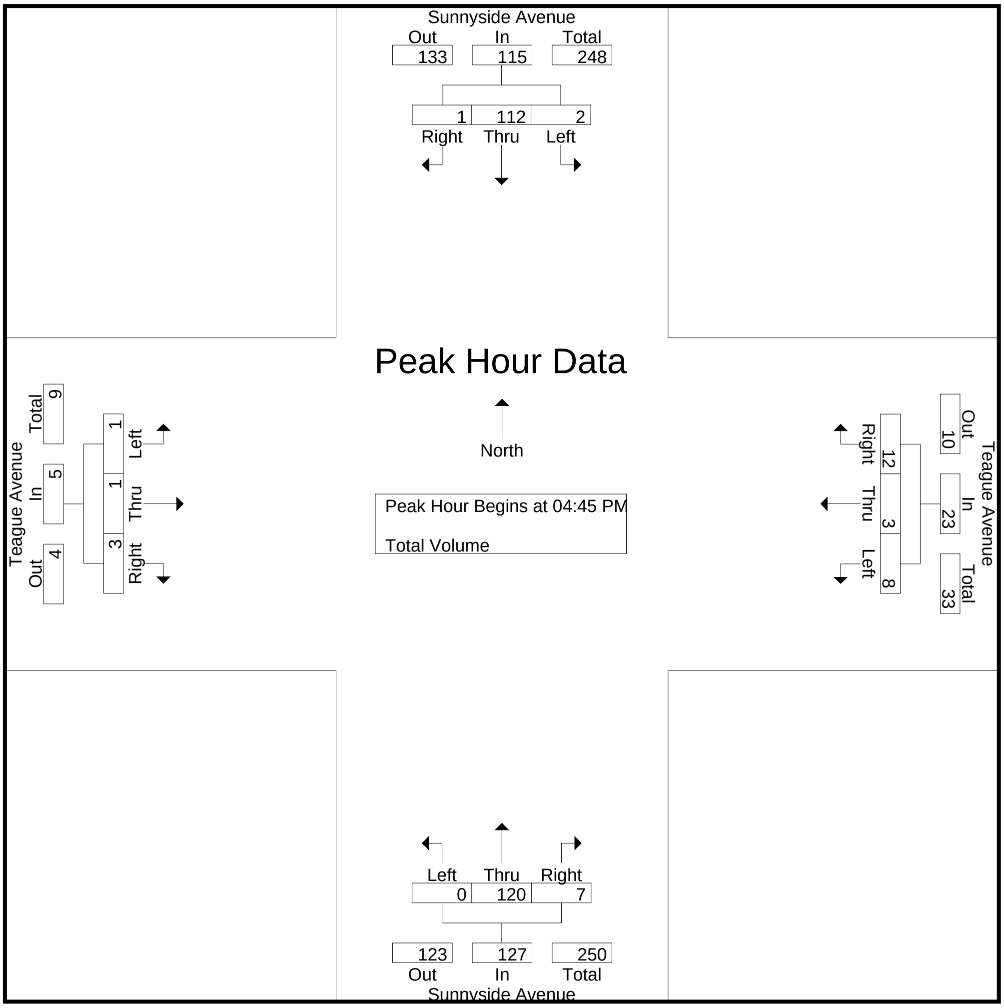

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	**1**	30	0	31	1	1	1	3	0	25	1	26	**1**	**2**	0	**3**
+15 mins.	1	24	**1**	26	1	0	**8**	**9**	0	28	2	30	0	2	**1**	3
+30 mins.	0	**33**	0	**33**	1	1	2	4	0	26	**4**	30	0	0	0	0
+45 mins.	0	25	0	25	**5**	**2**	1	8	0	**46**	1	**47**	0	0	1	1
Total Volume	2	112	1	115	8	4	12	24	0	125	8	133	1	4	2	7
% App. Total	1.7	97.4	0.9		33.3	16.7	50		0	94	6		14.3	57.1	28.6	
PHF	.500	.848	.250	.871	.400	.500	.375	.667	.000	.679	.500	.707	.250	.500	.500	.583

Location: Clovis
N/S: Sunnyside Avenue
E/W: Teague Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Sunnyside Avenue	East Leg Teague Avenue	South Leg Sunnyside Avenue	West Leg Teague Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Sunnyside Avenue	East Leg Teague Avenue	South Leg Sunnyside Avenue	West Leg Teague Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Sunnyside Avenue
E/W: Teague Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Sunnyside Avenue			Westbound Teague Avenue			Northbound Sunnyside Avenue			Eastbound Teague Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	1	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
8:30 AM	2	1	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	2	2	0	0	0	2	1	1	0	0	0	0	8

	Southbound Sunnyside Avenue			Westbound Teague Avenue			Northbound Sunnyside Avenue			Eastbound Teague Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Clovis
N/S: Sunnyside Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 18_CVS_Sun_Nees AM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Total Volume

	Sunnyside Avenue Southbound				Nees Avenue Westbound				Sunnyside Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	7	13	4	24	4	58	4	66	14	9	1	24	2	34	12	48	162
07:15 AM	5	24	5	34	8	143	5	156	40	12	5	57	5	43	9	57	304
07:30 AM	4	28	16	48	1	101	0	102	40	10	2	52	2	66	22	90	292
07:45 AM	7	28	6	41	5	63	7	75	20	10	3	33	4	104	35	143	292
Total	23	93	31	147	18	365	16	399	114	41	11	166	13	247	78	338	1050
08:00 AM	6	35	7	48	11	60	2	73	37	25	7	69	1	56	19	76	266
08:15 AM	6	27	4	37	11	66	2	79	34	17	10	61	1	38	15	54	231
08:30 AM	5	21	2	28	7	58	1	66	18	15	2	35	3	50	7	60	189
08:45 AM	7	22	6	35	9	50	2	61	14	13	1	28	6	31	14	51	175
Total	24	105	19	148	38	234	7	279	103	70	20	193	11	175	55	241	861
Grand Total	47	198	50	295	56	599	23	678	217	111	31	359	24	422	133	579	1911
Apprch %	15.9	67.1	16.9		8.3	88.3	3.4		60.4	30.9	8.6		4.1	72.9	23		
Total %	2.5	10.4	2.6	15.4	2.9	31.3	1.2	35.5	11.4	5.8	1.6	18.8	1.3	22.1	7	30.3	

	Sunnyside Avenue Southbound				Nees Avenue Westbound				Sunnyside Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	24	5	34	8	**143**	5	**156**	**40**	12	5	57	**5**	43	9	57	**304**
07:30 AM	4	28	**16**	**48**	1	101	0	102	40	10	2	52	2	66	22	90	292
07:45 AM	**7**	28	6	41	5	63	**7**	75	20	10	3	33	4	**104**	**35**	**143**	292
08:00 AM	6	**35**	7	48	**11**	60	2	73	37	**25**	**7**	**69**	1	56	19	76	266
Total Volume	22	115	34	171	25	367	14	406	137	57	17	211	12	269	85	366	1154
% App. Total	12.9	67.3	19.9		6.2	90.4	3.4		64.9	27	8.1		3.3	73.5	23.2		
PHF	.786	.821	.531	.891	.568	.642	.500	.651	.856	.570	.607	.764	.600	.647	.607	.640	.949

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City of Clovis
N/S: Sunnyside Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 18_CVS_Sun_Nees AM
Site Code : 00322473
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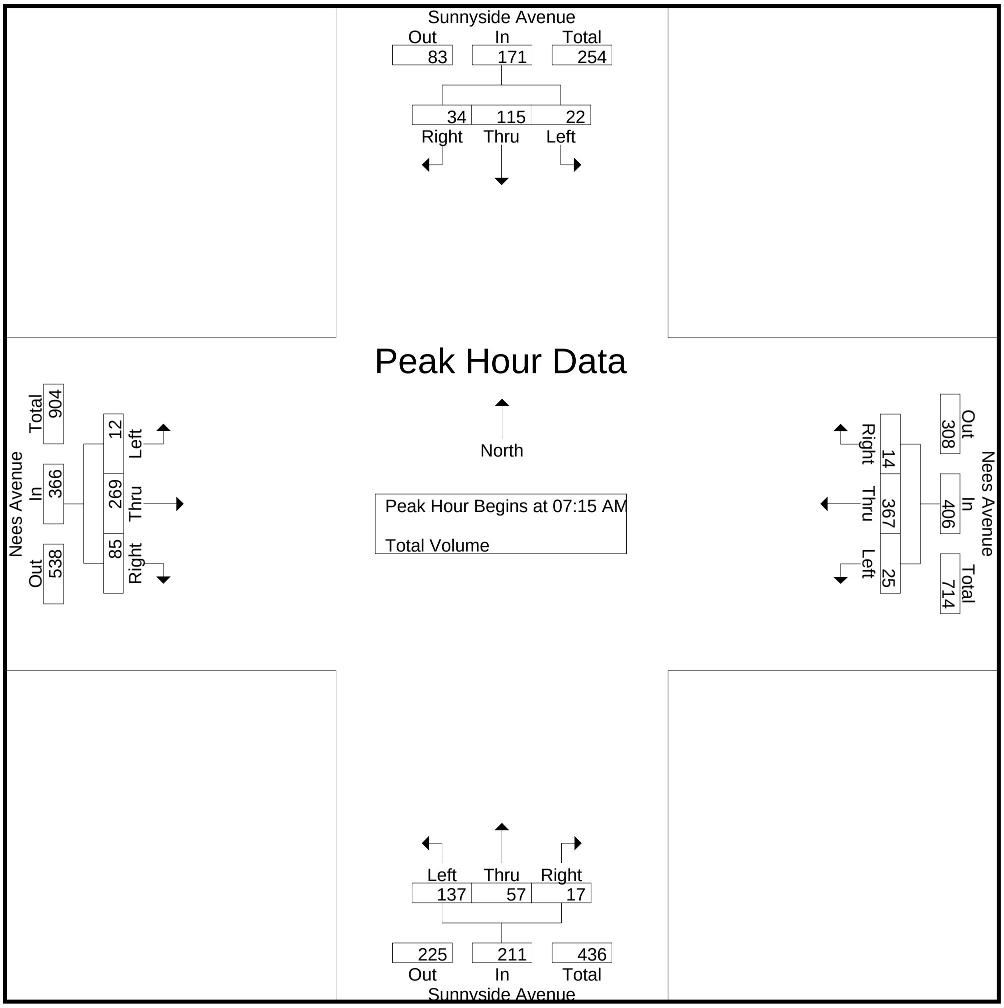

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:30 AM				07:15 AM			
+0 mins.	4	28	**16**	**48**	8	**143**	5	**156**	**40**	10	2	52	**5**	43	9	57
+15 mins.	**7**	28	6	41	1	101	0	102	20	10	3	33	2	66	22	90
+30 mins.	6	**35**	7	48	5	63	**7**	75	37	**25**	7	**69**	4	**104**	**35**	**143**
+45 mins.	6	27	4	37	**11**	60	2	73	34	17	**10**	61	1	56	19	76
Total Volume	23	118	33	174	25	367	14	406	131	62	22	215	12	269	85	366
% App. Total	13.2	67.8	19		6.2	90.4	3.4		60.9	28.8	10.2		3.3	73.5	23.2	
PHF	.821	.843	.516	.906	.568	.642	.500	.651	.819	.620	.550	.779	.600	.647	.607	.640

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Corona, CA 92878
(951)268-6268

City of Clovis
N/S: Sunnyside Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 18_CVS_Sun_Nees PM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Total Volume

	Sunnyside Avenue Southbound				Nees Avenue Westbound				Sunnyside Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	17	2	22	2	68	2	72	17	18	7	42	4	83	20	107	243
04:15 PM	3	24	5	32	9	57	3	69	15	22	3	40	2	88	14	104	245
04:30 PM	5	9	0	14	6	62	1	69	30	25	7	62	6	74	21	101	246
04:45 PM	3	25	6	34	5	69	3	77	24	22	6	52	9	75	17	101	264
Total	14	75	13	102	22	256	9	287	86	87	23	196	21	320	72	413	998
05:00 PM	3	18	6	27	9	88	5	102	34	36	6	76	9	80	19	108	313
05:15 PM	8	25	6	39	8	98	4	110	30	20	14	64	2	112	23	137	350
05:30 PM	3	22	1	26	10	82	3	95	27	20	9	56	4	97	15	116	293
05:45 PM	7	16	6	29	6	50	4	60	21	20	5	46	4	87	11	102	237
Total	21	81	19	121	33	318	16	367	112	96	34	242	19	376	68	463	1193
Grand Total	35	156	32	223	55	574	25	654	198	183	57	438	40	696	140	876	2191
Apprch %	15.7	70	14.3		8.4	87.8	3.8		45.2	41.8	13		4.6	79.5	16		
Total %	1.6	7.1	1.5	10.2	2.5	26.2	1.1	29.8	9	8.4	2.6	20	1.8	31.8	6.4	40	

	Sunnyside Avenue Southbound				Nees Avenue Westbound				Sunnyside Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	3	**25**	**6**	34	5	69	3	77	24	22	6	52	**9**	75	17	101	264
05:00 PM	3	18	6	27	9	88	**5**	102	**34**	**36**	6	**76**	9	80	19	108	313
05:15 PM	**8**	25	6	**39**	8	**98**	4	**110**	30	20	**14**	64	2	**112**	**23**	**137**	**350**
05:30 PM	3	22	1	26	**10**	82	3	95	27	20	9	56	4	97	15	116	293
Total Volume	17	90	19	126	32	337	15	384	115	98	35	248	24	364	74	462	1220
% App. Total	13.5	71.4	15.1		8.3	87.8	3.9		46.4	39.5	14.1		5.2	78.8	16		
PHF	.531	.900	.792	.808	.800	.860	.750	.873	.846	.681	.625	.816	.667	.813	.804	.843	.871

AGENDA ITEM NO. 6.

Counts Unlimited, Inc.
PO Box 1178
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(951)268-6268

City of Clovis
N/S: Sunnyside Avenue
E/W: Nees Avenue
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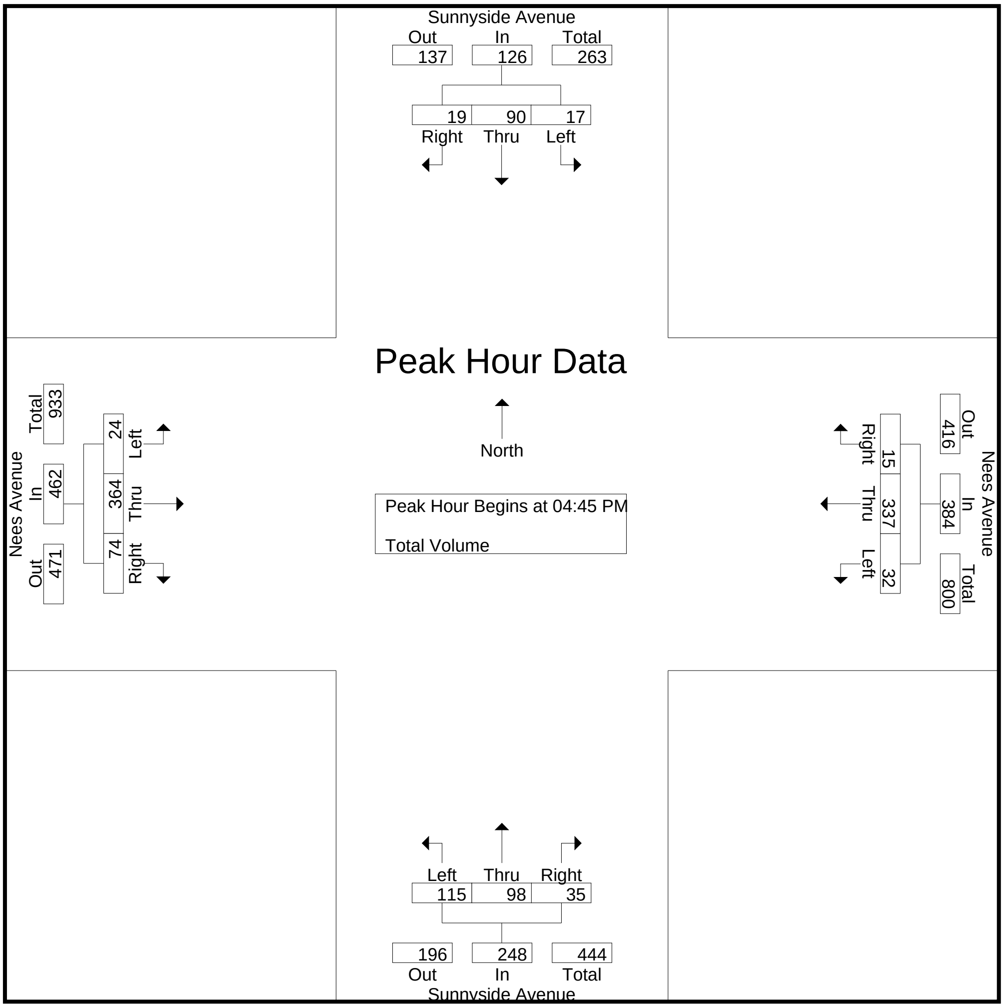
File Name : 18_CVS_Sun_Nees PM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:30 PM				05:00 PM			
+0 mins.	3	**25**	**6**	34	5	69	3	77	30	25	7	62	**9**	80	19	108
+15 mins.	3	18	6	27	9	88	**5**	102	24	22	6	52	2	**112**	**23**	**137**
+30 mins.	**8**	25	6	**39**	8	**98**	4	**110**	**34**	**36**	6	**76**	4	97	15	116
+45 mins.	3	22	1	26	**10**	82	3	95	30	20	**14**	64	4	87	11	102
Total Volume	17	90	19	126	32	337	15	384	118	103	33	254	19	376	68	463
% App. Total	13.5	71.4	15.1		8.3	87.8	3.9		46.5	40.6	13		4.1	81.2	14.7	
PHF	.531	.900	.792	.808	.800	.860	.750	.873	.868	.715	.589	.836	.528	.839	.739	.845

Location: Clovis
N/S: Sunnyside Avenue
E/W: Nees Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Sunnyside Avenue	East Leg Nees Avenue	South Leg Sunnyside Avenue	West Leg Nees Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	1	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	1	0	1
8:15 AM	0	0	1	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	0	0	4	0	4

	North Leg Sunnyside Avenue	East Leg Nees Avenue	South Leg Sunnyside Avenue	West Leg Nees Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Sunnyside Avenue
E/W: Nees Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound			Westbound			Northbound			Eastbound			
	Sunnyside Avenue			Nees Avenue			Sunnyside Avenue			Nees Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	1	0	0	0	1	0	2
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES:	1	1	0	0	0	1	3	0	0	0	1	0	7

	Southbound			Westbound			Northbound			Eastbound			
	Sunnyside Avenue			Nees Avenue			Sunnyside Avenue			Nees Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	1	0	0	0	1

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
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City of Clovis
N/S: Fowler Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 20_CVS_Fowl_Beh AM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Total Volume

	Fowler Avenue Southbound				Behymer Avenue Westbound				Fowler Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	14	2	16	1	0	0	1	54	13	0	67	1	1	32	34	118
07:15 AM	0	23	5	28	3	4	0	7	107	10	0	117	0	0	37	37	189
07:30 AM	0	15	2	17	0	1	0	1	146	18	0	164	2	0	46	48	230
07:45 AM	0	22	3	25	1	1	0	2	113	24	0	137	6	0	83	89	253
Total	0	74	12	86	5	6	0	11	420	65	0	485	9	1	198	208	790
08:00 AM	0	20	6	26	0	2	0	2	58	23	1	82	2	0	67	69	179
08:15 AM	0	15	4	19	1	0	0	1	43	6	1	50	3	0	54	57	127
08:30 AM	0	15	1	16	2	2	0	4	43	16	2	61	2	0	24	26	107
08:45 AM	1	19	2	22	0	0	0	0	30	9	0	39	0	0	27	27	88
Total	1	69	13	83	3	4	0	7	174	54	4	232	7	0	172	179	501
Grand Total	1	143	25	169	8	10	0	18	594	119	4	717	16	1	370	387	1291
Apprch %	0.6	84.6	14.8		44.4	55.6	0		82.8	16.6	0.6		4.1	0.3	95.6		
Total %	0.1	11.1	1.9	13.1	0.6	0.8	0	1.4	46	9.2	0.3	55.5	1.2	0.1	28.7	30	

	Fowler Avenue Southbound				Behymer Avenue Westbound				Fowler Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**23**	5	**28**	**3**	**4**	0	**7**	107	10	0	117	0	0	37	37	189
07:30 AM	0	15	2	17	0	1	0	1	**146**	18	0	**164**	2	0	46	48	230
07:45 AM	0	22	3	25	1	1	0	2	113	**24**	0	137	**6**	0	**83**	**89**	**253**
08:00 AM	0	20	**6**	26	0	2	0	2	58	23	**1**	82	2	0	67	69	179
Total Volume	0	80	16	96	4	8	0	12	424	75	1	500	10	0	233	243	851
% App. Total	0	83.3	16.7		33.3	66.7	0		84.8	15	0.2		4.1	0	95.9		
PHF	.000	.870	.667	.857	.333	.500	.000	.429	.726	.781	.250	.762	.417	.000	.702	.683	.841

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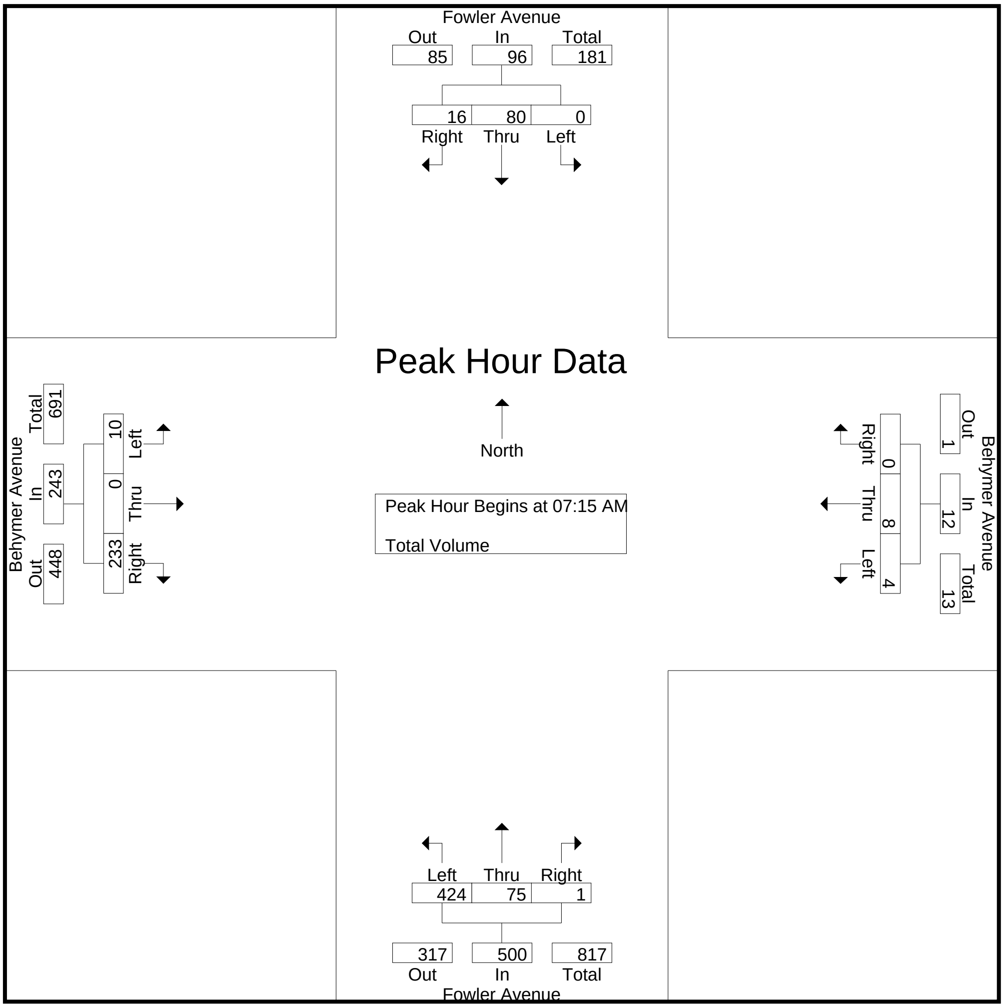
City of Clovis
N/S: Fowler Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 20_CVS_Fowl_Beh AM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	0	**23**	5	**28**	**3**	**4**	0	**7**	107	10	0	117	2	0	46	48
+15 mins.	0	15	2	17	0	1	0	1	**146**	18	0	**164**	**6**	0	**83**	**89**
+30 mins.	0	22	3	25	1	1	0	2	113	**24**	0	137	2	0	67	69
+45 mins.	0	20	**6**	26	0	2	0	2	58	23	**1**	82	3	0	54	57
Total Volume	0	80	16	96	4	8	0	12	424	75	1	500	13	0	250	263
% App. Total	0	83.3	16.7		33.3	66.7	0		84.8	15	0.2		4.9	0	95.1	
PHF	.000	.870	.667	.857	.333	.500	.000	.429	.726	.781	.250	.762	.542	.000	.753	.739

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City of Clovis
N/S: Fowler Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 20_CVS_Fowl_Beh PM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Total Volume

	Fowler Avenue Southbound				Behymer Avenue Westbound				Fowler Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	23	1	25	1	2	0	3	39	28	1	68	4	1	47	52	148
04:15 PM	0	12	1	13	3	0	0	3	33	13	1	47	2	1	53	56	119
04:30 PM	0	14	2	16	0	0	0	0	50	16	0	66	1	0	31	32	114
04:45 PM	0	10	1	11	0	2	1	3	41	22	1	64	0	1	45	46	124
Total	1	59	5	65	4	4	1	9	163	79	3	245	7	3	176	186	505
05:00 PM	0	16	2	18	0	1	0	1	47	16	0	63	3	1	40	44	126
05:15 PM	0	17	4	21	0	0	0	0	50	22	0	72	3	0	36	39	132
05:30 PM	0	15	5	20	0	0	0	0	33	18	2	53	3	0	38	41	114
05:45 PM	0	12	0	12	1	1	0	2	41	17	1	59	4	3	31	38	111
Total	0	60	11	71	1	2	0	3	171	73	3	247	13	4	145	162	483
Grand Total	1	119	16	136	5	6	1	12	334	152	6	492	20	7	321	348	988
Apprch %	0.7	87.5	11.8		41.7	50	8.3		67.9	30.9	1.2		5.7	2	92.2		
Total %	0.1	12	1.6	13.8	0.5	0.6	0.1	1.2	33.8	15.4	0.6	49.8	2	0.7	32.5	35.2	

	Fowler Avenue Southbound				Behymer Avenue Westbound				Fowler Avenue Northbound				Behymer Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**1**	**23**	1	**25**	1	**2**	0	**3**	39	**28**	**1**	**68**	**4**	**1**	47	52	**148**
04:15 PM	0	12	1	13	**3**	0	0	3	33	13	1	47	2	1	**53**	**56**	119
04:30 PM	0	14	**2**	16	0	0	0	0	**50**	16	0	66	1	0	31	32	114
04:45 PM	0	10	1	11	0	2	**1**	3	41	22	1	64	0	1	45	46	124
Total Volume	1	59	5	65	4	4	1	9	163	79	3	245	7	3	176	186	505
% App. Total	1.5	90.8	7.7		44.4	44.4	11.1		66.5	32.2	1.2		3.8	1.6	94.6		
PHF	.250	.641	.625	.650	.333	.500	.250	.750	.815	.705	.750	.901	.438	.750	.830	.830	.853

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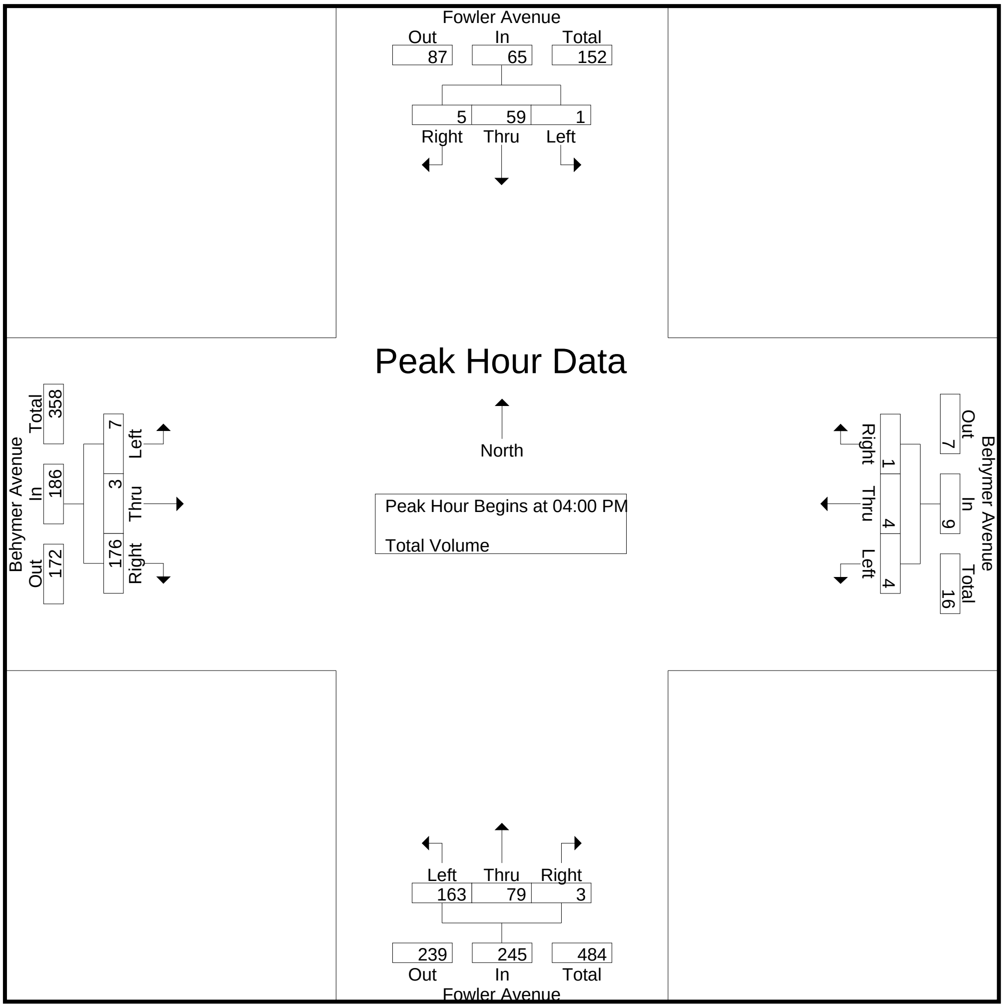
City of Clovis
N/S: Fowler Avenue
E/W: Behymer Avenue
Weather: Clear

File Name : 20_CVS_Fowl_Beh PM
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	0	16	2	18	1	**2**	0	**3**	**50**	16	0	66	**4**	**1**	47	52
+15 mins.	0	**17**	4	**21**	**3**	0	0	3	41	**22**	**1**	64	2	1	**53**	**56**
+30 mins.	0	15	**5**	20	0	0	0	0	47	16	0	63	1	0	31	32
+45 mins.	0	12	0	12	0	2	**1**	3	50	22	0	**72**	0	1	45	46
Total Volume	0	60	11	71	4	4	1	9	188	76	1	265	7	3	176	186
% App. Total	0	84.5	15.5		44.4	44.4	11.1		70.9	28.7	0.4		3.8	1.6	94.6	
PHF	.000	.882	.550	.845	.333	.500	.250	.750	.940	.864	.250	.920	.438	.750	.830	.830

Location: Clovis
N/S: Fowler Avenue
E/W: Behymer Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Fowler Avenue	East Leg Behymer Avenue	South Leg Fowler Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Fowler Avenue	East Leg Behymer Avenue	South Leg Fowler Avenue	West Leg Behymer Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Fowler Avenue
E/W: Behymer Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Fowler Avenue			Westbound Behymer Avenue			Northbound Fowler Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	1	0	0	0	0	0	2

	Southbound Fowler Avenue			Westbound Behymer Avenue			Northbound Fowler Avenue			Eastbound Behymer Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	0	0	0	0	0	2

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City of Clovis
N/S: Fowler Avenue
E/W: Ticonderoga
Weather: Clear

File Name : 21_CVS_Fowl_Tic AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	47	0	47	0	71	71	0	3	3	121
07:15 AM	60	0	60	4	113	117	0	0	0	177
07:30 AM	59	3	62	2	167	169	1	2	3	234
07:45 AM	106	1	107	1	127	128	5	2	7	242
Total	272	4	276	7	478	485	6	7	13	774
08:00 AM	85	3	88	2	81	83	1	4	5	176
08:15 AM	65	5	70	1	49	50	1	1	2	122
08:30 AM	40	1	41	0	61	61	1	0	1	103
08:45 AM	43	2	45	1	37	38	2	3	5	88
Total	233	11	244	4	228	232	5	8	13	489
Grand Total	505	15	520	11	706	717	11	15	26	1263
Apprch %	97.1	2.9		1.5	98.5		42.3	57.7		
Total %	40	1.2	41.2	0.9	55.9	56.8	0.9	1.2	2.1	
Passenger Vehicles	485	12	497	10	681	691	9	14	23	1211
% Passenger Vehicles	96	80	95.6	90.9	96.5	96.4	81.8	93.3	88.5	95.9
Large 2 Axle Vehicles	11	3	14	1	10	11	2	1	3	28
% Large 2 Axle Vehicles	2.2	20	2.7	9.1	1.4	1.5	18.2	6.7	11.5	2.2
3 Axle Vehicles	8	0	8	0	13	13	0	0	0	21
% 3 Axle Vehicles	1.6	0	1.5	0	1.8	1.8	0	0	0	1.7
4+ Axle Trucks	1	0	1	0	2	2	0	0	0	3
% 4+ Axle Trucks	0.2	0	0.2	0	0.3	0.3	0	0	0	0.2

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	60	0	60	**4**	113	117	0	0	0	177
07:30 AM	59	**3**	62	2	**167**	**169**	1	2	3	234
07:45 AM	**106**	1	**107**	1	127	128	**5**	2	**7**	**242**
08:00 AM	85	3	88	2	81	83	1	**4**	5	176
Total Volume	310	7	317	9	488	497	7	8	15	829
% App. Total	97.8	2.2		1.8	98.2		46.7	53.3		
PHF	.731	.583	.741	.563	.731	.735	.350	.500	.536	.856

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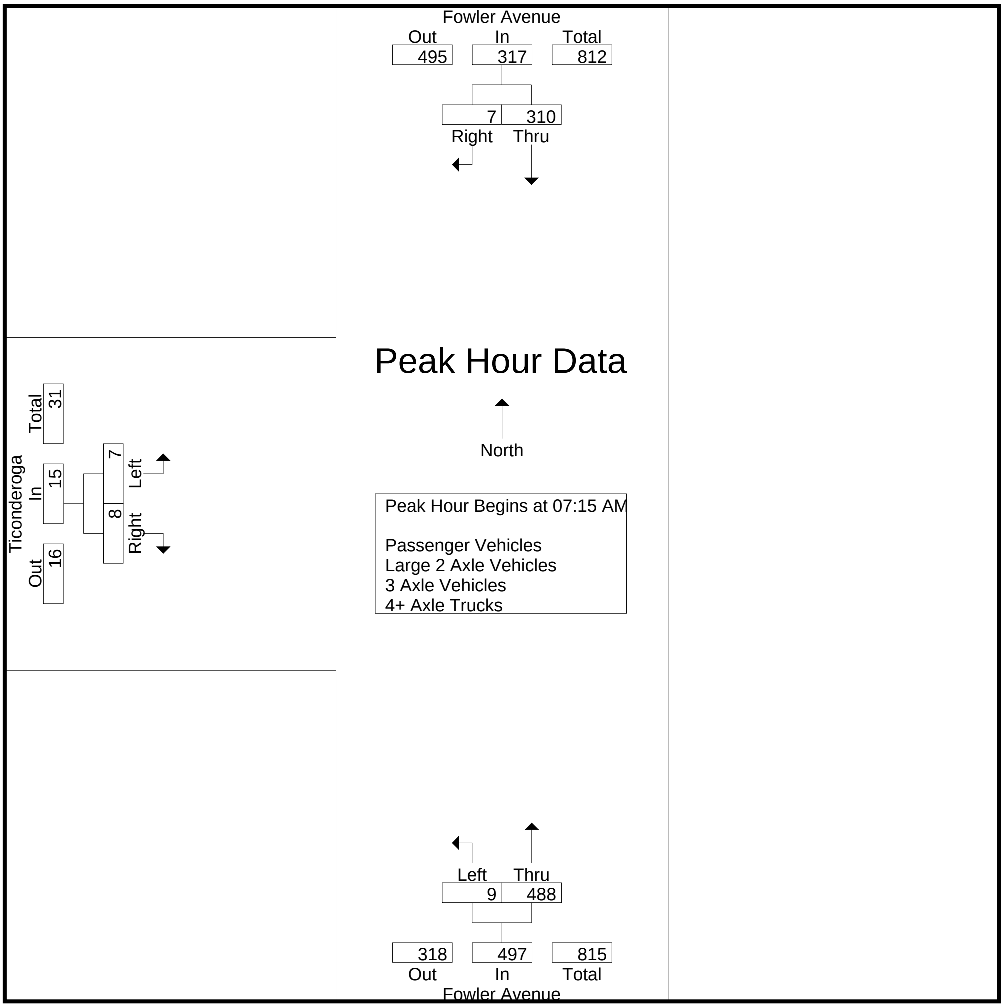

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			07:30 AM		
+0 mins.	59	3	62	**4**	113	117	1	2	3
+15 mins.	**106**	1	**107**	2	**167**	**169**	**5**	2	**7**
+30 mins.	85	3	88	1	127	128	1	**4**	5
+45 mins.	65	**5**	70	2	81	83	1	1	2
Total Volume	315	12	327	9	488	497	8	9	17
% App. Total	96.3	3.7		1.8	98.2		47.1	52.9	
PHF	.743	.600	.764	.563	.731	.735	.400	.563	.607

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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	47	0	47	0	68	68	0	3	3	118
07:15 AM	57	0	57	3	109	112	0	0	0	169
07:30 AM	58	3	61	2	166	168	1	1	2	231
07:45 AM	100	1	101	1	126	127	5	2	7	235
Total	262	4	266	6	469	475	6	6	12	753
08:00 AM	85	3	88	2	76	78	1	4	5	171
08:15 AM	63	4	67	1	45	46	1	1	2	115
08:30 AM	38	0	38	0	58	58	0	0	0	96
08:45 AM	37	1	38	1	33	34	1	3	4	76
Total	223	8	231	4	212	216	3	8	11	458
Grand Total	485	12	497	10	681	691	9	14	23	1211
Apprch %	97.6	2.4		1.4	98.6		39.1	60.9		
Total %	40	1	41	0.8	56.2	57.1	0.7	1.2	1.9	

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	57	0	57	**3**	109	112	0	0	0	169
07:30 AM	58	**3**	61	2	**166**	**168**	1	1	2	231
07:45 AM	**100**	1	**101**	1	126	127	**5**	2	**7**	**235**
08:00 AM	85	3	88	2	76	78	1	**4**	5	171
Total Volume	300	7	307	8	477	485	7	7	14	806
% App. Total	97.7	2.3		1.6	98.4		50	50		
PHF	.750	.583	.760	.667	.718	.722	.350	.438	.500	.857

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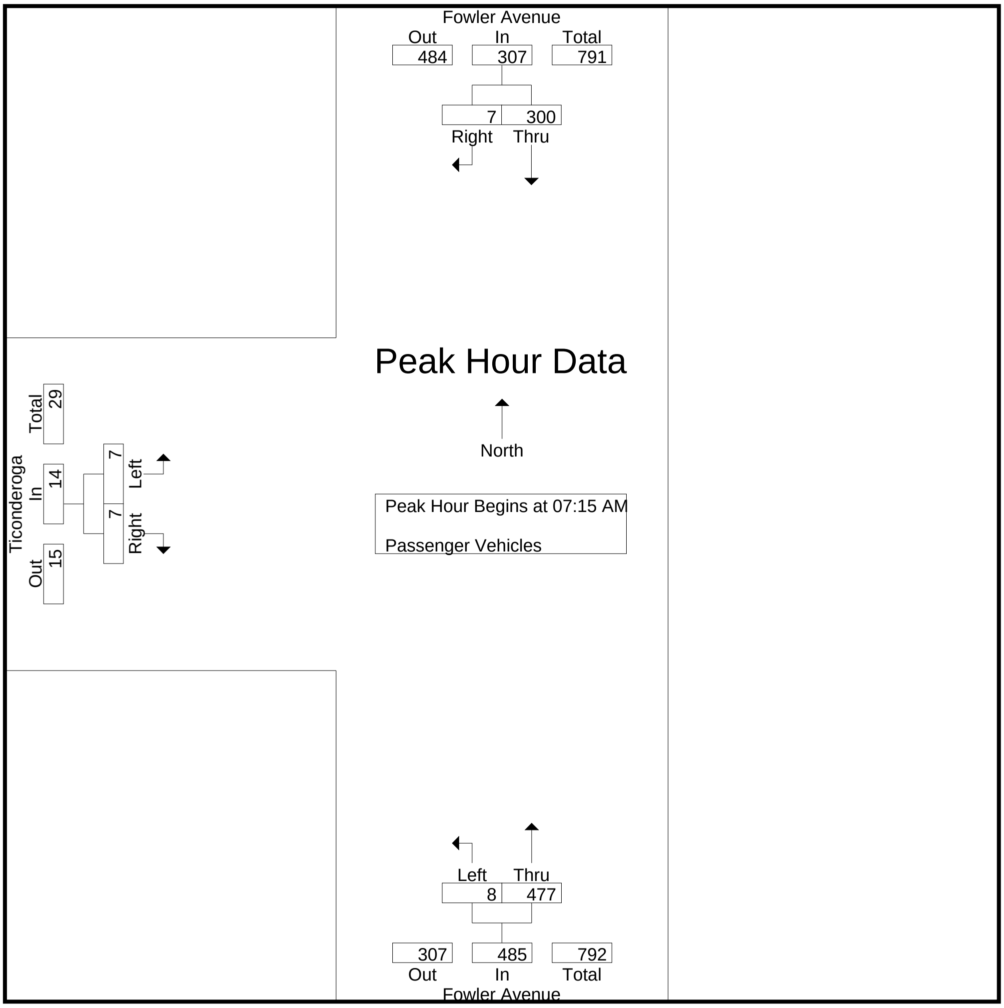

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	57	0	57	**3**	109	112	0	0	0
+15 mins.	58	**3**	61	2	**166**	**168**	1	1	2
+30 mins.	**100**	1	**101**	1	126	127	**5**	2	**7**
+45 mins.	85	3	88	2	76	78	1	**4**	5
Total Volume	300	7	307	8	477	485	7	7	14
% App. Total	97.7	2.3		1.6	98.4		50	50	
PHF	.750	.583	.760	.667	.718	.722	.350	.438	.500

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Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	0	0	0	1
07:15 AM	2	0	2	1	3	4	0	0	0	6
07:30 AM	0	0	0	0	1	1	0	1	1	2
07:45 AM	3	0	3	0	0	0	0	0	0	3
Total	5	0	5	1	5	6	0	1	1	12
08:00 AM	0	0	0	0	2	2	0	0	0	2
08:15 AM	2	1	3	0	1	1	0	0	0	4
08:30 AM	2	1	3	0	2	2	1	0	1	6
08:45 AM	2	1	3	0	0	0	1	0	1	4
Total	6	3	9	0	5	5	2	0	2	16
Grand Total	11	3	14	1	10	11	2	1	3	28
Apprch %	78.6	21.4		9.1	90.9		66.7	33.3		
Total %	39.3	10.7	50	3.6	35.7	39.3	7.1	3.6	10.7	

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	2	0	2	**1**	**3**	**4**	0	0	0	**6**
07:30 AM	0	0	0	0	1	1	0	**1**	**1**	2
07:45 AM	**3**	0	**3**	0	0	0	0	0	0	3
08:00 AM	0	0	0	0	2	2	0	0	0	2
Total Volume	5	0	5	1	6	7	0	1	1	13
% App. Total	100	0		14.3	85.7		0	100		
PHF	.417	.000	.417	.250	.500	.438	.000	.250	.250	.542

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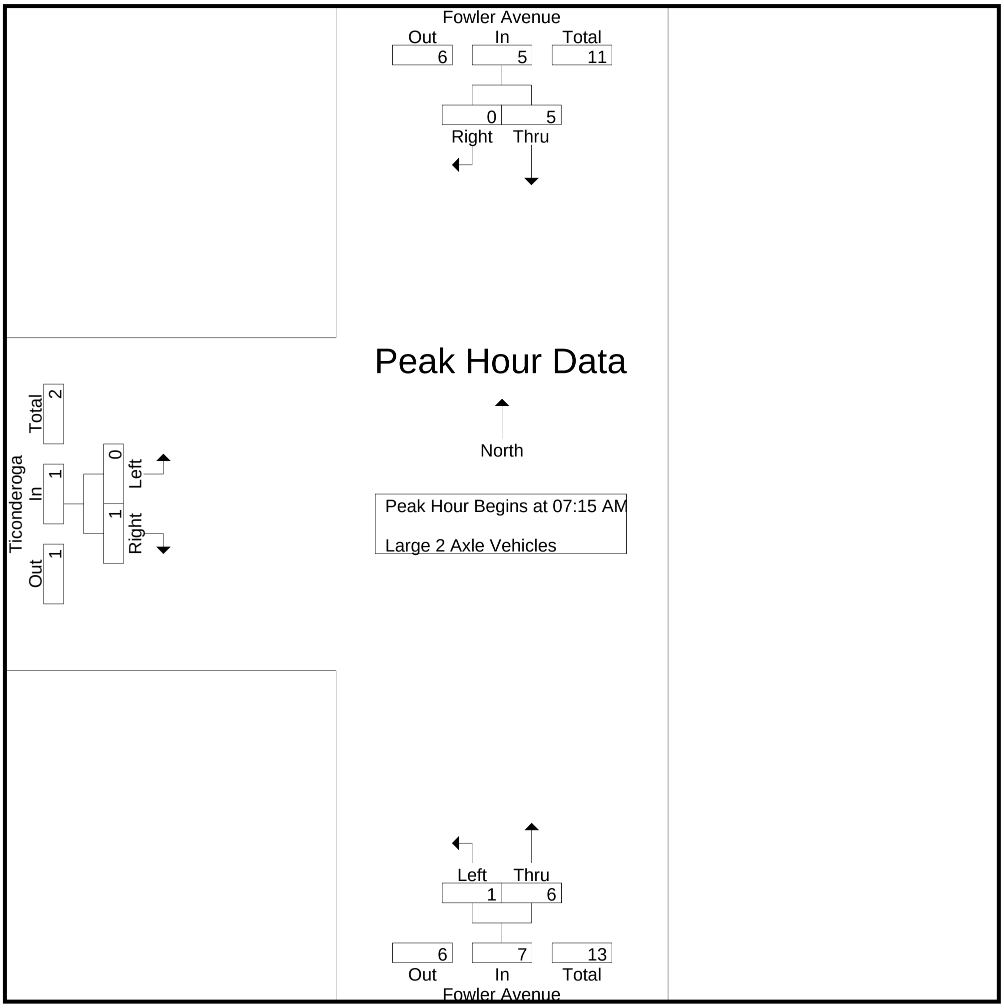

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	2	0	2	**1**	**3**	**4**	0	0	0
+15 mins.	0	0	0	0	1	1	0	**1**	**1**
+30 mins.	**3**	0	**3**	0	0	0	0	0	0
+45 mins.	0	0	0	0	2	2	0	0	0
Total Volume	5	0	5	1	6	7	0	1	1
% App. Total	100	0		14.3	85.7		0	100	
PHF	.417	.000	.417	.250	.500	.438	.000	.250	.250

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Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	2	2	0	0	0	2
07:15 AM	1	0	1	0	1	1	0	0	0	2
07:30 AM	1	0	1	0	0	0	0	0	0	1
07:45 AM	2	0	2	0	1	1	0	0	0	3
Total	4	0	4	0	4	4	0	0	0	8
08:00 AM	0	0	0	0	3	3	0	0	0	3
08:15 AM	0	0	0	0	1	1	0	0	0	1
08:30 AM	0	0	0	0	1	1	0	0	0	1
08:45 AM	4	0	4	0	4	4	0	0	0	8
Total	4	0	4	0	9	9	0	0	0	13
Grand Total	8	0	8	0	13	13	0	0	0	21
Apprch %	100	0		0	100		0	0		
Total %	38.1	0	38.1	0	61.9	61.9	0	0	0	

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	1	0	1	0	1	1	0	0	0	2
07:30 AM	1	0	1	0	0	0	0	0	0	1
07:45 AM	**2**	0	**2**	0	1	1	0	0	0	**3**
08:00 AM	0	0	0	0	**3**	**3**	0	0	0	3
Total Volume	4	0	4	0	5	5	0	0	0	9
% App. Total	100	0		0	100		0	0		
PHF	.500	.000	.500	.000	.417	.417	.000	.000	.000	.750

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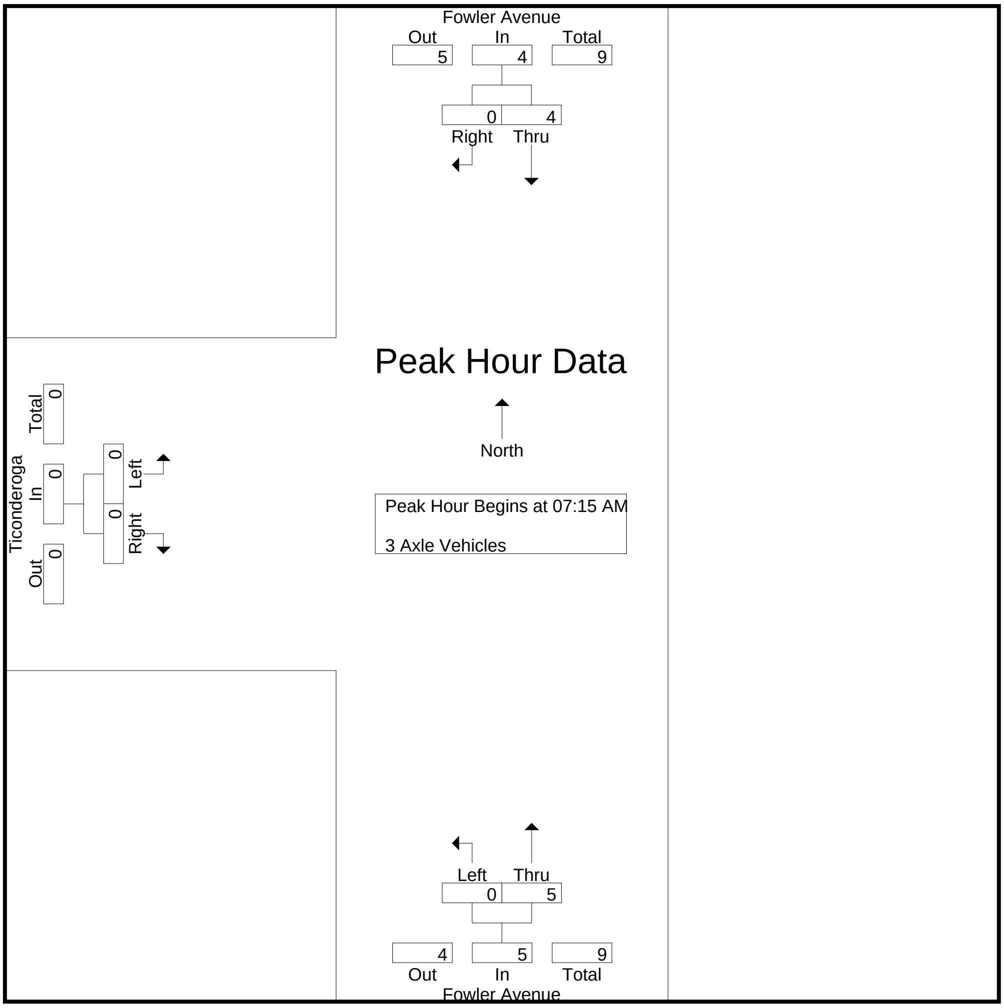

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	1	0	1	0	1	1	0	0	0
+15 mins.	1	0	1	0	0	0	0	0	0
+30 mins.	**2**	0	**2**	0	1	1	0	0	0
+45 mins.	0	0	0	0	**3**	**3**	0	0	0
Total Volume	4	0	4	0	5	5	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.500	.000	.500	.000	.417	.417	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	0	1	0	0	0	0	0	0	1
Total	1	0	1	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	2	2	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	2	0	0	0	2
Grand Total	1	0	1	0	2	2	0	0	0	3
Apprch %	100	0		0	100		0	0		
Total %	33.3	0	33.3	0	66.7	66.7	0	0	0	

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	**1**	0	**1**	0	0	0	0	0	0	**1**
08:00 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	0	0	0	1
% App. Total	100	0		0	0		0	0		
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.000	.250

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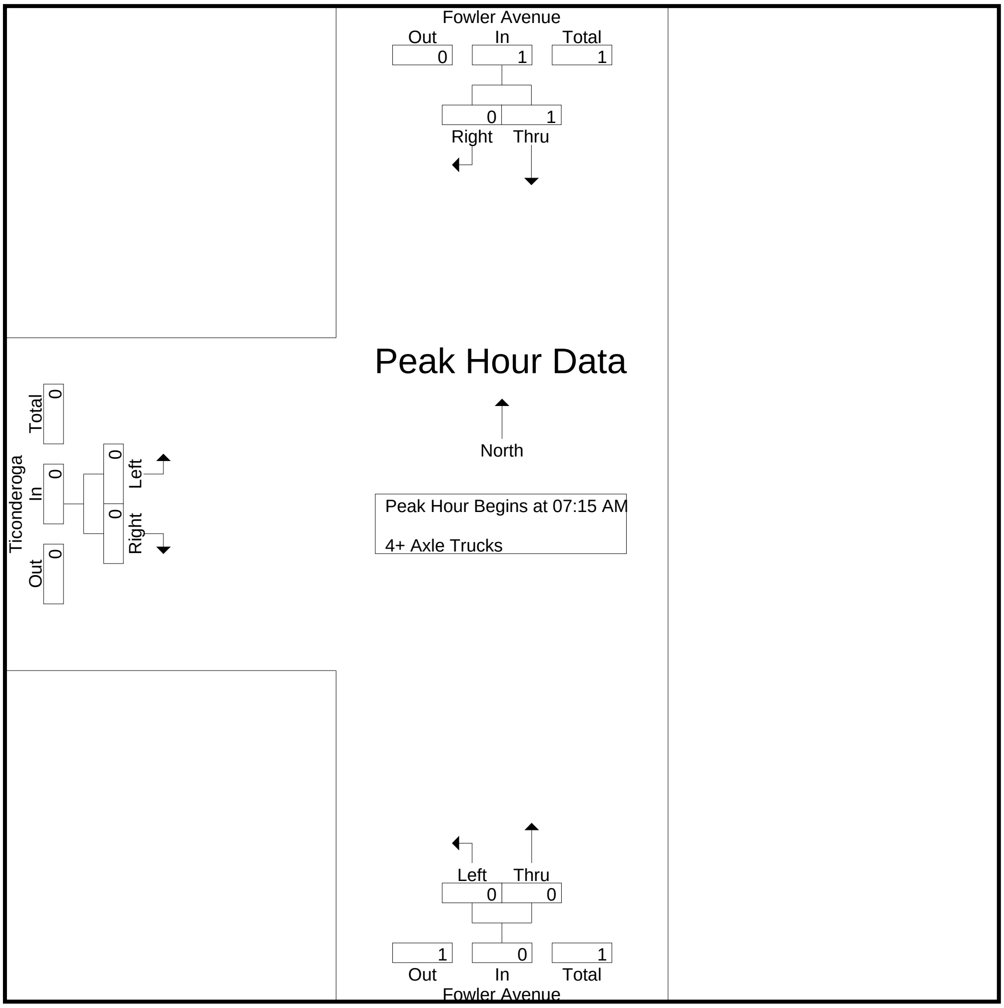

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	**1**	0	**1**	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	0	0	0
% App. Total	100	0		0	0		0	0	
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.000

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	69	0	69	2	65	67	0	2	2	138
04:15 PM	69	1	70	4	48	52	0	1	1	123
04:30 PM	46	0	46	2	63	65	2	2	4	115
04:45 PM	54	1	55	1	62	63	1	1	2	120
Total	238	2	240	9	238	247	3	6	9	496
05:00 PM	55	0	55	0	65	65	2	3	5	125
05:15 PM	53	0	53	2	69	71	3	1	4	128
05:30 PM	53	1	54	0	53	53	0	0	0	107
05:45 PM	44	0	44	2	57	59	1	1	2	105
Total	205	1	206	4	244	248	6	5	11	465
Grand Total	443	3	446	13	482	495	9	11	20	961
Apprch %	99.3	0.7		2.6	97.4		45	55		
Total %	46.1	0.3	46.4	1.4	50.2	51.5	0.9	1.1	2.1	
Passenger Vehicles	435	3	438	13	470	483	9	11	20	941
% Passenger Vehicles	98.2	100	98.2	100	97.5	97.6	100	100	100	97.9
Large 2 Axle Vehicles	6	0	6	0	9	9	0	0	0	15
% Large 2 Axle Vehicles	1.4	0	1.3	0	1.9	1.8	0	0	0	1.6
3 Axle Vehicles	2	0	2	0	3	3	0	0	0	5
% 3 Axle Vehicles	0.5	0	0.4	0	0.6	0.6	0	0	0	0.5
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**69**	0	69	2	**65**	**67**	0	**2**	2	**138**
04:15 PM	69	**1**	**70**	**4**	48	52	0	1	1	123
04:30 PM	46	0	46	2	63	65	**2**	2	**4**	115
04:45 PM	54	1	55	1	62	63	1	1	2	120
Total Volume	238	2	240	9	238	247	3	6	9	496
% App. Total	99.2	0.8		3.6	96.4		33.3	66.7		
PHF	.862	.500	.857	.563	.915	.922	.375	.750	.563	.899

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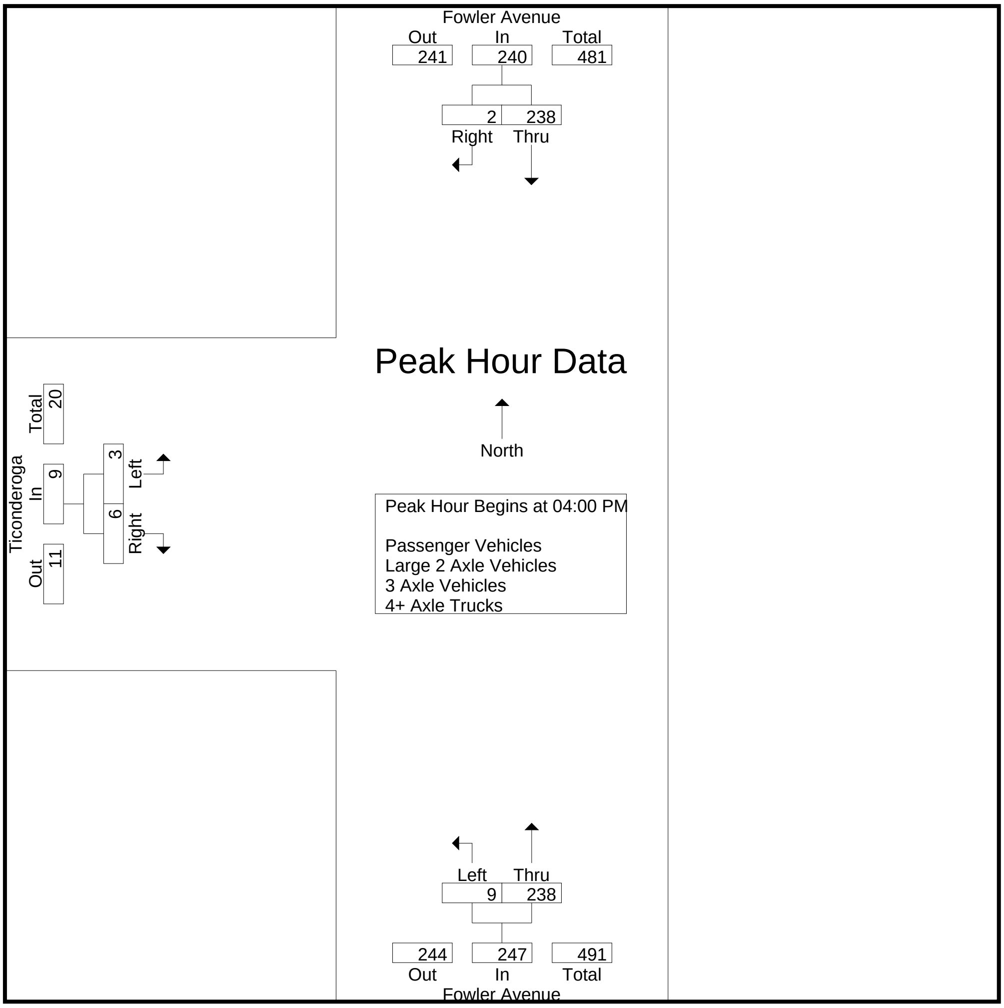

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:30 PM			04:30 PM		
+0 mins.	**69**	0	69	**2**	63	65	2	2	4
+15 mins.	69	**1**	**70**	1	62	63	1	1	2
+30 mins.	46	0	46	0	65	65	2	**3**	**5**
+45 mins.	54	1	55	2	**69**	**71**	**3**	1	4
Total Volume	238	2	240	5	259	264	8	7	15
% App. Total	99.2	0.8		1.9	98.1		53.3	46.7	
PHF	.862	.500	.857	.625	.938	.930	.667	.583	.750

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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	67	0	67	2	64	66	0	2	2	135
04:15 PM	67	1	68	4	48	52	0	1	1	121
04:30 PM	46	0	46	2	63	65	2	2	4	115
04:45 PM	54	1	55	1	62	63	1	1	2	120
Total	234	2	236	9	237	246	3	6	9	491
05:00 PM	55	0	55	0	62	62	2	3	5	122
05:15 PM	50	0	50	2	65	67	3	1	4	121
05:30 PM	52	1	53	0	50	50	0	0	0	103
05:45 PM	44	0	44	2	56	58	1	1	2	104
Total	201	1	202	4	233	237	6	5	11	450
Grand Total	435	3	438	13	470	483	9	11	20	941
Apprch %	99.3	0.7		2.7	97.3		45	55		
Total %	46.2	0.3	46.5	1.4	49.9	51.3	1	1.2	2.1	

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**67**	0	67	2	**64**	**66**	0	**2**	2	**135**
04:15 PM	67	**1**	**68**	**4**	48	52	0	1	1	121
04:30 PM	46	0	46	2	63	65	**2**	2	**4**	115
04:45 PM	54	1	55	1	62	63	1	1	2	120
Total Volume	234	2	236	9	237	246	3	6	9	491
% App. Total	99.2	0.8		3.7	96.3		33.3	66.7		
PHF	.873	.500	.868	.563	.926	.932	.375	.750	.563	.909

AGENDA ITEM NO. 6.

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City of Clovis
N/S: Fowler Avenue
E/W: Ticonderoga
Weather: Clear

File Name : 21_CVS_Fowl_Tic PMC
Site Code : 00322473
Start Date : 5/24/2022
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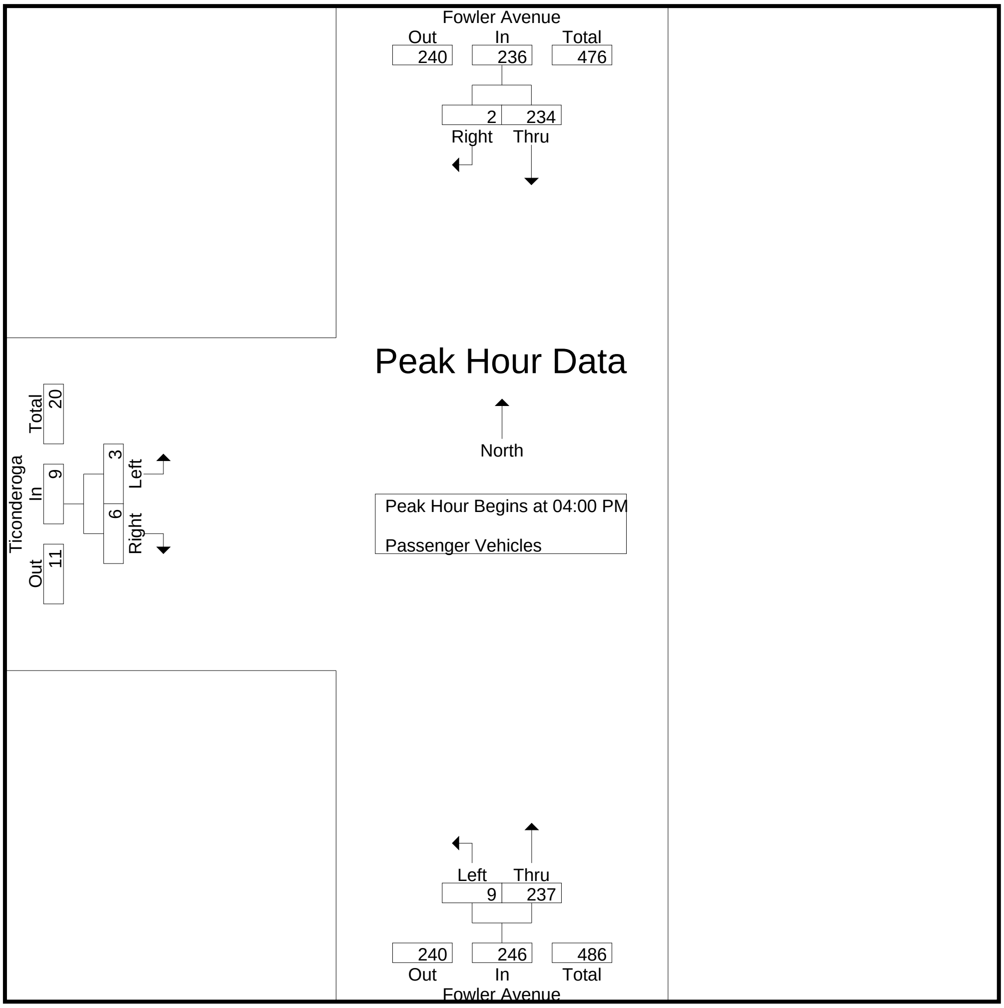

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	**67**	0	67	2	**64**	**66**	0	**2**	2
+15 mins.	67	**1**	**68**	**4**	48	52	0	1	1
+30 mins.	46	0	46	2	63	65	**2**	2	**4**
+45 mins.	54	1	55	1	62	63	1	1	2
Total Volume	234	2	236	9	237	246	3	6	9
% App. Total	99.2	0.8		3.7	96.3		33.3	66.7	
PHF	.873	.500	.868	.563	.926	.932	.375	.750	.563

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City of Clovis
N/S: Fowler Avenue
E/W: Ticonderoga
Weather: Clear

File Name : 21_CVS_Fowl_Tic PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	1	0	1	0	1	1	0	0	0	2
04:15 PM	2	0	2	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	3	0	3	0	1	1	0	0	0	4
05:00 PM	0	0	0	0	2	2	0	0	0	2
05:15 PM	2	0	2	0	3	3	0	0	0	5
05:30 PM	1	0	1	0	2	2	0	0	0	3
05:45 PM	0	0	0	0	1	1	0	0	0	1
Total	3	0	3	0	8	8	0	0	0	11
Grand Total	6	0	6	0	9	9	0	0	0	15
Apprch %	100	0		0	100		0	0		
Total %	40	0	40	0	60	60	0	0	0	

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	1	0	1	0	**1**	**1**	0	0	0	**2**
04:15 PM	**2**	0	**2**	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	3	0	3	0	1	1	0	0	0	4
% App. Total	100	0		0	100		0	0		
PHF	.375	.000	.375	.000	.250	.250	.000	.000	.000	.500

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City of Clovis
N/S: Fowler Avenue
E/W: Ticonderoga
Weather: Clear

File Name : 21_CVS_Fowl_Tic PMC
Site Code : 00322473
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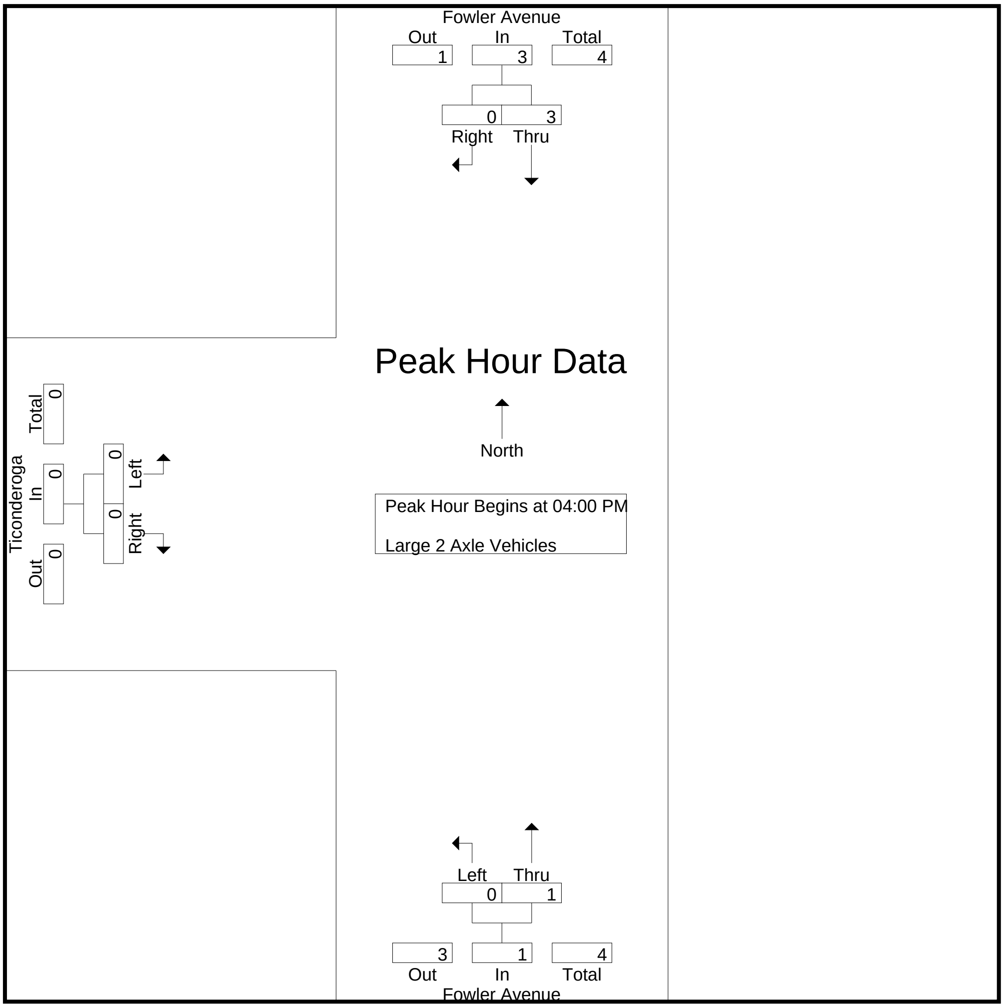

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	1	0	1	0	**1**	**1**	0	0	0
+15 mins.	**2**	0	**2**	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	3	0	3	0	1	1	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.375	.000	.375	.000	.250	.250	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: Ticonderoga
Weather: Clear

File Name : 21_CVS_Fowl_Tic PMC
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Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	1	0	1	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	1	1	0	0	0	1
05:15 PM	1	0	1	0	1	1	0	0	0	2
05:30 PM	0	0	0	0	1	1	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	3	3	0	0	0	4
Grand Total	2	0	2	0	3	3	0	0	0	5
Apprch %	100	0		0	100		0	0		
Total %	40	0	40	0	60	60	0	0	0	

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**1**	0	**1**	0	0	0	0	0	0	**1**
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	0	0	0	1
% App. Total	100	0		0	0		0	0		
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.000	.250

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City of Clovis
N/S: Fowler Avenue
E/W: Ticonderoga
Weather: Clear

File Name : 21_CVS_Fowl_Tic PMC
Site Code : 00322473
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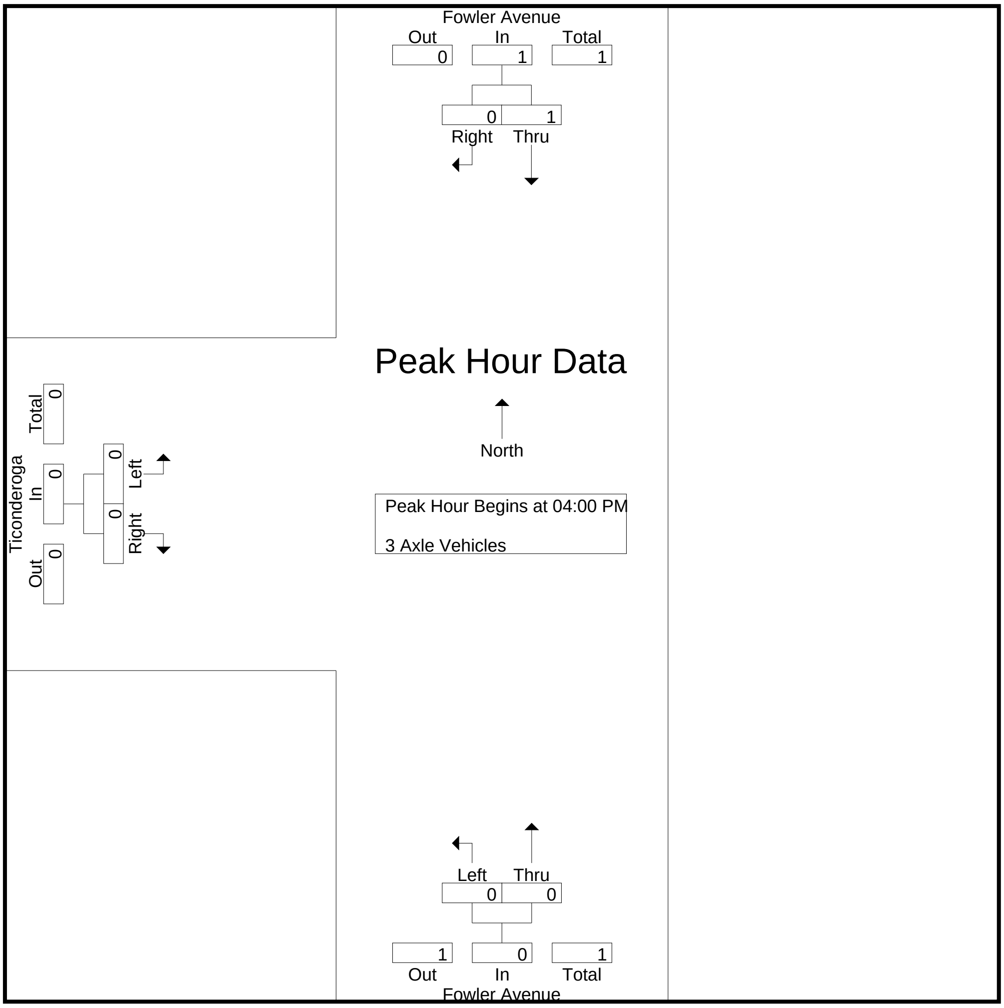

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	**1**	0	**1**	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	0	0	0
% App. Total	100	0		0	0		0	0	
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: Ticonderoga
Weather: Clear

File Name : 21_CVS_Fowl_Tic PMC
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Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

	Fowler Avenue Southbound			Fowler Avenue Northbound			Ticonderoga Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

AGENDA ITEM NO. 6.

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City of Clovis
N/S: Fowler Avenue
E/W: Ticonderoga
Weather: Clear

File Name : 21_CVS_Fowl_Tic PMC
Site Code : 00322473
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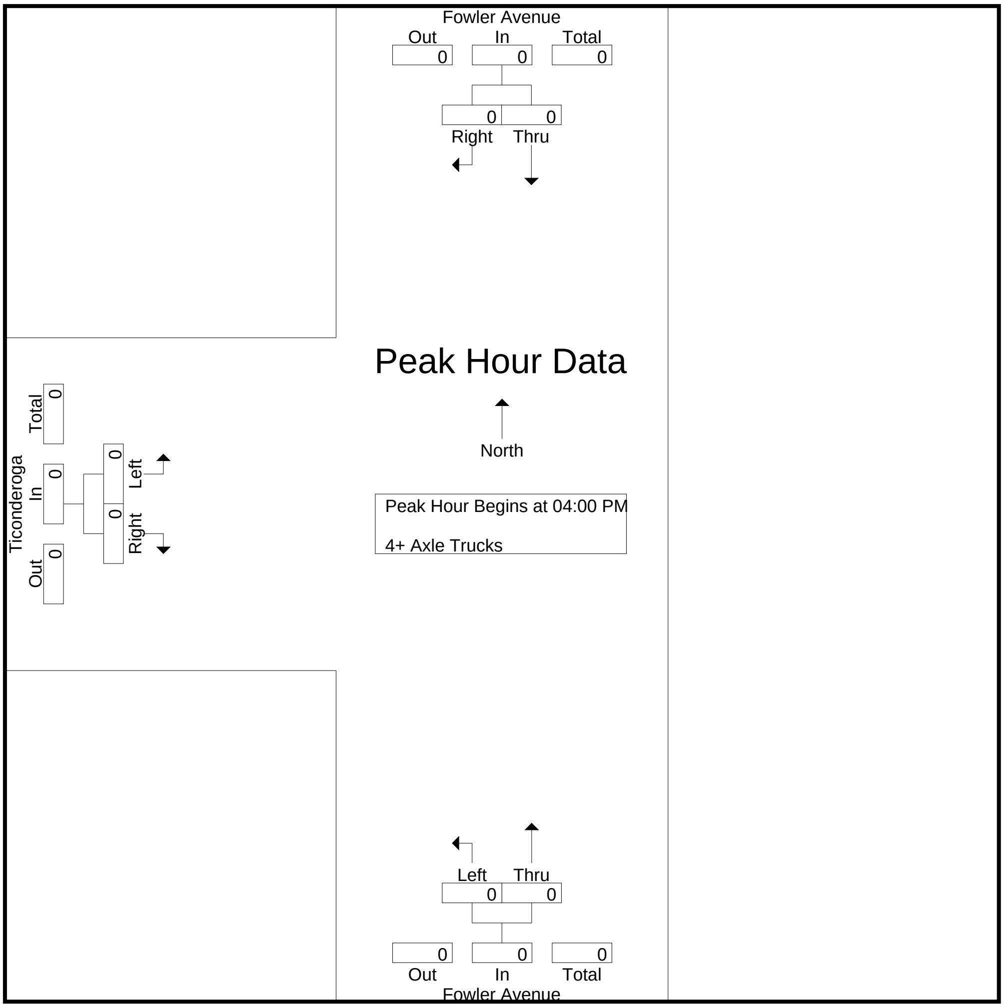

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Fowler Avenue
E/W: Ticonderoga

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Fowler Avenue	East Leg Ticonderoga	South Leg Fowler Avenue	West Leg Ticonderoga	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Fowler Avenue	East Leg Ticonderoga	South Leg Fowler Avenue	West Leg Ticonderoga	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Fowler Avenue
E/W: Ticonderoga

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Fowler Avenue			Westbound Ticonderoga			Northbound Fowler Avenue			Eastbound Ticonderoga			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	1	0	0	0	0	2

	Southbound Fowler Avenue			Westbound Ticonderoga			Northbound Fowler Avenue			Eastbound Ticonderoga			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	2	0	0	0	0	0	0	0	0	0	2

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City of Clovis
N/S: Fowler Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 22_CVS_Fowl_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	34	23	5	62	3	58	62	123	23	14	2	39	1	28	2	31	255
07:15 AM	21	36	6	63	11	91	93	195	55	25	8	88	2	47	10	59	405
07:30 AM	38	30	1	69	8	81	133	222	31	17	6	54	5	63	12	80	425
07:45 AM	74	35	6	115	9	45	100	154	26	26	6	58	2	81	13	96	423
Total	167	124	18	309	31	275	388	694	135	82	22	239	10	219	37	266	1508
08:00 AM	52	24	5	81	8	62	44	114	29	24	14	67	11	90	16	117	379
08:15 AM	42	27	8	77	8	68	35	111	27	17	13	57	4	39	11	54	299
08:30 AM	23	24	2	49	7	54	33	94	26	23	5	54	3	35	11	49	246
08:45 AM	18	25	5	48	13	54	29	96	19	10	4	33	5	36	8	49	226
Total	135	100	20	255	36	238	141	415	101	74	36	211	23	200	46	269	1150
Grand Total	302	224	38	564	67	513	529	1109	236	156	58	450	33	419	83	535	2658
Apprch %	53.5	39.7	6.7		6	46.3	47.7		52.4	34.7	12.9		6.2	78.3	15.5		
Total %	11.4	8.4	1.4	21.2	2.5	19.3	19.9	41.7	8.9	5.9	2.2	16.9	1.2	15.8	3.1	20.1	
Passenger Vehicles	286	220	36	542	67	505	510	1082	234	147	57	438	32	408	82	522	2584
% Passenger Vehicles	94.7	98.2	94.7	96.1	100	98.4	96.4	97.6	99.2	94.2	98.3	97.3	97	97.4	98.8	97.6	97.2
Large 2 Axle Vehicles	9	2	2	13	0	5	7	12	2	1	1	4	1	6	1	8	37
% Large 2 Axle Vehicles	3	0.9	5.3	2.3	0	1	1.3	1.1	0.8	0.6	1.7	0.9	3	1.4	1.2	1.5	1.4
3 Axle Vehicles	3	0	0	3	0	3	8	11	0	4	0	4	0	3	0	3	21
% 3 Axle Vehicles	1	0	0	0.5	0	0.6	1.5	1	0	2.6	0	0.9	0	0.7	0	0.6	0.8
4+ Axle Trucks	4	2	0	6	0	0	4	4	0	4	0	4	0	2	0	2	16
% 4+ Axle Trucks	1.3	0.9	0	1.1	0	0	0.8	0.4	0	2.6	0	0.9	0	0.5	0	0.4	0.6

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	21	**36**	**6**	63	**11**	**91**	93	195	**55**	25	8	**88**	2	47	10	59	405
07:30 AM	38	30	1	69	8	81	**133**	**222**	31	17	6	54	5	63	12	80	**425**
07:45 AM	**74**	35	6	**115**	9	45	100	154	26	**26**	6	58	2	81	13	96	423
08:00 AM	52	24	5	81	8	62	44	114	29	24	**14**	67	**11**	**90**	**16**	**117**	379
Total Volume	185	125	18	328	36	279	370	685	141	92	34	267	20	281	51	352	1632
% App. Total	56.4	38.1	5.5		5.3	40.7	54		52.8	34.5	12.7		5.7	79.8	14.5		
PHF	.625	.868	.750	.713	.818	.766	.695	.771	.641	.885	.607	.759	.455	.781	.797	.752	.960

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City of Clovis
N/S: Fowler Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 22_CVS_Fowl_Shep AMC
Site Code : 00322473
Start Date : 5/24/2022
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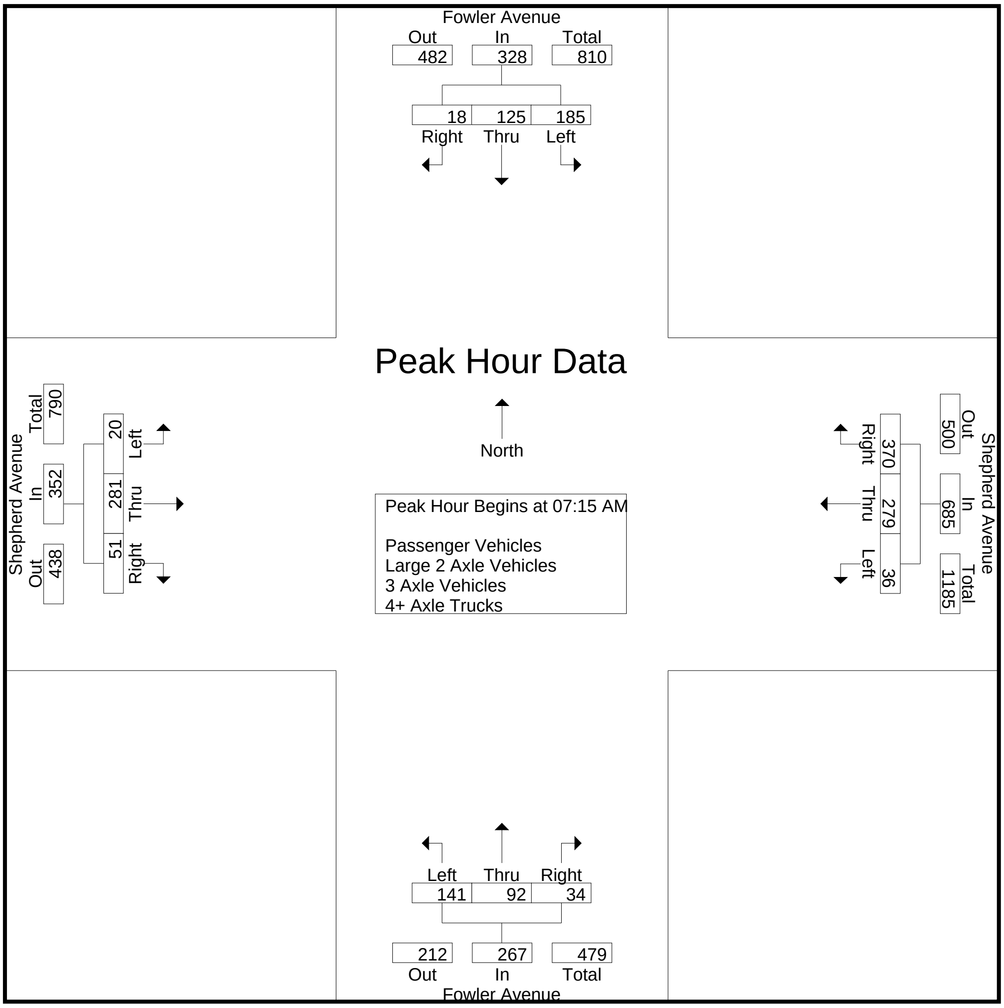

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	38	30	1	69	3	58	62	123	**55**	25	8	**88**	2	47	10	59
+15 mins.	**74**	**35**	6	**115**	**11**	**91**	93	195	31	17	6	54	5	63	12	80
+30 mins.	52	24	5	81	8	81	**133**	**222**	26	**26**	6	58	2	81	13	96
+45 mins.	42	27	**8**	77	9	45	100	154	29	24	**14**	67	**11**	**90**	**16**	**117**
Total Volume	206	116	20	342	31	275	388	694	141	92	34	267	20	281	51	352
% App. Total	60.2	33.9	5.8		4.5	39.6	55.9		52.8	34.5	12.7		5.7	79.8	14.5	
PHF	.696	.829	.625	.743	.705	.755	.729	.782	.641	.885	.607	.759	.455	.781	.797	.752

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City of Clovis
N/S: Fowler Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 22_CVS_Fowl_Shep AMC
Site Code : 00322473
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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	34	23	4	61	3	56	59	118	22	14	2	38	1	26	2	29	246
07:15 AM	19	36	6	61	11	91	89	191	55	25	8	88	1	45	9	55	395
07:30 AM	37	28	1	66	8	81	133	222	30	17	6	53	5	62	12	79	420
07:45 AM	70	35	5	110	9	44	99	152	26	23	6	55	2	80	13	95	412
Total	160	122	16	298	31	272	380	683	133	79	22	234	9	213	36	258	1473
08:00 AM	50	24	5	79	8	62	40	110	29	24	13	66	11	88	16	115	370
08:15 AM	40	27	8	75	8	65	33	106	27	13	13	53	4	38	11	53	287
08:30 AM	22	24	2	48	7	54	32	93	26	21	5	52	3	35	11	49	242
08:45 AM	14	23	5	42	13	52	25	90	19	10	4	33	5	34	8	47	212
Total	126	98	20	244	36	233	130	399	101	68	35	204	23	195	46	264	1111
Grand Total	286	220	36	542	67	505	510	1082	234	147	57	438	32	408	82	522	2584
Apprch %	52.8	40.6	6.6		6.2	46.7	47.1		53.4	33.6	13		6.1	78.2	15.7		
Total %	11.1	8.5	1.4	21	2.6	19.5	19.7	41.9	9.1	5.7	2.2	17	1.2	15.8	3.2	20.2	

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	19	**36**	**6**	61	**11**	**91**	89	191	**55**	**25**	8	**88**	1	45	9	55	395
07:30 AM	37	28	1	66	8	81	**133**	**222**	30	17	6	53	5	62	12	79	**420**
07:45 AM	**70**	35	5	**110**	9	44	99	152	26	23	6	55	2	80	13	95	412
08:00 AM	50	24	5	79	8	62	40	110	29	24	**13**	66	**11**	**88**	**16**	**115**	370
Total Volume	176	123	17	316	36	278	361	675	140	89	33	262	19	275	50	344	1597
% App. Total	55.7	38.9	5.4		5.3	41.2	53.5		53.4	34	12.6		5.5	79.9	14.5		
PHF	.629	.854	.708	.718	.818	.764	.679	.760	.636	.890	.635	.744	.432	.781	.781	.748	.951

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File Name : 22_CVS_Fowl_Shep AMC
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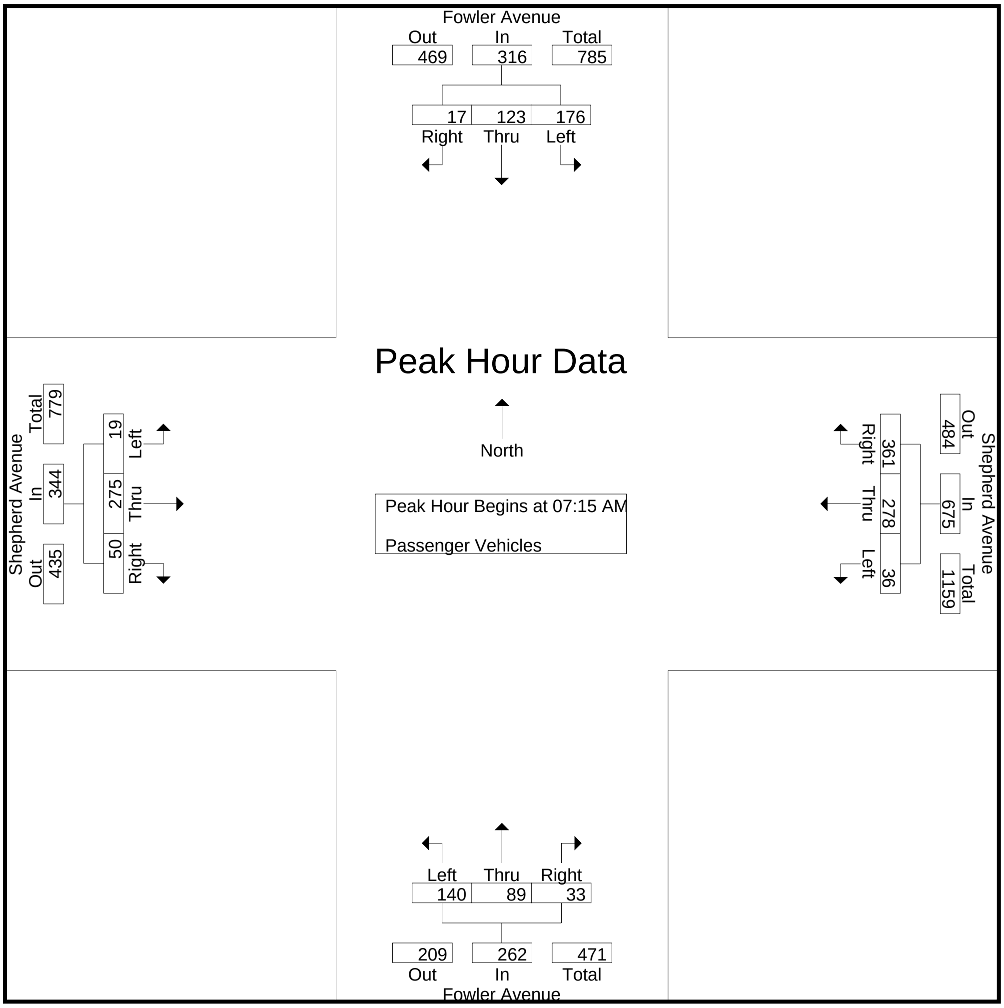

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	19	**36**	**6**	61	**11**	**91**	89	191	**55**	**25**	8	**88**	1	45	9	55
+15 mins.	37	28	1	66	8	81	**133**	**222**	30	17	6	53	5	62	12	79
+30 mins.	**70**	35	5	**110**	9	44	99	152	26	23	6	55	2	80	13	95
+45 mins.	50	24	5	79	8	62	40	110	29	24	**13**	66	**11**	**88**	**16**	**115**
Total Volume	176	123	17	316	36	278	361	675	140	89	33	262	19	275	50	344
% App. Total	55.7	38.9	5.4		5.3	41.2	53.5		53.4	34	12.6		5.5	79.9	14.5	
PHF	.629	.854	.708	.718	.818	.764	.679	.760	.636	.890	.635	.744	.432	.781	.781	.748

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N/S: Fowler Avenue
E/W: Shepherd Avenue
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File Name : 22_CVS_Fowl_Shep AMC
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Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	0	1	1	2	1	0	0	1	0	1	0	1	5
07:15 AM	2	0	0	2	0	0	3	3	0	0	0	0	1	2	1	4	9
07:30 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	1	0	1	3
07:45 AM	1	0	1	2	0	1	0	1	0	0	0	0	0	0	0	0	3
Total	3	1	2	6	0	2	4	6	2	0	0	2	1	4	1	6	20
08:00 AM	2	0	0	2	0	0	1	1	0	0	1	1	0	0	0	0	4
08:15 AM	2	0	0	2	0	1	1	2	0	0	0	0	0	1	0	1	5
08:30 AM	1	0	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
08:45 AM	1	1	0	2	0	2	0	2	0	0	0	0	0	1	0	1	5
Total	6	1	0	7	0	3	3	6	0	1	1	2	0	2	0	2	17
Grand Total	9	2	2	13	0	5	7	12	2	1	1	4	1	6	1	8	37
Apprch %	69.2	15.4	15.4		0	41.7	58.3		50	25	25		12.5	75	12.5		
Total %	24.3	5.4	5.4	35.1	0	13.5	18.9	32.4	5.4	2.7	2.7	10.8	2.7	16.2	2.7	21.6	

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	0	0	**2**	0	0	**3**	**3**	0	0	0	0	**1**	**2**	**1**	**4**	**9**
07:30 AM	0	**1**	0	1	0	0	0	0	**1**	0	0	**1**	0	1	0	1	3
07:45 AM	1	0	**1**	2	0	**1**	0	1	0	0	0	0	0	0	0	0	3
08:00 AM	2	0	0	2	0	0	1	1	0	0	**1**	1	0	0	0	0	4
Total Volume	5	1	1	7	0	1	4	5	1	0	1	2	1	3	1	5	19
% App. Total	71.4	14.3	14.3		0	20	80		50	0	50		20	60	20		
PHF	.625	.250	.250	.875	.000	.250	.333	.417	.250	.000	.250	.500	.250	.375	.250	.313	.528

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City of Clovis
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File Name : 22_CVS_Fowl_Shep AMC
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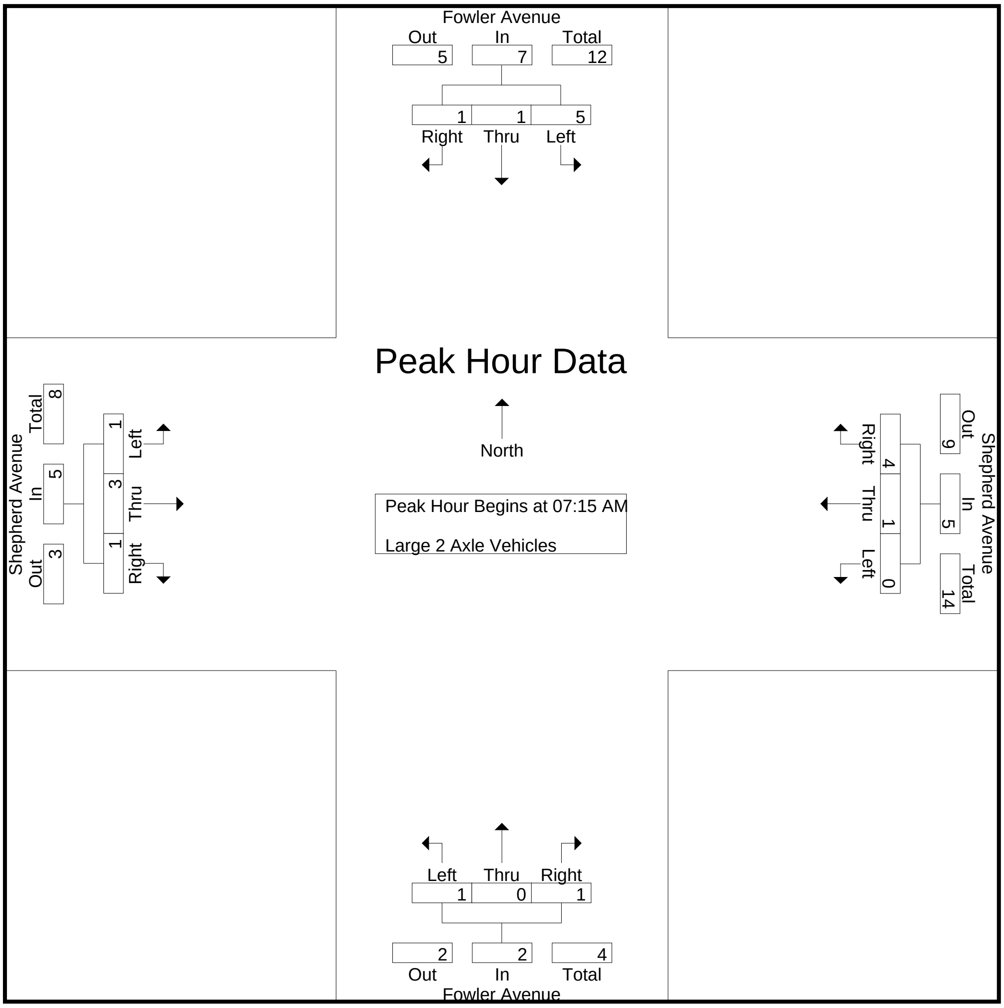

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**2**	0	0	**2**	0	0	**3**	**3**	0	0	0	0	**1**	**2**	**1**	**4**
+15 mins.	0	**1**	0	1	0	0	0	0	**1**	0	0	**1**	0	1	0	1
+30 mins.	1	0	**1**	2	0	**1**	0	1	0	0	0	0	0	0	0	0
+45 mins.	2	0	0	2	0	0	1	1	0	0	**1**	1	0	0	0	0
Total Volume	5	1	1	7	0	1	4	5	1	0	1	2	1	3	1	5
% App. Total	71.4	14.3	14.3		0	20	80		50	0	50		20	60	20	
PHF	.625	.250	.250	.875	.000	.250	.333	.417	.250	.000	.250	.500	.250	.375	.250	.313

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Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
07:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	2	0	0	2	0	0	1	1	0	3	0	3	0	0	0	0	6
Total	2	0	0	2	0	1	3	4	0	3	0	3	0	1	0	1	10
08:00 AM	0	0	0	0	0	0	2	2	0	0	0	0	0	1	0	1	3
08:15 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	1	0	0	1	0	0	2	2	0	0	0	0	0	1	0	1	4
Total	1	0	0	1	0	2	5	7	0	1	0	1	0	2	0	2	11
Grand Total	3	0	0	3	0	3	8	11	0	4	0	4	0	3	0	3	21
Apprch %	100	0	0		0	27.3	72.7		0	100	0		0	100	0		
Total %	14.3	0	0	14.3	0	14.3	38.1	52.4	0	19	0	19	0	14.3	0	14.3	

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	**2**	0	0	**2**	0	0	1	1	0	**3**	0	**3**	0	0	0	0	**6**
08:00 AM	0	0	0	0	0	0	**2**	**2**	0	0	0	0	0	**1**	0	**1**	3
Total Volume	2	0	0	2	0	0	4	4	0	3	0	3	0	1	0	1	10
% App. Total	100	0	0		0	0	100		0	100	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.000	.500	.500	.000	.250	.000	.250	.000	.250	.000	.250	.417

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City of Clovis
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E/W: Shepherd Avenue
Weather: Clear

File Name : 22_CVS_Fowl_Shep AMC
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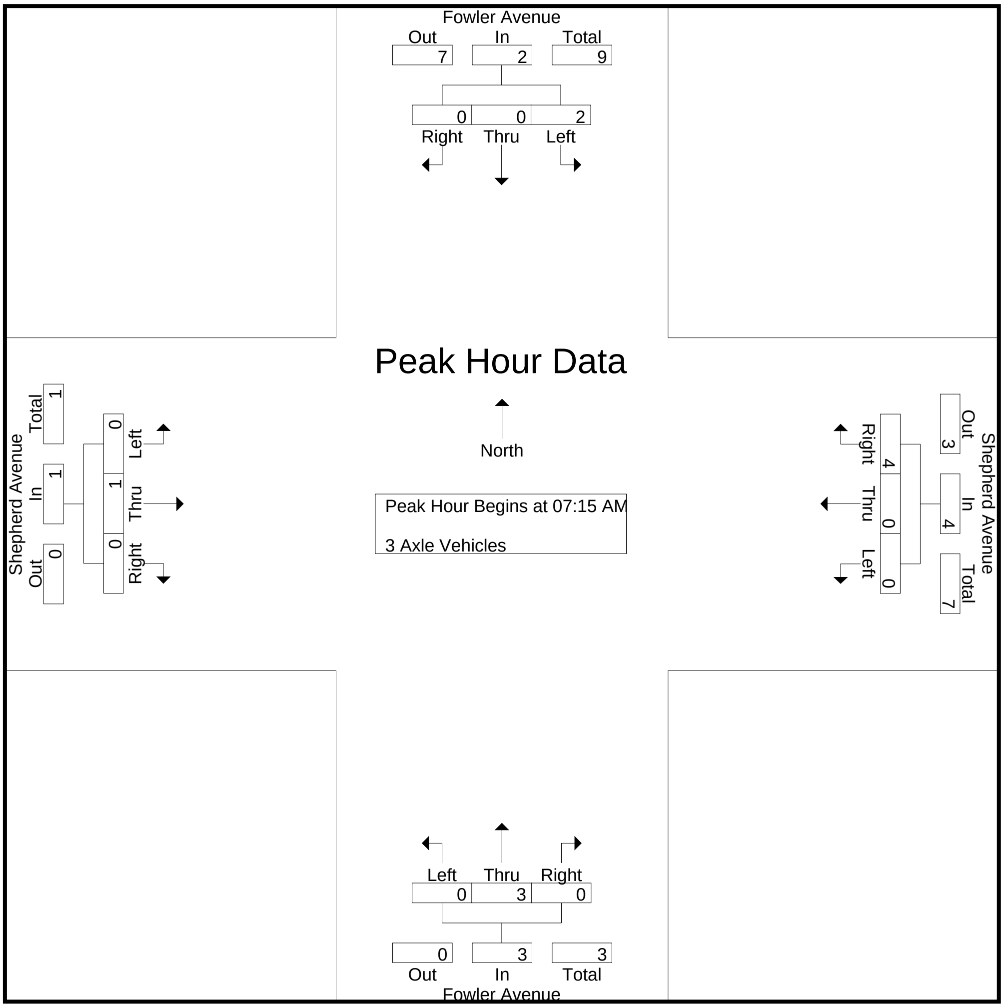

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	**2**	0	0	**2**	0	0	1	1	0	**3**	0	**3**	0	0	0	0
+45 mins.	0	0	0	0	0	0	**2**	**2**	0	0	0	0	0	**1**	0	**1**
Total Volume	2	0	0	2	0	0	4	4	0	3	0	3	0	1	0	1
% App. Total	100	0	0		0	0	100		0	100	0		0	100	0	
PHF	.250	.000	.000	.250	.000	.000	.500	.500	.000	.250	.000	.250	.000	.250	.000	.250

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City of Clovis
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Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	2	1	0	3	0	0	1	1	0	0	0	0	0	1	0	1	5
08:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	2	1	0	3	0	0	2	2	0	0	0	0	0	0	0	0	5
Total	2	1	0	3	0	0	3	3	0	4	0	4	0	1	0	1	11
Grand Total	4	2	0	6	0	0	4	4	0	4	0	4	0	2	0	2	16
Apprch %	66.7	33.3	0		0	0	100		0	100	0		0	100	0		
Total %	25	12.5	0	37.5	0	0	25	25	0	25	0	25	0	12.5	0	12.5	

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	**1**	0	**1**	2
08:00 AM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	1	0	1	2
Total Volume	2	1	0	3	0	0	1	1	0	0	0	0	0	2	0	2	6
% App. Total	66.7	33.3	0		0	0	100		0	0	0		0	100	0		
PHF	.500	.250	.000	.375	.000	.000	.250	.250	.000	.000	.000	.000	.000	.500	.000	.500	.750

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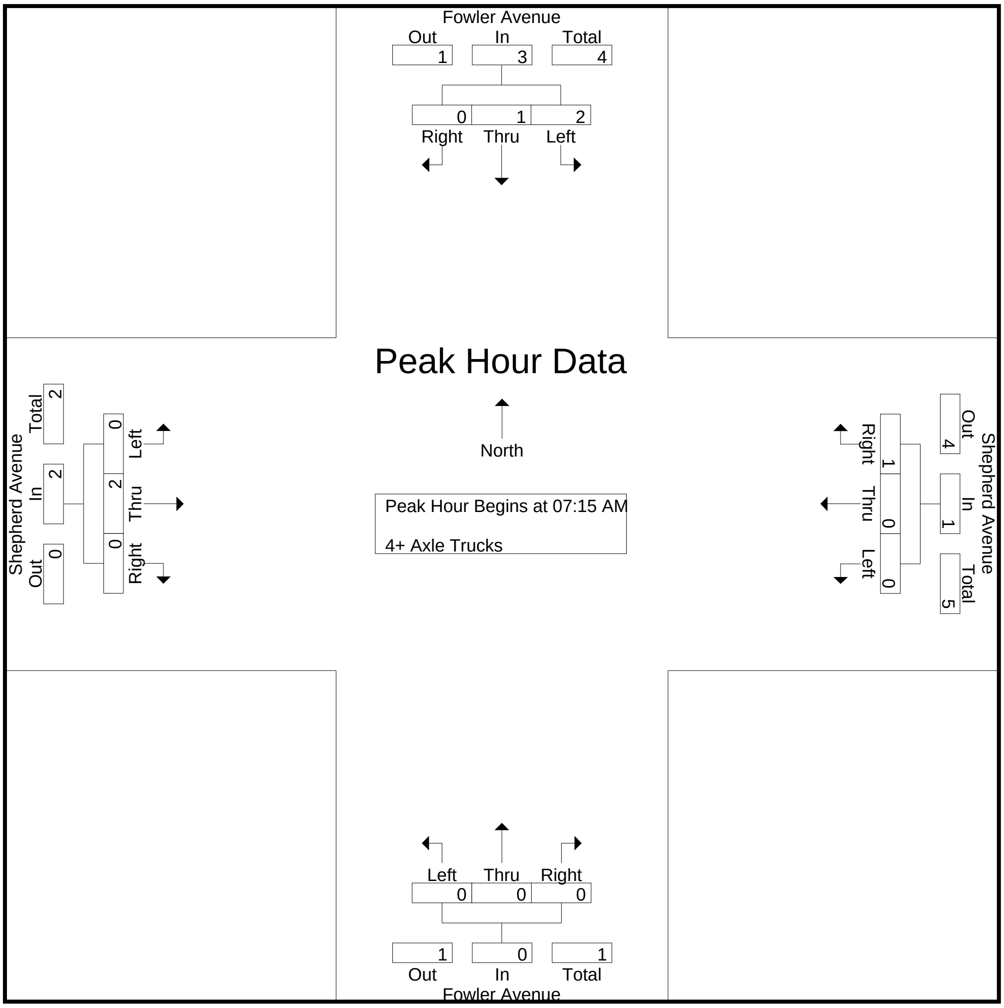

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	**1**	**1**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+45 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	1	0	1
Total Volume	2	1	0	3	0	0	1	1	0	0	0	0	0	2	0	2
% App. Total	66.7	33.3	0		0	0	100		0	0	0		0	100	0	
PHF	.500	.250	.000	.375	.000	.000	.250	.250	.000	.000	.000	.000	.000	.500	.000	.500

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City of Clovis
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	32	36	8	76	5	55	33	93	27	36	18	81	8	63	23	94	344
04:15 PM	37	36	1	74	15	60	21	96	25	32	13	70	1	56	16	73	313
04:30 PM	24	31	6	61	13	58	38	109	14	27	18	59	3	54	16	73	302
04:45 PM	26	22	6	54	15	54	33	102	22	26	16	64	5	62	20	87	307
Total	119	125	21	265	48	227	125	400	88	121	65	274	17	235	75	327	1266
05:00 PM	26	29	2	57	9	62	30	101	25	38	19	82	7	71	26	104	344
05:15 PM	29	31	5	65	18	64	37	119	22	29	20	71	4	73	15	92	347
05:30 PM	29	30	1	60	5	60	28	93	40	26	18	84	7	70	14	91	328
05:45 PM	27	18	2	47	17	60	27	104	18	37	11	66	7	59	18	84	301
Total	111	108	10	229	49	246	122	417	105	130	68	303	25	273	73	371	1320
Grand Total	230	233	31	494	97	473	247	817	193	251	133	577	42	508	148	698	2586
Apprch %	46.6	47.2	6.3		11.9	57.9	30.2		33.4	43.5	23.1		6	72.8	21.2		
Total %	8.9	9	1.2	19.1	3.8	18.3	9.6	31.6	7.5	9.7	5.1	22.3	1.6	19.6	5.7	27	
Passenger Vehicles	226	228	30	484	96	470	243	809	192	246	133	571	41	504	144	689	2553
% Passenger Vehicles	98.3	97.9	96.8	98	99	99.4	98.4	99	99.5	98	100	99	97.6	99.2	97.3	98.7	98.7
Large 2 Axle Vehicles	4	3	1	8	1	3	2	6	1	4	0	5	1	3	4	8	27
% Large 2 Axle Vehicles	1.7	1.3	3.2	1.6	1	0.6	0.8	0.7	0.5	1.6	0	0.9	2.4	0.6	2.7	1.1	1
3 Axle Vehicles	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
% 3 Axle Vehicles	0	0.9	0	0.4	0	0	0	0	0	0	0	0	0	0.2	0	0.1	0.1
4+ Axle Trucks	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	3
% 4+ Axle Trucks	0	0	0	0	0	0	0.8	0.2	0	0.4	0	0.2	0	0	0	0	0.1

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	26	22	**6**	54	15	54	33	102	22	26	16	64	5	62	20	87	307
05:00 PM	26	29	2	57	9	62	30	101	25	**38**	19	82	**7**	71	**26**	**104**	344
05:15 PM	**29**	**31**	5	**65**	**18**	**64**	**37**	**119**	22	29	**20**	71	4	**73**	15	92	**347**
05:30 PM	29	30	1	60	5	60	28	93	**40**	26	18	**84**	7	70	14	91	328
Total Volume	110	112	14	236	47	240	128	415	109	119	73	301	23	276	75	374	1326
% App. Total	46.6	47.5	5.9		11.3	57.8	30.8		36.2	39.5	24.3		6.1	73.8	20.1		
PHF	.948	.903	.583	.908	.653	.938	.865	.872	.681	.783	.913	.896	.821	.945	.721	.899	.955

AGENDA ITEM NO. 6.

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City of Clovis
N/S: Fowler Avenue
E/W: Shepherd Avenue
Weather: Clear

File Name : 22_CVS_Fowl_Shep PMC
Site Code : 00322473
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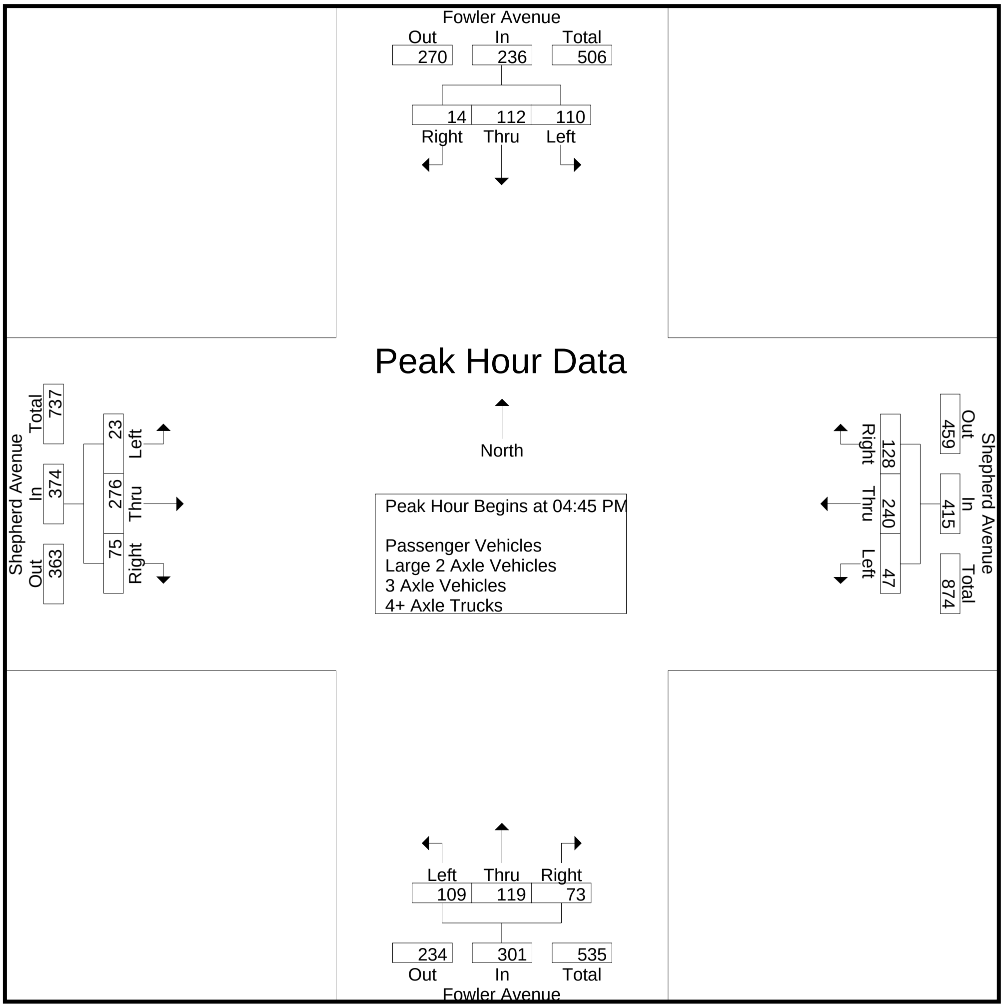

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				05:00 PM				04:45 PM			
+0 mins.	32	**36**	**8**	**76**	13	58	**38**	109	25	**38**	19	82	5	62	20	87
+15 mins.	**37**	36	1	74	15	54	33	102	22	29	**20**	71	**7**	71	**26**	**104**
+30 mins.	24	31	6	61	9	62	30	101	**40**	26	18	**84**	4	**73**	15	92
+45 mins.	26	22	6	54	**18**	**64**	37	**119**	18	37	11	66	7	70	14	91
Total Volume	119	125	21	265	55	238	138	431	105	130	68	303	23	276	75	374
% App. Total	44.9	47.2	7.9		12.8	55.2	32		34.7	42.9	22.4		6.1	73.8	20.1	
PHF	.804	.868	.656	.872	.764	.930	.908	.905	.656	.855	.850	.902	.821	.945	.721	.899

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City of Clovis
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File Name : 22_CVS_Fowl_Shep PMC
Site Code : 00322473
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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	31	35	7	73	5	53	33	91	26	35	18	79	8	60	23	91	334
04:15 PM	35	35	1	71	15	59	21	95	25	32	13	70	1	56	15	72	308
04:30 PM	24	31	6	61	13	58	38	109	14	27	18	59	3	54	15	72	301
04:45 PM	26	22	6	54	15	54	33	102	22	26	16	64	5	61	19	85	305
Total	116	123	20	259	48	224	125	397	87	120	65	272	17	231	72	320	1248
05:00 PM	26	29	2	57	9	62	29	100	25	36	19	80	7	71	26	104	341
05:15 PM	28	30	5	63	17	64	35	116	22	27	20	69	4	73	14	91	339
05:30 PM	29	29	1	59	5	60	27	92	40	26	18	84	7	70	14	91	326
05:45 PM	27	17	2	46	17	60	27	104	18	37	11	66	6	59	18	83	299
Total	110	105	10	225	48	246	118	412	105	126	68	299	24	273	72	369	1305
Grand Total	226	228	30	484	96	470	243	809	192	246	133	571	41	504	144	689	2553
Apprch %	46.7	47.1	6.2		11.9	58.1	30		33.6	43.1	23.3		6	73.1	20.9		
Total %	8.9	8.9	1.2	19	3.8	18.4	9.5	31.7	7.5	9.6	5.2	22.4	1.6	19.7	5.6	27	

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	26	22	**6**	54	15	54	33	102	22	26	16	64	5	61	19	85	305
05:00 PM	26	29	2	57	9	62	29	100	25	**36**	19	80	**7**	71	**26**	**104**	**341**
05:15 PM	28	**30**	5	**63**	**17**	**64**	**35**	**116**	22	27	**20**	69	4	**73**	14	91	339
05:30 PM	**29**	29	1	59	5	60	27	92	**40**	26	18	**84**	7	70	14	91	326
Total Volume	109	110	14	233	46	240	124	410	109	115	73	297	23	275	73	371	1311
% App. Total	46.8	47.2	6		11.2	58.5	30.2		36.7	38.7	24.6		6.2	74.1	19.7		
PHF	.940	.917	.583	.925	.676	.938	.886	.884	.681	.799	.913	.884	.821	.942	.702	.892	.961

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City of Clovis
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File Name : 22_CVS_Fowl_Shep PMC
Site Code : 00322473
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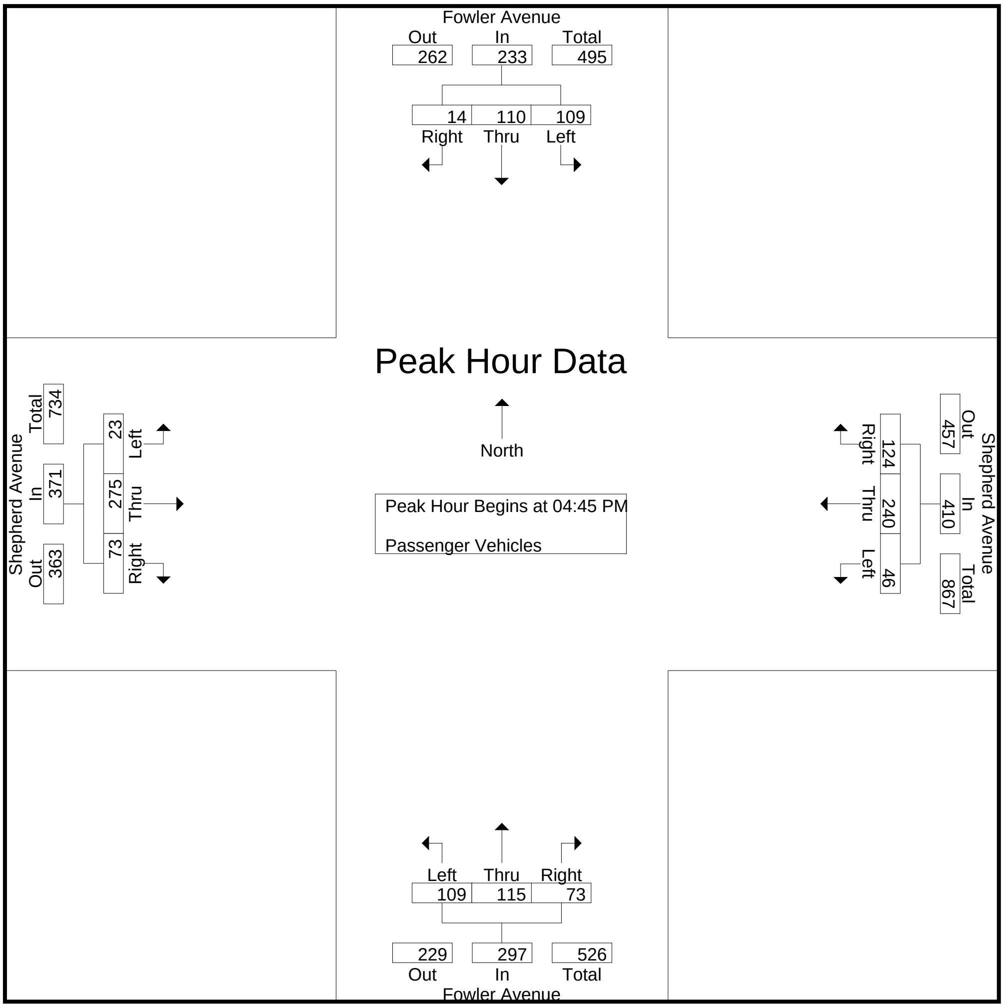

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	26	22	**6**	54	15	54	33	102	22	26	16	64	5	61	19	85
+15 mins.	26	29	2	57	9	62	29	100	25	**36**	19	80	**7**	71	**26**	**104**
+30 mins.	28	**30**	5	**63**	**17**	**64**	**35**	**116**	22	27	**20**	69	4	**73**	14	91
+45 mins.	**29**	29	1	59	5	60	27	92	**40**	26	18	**84**	7	70	14	91
Total Volume	109	110	14	233	46	240	124	410	109	115	73	297	23	275	73	371
% App. Total	46.8	47.2	6		11.2	58.5	30.2		36.7	38.7	24.6		6.2	74.1	19.7	
PHF	.940	.917	.583	.925	.676	.938	.886	.884	.681	.799	.913	.884	.821	.942	.702	.892

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City of Clovis
N/S: Fowler Avenue
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Weather: Clear

File Name : 22_CVS_Fowl_Shep PMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	1	2	0	2	0	2	1	1	0	2	0	2	0	2	8
04:15 PM	2	1	0	3	0	1	0	1	0	0	0	0	0	0	1	1	5
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Total	3	1	1	5	0	3	0	3	1	1	0	2	0	3	3	6	16
05:00 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
05:15 PM	1	0	0	1	1	0	1	2	0	2	0	2	0	0	1	1	6
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	1	2	0	3	1	0	2	3	0	3	0	3	1	0	1	2	11
Grand Total	4	3	1	8	1	3	2	6	1	4	0	5	1	3	4	8	27
Apprch %	50	37.5	12.5		16.7	50	33.3		20	80	0		12.5	37.5	50		
Total %	14.8	11.1	3.7	29.6	3.7	11.1	7.4	22.2	3.7	14.8	0	18.5	3.7	11.1	14.8	29.6	

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**	2
05:00 PM	0	0	0	0	0	0	**1**	1	0	1	0	1	0	0	0	0	2
05:15 PM	**1**	0	0	**1**	**1**	0	1	**2**	0	**2**	0	**2**	0	0	1	1	**6**
05:30 PM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	1	0	2	1	0	2	3	0	3	0	3	0	1	2	3	11
% App. Total	50	50	0		33.3	0	66.7		0	100	0		0	33.3	66.7		
PHF	.250	.250	.000	.500	.250	.000	.500	.375	.000	.375	.000	.375	.000	.250	.500	.375	.458

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City of Clovis
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File Name : 22_CVS_Fowl_Shep PMC
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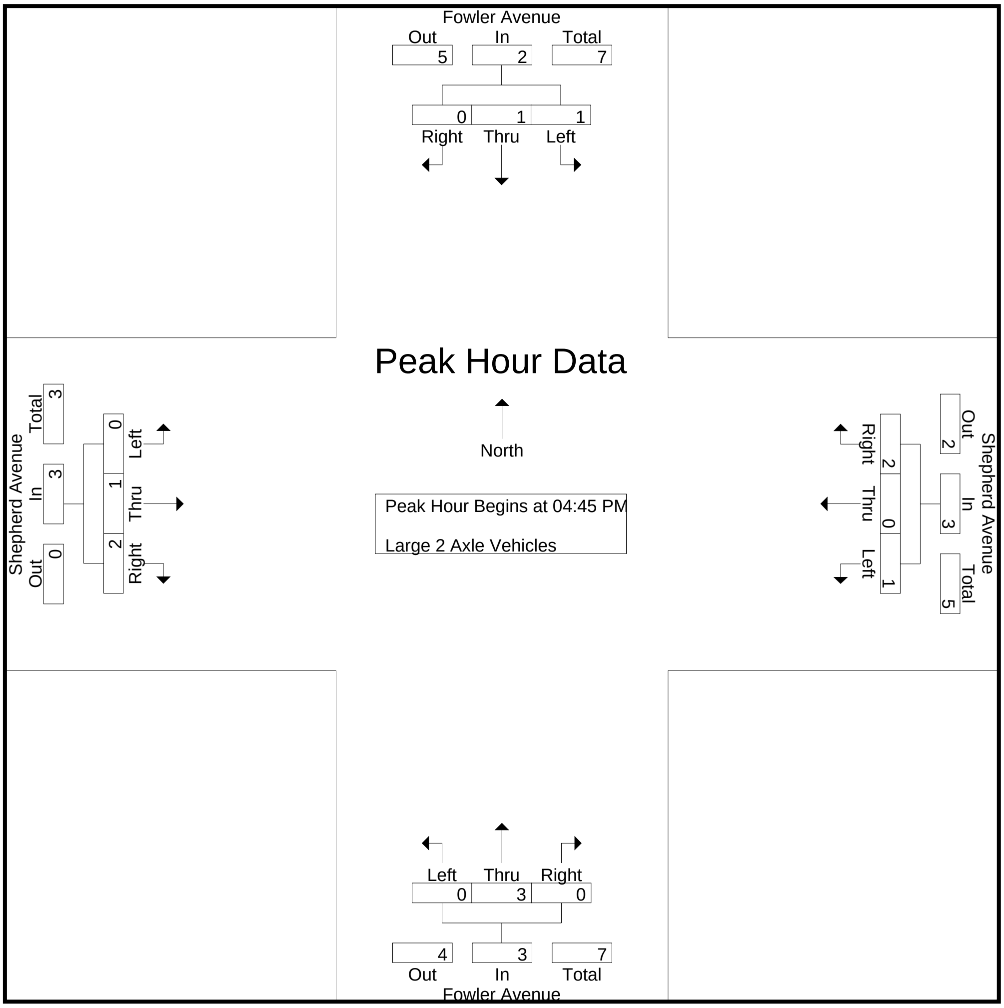

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
+15 mins.	0	0	0	0	0	0	**1**	1	0	1	0	1	0	0	0	0
+30 mins.	**1**	0	0	**1**	**1**	0	1	**2**	0	**2**	0	**2**	0	0	1	1
+45 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	1	0	2	1	0	2	3	0	3	0	3	0	1	2	3
% App. Total	50	50	0		33.3	0	66.7		0	100	0		0	33.3	66.7	
PHF	.250	.250	.000	.500	.250	.000	.500	.375	.000	.375	.000	.375	.000	.250	.500	.375

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City of Clovis
N/S: Fowler Avenue
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File Name : 22_CVS_Fowl_Shep PMC
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Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
Apprch %	0	100	0		0	0	0		0	0	0		0	100	0		
Total %	0	66.7	0	66.7	0	0	0	0	0	0	0	0	0	33.3	0	33.3	

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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City of Clovis
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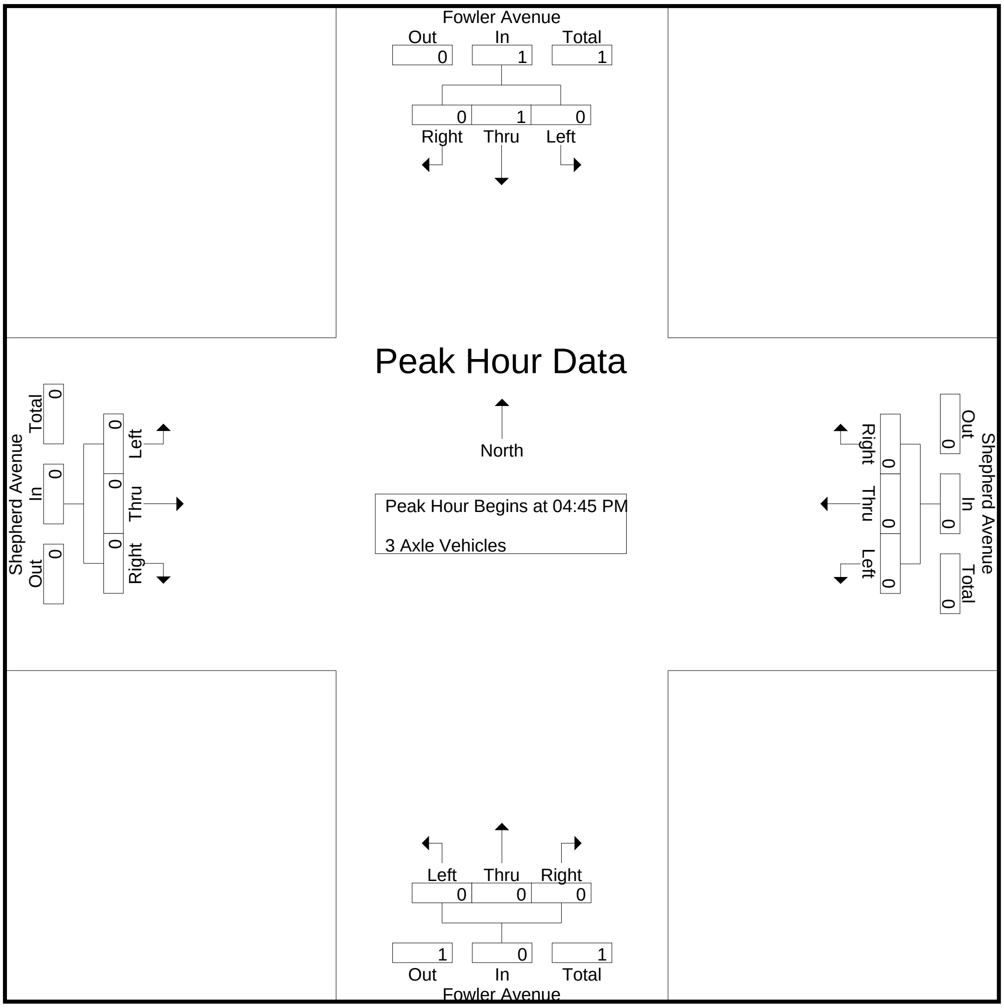

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
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Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	3
Grand Total	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	3
Apprch %	0	0	0		0	0	100		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	66.7	66.7	0	33.3	0	33.3	0	0	0	0	

	Fowler Avenue Southbound				Shepherd Avenue Westbound				Fowler Avenue Northbound				Shepherd Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	3
% App. Total	0	0	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.500	.000	.250	.000	.250	.000	.000	.000	.000	.750

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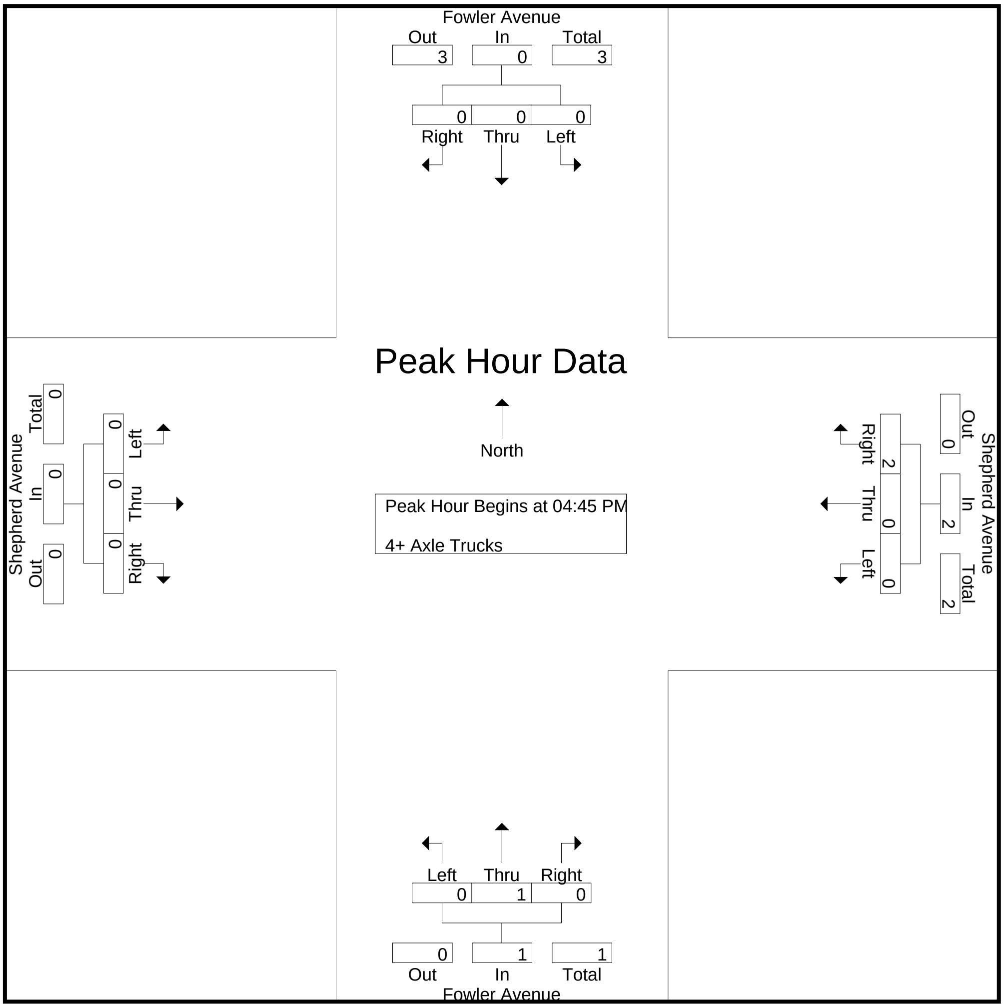

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+30 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0
% App. Total	0	0	0		0	0	100		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.500	.500	.000	.250	.000	.250	.000	.000	.000	.000

Location: Clovis
N/S: Fowler Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Fowler Avenue	East Leg Shepherd Avenue	South Leg Fowler Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Fowler Avenue	East Leg Shepherd Avenue	South Leg Fowler Avenue	West Leg Shepherd Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	1	0	0	1	2
TOTAL VOLUMES:	1	0	0	2	3

Location: Clovis
N/S: Fowler Avenue
E/W: Shepherd Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Fowler Avenue			Westbound Shepherd Avenue			Northbound Fowler Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
8:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	2
TOTAL VOLUMES:	0	1	0	1	1	0	0	0	0	0	2	0	5

	Southbound Fowler Avenue			Westbound Shepherd Avenue			Northbound Fowler Avenue			Eastbound Shepherd Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

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City of Clovis
N/S: Fowler Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 23_CVS_Fowl_Tea AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	45	1	46	2	2	1	5	4	29	2	35	1	0	2	3	89
07:15 AM	6	60	1	67	8	5	1	14	1	29	1	31	1	2	1	4	116
07:30 AM	2	60	6	68	4	6	0	10	0	39	1	40	1	1	3	5	123
07:45 AM	9	50	1	60	0	0	5	5	1	41	2	44	0	4	3	7	116
Total	17	215	9	241	14	13	7	34	6	138	6	150	3	7	9	19	444
08:00 AM	4	56	2	62	9	1	12	22	1	43	2	46	2	1	0	3	133
08:15 AM	4	72	1	77	4	1	13	18	1	41	2	44	1	0	0	1	140
08:30 AM	1	58	2	61	3	0	5	8	2	38	1	41	0	0	0	0	110
08:45 AM	2	48	1	51	2	2	4	8	2	33	0	35	0	2	2	4	98
Total	11	234	6	251	18	4	34	56	6	155	5	166	3	3	2	8	481
Grand Total	28	449	15	492	32	17	41	90	12	293	11	316	6	10	11	27	925
Apprch %	5.7	91.3	3		35.6	18.9	45.6		3.8	92.7	3.5		22.2	37	40.7		
Total %	3	48.5	1.6	53.2	3.5	1.8	4.4	9.7	1.3	31.7	1.2	34.2	0.6	1.1	1.2	2.9	
Passenger Vehicles	27	441	15	483	32	17	40	89	12	286	11	309	6	10	11	27	908
% Passenger Vehicles	96.4	98.2	100	98.2	100	100	97.6	98.9	100	97.6	100	97.8	100	100	100	100	98.2
Large 2 Axle Vehicles	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
% Large 2 Axle Vehicles	0	0.7	0	0.6	0	0	0	0	0	1.4	0	1.3	0	0	0	0	0.8
3 Axle Vehicles	1	2	0	3	0	0	1	1	0	2	0	2	0	0	0	0	6
% 3 Axle Vehicles	3.6	0.4	0	0.6	0	0	2.4	1.1	0	0.7	0	0.6	0	0	0	0	0.6
4+ Axle Trucks	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
% 4+ Axle Trucks	0	0.7	0	0.6	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0.4

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	60	**6**	68	4	**6**	0	10	0	39	1	40	1	1	**3**	5	123
07:45 AM	**9**	50	1	60	0	0	5	5	**1**	41	**2**	44	0	**4**	3	**7**	116
08:00 AM	4	56	2	62	**9**	1	12	**22**	1	**43**	2	**46**	**2**	1	0	3	133
08:15 AM	4	**72**	1	**77**	4	1	**13**	18	1	41	2	44	1	0	0	1	**140**
Total Volume	19	238	10	267	17	8	30	55	3	164	7	174	4	6	6	16	512
% App. Total	7.1	89.1	3.7		30.9	14.5	54.5		1.7	94.3	4		25	37.5	37.5		
PHF	.528	.826	.417	.867	.472	.333	.577	.625	.750	.953	.875	.946	.500	.375	.500	.571	.914

City of Clovis
N/S: Fowler Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 23_CVS_Fowl_Tea AMC
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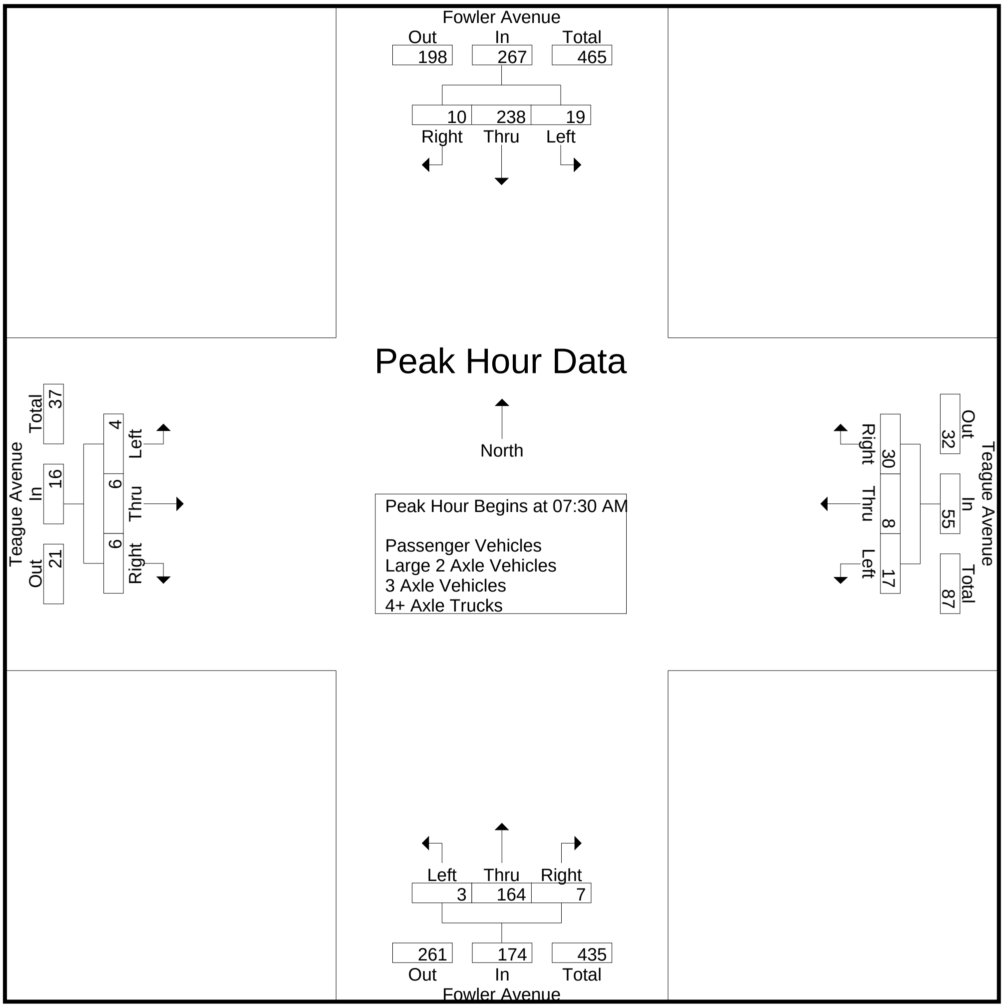

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				07:45 AM				07:00 AM			
+0 mins.	2	60	**6**	68	**9**	1	12	**22**	1	41	**2**	44	**1**	0	2	3
+15 mins.	**9**	50	1	60	4	1	**13**	18	1	**43**	2	**46**	1	2	1	4
+30 mins.	4	56	2	62	3	0	5	8	1	41	2	44	1	1	**3**	5
+45 mins.	4	**72**	1	**77**	2	**2**	4	8	**2**	38	1	41	0	**4**	3	**7**
Total Volume	19	238	10	267	18	4	34	56	5	163	7	175	3	7	9	19
% App. Total	7.1	89.1	3.7		32.1	7.1	60.7		2.9	93.1	4		15.8	36.8	47.4	
PHF	.528	.826	.417	.867	.500	.500	.654	.636	.625	.948	.875	.951	.750	.438	.750	.679

City of Clovis
N/S: Fowler Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 23_CVS_Fowl_Tea AMC
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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	44	1	45	2	2	1	5	4	27	2	33	1	0	2	3	86
07:15 AM	6	60	1	67	8	5	1	14	1	29	1	31	1	2	1	4	116
07:30 AM	2	59	6	67	4	6	0	10	0	37	1	38	1	1	3	5	120
07:45 AM	9	50	1	60	0	0	5	5	1	41	2	44	0	4	3	7	116
Total	17	213	9	239	14	13	7	34	6	134	6	146	3	7	9	19	438
08:00 AM	4	55	2	61	9	1	12	22	1	43	2	46	2	1	0	3	132
08:15 AM	4	71	1	76	4	1	13	18	1	38	2	41	1	0	0	1	136
08:30 AM	0	55	2	57	3	0	4	7	2	38	1	41	0	0	0	0	105
08:45 AM	2	47	1	50	2	2	4	8	2	33	0	35	0	2	2	4	97
Total	10	228	6	244	18	4	33	55	6	152	5	163	3	3	2	8	470
Grand Total	27	441	15	483	32	17	40	89	12	286	11	309	6	10	11	27	908
Apprch %	5.6	91.3	3.1		36	19.1	44.9		3.9	92.6	3.6		22.2	37	40.7		
Total %	3	48.6	1.7	53.2	3.5	1.9	4.4	9.8	1.3	31.5	1.2	34	0.7	1.1	1.2	3	

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	59	**6**	67	4	**6**	0	10	0	37	1	38	1	1	**3**	5	120
07:45 AM	**9**	50	1	60	0	0	5	5	**1**	41	**2**	44	0	**4**	3	**7**	116
08:00 AM	4	55	2	61	**9**	1	12	**22**	1	**43**	2	**46**	**2**	1	0	3	132
08:15 AM	4	**71**	1	**76**	4	1	**13**	18	1	38	2	41	1	0	0	1	**136**
Total Volume	19	235	10	264	17	8	30	55	3	159	7	169	4	6	6	16	504
% App. Total	7.2	89	3.8		30.9	14.5	54.5		1.8	94.1	4.1		25	37.5	37.5		
PHF	.528	.827	.417	.868	.472	.333	.577	.625	.750	.924	.875	.918	.500	.375	.500	.571	.926

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City of Clovis
N/S: Fowler Avenue
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Weather: Clear

File Name : 23_CVS_Fowl_Tea AMC
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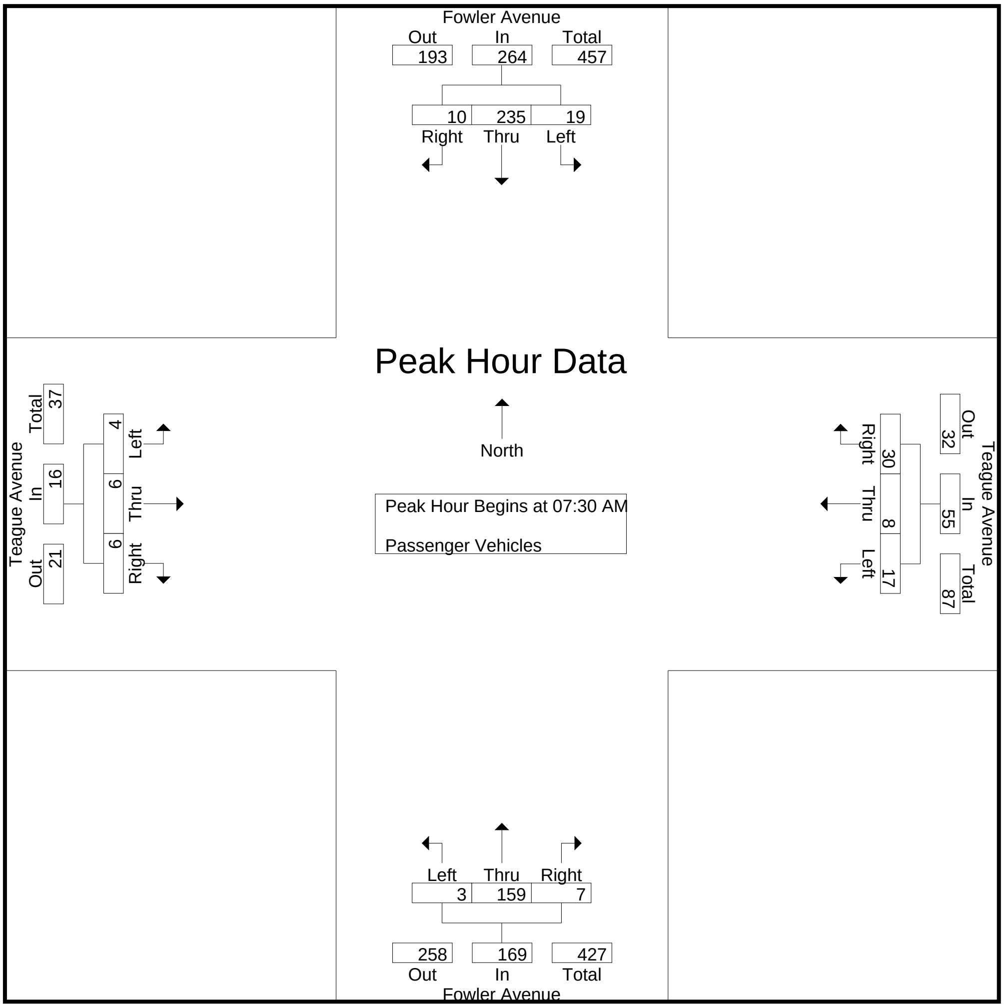

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	2	59	**6**	67	4	**6**	0	10	0	37	1	38	1	1	**3**	5
+15 mins.	**9**	50	1	60	0	0	5	5	**1**	41	**2**	44	0	**4**	3	**7**
+30 mins.	4	55	2	61	**9**	1	12	**22**	1	**43**	2	**46**	**2**	1	0	3
+45 mins.	4	**71**	1	**76**	4	1	**13**	18	1	38	2	41	1	0	0	1
Total Volume	19	235	10	264	17	8	30	55	3	159	7	169	4	6	6	16
% App. Total	7.2	89	3.8		30.9	14.5	54.5		1.8	94.1	4.1		25	37.5	37.5	
PHF	.528	.827	.417	.868	.472	.333	.577	.625	.750	.924	.875	.918	.500	.375	.500	.571

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City of Clovis
N/S: Fowler Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 23_CVS_Fowl_Tea AMC
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Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Grand Total	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	42.9	0	42.9	0	0	0	0	0	57.1	0	57.1	0	0	0	0	

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**2**
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.375

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City of Clovis
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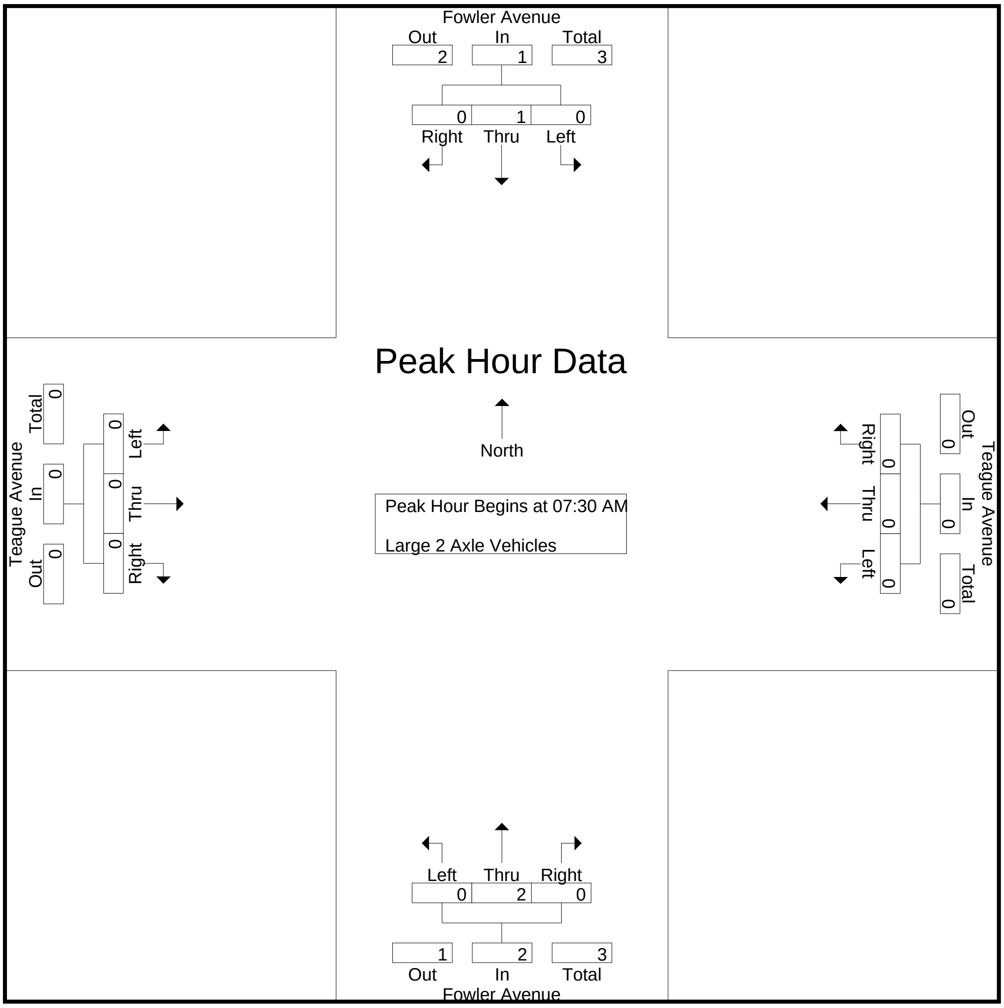

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 23_CVS_Fowl_Tea AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	1	1	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	2	0	3	0	0	1	1	0	0	0	0	0	0	0	0	4
Grand Total	1	2	0	3	0	0	1	1	0	2	0	2	0	0	0	0	6
Apprch %	33.3	66.7	0		0	0	100		0	100	0		0	0	0		
Total %	16.7	33.3	0	50	0	0	16.7	16.7	0	33.3	0	33.3	0	0	0	0	

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**2**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.375

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City of Clovis
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E/W: Teague Avenue
Weather: Clear

File Name : 23_CVS_Fowl_Tea AMC
Site Code : 00322473
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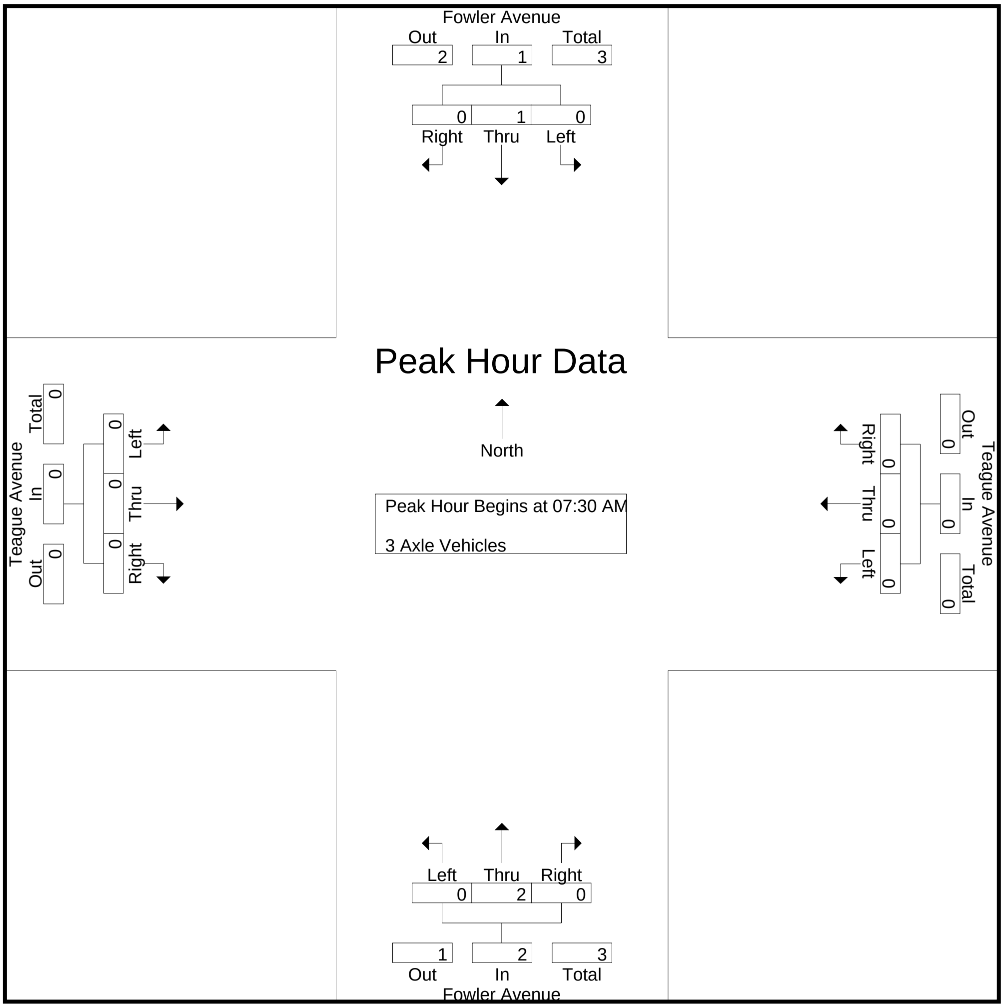

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Grand Total	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	75	0	75	0	0	0	0	0	25	0	25	0	0	0	0	

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**2**
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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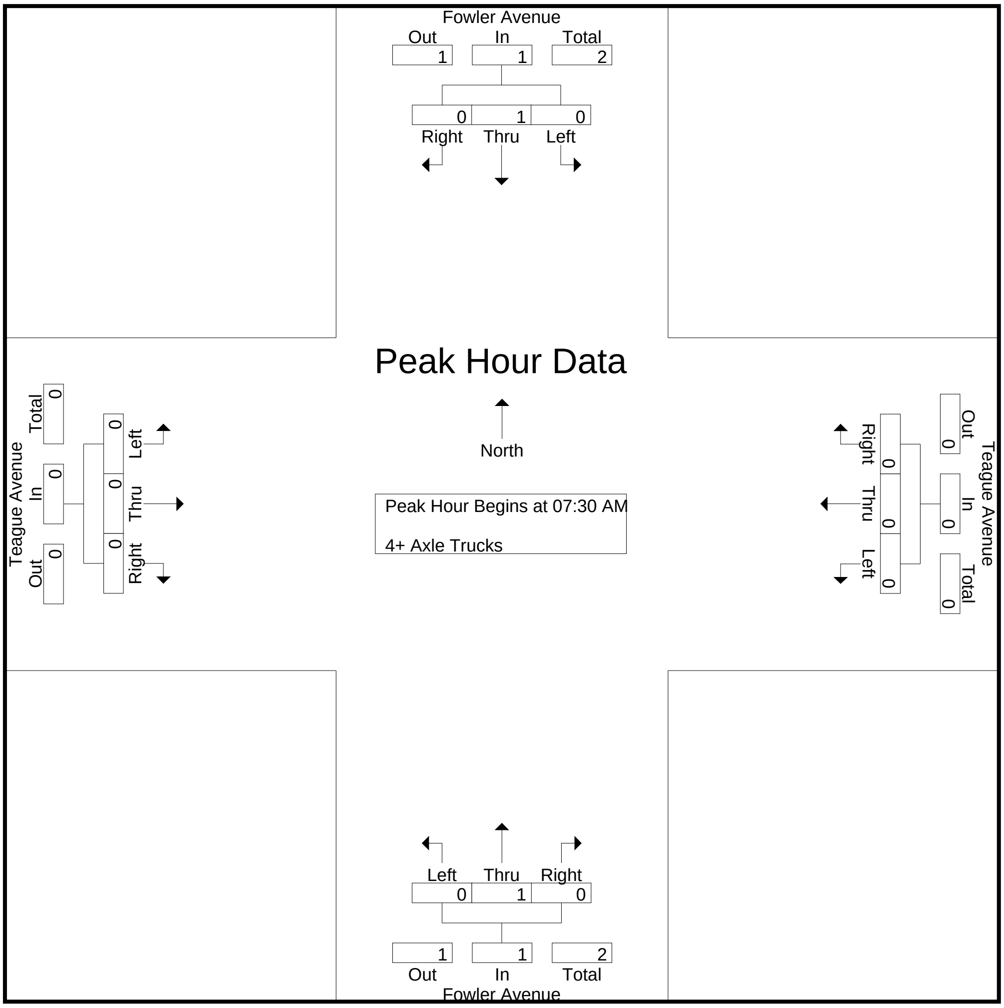

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

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File Name : 23_CVS_Fowl_Tea PMC
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	84	0	84	1	2	4	7	2	71	4	77	1	1	0	2	170
04:15 PM	1	59	4	64	1	0	3	4	1	83	5	89	1	0	0	1	158
04:30 PM	1	67	5	73	1	0	4	5	0	56	2	58	1	2	0	3	139
04:45 PM	1	57	1	59	1	2	2	5	4	78	2	84	1	1	2	4	152
Total	3	267	10	280	4	4	13	21	7	288	13	308	4	4	2	10	619
05:00 PM	2	62	2	66	0	2	4	6	3	86	1	90	0	1	0	1	163
05:15 PM	1	66	2	69	2	3	3	8	2	66	4	72	2	1	0	3	152
05:30 PM	5	62	1	68	2	0	6	8	0	79	6	85	0	0	3	3	164
05:45 PM	2	45	4	51	1	1	3	5	2	54	1	57	3	2	0	5	118
Total	10	235	9	254	5	6	16	27	7	285	12	304	5	4	3	12	597
Grand Total	13	502	19	534	9	10	29	48	14	573	25	612	9	8	5	22	1216
Apprch %	2.4	94	3.6		18.8	20.8	60.4		2.3	93.6	4.1		40.9	36.4	22.7		
Total %	1.1	41.3	1.6	43.9	0.7	0.8	2.4	3.9	1.2	47.1	2.1	50.3	0.7	0.7	0.4	1.8	
Passenger Vehicles	13	494	17	524	9	10	28	47	14	567	25	606	8	8	4	20	1197
% Passenger Vehicles	100	98.4	89.5	98.1	100	100	96.6	97.9	100	99	100	99	88.9	100	80	90.9	98.4
Large 2 Axle Vehicles	0	5	2	7	0	0	0	0	0	6	0	6	1	0	1	2	15
% Large 2 Axle Vehicles	0	1	10.5	1.3	0	0	0	0	0	1	0	1	11.1	0	20	9.1	1.2
3 Axle Vehicles	0	3	0	3	0	0	1	1	0	0	0	0	0	0	0	0	4
% 3 Axle Vehicles	0	0.6	0	0.6	0	0	3.4	2.1	0	0	0	0	0	0	0	0	0.3
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	57	1	59	1	2	2	5	**4**	78	2	84	1	**1**	2	**4**	152
05:00 PM	2	62	**2**	66	0	2	4	6	3	**86**	1	**90**	0	1	0	1	163
05:15 PM	1	**66**	2	**69**	**2**	**3**	3	**8**	2	66	4	72	**2**	1	0	3	152
05:30 PM	**5**	62	1	68	2	0	**6**	8	0	79	**6**	85	0	0	**3**	3	**164**
Total Volume	9	247	6	262	5	7	15	27	9	309	13	331	3	3	5	11	631
% App. Total	3.4	94.3	2.3		18.5	25.9	55.6		2.7	93.4	3.9		27.3	27.3	45.5		
PHF	.450	.936	.750	.949	.625	.583	.625	.844	.563	.898	.542	.919	.375	.750	.417	.688	.962

City of Clovis
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File Name : 23_CVS_Fowl_Tea PMC
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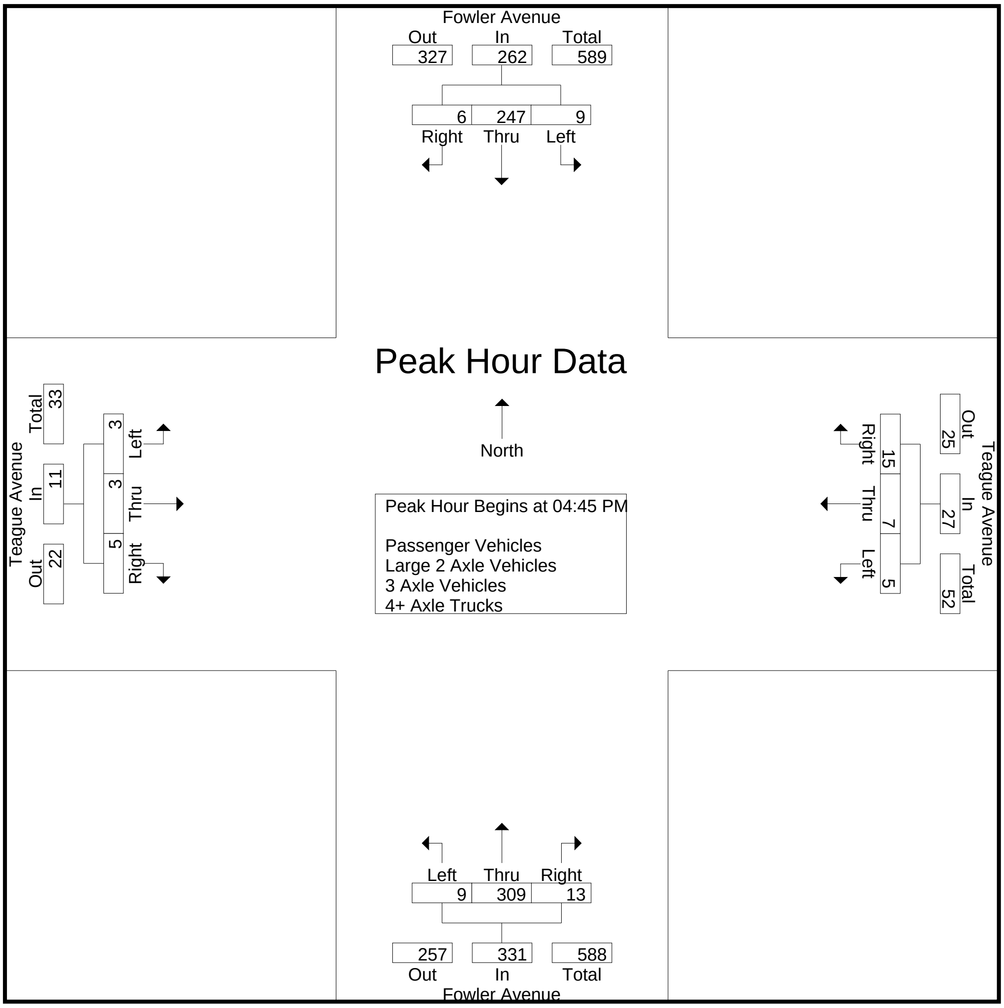

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				04:45 PM				05:00 PM			
+0 mins.	0	**84**	0	**84**	1	2	2	5	**4**	78	2	84	0	1	0	1
+15 mins.	**1**	59	4	64	0	2	4	6	3	**86**	1	**90**	2	1	0	3
+30 mins.	1	67	**5**	73	**2**	**3**	3	**8**	2	66	4	72	0	0	**3**	3
+45 mins.	1	57	1	59	2	0	**6**	8	0	79	**6**	85	**3**	**2**	0	**5**
Total Volume	3	267	10	280	5	7	15	27	9	309	13	331	5	4	3	12
% App. Total	1.1	95.4	3.6		18.5	25.9	55.6		2.7	93.4	3.9		41.7	33.3	25	
PHF	.750	.795	.500	.833	.625	.583	.625	.844	.563	.898	.542	.919	.417	.500	.250	.600

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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	83	0	83	1	2	4	7	2	69	4	75	1	1	0	2	167
04:15 PM	1	58	4	63	1	0	3	4	1	82	5	88	1	0	0	1	156
04:30 PM	1	67	4	72	1	0	4	5	0	56	2	58	1	2	0	3	138
04:45 PM	1	54	1	56	1	2	2	5	4	77	2	83	1	1	1	3	147
Total	3	262	9	274	4	4	13	21	7	284	13	304	4	4	1	9	608
05:00 PM	2	62	2	66	0	2	3	5	3	85	1	89	0	1	0	1	161
05:15 PM	1	64	2	67	2	3	3	8	2	65	4	71	2	1	0	3	149
05:30 PM	5	61	1	67	2	0	6	8	0	79	6	85	0	0	3	3	163
05:45 PM	2	45	3	50	1	1	3	5	2	54	1	57	2	2	0	4	116
Total	10	232	8	250	5	6	15	26	7	283	12	302	4	4	3	11	589
Grand Total	13	494	17	524	9	10	28	47	14	567	25	606	8	8	4	20	1197
Apprch %	2.5	94.3	3.2		19.1	21.3	59.6		2.3	93.6	4.1		40	40	20		
Total %	1.1	41.3	1.4	43.8	0.8	0.8	2.3	3.9	1.2	47.4	2.1	50.6	0.7	0.7	0.3	1.7	

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	54	1	56	1	2	2	5	**4**	77	2	83	1	**1**	1	**3**	147
05:00 PM	2	62	**2**	66	0	2	3	5	3	**85**	1	**89**	0	1	0	1	161
05:15 PM	1	**64**	2	**67**	**2**	**3**	3	**8**	2	65	4	71	**2**	1	0	3	149
05:30 PM	**5**	61	1	67	2	0	**6**	8	0	79	**6**	85	0	0	**3**	3	**163**
Total Volume	9	241	6	256	5	7	14	26	9	306	13	328	3	3	4	10	620
% App. Total	3.5	94.1	2.3		19.2	26.9	53.8		2.7	93.3	4		30	30	40		
PHF	.450	.941	.750	.955	.625	.583	.583	.813	.563	.900	.542	.921	.375	.750	.333	.833	.951

City of Clovis
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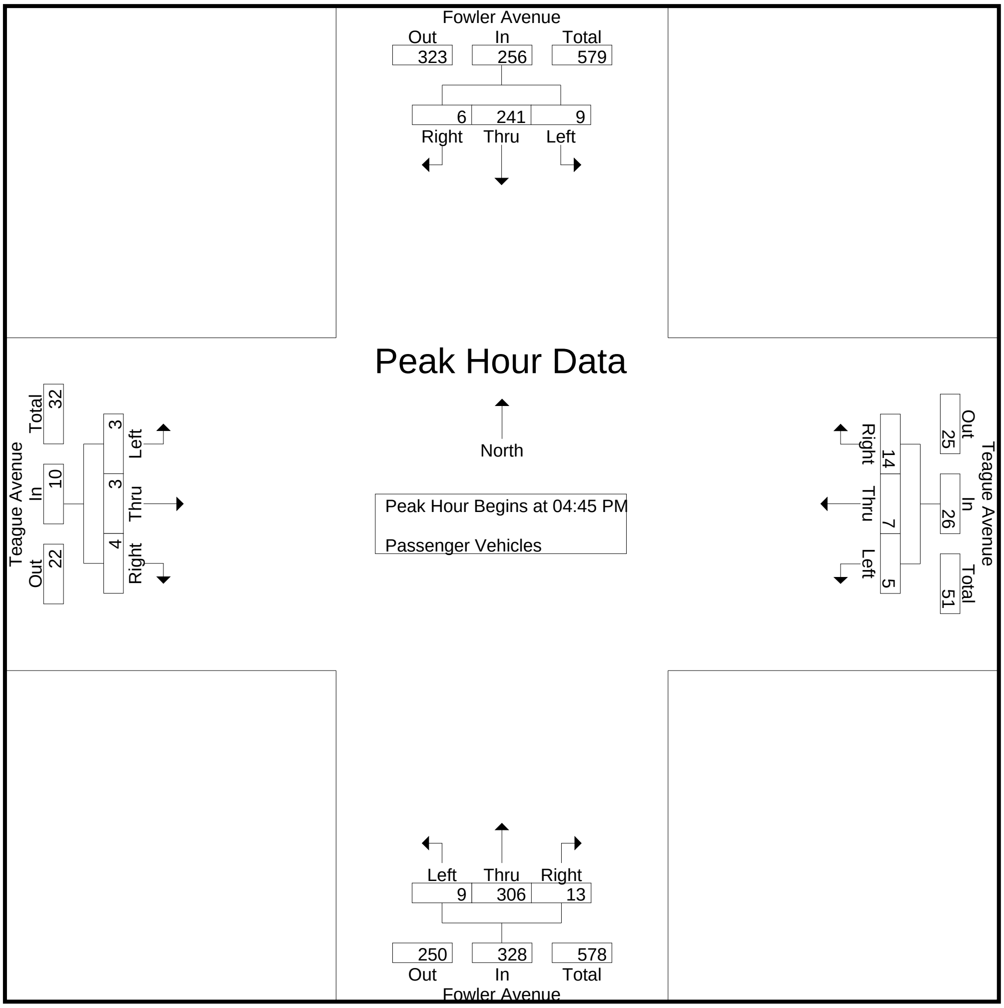

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	1	54	1	56	1	2	2	5	**4**	77	2	83	1	**1**	1	**3**
+15 mins.	2	62	**2**	66	0	2	3	5	3	**85**	1	**89**	0	1	0	1
+30 mins.	1	**64**	2	**67**	**2**	**3**	3	**8**	2	65	4	71	**2**	1	0	3
+45 mins.	**5**	61	1	67	2	0	**6**	8	0	79	**6**	85	0	0	**3**	3
Total Volume	9	241	6	256	5	7	14	26	9	306	13	328	3	3	4	10
% App. Total	3.5	94.1	2.3		19.2	26.9	53.8		2.7	93.3	4		30	30	40	
PHF	.450	.941	.750	.955	.625	.583	.583	.813	.563	.900	.542	.921	.375	.750	.333	.833

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Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	1	1	4
Total	0	3	1	4	0	0	0	0	0	4	0	4	0	0	1	1	9
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	2	1	3	0	0	0	0	0	2	0	2	1	0	0	1	6
Grand Total	0	5	2	7	0	0	0	0	0	6	0	6	1	0	1	2	15
Apprch %	0	71.4	28.6		0	0	0		0	100	0		50	0	50		
Total %	0	33.3	13.3	46.7	0	0	0	0	0	40	0	40	6.7	0	6.7	13.3	

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**2**	0	**2**	0	0	0	0	0	**1**	0	**1**	0	0	**1**	**1**	**4**
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	4	0	4	0	0	0	0	0	3	0	3	0	0	1	1	8
% App. Total	0	100	0		0	0	0		0	100	0		0	0	100		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.250	.250	.500

AGENDA ITEM NO. 6.

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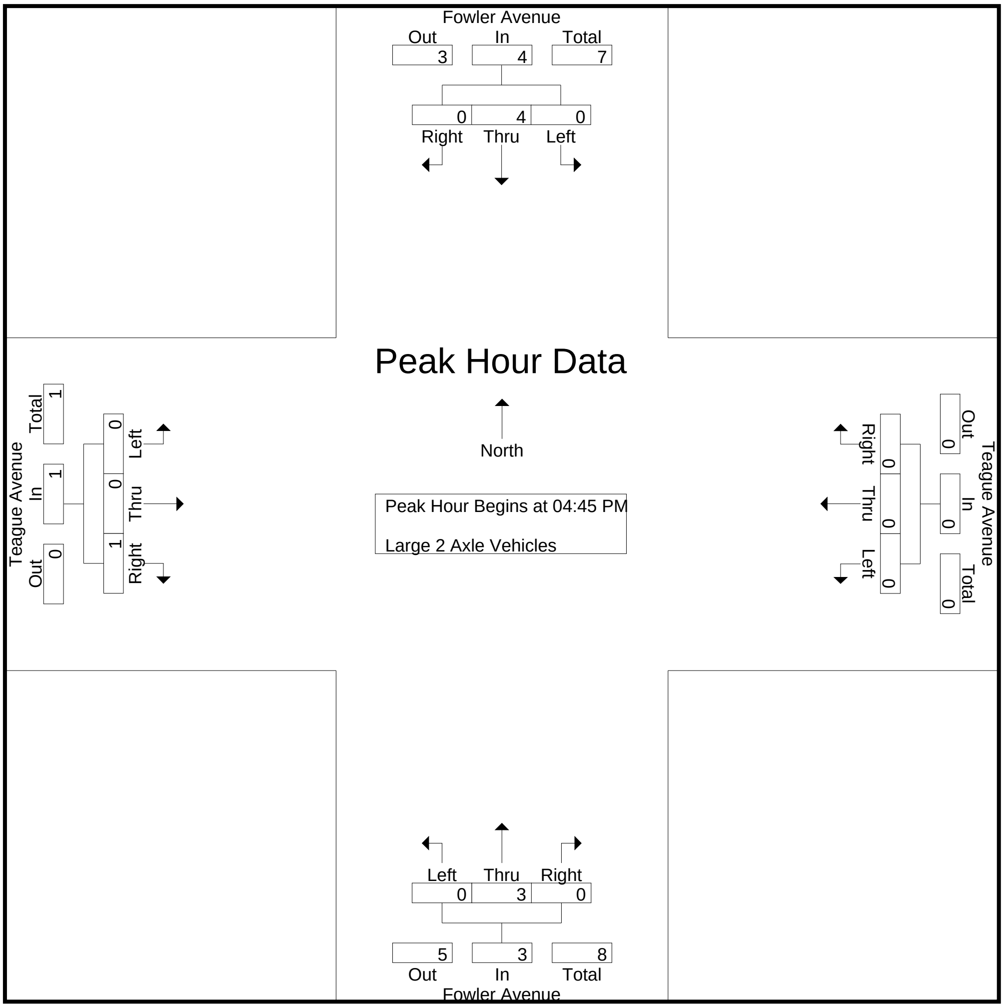

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**2**	0	**2**	0	0	0	0	0	**1**	0	**1**	0	0	**1**	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	4	0	4	0	0	0	0	0	3	0	3	0	0	1	1
% App. Total	0	100	0		0	0	0		0	100	0		0	0	100	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.250	.250

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City of Clovis
N/S: Fowler Avenue
E/W: Teague Avenue
Weather: Clear

File Name : 23_CVS_Fowl_Tea PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
Grand Total	0	3	0	3	0	0	1	1	0	0	0	0	0	0	0	0	4
Apprch %	0	100	0		0	0	100		0	0	0		0	0	0		
Total %	0	75	0	75	0	0	25	25	0	0	0	0	0	0	0	0	

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
% App. Total	0	100	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.750

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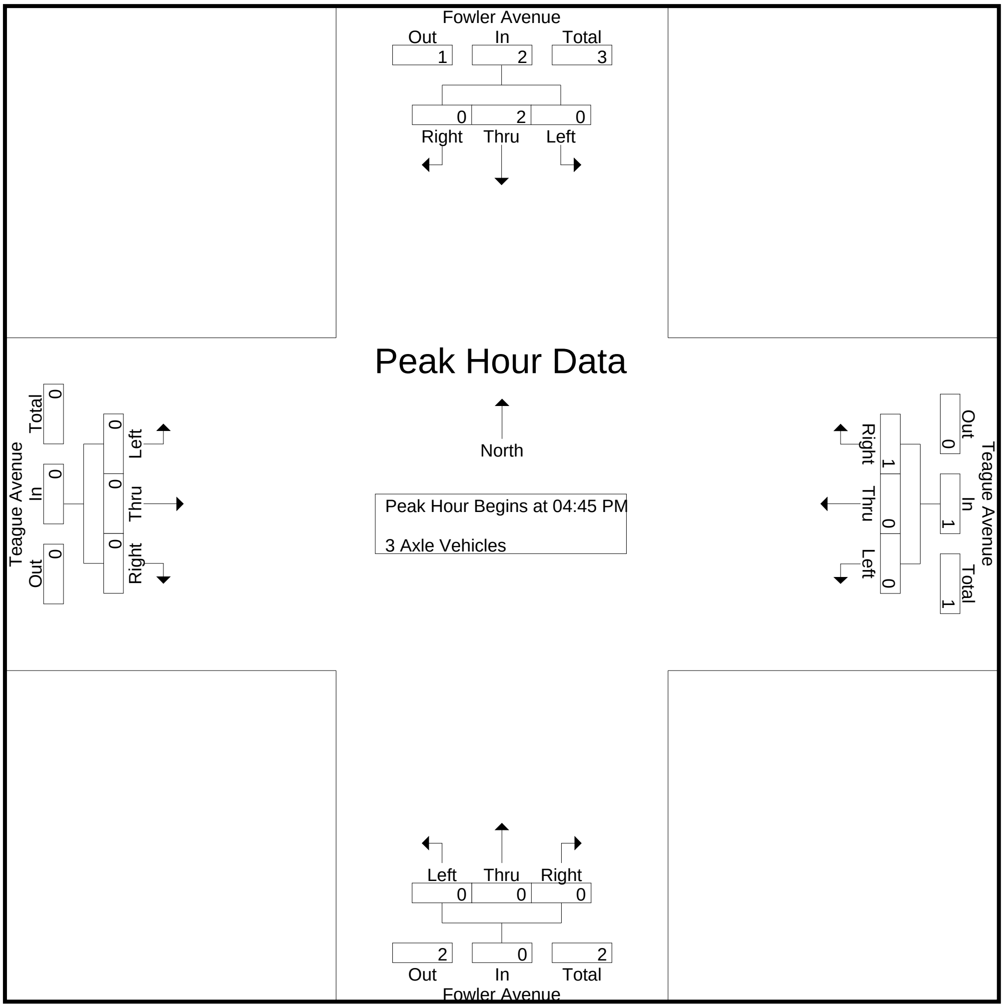

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	100		0	0	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000

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Start Date : 5/24/2022
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Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Fowler Avenue Southbound				Teague Avenue Westbound				Fowler Avenue Northbound				Teague Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Clovis
N/S: Fowler Avenue
E/W: Teague Avenue
Weather: Clear

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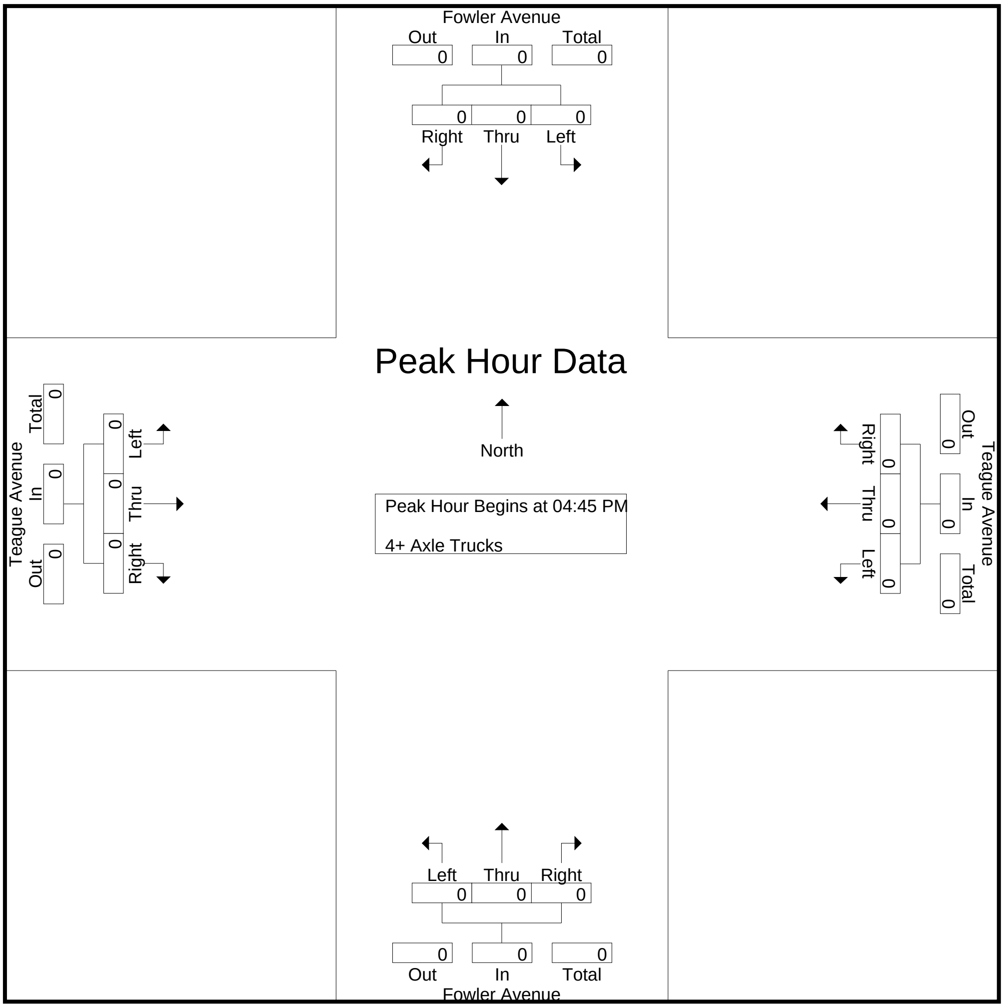

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Fowler Avenue
E/W: Teague Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Fowler Avenue	East Leg Teague Avenue	South Leg Fowler Avenue	West Leg Teague Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	2	0	0	0	2
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	0	2

	North Leg Fowler Avenue	East Leg Teague Avenue	South Leg Fowler Avenue	West Leg Teague Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Fowler Avenue
E/W: Teague Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Fowler Avenue			Westbound Teague Avenue			Northbound Fowler Avenue			Eastbound Teague Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:30 AM	1	0	1	0	0	0	0	0	0	2	0	0	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	2	1	1	0	0	0	0	2	0	0	7

	Southbound Fowler Avenue			Westbound Teague Avenue			Northbound Fowler Avenue			Eastbound Teague Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

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City of Clovis
N/S: Fowler Avenue
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File Name : 24_CVS_Fowl_Nees AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	8	36	3	47	15	48	5	68	25	28	2	55	2	24	18	44	214
07:15 AM	5	62	11	78	11	112	3	126	45	26	3	74	5	33	20	58	336
07:30 AM	6	59	9	74	9	76	6	91	19	29	9	57	4	47	16	67	289
07:45 AM	9	41	5	55	12	39	6	57	28	29	12	69	10	69	29	108	289
Total	28	198	28	254	47	275	20	342	117	112	26	255	21	173	83	277	1128
08:00 AM	8	53	7	68	41	45	17	103	19	39	13	71	1	53	22	76	318
08:15 AM	15	61	5	81	45	42	12	99	36	28	9	73	5	32	19	56	309
08:30 AM	10	47	6	63	18	33	6	57	29	36	5	70	1	40	17	58	248
08:45 AM	6	48	4	58	9	40	8	57	25	26	7	58	3	23	13	39	212
Total	39	209	22	270	113	160	43	316	109	129	34	272	10	148	71	229	1087
Grand Total	67	407	50	524	160	435	63	658	226	241	60	527	31	321	154	506	2215
Apprch %	12.8	77.7	9.5		24.3	66.1	9.6		42.9	45.7	11.4		6.1	63.4	30.4		
Total %	3	18.4	2.3	23.7	7.2	19.6	2.8	29.7	10.2	10.9	2.7	23.8	1.4	14.5	7	22.8	
Passenger Vehicles	67	402	48	517	159	429	63	651	225	235	59	519	30	315	152	497	2184
% Passenger Vehicles	100	98.8	96	98.7	99.4	98.6	100	98.9	99.6	97.5	98.3	98.5	96.8	98.1	98.7	98.2	98.6
Large 2 Axle Vehicles	0	1	1	2	1	5	0	6	1	3	0	4	1	5	2	8	20
% Large 2 Axle Vehicles	0	0.2	2	0.4	0.6	1.1	0	0.9	0.4	1.2	0	0.8	3.2	1.6	1.3	1.6	0.9
3 Axle Vehicles	0	1	1	2	0	1	0	1	0	3	0	3	0	1	0	1	7
% 3 Axle Vehicles	0	0.2	2	0.4	0	0.2	0	0.2	0	1.2	0	0.6	0	0.3	0	0.2	0.3
4+ Axle Trucks	0	3	0	3	0	0	0	0	0	0	1	1	0	0	0	0	4
% 4+ Axle Trucks	0	0.7	0	0.6	0	0	0	0	0	0	1.7	0.2	0	0	0	0	0.2

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	**62**	**11**	**78**	11	**112**	3	**126**	**45**	26	3	**74**	5	33	20	58	**336**
07:30 AM	6	59	9	74	9	76	6	91	19	29	9	57	4	47	16	67	289
07:45 AM	**9**	41	5	55	12	39	6	57	28	29	12	69	**10**	**69**	**29**	**108**	289
08:00 AM	8	53	7	68	**41**	45	**17**	103	19	**39**	**13**	71	1	53	22	76	318
Total Volume	28	215	32	275	73	272	32	377	111	123	37	271	20	202	87	309	1232
% App. Total	10.2	78.2	11.6		19.4	72.1	8.5		41	45.4	13.7		6.5	65.4	28.2		
PHF	.778	.867	.727	.881	.445	.607	.471	.748	.617	.788	.712	.916	.500	.732	.750	.715	.917

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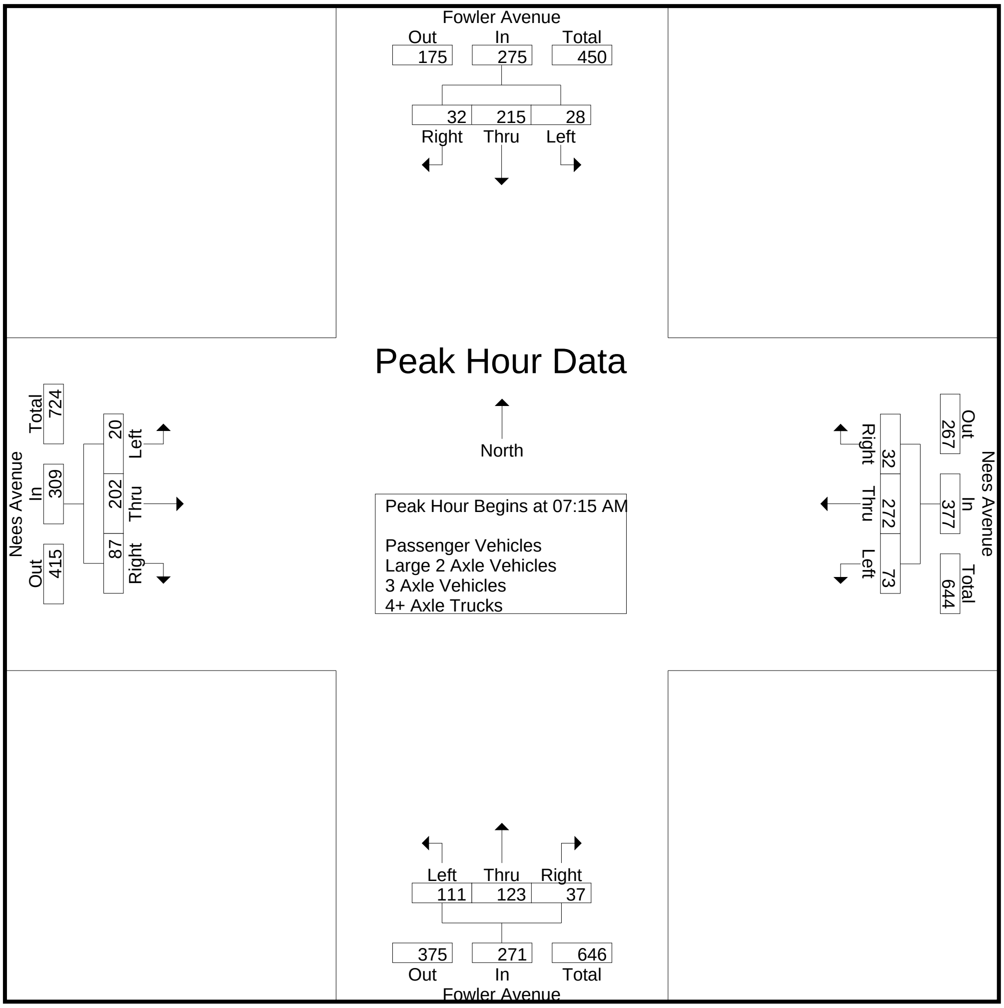

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:45 AM				07:15 AM			
+0 mins.	6	59	**9**	74	11	**112**	3	**126**	28	29	12	69	5	33	20	58
+15 mins.	9	41	5	55	9	76	6	91	19	**39**	**13**	71	4	47	16	67
+30 mins.	8	53	7	68	12	39	6	57	**36**	28	9	**73**	**10**	**69**	**29**	**108**
+45 mins.	**15**	**61**	5	**81**	**41**	45	**17**	103	29	36	5	70	1	53	22	76
Total Volume	38	214	26	278	73	272	32	377	112	132	39	283	20	202	87	309
% App. Total	13.7	77	9.4		19.4	72.1	8.5		39.6	46.6	13.8		6.5	65.4	28.2	
PHF	.633	.877	.722	.858	.445	.607	.471	.748	.778	.846	.750	.969	.500	.732	.750	.715

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Weather: Clear

File Name : 24_CVS_Fowl_Nees AMC
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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	8	35	3	46	15	47	5	67	25	26	2	53	2	23	18	43	209
07:15 AM	5	62	11	78	11	111	3	125	45	25	3	73	5	31	20	56	332
07:30 AM	6	58	9	73	9	76	6	91	19	28	9	56	4	47	16	67	287
07:45 AM	9	41	5	55	12	37	6	55	28	29	11	68	10	69	29	108	286
Total	28	196	28	252	47	271	20	338	117	108	25	250	21	170	83	274	1114
08:00 AM	8	52	7	67	41	45	17	103	19	39	13	71	1	52	21	74	315
08:15 AM	15	61	5	81	45	42	12	99	36	26	9	71	4	30	19	53	304
08:30 AM	10	46	4	60	17	32	6	55	28	36	5	69	1	40	17	58	242
08:45 AM	6	47	4	57	9	39	8	56	25	26	7	58	3	23	12	38	209
Total	39	206	20	265	112	158	43	313	108	127	34	269	9	145	69	223	1070
Grand Total	67	402	48	517	159	429	63	651	225	235	59	519	30	315	152	497	2184
Apprch %	13	77.8	9.3		24.4	65.9	9.7		43.4	45.3	11.4		6	63.4	30.6		
Total %	3.1	18.4	2.2	23.7	7.3	19.6	2.9	29.8	10.3	10.8	2.7	23.8	1.4	14.4	7	22.8	

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	**62**	**11**	**78**	11	**111**	3	**125**	**45**	25	3	**73**	5	31	20	56	**332**
07:30 AM	6	58	9	73	9	76	6	91	19	28	9	56	4	47	16	67	287
07:45 AM	**9**	41	5	55	12	37	6	55	28	29	11	68	**10**	**69**	**29**	**108**	286
08:00 AM	8	52	7	67	**41**	45	**17**	103	19	**39**	**13**	71	1	52	21	74	315
Total Volume	28	213	32	273	73	269	32	374	111	121	36	268	20	199	86	305	1220
% App. Total	10.3	78	11.7		19.5	71.9	8.6		41.4	45.1	13.4		6.6	65.2	28.2		
PHF	.778	.859	.727	.875	.445	.606	.471	.748	.617	.776	.692	.918	.500	.721	.741	.706	.919

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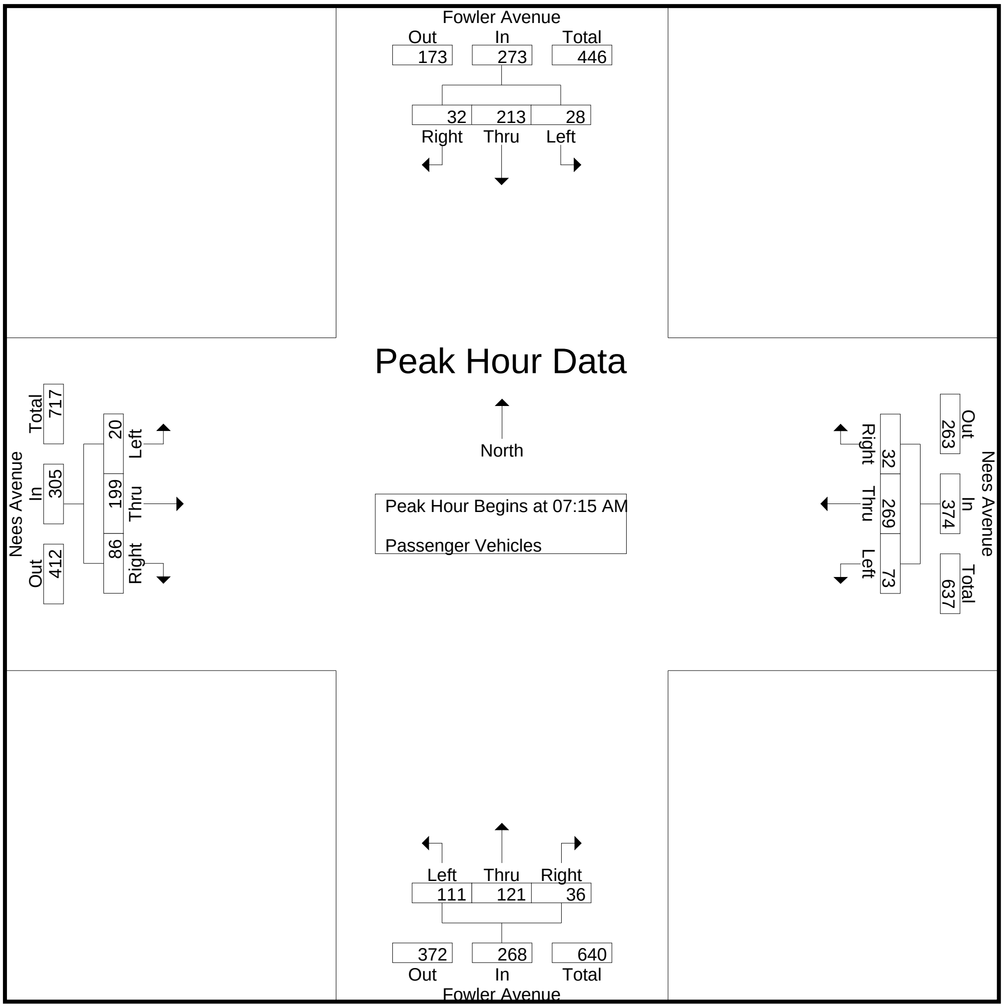

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	5	**62**	**11**	**78**	11	**111**	3	**125**	**45**	25	3	**73**	5	31	20	56
+15 mins.	6	58	9	73	9	76	6	91	19	28	9	56	4	47	16	67
+30 mins.	**9**	41	5	55	12	37	6	55	28	29	11	68	**10**	**69**	**29**	**108**
+45 mins.	8	52	7	67	**41**	45	**17**	103	19	**39**	**13**	71	1	52	21	74
Total Volume	28	213	32	273	73	269	32	374	111	121	36	268	20	199	86	305
% App. Total	10.3	78	11.7		19.5	71.9	8.6		41.4	45.1	13.4		6.6	65.2	28.2	
PHF	.778	.859	.727	.875	.445	.606	.471	.748	.617	.776	.692	.918	.500	.721	.741	.706

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City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	2	0	2	0	0	0	0	3
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	0	1	0	1	0	4	0	4	0	2	0	2	0	2	0	2	9
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	2	0	3	4
08:30 AM	0	0	1	1	1	0	0	1	1	0	0	1	0	0	0	0	3
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
Total	0	0	1	1	1	1	0	2	1	1	0	2	1	3	2	6	11
Grand Total	0	1	1	2	1	5	0	6	1	3	0	4	1	5	2	8	20
Apprch %	0	50	50		16.7	83.3	0		25	75	0		12.5	62.5	25		
Total %	0	5	5	10	5	25	0	30	5	15	0	20	5	25	10	40	

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	**2**	**3**
07:30 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	2	2
Total Volume	0	1	0	1	0	3	0	3	0	0	0	0	0	3	1	4	8
% App. Total	0	100	0		0	100	0		0	0	0		0	75	25		
PHF	.000	.250	.000	.250	.000	.375	.000	.375	.000	.000	.000	.000	.000	.375	.250	.500	.667

City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees AMC
Site Code : 00322473
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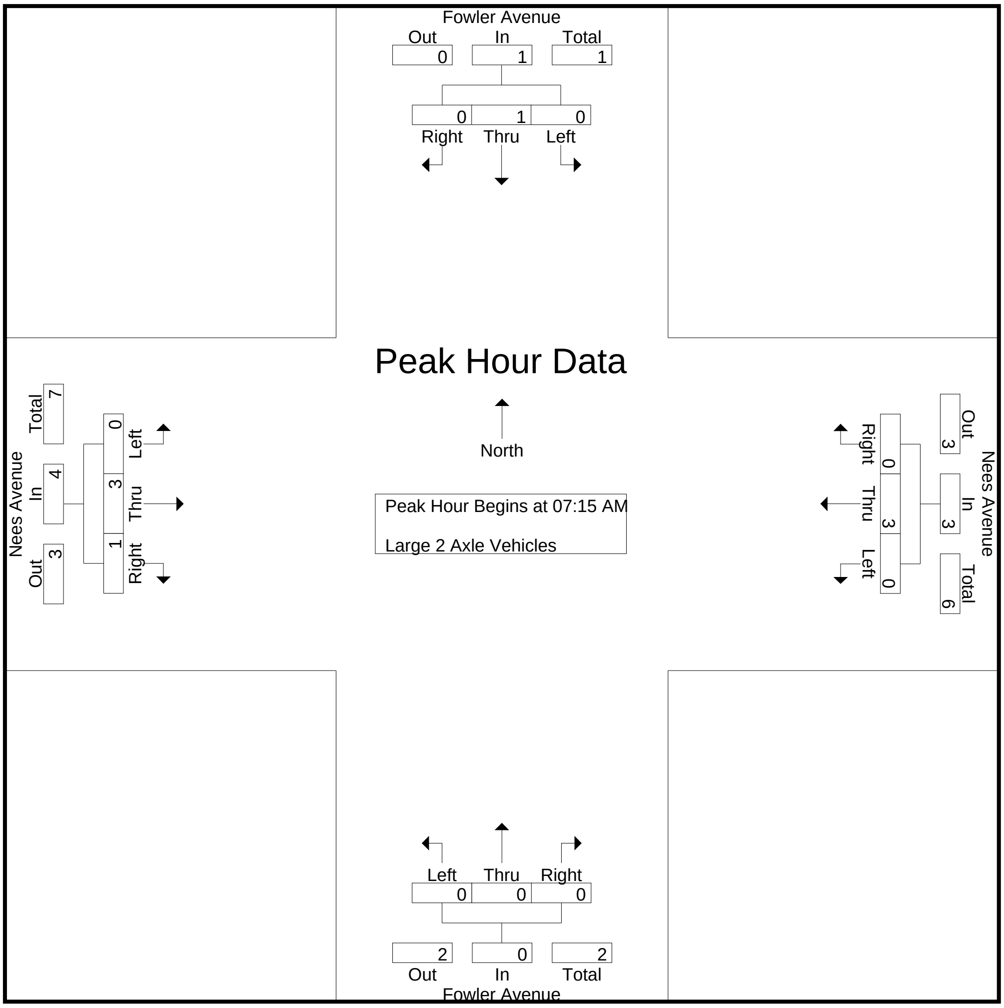

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	**2**
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	2
Total Volume	0	1	0	1	0	3	0	3	0	0	0	0	0	3	1	4
% App. Total	0	100	0		0	100	0		0	0	0		0	75	25	
PHF	.000	.250	.000	.250	.000	.375	.000	.375	.000	.000	.000	.000	.000	.375	.250	.500

City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	1	0	1	0	1	0	1	0	0	0	0	4
Grand Total	0	1	1	2	0	1	0	1	0	3	0	3	0	1	0	1	7
Apprch %	0	50	50		0	100	0		0	100	0		0	100	0		
Total %	0	14.3	14.3	28.6	0	14.3	0	14.3	0	42.9	0	42.9	0	14.3	0	14.3	

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.750

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City of Clovis
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Weather: Clear

File Name : 24_CVS_Fowl_Nees AMC
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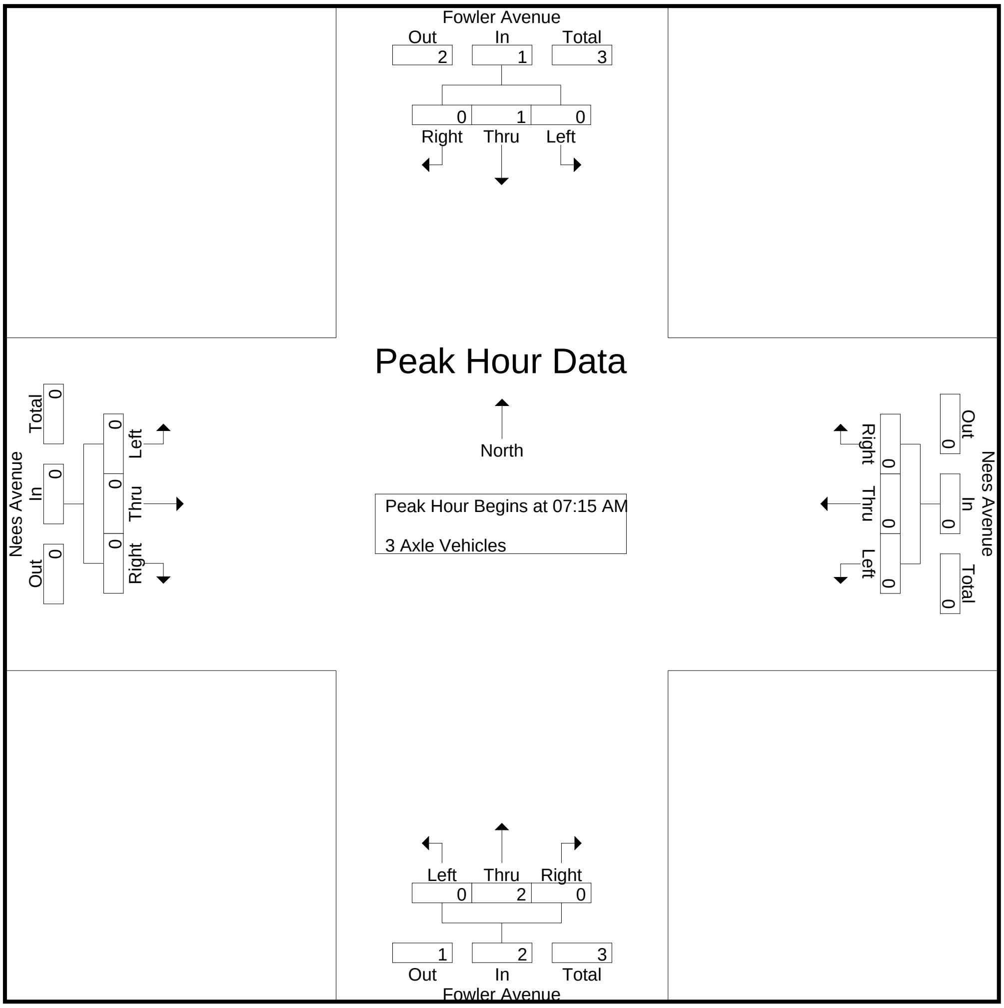

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees AMC
Site Code : 00322473
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Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	3	0	3	0	0	0	0	0	0	1	1	0	0	0	0	4
Apprch %	0	100	0		0	0	0		0	0	100		0	0	0		
Total %	0	75	0	75	0	0	0	0	0	0	25	25	0	0	0	0	

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	**1**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250

City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees AMC
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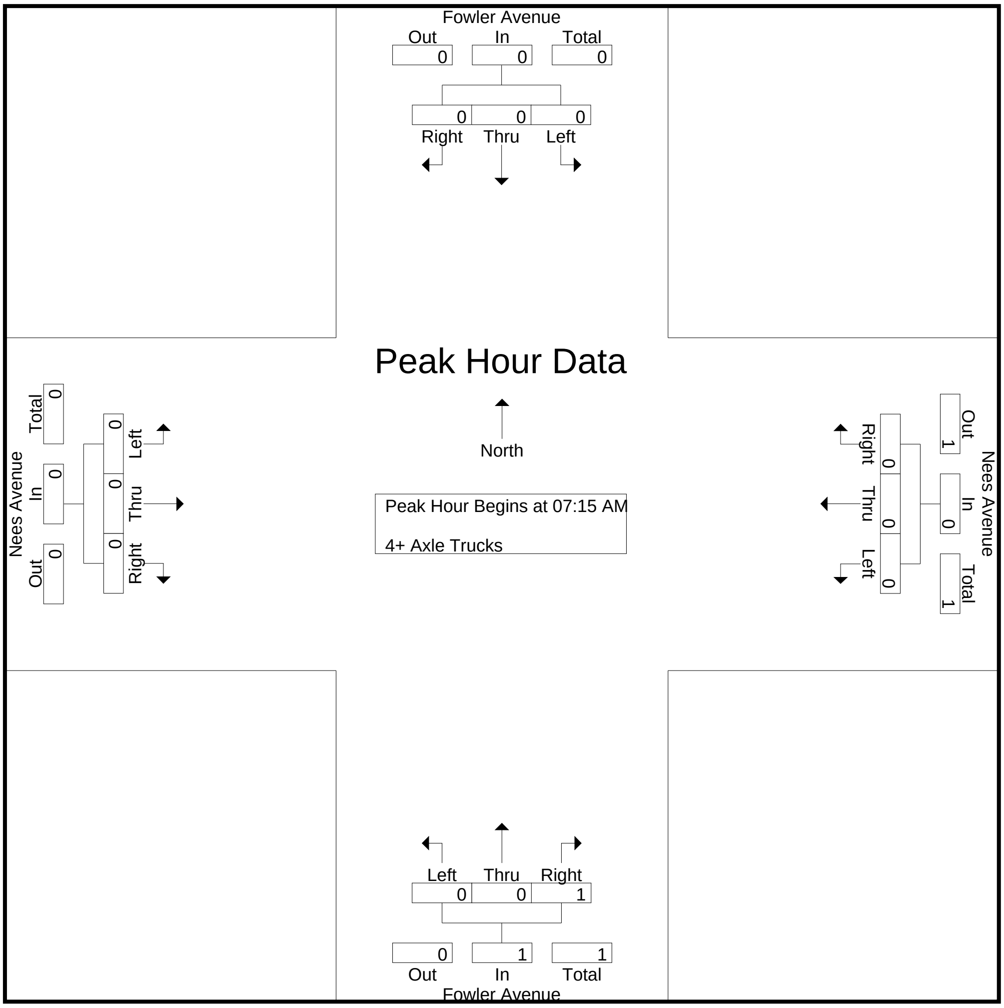

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	100		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000

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City of Clovis
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Weather: Clear

File Name : 24_CVS_Fowl_Nees PMC
Site Code : 00322473
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	7	73	4	84	7	45	8	60	33	71	18	122	11	61	17	89	355
04:15 PM	9	52	7	68	19	44	10	73	25	68	15	108	5	64	26	95	344
04:30 PM	11	52	4	67	16	35	7	58	38	53	6	97	9	53	25	87	309
04:45 PM	8	53	9	70	6	42	8	56	37	72	15	124	7	57	23	87	337
Total	35	230	24	289	48	166	33	247	133	264	54	451	32	235	91	358	1345
05:00 PM	6	48	9	63	10	57	15	82	51	65	21	137	5	54	33	92	374
05:15 PM	9	48	12	69	16	64	1	81	44	74	10	128	6	85	34	125	403
05:30 PM	11	52	6	69	5	59	9	73	31	59	16	106	12	73	24	109	357
05:45 PM	7	35	8	50	15	37	7	59	29	48	21	98	4	69	34	107	314
Total	33	183	35	251	46	217	32	295	155	246	68	469	27	281	125	433	1448
Grand Total	68	413	59	540	94	383	65	542	288	510	122	920	59	516	216	791	2793
Apprch %	12.6	76.5	10.9		17.3	70.7	12		31.3	55.4	13.3		7.5	65.2	27.3		
Total %	2.4	14.8	2.1	19.3	3.4	13.7	2.3	19.4	10.3	18.3	4.4	32.9	2.1	18.5	7.7	28.3	
Passenger Vehicles	67	406	58	531	94	380	64	538	286	506	121	913	59	516	215	790	2772
% Passenger Vehicles	98.5	98.3	98.3	98.3	100	99.2	98.5	99.3	99.3	99.2	99.2	99.2	100	100	99.5	99.9	99.2
Large 2 Axle Vehicles	0	6	0	6	0	3	1	4	2	4	1	7	0	0	1	1	18
% Large 2 Axle Vehicles	0	1.5	0	1.1	0	0.8	1.5	0.7	0.7	0.8	0.8	0.8	0	0	0.5	0.1	0.6
3 Axle Vehicles	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
% 3 Axle Vehicles	1.5	0.2	1.7	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	8	**53**	9	**70**	6	42	8	56	37	72	15	124	7	57	23	87	337
05:00 PM	6	48	9	63	10	57	**15**	**82**	**51**	65	**21**	**137**	5	54	33	92	374
05:15 PM	9	48	**12**	69	**16**	**64**	1	81	44	**74**	10	128	6	**85**	**34**	**125**	**403**
05:30 PM	**11**	52	6	69	5	59	9	73	31	59	16	106	**12**	73	24	109	357
Total Volume	34	201	36	271	37	222	33	292	163	270	62	495	30	269	114	413	1471
% App. Total	12.5	74.2	13.3		12.7	76	11.3		32.9	54.5	12.5		7.3	65.1	27.6		
PHF	.773	.948	.750	.968	.578	.867	.550	.890	.799	.912	.738	.903	.625	.791	.838	.826	.913

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File Name : 24_CVS_Fowl_Nees PMC
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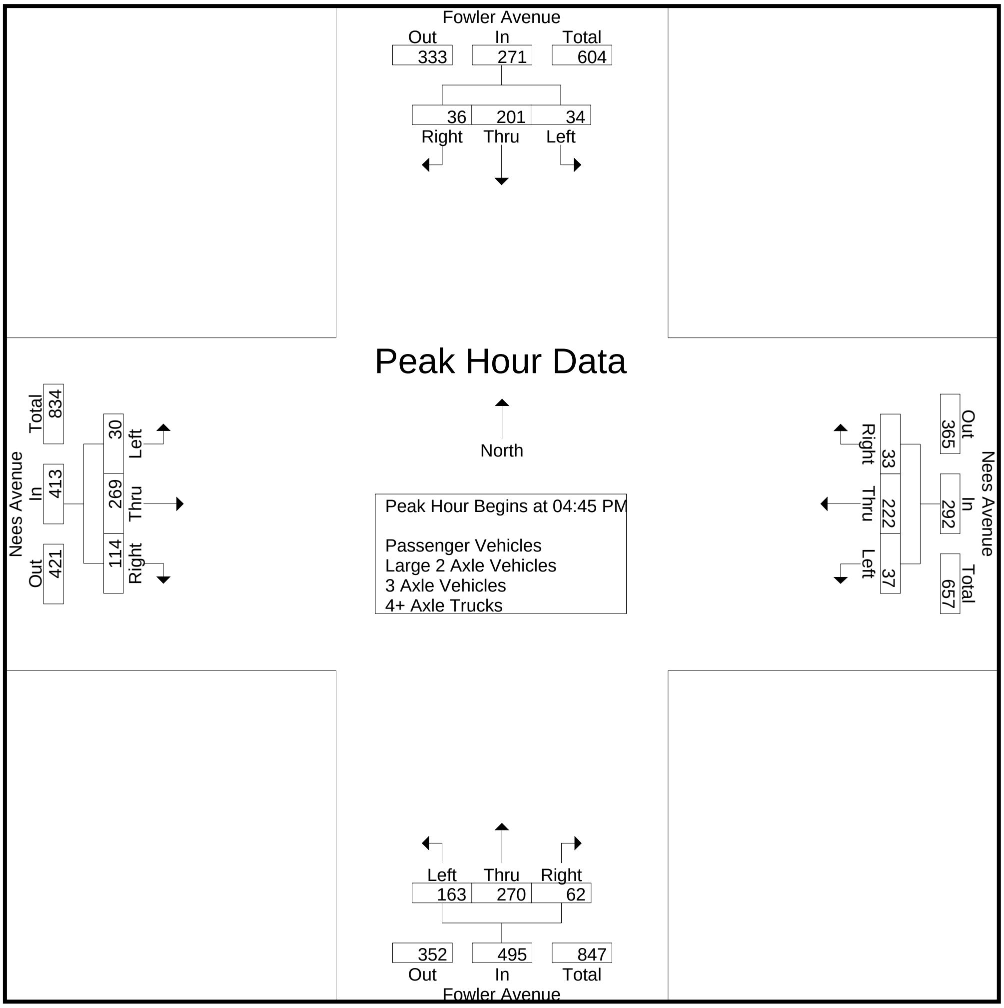

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:45 PM				05:00 PM			
+0 mins.	7	**73**	4	**84**	10	57	**15**	**82**	37	72	15	124	5	54	33	92
+15 mins.	9	52	7	68	**16**	**64**	1	81	**51**	65	**21**	**137**	6	**85**	**34**	**125**
+30 mins.	**11**	52	4	67	5	59	9	73	44	**74**	10	128	**12**	73	24	109
+45 mins.	8	53	**9**	70	15	37	7	59	31	59	16	106	4	69	34	107
Total Volume	35	230	24	289	46	217	32	295	163	270	62	495	27	281	125	433
% App. Total	12.1	79.6	8.3		15.6	73.6	10.8		32.9	54.5	12.5		6.2	64.9	28.9	
PHF	.795	.788	.667	.860	.719	.848	.533	.899	.799	.912	.738	.903	.563	.826	.919	.866

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City of Clovis
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E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees PMC
Site Code : 00322473
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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	7	72	4	83	7	45	7	59	33	69	18	120	11	61	17	89	351
04:15 PM	9	51	7	67	19	44	10	73	25	68	15	108	5	64	26	95	343
04:30 PM	11	52	4	67	16	35	7	58	38	53	6	97	9	53	24	86	308
04:45 PM	8	50	8	66	6	42	8	56	37	71	14	122	7	57	23	87	331
Total	35	225	23	283	48	166	32	246	133	261	53	447	32	235	90	357	1333
05:00 PM	6	48	9	63	10	56	15	81	51	64	21	136	5	54	33	92	372
05:15 PM	8	47	12	67	16	63	1	80	44	74	10	128	6	85	34	125	400
05:30 PM	11	51	6	68	5	58	9	72	31	59	16	106	12	73	24	109	355
05:45 PM	7	35	8	50	15	37	7	59	27	48	21	96	4	69	34	107	312
Total	32	181	35	248	46	214	32	292	153	245	68	466	27	281	125	433	1439
Grand Total	67	406	58	531	94	380	64	538	286	506	121	913	59	516	215	790	2772
Apprch %	12.6	76.5	10.9		17.5	70.6	11.9		31.3	55.4	13.3		7.5	65.3	27.2		
Total %	2.4	14.6	2.1	19.2	3.4	13.7	2.3	19.4	10.3	18.3	4.4	32.9	2.1	18.6	7.8	28.5	

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	8	50	8	66	6	42	8	56	37	71	14	122	7	57	23	87	331
05:00 PM	6	48	9	63	10	56	**15**	**81**	**51**	64	**21**	**136**	5	54	33	92	372
05:15 PM	8	47	**12**	67	**16**	**63**	1	80	44	**74**	10	128	6	**85**	**34**	**125**	**400**
05:30 PM	**11**	**51**	6	**68**	5	58	9	72	31	59	16	106	**12**	73	24	109	355
Total Volume	33	196	35	264	37	219	33	289	163	268	61	492	30	269	114	413	1458
% App. Total	12.5	74.2	13.3		12.8	75.8	11.4		33.1	54.5	12.4		7.3	65.1	27.6		
PHF	.750	.961	.729	.971	.578	.869	.550	.892	.799	.905	.726	.904	.625	.791	.838	.826	.911

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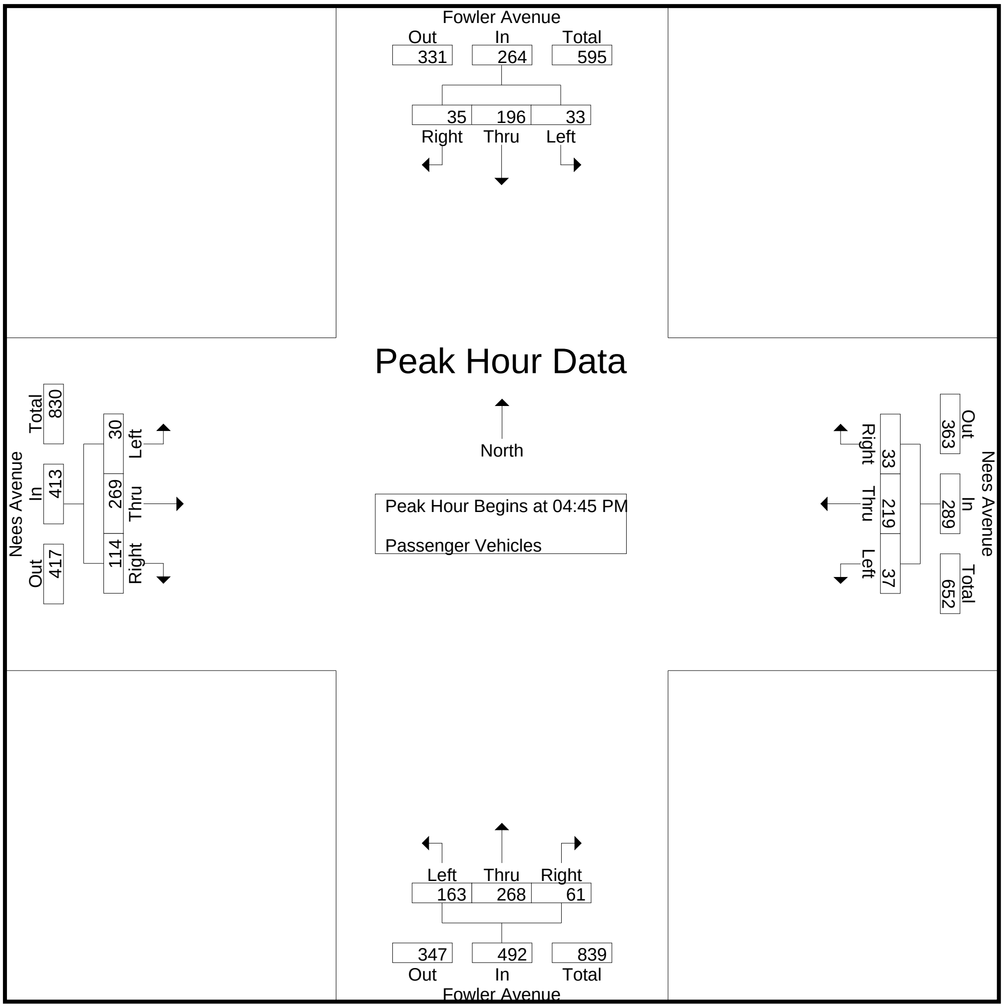
City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	8	50	8	66	6	42	8	56	37	71	14	122	7	57	23	87
+15 mins.	6	48	9	63	10	56	**15**	**81**	**51**	64	**21**	**136**	5	54	33	92
+30 mins.	8	47	**12**	67	**16**	**63**	1	80	44	**74**	10	128	6	**85**	**34**	**125**
+45 mins.	**11**	**51**	6	**68**	5	58	9	72	31	59	16	106	**12**	73	24	109
Total Volume	33	196	35	264	37	219	33	289	163	268	61	492	30	269	114	413
% App. Total	12.5	74.2	13.3		12.8	75.8	11.4		33.1	54.5	12.4		7.3	65.1	27.6	
PHF	.750	.961	.729	.971	.578	.869	.550	.892	.799	.905	.726	.904	.625	.791	.838	.826

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City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	3
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	3	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
Total	0	4	0	4	0	0	1	1	0	3	1	4	0	0	1	1	10
05:00 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
Total	0	2	0	2	0	3	0	3	2	1	0	3	0	0	0	0	8
Grand Total	0	6	0	6	0	3	1	4	2	4	1	7	0	0	1	1	18
Apprch %	0	100	0		0	75	25		28.6	57.1	14.3		0	0	100		
Total %	0	33.3	0	33.3	0	16.7	5.6	22.2	11.1	22.2	5.6	38.9	0	0	5.6	5.6	

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**3**	0	**3**	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	**5**
05:00 PM	0	0	0	0	0	**1**	0	**1**	0	1	0	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total Volume	0	5	0	5	0	3	0	3	0	2	1	3	0	0	0	0	11
% App. Total	0	100	0		0	100	0		0	66.7	33.3		0	0	0		
PHF	.000	.417	.000	.417	.000	.750	.000	.750	.000	.500	.250	.375	.000	.000	.000	.000	.550

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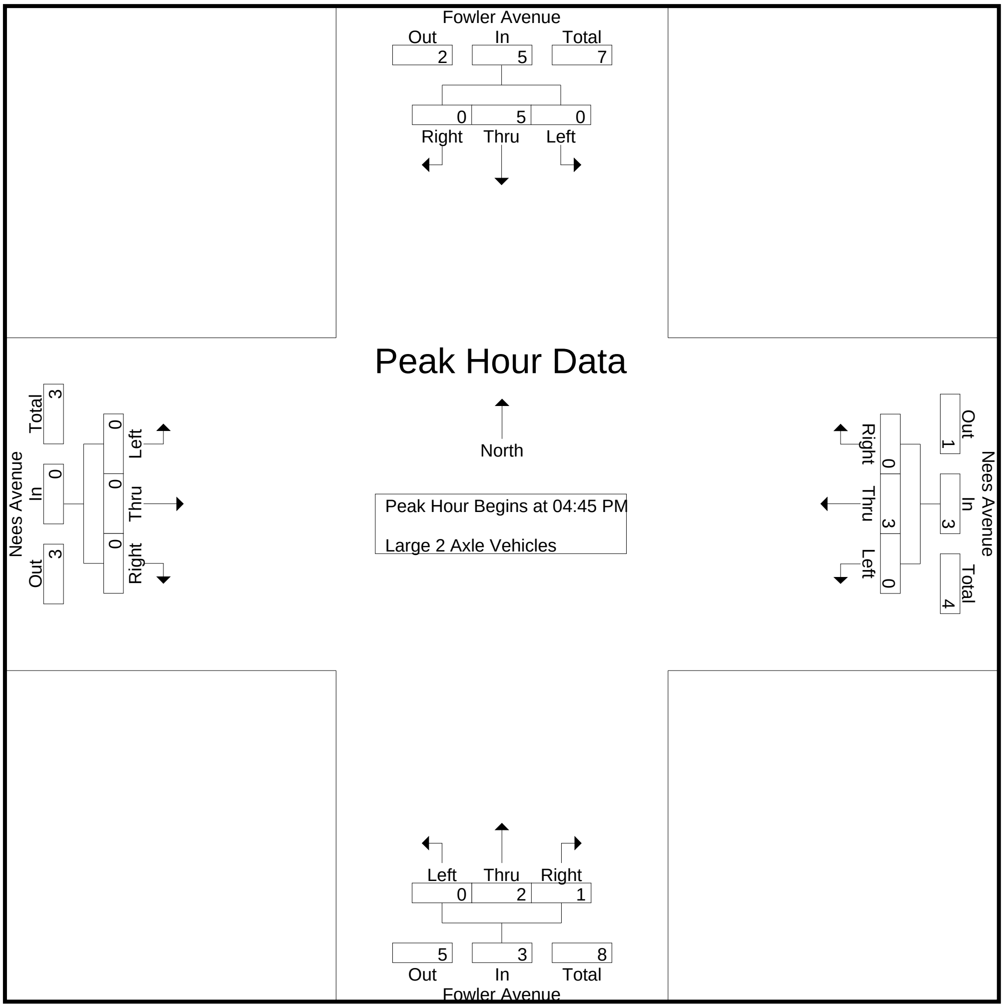
City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**3**	0	**3**	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	1	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	5	0	5	0	3	0	3	0	2	1	3	0	0	0	0
% App. Total	0	100	0		0	100	0		0	66.7	33.3		0	0	0	
PHF	.000	.417	.000	.417	.000	.750	.000	.750	.000	.500	.250	.375	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

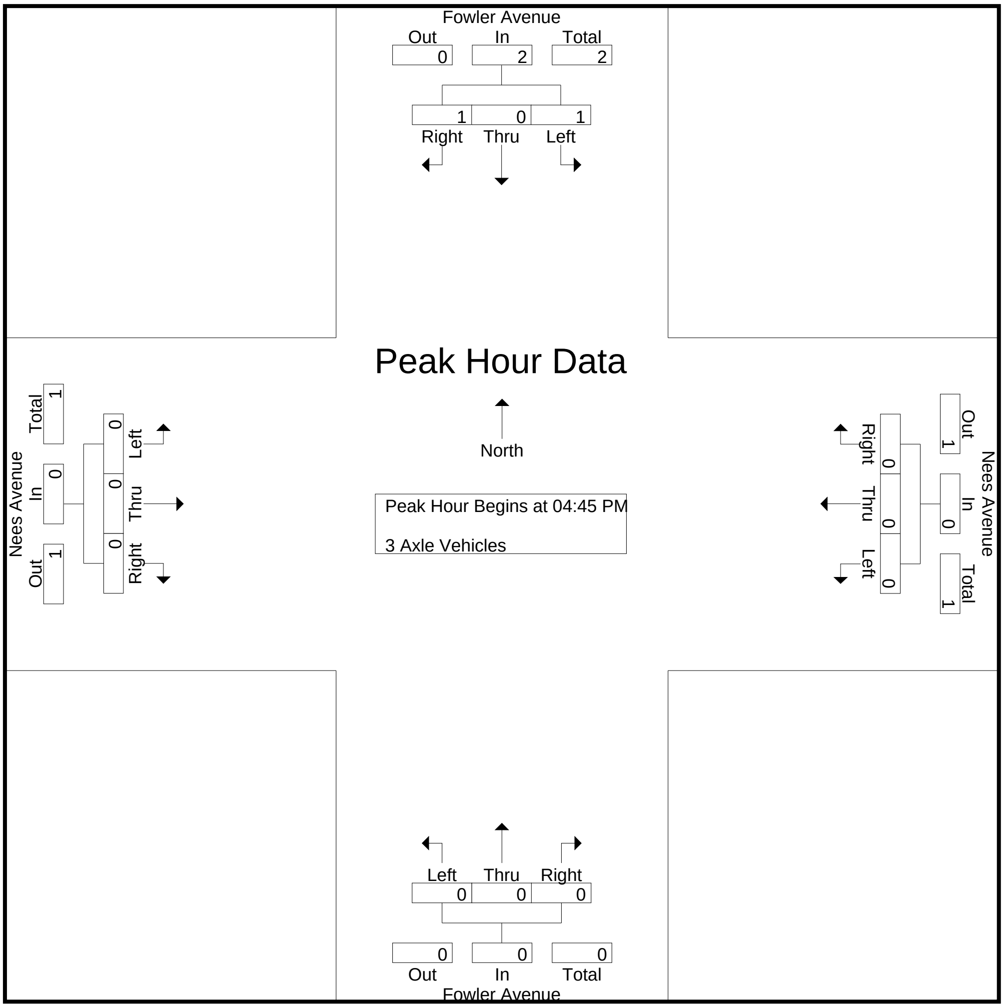
Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Apprch %	33.3	33.3	33.3		0	0	0		0	0	0		0	0	0		
Total %	33.3	33.3	33.3	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	**1**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	50	0	50		0	0	0		0	0	0		0	0	0		
PHF	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	**1**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	50	0	50		0	0	0		0	0	0		0	0	0	
PHF	.250	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

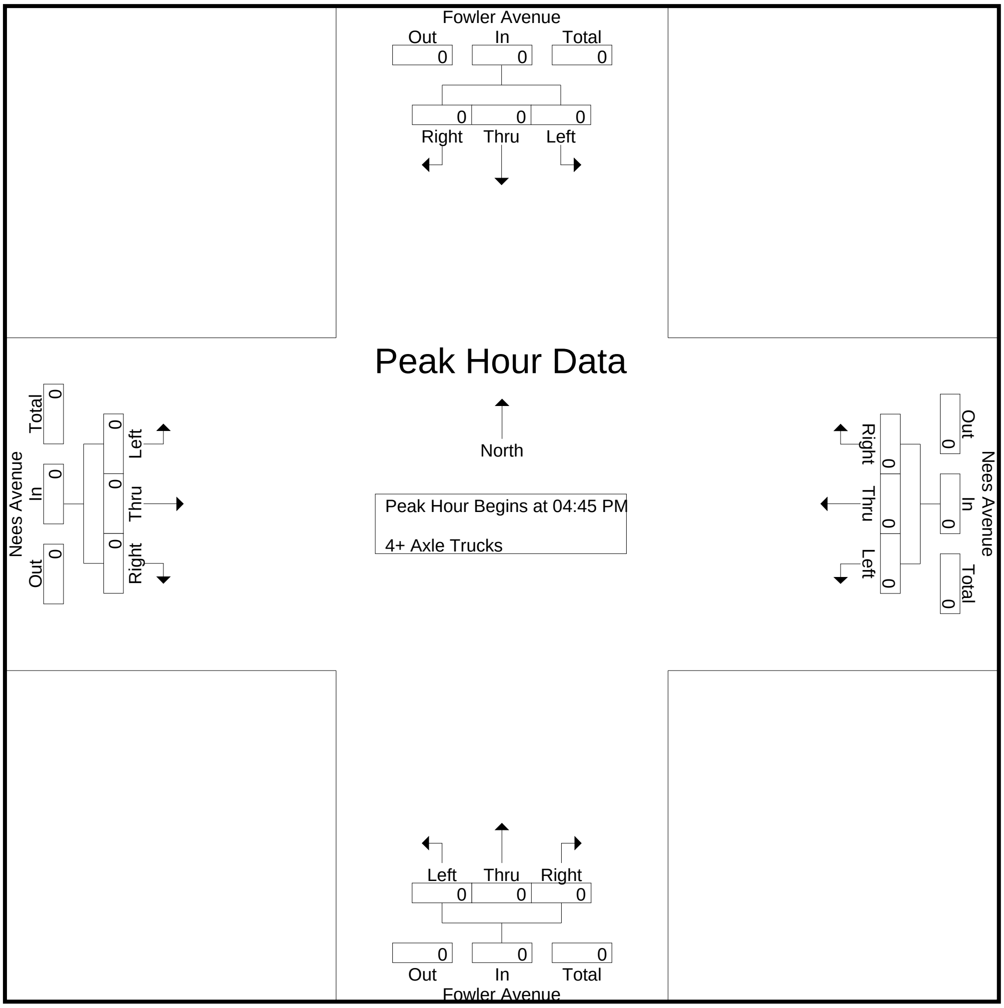
Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Fowler Avenue Southbound				Nees Avenue Westbound				Fowler Avenue Northbound				Nees Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Clovis
N/S: Fowler Avenue
E/W: Nees Avenue
Weather: Clear

File Name : 24_CVS_Fowl_Nees PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Fowler Avenue
E/W: Nees Avenue

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Fowler Avenue	East Leg Nees Avenue	South Leg Fowler Avenue	West Leg Nees Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	1	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	2	0	2
8:00 AM	0	0	0	0	0
8:15 AM	0	0	1	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	4	0	4

	North Leg Fowler Avenue	East Leg Nees Avenue	South Leg Fowler Avenue	West Leg Nees Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Fowler Avenue
E/W: Nees Avenue

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Fowler Avenue			Westbound Nees Avenue			Northbound Fowler Avenue			Eastbound Nees Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

	Southbound Fowler Avenue			Westbound Nees Avenue			Northbound Fowler Avenue			Eastbound Nees Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	1	0	0	1

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	61	99	160	36	0	7	43	97	68	0	165	0	0	0	0	368
07:15 AM	0	62	101	163	44	0	3	47	122	90	0	212	0	0	0	0	422
07:30 AM	0	75	111	186	29	0	4	33	146	90	0	236	0	0	0	0	455
07:45 AM	0	67	75	142	36	0	7	43	131	118	0	249	0	0	0	0	434
Total	0	265	386	651	145	0	21	166	496	366	0	862	0	0	0	0	1679
08:00 AM	0	83	92	175	28	0	13	41	119	120	0	239	0	0	0	0	455
08:15 AM	0	92	111	203	38	0	7	45	103	92	0	195	0	0	0	0	443
08:30 AM	0	75	69	144	34	0	5	39	78	88	0	166	0	0	0	0	349
08:45 AM	0	61	51	112	50	0	1	51	77	89	0	166	0	0	0	0	329
Total	0	311	323	634	150	0	26	176	377	389	0	766	0	0	0	0	1576
Grand Total	0	576	709	1285	295	0	47	342	873	755	0	1628	0	0	0	0	3255
Apprch %	0	44.8	55.2		86.3	0	13.7		53.6	46.4	0		0	0	0		
Total %	0	17.7	21.8	39.5	9.1	0	1.4	10.5	26.8	23.2	0	50	0	0	0	0	
Passenger Vehicles	0	568	702	1270	293	0	46	339	858	743	0	1601	0	0	0	0	3210
% Passenger Vehicles	0	98.6	99	98.8	99.3	0	97.9	99.1	98.3	98.4	0	98.3	0	0	0	0	98.6
Large 2 Axle Vehicles	0	5	3	8	2	0	1	3	6	9	0	15	0	0	0	0	26
% Large 2 Axle Vehicles	0	0.9	0.4	0.6	0.7	0	2.1	0.9	0.7	1.2	0	0.9	0	0	0	0	0.8
3 Axle Vehicles	0	2	1	3	0	0	0	0	1	2	0	3	0	0	0	0	6
% 3 Axle Vehicles	0	0.3	0.1	0.2	0	0	0	0	0.1	0.3	0	0.2	0	0	0	0	0.2
4+ Axle Trucks	0	1	3	4	0	0	0	0	8	1	0	9	0	0	0	0	13
% 4+ Axle Trucks	0	0.2	0.4	0.3	0	0	0	0	0.9	0.1	0	0.6	0	0	0	0	0.4

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	75	**111**	186	29	0	4	33	**146**	90	0	236	0	0	0	0	**455**
07:45 AM	0	67	75	142	36	0	7	43	131	118	0	**249**	0	0	0	0	434
08:00 AM	0	83	92	175	28	0	**13**	41	119	**120**	0	239	0	0	0	0	455
08:15 AM	0	**92**	111	**203**	**38**	0	7	**45**	103	92	0	195	0	0	0	0	443
Total Volume	0	317	389	706	131	0	31	162	499	420	0	919	0	0	0	0	1787
% App. Total	0	44.9	55.1		80.9	0	19.1		54.3	45.7	0		0	0	0		
PHF	.000	.861	.876	.869	.862	.000	.596	.900	.854	.875	.000	.923	.000	.000	.000	.000	.982

City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W AMC
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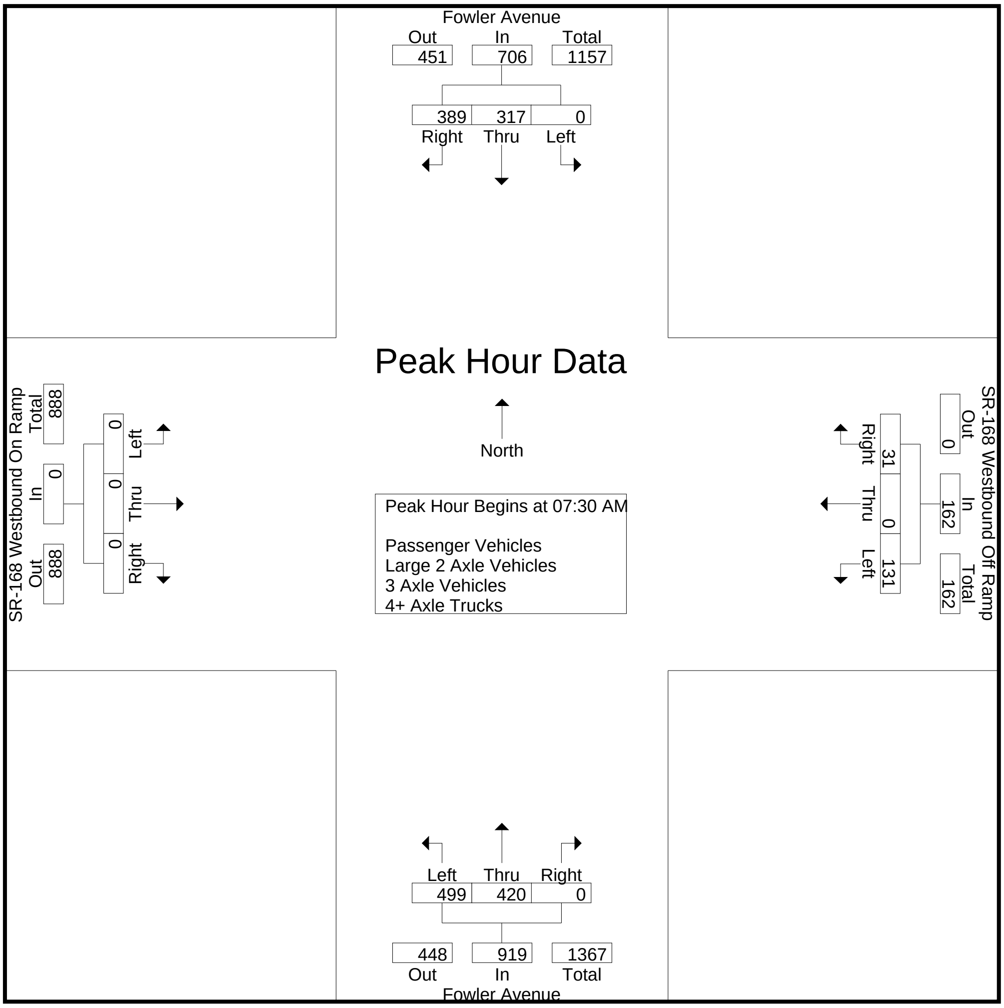

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				07:15 AM				07:00 AM			
+0 mins.	0	75	**111**	186	28	0	**13**	41	122	90	0	212	0	0	0	0
+15 mins.	0	67	75	142	38	0	7	45	**146**	90	0	236	0	0	0	0
+30 mins.	0	83	92	175	34	0	5	39	131	118	0	**249**	0	0	0	0
+45 mins.	0	**92**	111	**203**	**50**	0	1	**51**	119	**120**	0	239	0	0	0	0
Total Volume	0	317	389	706	150	0	26	176	518	418	0	936	0	0	0	0
% App. Total	0	44.9	55.1		85.2	0	14.8		55.3	44.7	0		0	0	0	
PHF	.000	.861	.876	.869	.750	.000	.500	.863	.887	.871	.000	.940	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	60	99	159	36	0	7	43	96	66	0	162	0	0	0	0	364
07:15 AM	0	62	101	163	44	0	3	47	120	88	0	208	0	0	0	0	418
07:30 AM	0	75	111	186	29	0	4	33	146	89	0	235	0	0	0	0	454
07:45 AM	0	64	75	139	36	0	7	43	129	118	0	247	0	0	0	0	429
Total	0	261	386	647	145	0	21	166	491	361	0	852	0	0	0	0	1665
08:00 AM	0	81	92	173	28	0	13	41	117	118	0	235	0	0	0	0	449
08:15 AM	0	90	110	200	36	0	7	43	101	89	0	190	0	0	0	0	433
08:30 AM	0	75	64	139	34	0	4	38	76	87	0	163	0	0	0	0	340
08:45 AM	0	61	50	111	50	0	1	51	73	88	0	161	0	0	0	0	323
Total	0	307	316	623	148	0	25	173	367	382	0	749	0	0	0	0	1545
Grand Total	0	568	702	1270	293	0	46	339	858	743	0	1601	0	0	0	0	3210
Apprch %	0	44.7	55.3		86.4	0	13.6		53.6	46.4	0		0	0	0		
Total %	0	17.7	21.9	39.6	9.1	0	1.4	10.6	26.7	23.1	0	49.9	0	0	0	0	

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	75	**111**	186	29	0	4	33	**146**	89	0	235	0	0	0	0	**454**
07:45 AM	0	64	75	139	**36**	0	7	**43**	129	**118**	0	**247**	0	0	0	0	429
08:00 AM	0	81	92	173	28	0	**13**	41	117	118	0	235	0	0	0	0	449
08:15 AM	0	**90**	110	**200**	36	0	7	43	101	89	0	190	0	0	0	0	433
Total Volume	0	310	388	698	129	0	31	160	493	414	0	907	0	0	0	0	1765
% App. Total	0	44.4	55.6		80.6	0	19.4		54.4	45.6	0		0	0	0		
PHF	.000	.861	.874	.873	.896	.000	.596	.930	.844	.877	.000	.918	.000	.000	.000	.000	.972

AGENDA ITEM NO. 6.

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W AMC
Site Code : 00322473
Start Date : 5/24/2022
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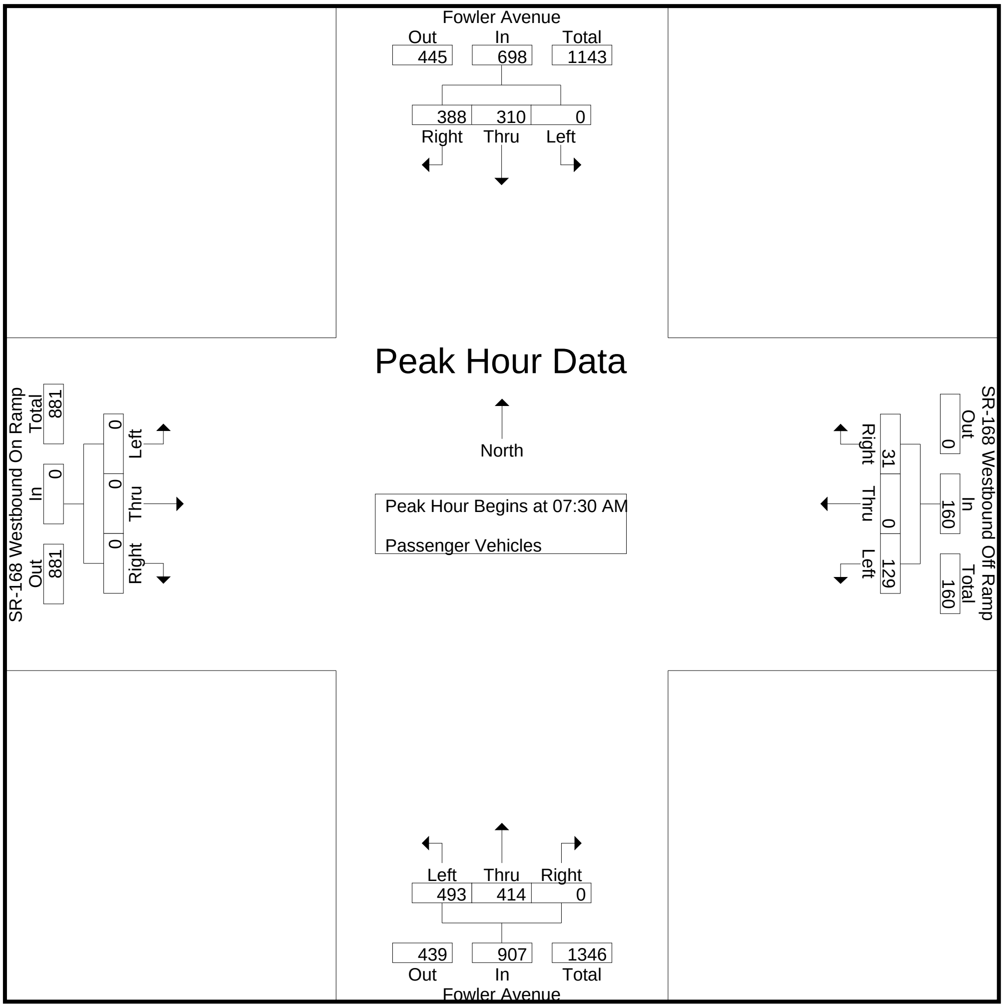

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	75	**111**	186	29	0	4	33	**146**	89	0	235	0	0	0	0
+15 mins.	0	64	75	139	**36**	0	7	**43**	129	**118**	0	**247**	0	0	0	0
+30 mins.	0	81	92	173	28	0	**13**	41	117	118	0	235	0	0	0	0
+45 mins.	0	**90**	110	**200**	36	0	7	43	101	89	0	190	0	0	0	0
Total Volume	0	310	388	698	129	0	31	160	493	414	0	907	0	0	0	0
% App. Total	0	44.4	55.6		80.6	0	19.4		54.4	45.6	0		0	0	0	
PHF	.000	.861	.874	.873	.896	.000	.596	.930	.844	.877	.000	.918	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W AMC
Site Code : 00322473
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Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	2	0	0	2	0	0	0	0	3
Total	0	1	0	1	0	0	0	0	3	2	0	5	0	0	0	0	6
08:00 AM	0	2	0	2	0	0	0	0	1	2	0	3	0	0	0	0	5
08:15 AM	0	2	0	2	2	0	0	2	0	3	0	3	0	0	0	0	7
08:30 AM	0	0	3	3	0	0	1	1	0	1	0	1	0	0	0	0	5
08:45 AM	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	3
Total	0	4	3	7	2	0	1	3	3	7	0	10	0	0	0	0	20
Grand Total	0	5	3	8	2	0	1	3	6	9	0	15	0	0	0	0	26
Apprch %	0	62.5	37.5		66.7	0	33.3		40	60	0		0	0	0		
Total %	0	19.2	11.5	30.8	7.7	0	3.8	11.5	23.1	34.6	0	57.7	0	0	0	0	

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	**2**	0	0	2	0	0	0	0	3
08:00 AM	0	**2**	0	**2**	0	0	0	0	1	2	0	**3**	0	0	0	0	5
08:15 AM	0	2	0	2	**2**	0	0	**2**	0	**3**	0	3	0	0	0	0	**7**
Total Volume	0	5	0	5	2	0	0	2	3	5	0	8	0	0	0	0	15
% App. Total	0	100	0		100	0	0		37.5	62.5	0		0	0	0		
PHF	.000	.625	.000	.625	.250	.000	.000	.250	.375	.417	.000	.667	.000	.000	.000	.000	.536

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W AMC
Site Code : 00322473
Start Date : 5/24/2022
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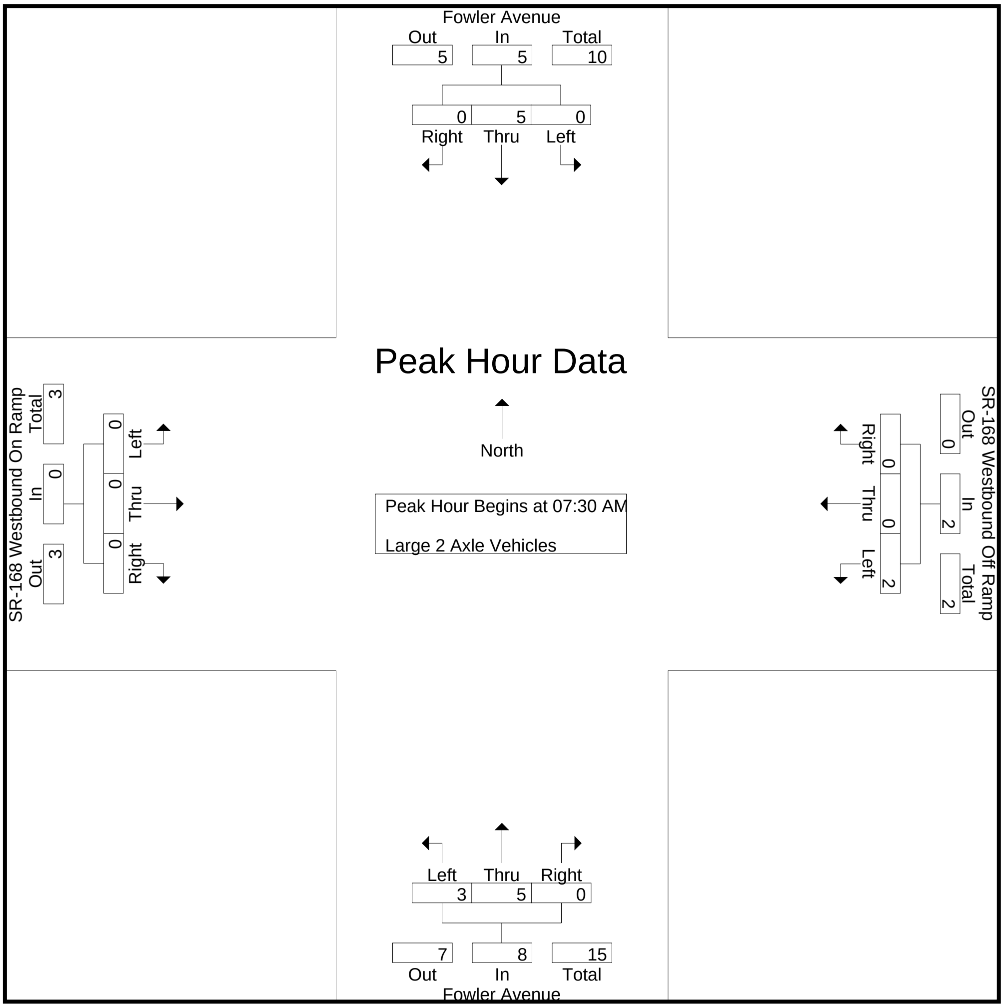

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	**2**	0	0	2	0	0	0	0
+30 mins.	0	**2**	0	**2**	0	0	0	0	1	2	0	**3**	0	0	0	0
+45 mins.	0	2	0	2	**2**	0	0	**2**	0	**3**	0	3	0	0	0	0
Total Volume	0	5	0	5	2	0	0	2	3	5	0	8	0	0	0	0
% App. Total	0	100	0		100	0	0		37.5	62.5	0		0	0	0	
PHF	.000	.625	.000	.625	.250	.000	.000	.250	.375	.417	.000	.667	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W AMC
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Start Date : 5/24/2022
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Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0	2
Grand Total	0	2	1	3	0	0	0	0	1	2	0	3	0	0	0	0	6
Apprch %	0	66.7	33.3		0	0	0		33.3	66.7	0		0	0	0		
Total %	0	33.3	16.7	50	0	0	0	0	16.7	33.3	0	50	0	0	0	0	

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
% App. Total	0	66.7	33.3		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.250	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375

City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W AMC
Site Code : 00322473
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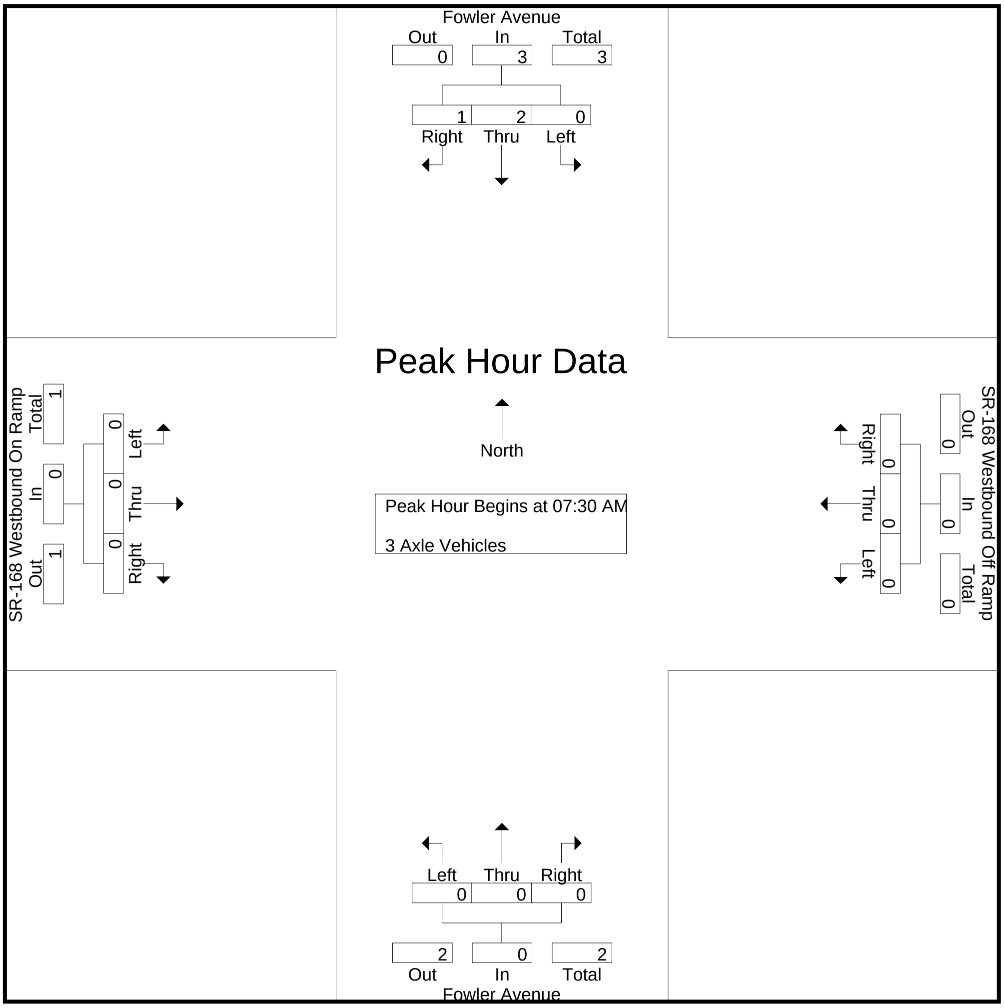

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	66.7	33.3		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.250	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W AMC
Site Code : 00322473
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Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	2	1	0	3	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
08:30 AM	0	0	2	2	0	0	0	0	2	0	0	2	0	0	0	0	4
08:45 AM	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0	2
Total	0	0	3	3	0	0	0	0	6	0	0	6	0	0	0	0	9
Grand Total	0	1	3	4	0	0	0	0	8	1	0	9	0	0	0	0	13
Apprch %	0	25	75		0	0	0		88.9	11.1	0		0	0	0		
Total %	0	7.7	23.1	30.8	0	0	0	0	61.5	7.7	0	69.2	0	0	0	0	

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	**2**	0	0	**2**	0	0	0	0	**2**
Total Volume	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0	4
% App. Total	0	0	0		0	0	0		75	25	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.375	.250	.000	.500	.000	.000	.000	.000	.500

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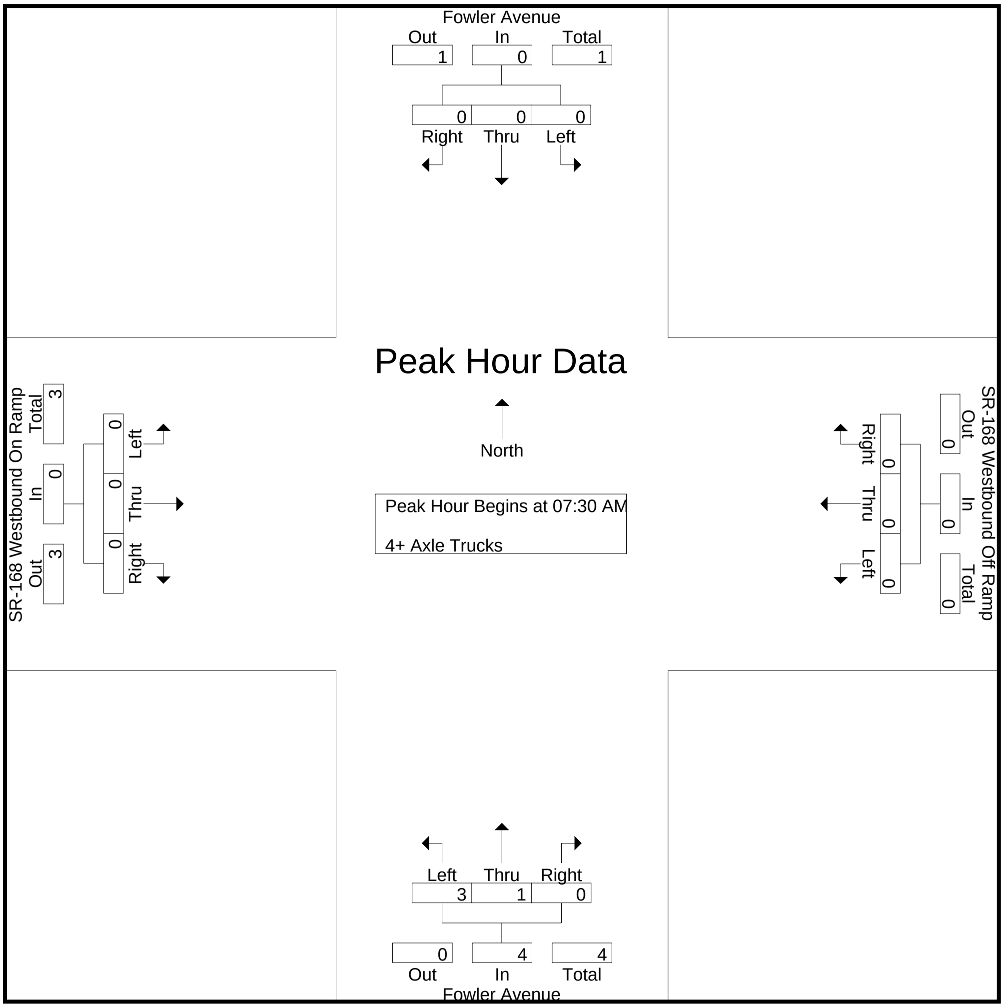
City of Clovis	File Name : 25_CVS_Fowl_168W AMC
N/S: Fowler Avenue	Site Code : 00322473
E/W: SR-168 Westbound Ramps	Start Date : 5/24/2022
Weather: Clear	Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	**2**	0	0	**2**	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0
% App. Total	0	0	0		0	0	0		75	25	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.375	.250	.000	.500	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	97	51	148	50	1	2	53	110	182	0	292	0	0	0	0	493
04:15 PM	0	111	49	160	46	0	4	50	94	194	0	288	0	0	0	0	498
04:30 PM	0	110	53	163	25	0	3	28	102	162	0	264	0	0	0	0	455
04:45 PM	0	80	34	114	44	1	5	50	105	193	0	298	0	0	0	0	462
Total	0	398	187	585	165	2	14	181	411	731	0	1142	0	0	0	0	1908
05:00 PM	0	94	47	141	43	0	3	46	129	189	0	318	0	0	0	0	505
05:15 PM	0	109	42	151	26	0	8	34	100	198	0	298	0	0	0	0	483
05:30 PM	0	101	50	151	33	0	8	41	103	175	0	278	0	0	0	0	470
05:45 PM	0	112	35	147	37	0	5	42	63	168	0	231	0	0	0	0	420
Total	0	416	174	590	139	0	24	163	395	730	0	1125	0	0	0	0	1878
Grand Total	0	814	361	1175	304	2	38	344	806	1461	0	2267	0	0	0	0	3786
Apprch %	0	69.3	30.7		88.4	0.6	11		35.6	64.4	0		0	0	0		
Total %	0	21.5	9.5	31	8	0.1	1	9.1	21.3	38.6	0	59.9	0	0	0	0	
Passenger Vehicles	0	806	357	1163	296	2	37	335	796	1454	0	2250	0	0	0	0	3748
% Passenger Vehicles	0	99	98.9	99	97.4	100	97.4	97.4	98.8	99.5	0	99.3	0	0	0	0	99
Large 2 Axle Vehicles	0	7	4	11	6	0	1	7	3	7	0	10	0	0	0	0	28
% Large 2 Axle Vehicles	0	0.9	1.1	0.9	2	0	2.6	2	0.4	0.5	0	0.4	0	0	0	0	0.7
3 Axle Vehicles	0	1	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3
% 3 Axle Vehicles	0	0.1	0	0.1	0.7	0	0	0.6	0	0	0	0	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	7
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0.9	0	0	0.3	0	0	0	0	0.2

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**111**	49	160	**46**	0	4	**50**	94	**194**	0	288	0	0	0	0	498
04:30 PM	0	110	**53**	**163**	25	0	3	28	102	162	0	264	0	0	0	0	455
04:45 PM	0	80	34	114	44	**1**	**5**	50	105	193	0	298	0	0	0	0	462
05:00 PM	0	94	47	141	43	0	3	46	**129**	189	0	**318**	0	0	0	0	**505**
Total Volume	0	395	183	578	158	1	15	174	430	738	0	1168	0	0	0	0	1920
% App. Total	0	68.3	31.7		90.8	0.6	8.6		36.8	63.2	0		0	0	0		
PHF	.000	.890	.863	.887	.859	.250	.750	.870	.833	.951	.000	.918	.000	.000	.000	.000	.950

AGENDA ITEM NO. 6.

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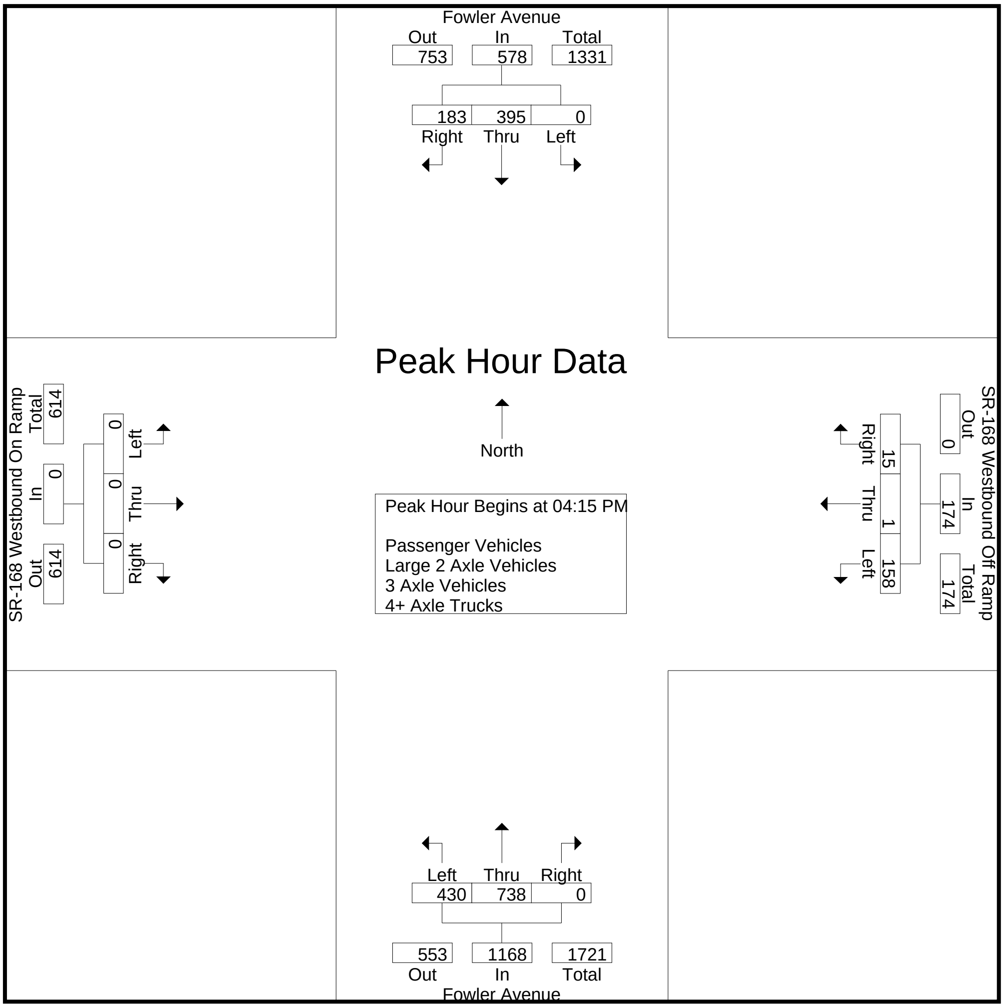
City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:45 PM				04:00 PM			
+0 mins.	0	94	47	141	**50**	**1**	2	**53**	105	193	0	298	0	0	0	0
+15 mins.	0	109	42	**151**	46	0	4	50	**129**	189	0	**318**	0	0	0	0
+30 mins.	0	101	**50**	151	25	0	3	28	100	**198**	0	298	0	0	0	0
+45 mins.	0	**112**	35	147	44	1	**5**	50	103	175	0	278	0	0	0	0
Total Volume	0	416	174	590	165	2	14	181	437	755	0	1192	0	0	0	0
% App. Total	0	70.5	29.5		91.2	1.1	7.7		36.7	63.3	0		0	0	0	
PHF	.000	.929	.870	.977	.825	.500	.700	.854	.847	.953	.000	.937	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	97	51	148	48	1	1	50	109	182	0	291	0	0	0	0	489
04:15 PM	0	110	48	158	43	0	4	47	93	194	0	287	0	0	0	0	492
04:30 PM	0	110	53	163	25	0	3	28	100	161	0	261	0	0	0	0	452
04:45 PM	0	78	31	109	43	1	5	49	101	191	0	292	0	0	0	0	450
Total	0	395	183	578	159	2	13	174	403	728	0	1131	0	0	0	0	1883
05:00 PM	0	94	47	141	41	0	3	44	129	187	0	316	0	0	0	0	501
05:15 PM	0	107	42	149	26	0	8	34	98	198	0	296	0	0	0	0	479
05:30 PM	0	100	50	150	33	0	8	41	103	174	0	277	0	0	0	0	468
05:45 PM	0	110	35	145	37	0	5	42	63	167	0	230	0	0	0	0	417
Total	0	411	174	585	137	0	24	161	393	726	0	1119	0	0	0	0	1865
Grand Total	0	806	357	1163	296	2	37	335	796	1454	0	2250	0	0	0	0	3748
Apprch %	0	69.3	30.7		88.4	0.6	11		35.4	64.6	0		0	0	0		
Total %	0	21.5	9.5	31	7.9	0.1	1	8.9	21.2	38.8	0	60	0	0	0	0	

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	**110**	48	158	**43**	0	4	47	93	**194**	0	287	0	0	0	0	492
04:30 PM	0	110	**53**	**163**	25	0	3	28	100	161	0	261	0	0	0	0	452
04:45 PM	0	78	31	109	43	**1**	**5**	**49**	101	191	0	292	0	0	0	0	450
05:00 PM	0	94	47	141	41	0	3	44	**129**	187	0	**316**	0	0	0	0	**501**
Total Volume	0	392	179	571	152	1	15	168	423	733	0	1156	0	0	0	0	1895
% App. Total	0	68.7	31.3		90.5	0.6	8.9		36.6	63.4	0		0	0	0		
PHF	.000	.891	.844	.876	.884	.250	.750	.857	.820	.945	.000	.915	.000	.000	.000	.000	.946

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
Site Code : 00322473
Start Date : 5/24/2022
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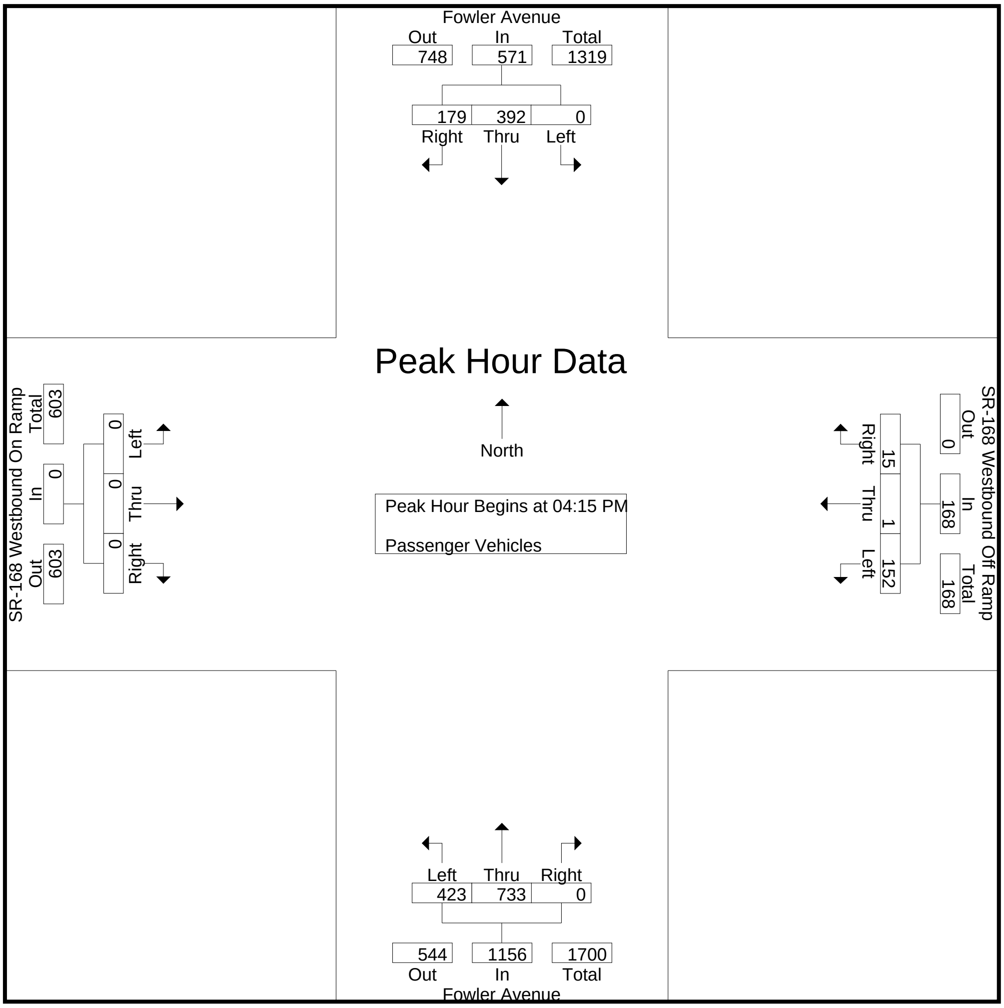

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	**110**	48	158	**43**	0	4	47	93	**194**	0	287	0	0	0	0
+15 mins.	0	110	**53**	**163**	25	0	3	28	100	161	0	261	0	0	0	0
+30 mins.	0	78	31	109	43	**1**	**5**	**49**	101	191	0	292	0	0	0	0
+45 mins.	0	94	47	141	41	0	3	44	**129**	187	0	**316**	0	0	0	0
Total Volume	0	392	179	571	152	1	15	168	423	733	0	1156	0	0	0	0
% App. Total	0	68.7	31.3		90.5	0.6	8.9		36.6	63.4	0		0	0	0	
PHF	.000	.891	.844	.876	.884	.250	.750	.857	.820	.945	.000	.915	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	2	0	1	3	0	0	0	0	0	0	0	0	3
04:15 PM	0	1	1	2	3	0	0	3	1	0	0	1	0	0	0	0	6
04:30 PM	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	3
04:45 PM	0	2	3	5	0	0	0	0	0	2	0	2	0	0	0	0	7
Total	0	3	4	7	5	0	1	6	3	3	0	6	0	0	0	0	19
05:00 PM	0	0	0	0	1	0	0	1	0	2	0	2	0	0	0	0	3
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	4	0	4	1	0	0	1	0	4	0	4	0	0	0	0	9
Grand Total	0	7	4	11	6	0	1	7	3	7	0	10	0	0	0	0	28
Apprch %	0	63.6	36.4		85.7	0	14.3		30	70	0		0	0	0		
Total %	0	25	14.3	39.3	21.4	0	3.6	25	10.7	25	0	35.7	0	0	0	0	

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	1	1	2	**3**	0	0	**3**	1	0	0	1	0	0	0	0	6
04:30 PM	0	0	0	0	0	0	0	0	**2**	1	0	**3**	0	0	0	0	3
04:45 PM	0	**2**	**3**	**5**	0	0	0	0	0	**2**	0	2	0	0	0	0	**7**
05:00 PM	0	0	0	0	1	0	0	1	0	2	0	2	0	0	0	0	3
Total Volume	0	3	4	7	4	0	0	4	3	5	0	8	0	0	0	0	19
% App. Total	0	42.9	57.1		100	0	0		37.5	62.5	0		0	0	0		
PHF	.000	.375	.333	.350	.333	.000	.000	.333	.375	.625	.000	.667	.000	.000	.000	.000	.679

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
Site Code : 00322473
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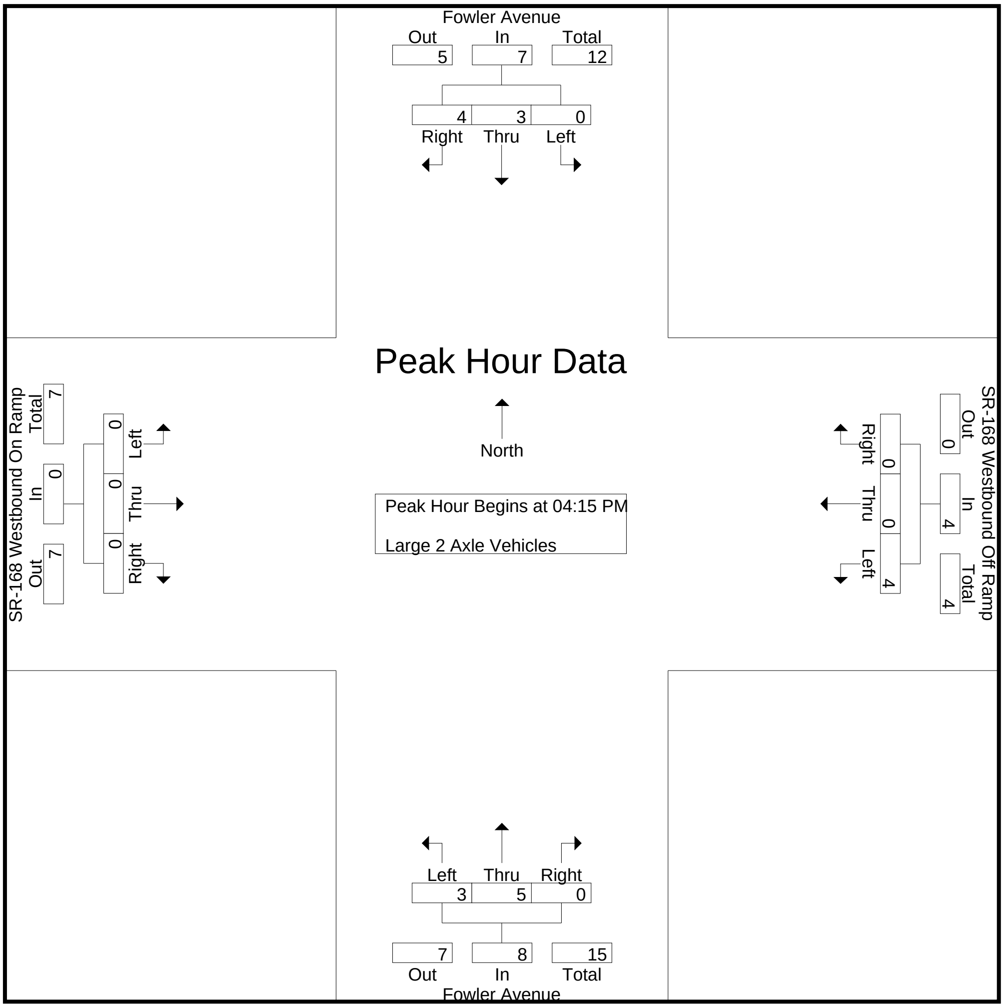

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	1	1	2	**3**	0	0	**3**	1	0	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	**2**	1	0	**3**	0	0	0	0
+30 mins.	0	**2**	**3**	**5**	0	0	0	0	0	**2**	0	2	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	1	0	2	0	2	0	0	0	0
Total Volume	0	3	4	7	4	0	0	4	3	5	0	8	0	0	0	0
% App. Total	0	42.9	57.1		100	0	0		37.5	62.5	0		0	0	0	
PHF	.000	.375	.333	.350	.333	.000	.000	.333	.375	.625	.000	.667	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
Site Code : 00322473
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Page No : 1

Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Grand Total	0	1	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3
Apprch %	0	100	0		100	0	0		0	0	0		0	0	0		
Total %	0	33.3	0	33.3	66.7	0	0	66.7	0	0	0	0	0	0	0	0	

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0	**1**
05:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		100	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
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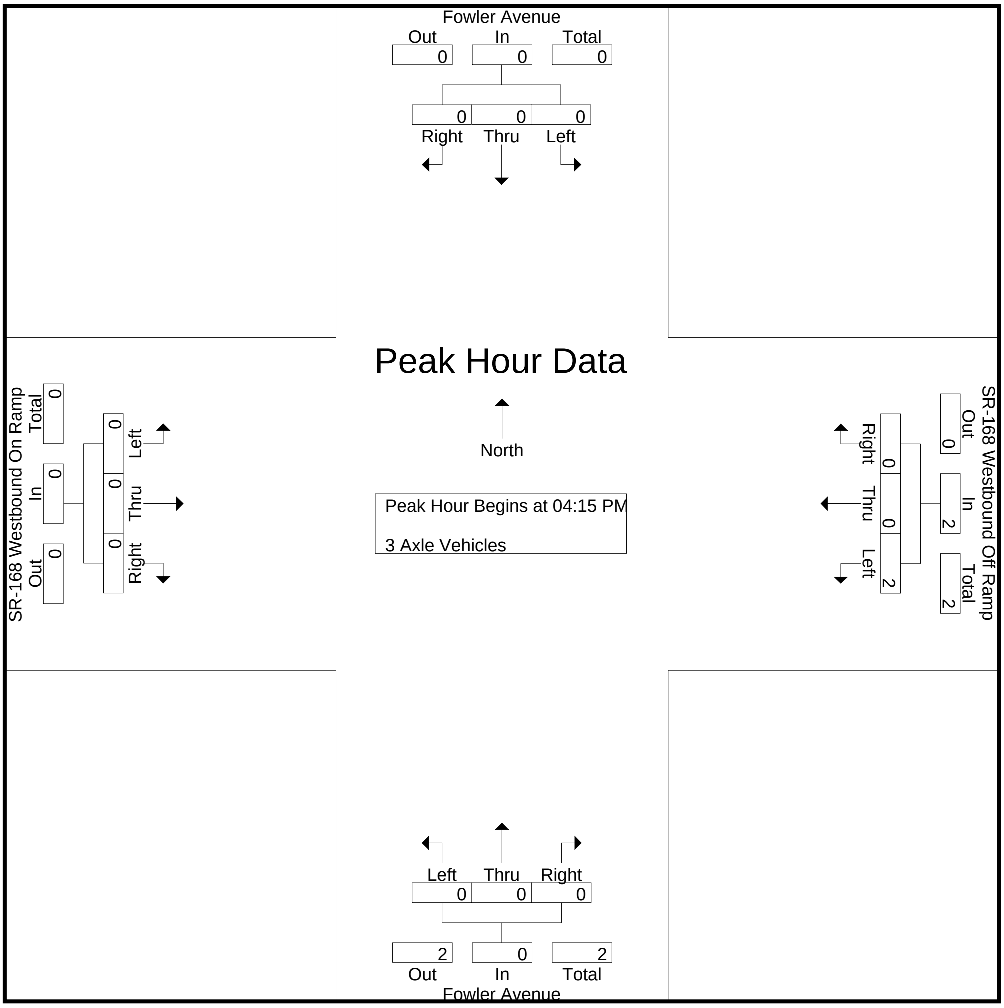

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0
% App. Total	0	0	0		100	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
Site Code : 00322473
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Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	4
Total	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	7
Apprch %	0	0	0		0	0	0		100	0	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	

	Fowler Avenue Southbound				SR-168 Westbound Off Ramp Westbound				Fowler Avenue Northbound				SR-168 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	**4**	0	0	**4**	0	0	0	0	**4**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	4
% App. Total	0	0	0		0	0	0		100	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.250

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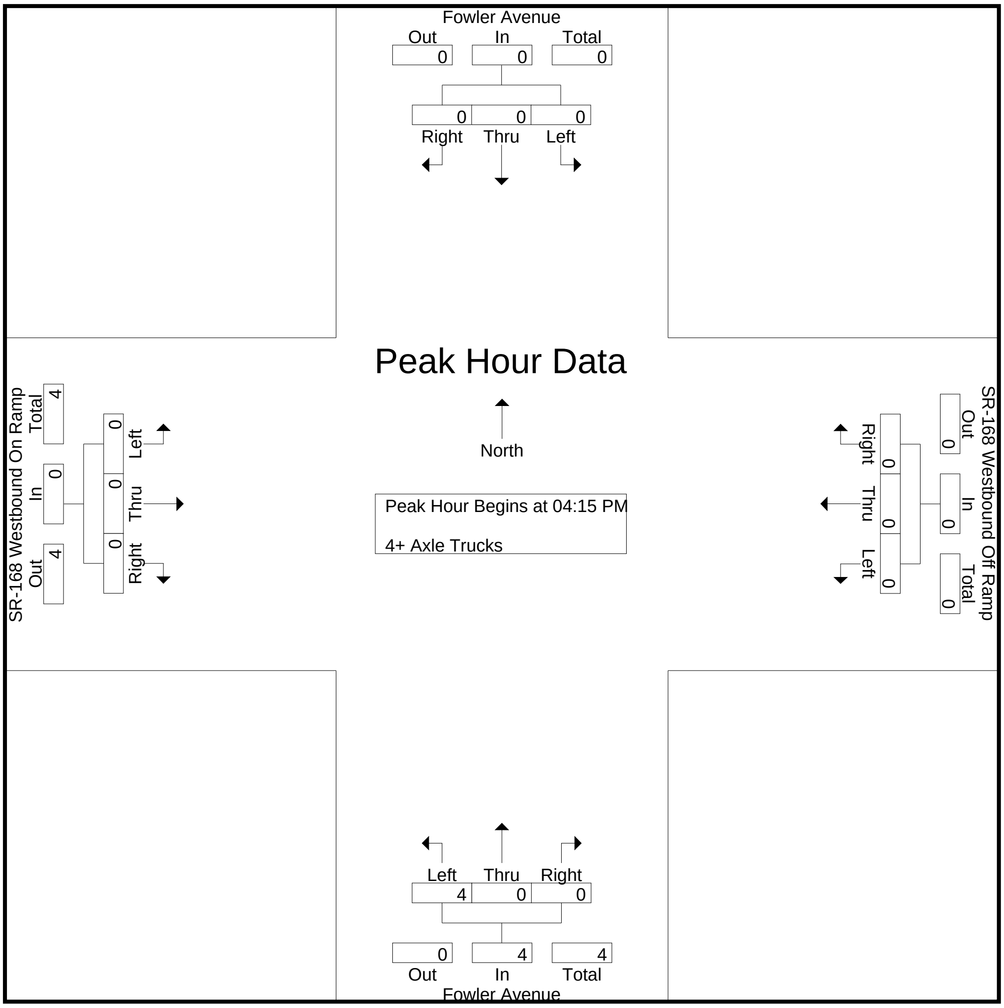
City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Westbound Ramps
Weather: Clear

File Name : 25_CVS_Fowl_168W PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	**4**	0	0	**4**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0
% App. Total	0	0	0		0	0	0		100	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000

Location: Clovis
N/S: Fowler Avenue
E/W: SR-168 WB Ramps

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Fowler Avenue	East Leg SR-168 WB Ramps	South Leg Fowler Avenue	West Leg SR-168 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	2	0	0	2
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	0	5	0	0	5

	North Leg Fowler Avenue	East Leg SR-168 WB Ramps	South Leg Fowler Avenue	West Leg SR-168 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Fowler Avenue
E/W: SR-168 WB Ramps

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Fowler Avenue			Westbound SR-168 WB Ramps			Northbound Fowler Avenue			Eastbound SR-168 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

	Southbound Fowler Avenue			Westbound SR-168 WB Ramps			Northbound Fowler Avenue			Eastbound SR-168 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	1	0	0	0	0	2

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	95	0	98	0	0	0	0	0	144	25	169	29	1	37	67	334
07:15 AM	2	110	0	112	0	0	0	0	0	193	27	220	22	0	62	84	416
07:30 AM	1	97	0	98	0	0	0	0	0	203	19	222	36	0	77	113	433
07:45 AM	4	107	0	111	0	0	0	0	0	204	21	225	41	0	84	125	461
Total	10	409	0	419	0	0	0	0	0	744	92	836	128	1	260	389	1644
08:00 AM	4	112	0	116	0	0	0	0	0	203	24	227	39	0	89	128	471
08:15 AM	5	128	0	133	0	0	0	0	0	164	28	192	25	0	82	107	432
08:30 AM	2	108	0	110	0	0	0	0	0	137	21	158	27	0	71	98	366
08:45 AM	1	112	0	113	0	0	0	0	0	141	17	158	21	0	68	89	360
Total	12	460	0	472	0	0	0	0	0	645	90	735	112	0	310	422	1629
Grand Total	22	869	0	891	0	0	0	0	0	1389	182	1571	240	1	570	811	3273
Apprch %	2.5	97.5	0		0	0	0		0	88.4	11.6		29.6	0.1	70.3		
Total %	0.7	26.6	0	27.2	0	0	0	0	0	42.4	5.6	48	7.3	0	17.4	24.8	
Passenger Vehicles	22	859	0	881	0	0	0	0	0	1370	179	1549	232	1	554	787	3217
% Passenger Vehicles	100	98.8	0	98.9	0	0	0	0	0	98.6	98.4	98.6	96.7	100	97.2	97	98.3
Large 2 Axle Vehicles	0	6	0	6	0	0	0	0	0	10	3	13	7	0	7	14	33
% Large 2 Axle Vehicles	0	0.7	0	0.7	0	0	0	0	0	0.7	1.6	0.8	2.9	0	1.2	1.7	1
3 Axle Vehicles	0	4	0	4	0	0	0	0	0	1	0	1	1	0	2	3	8
% 3 Axle Vehicles	0	0.5	0	0.4	0	0	0	0	0	0.1	0	0.1	0.4	0	0.4	0.4	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	8	0	8	0	0	7	7	15
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.6	0	0.5	0	0	1.2	0.9	0.5

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	97	0	98	0	0	0	0	0	203	19	222	36	0	77	113	433
07:45 AM	4	107	0	111	0	0	0	0	0	**204**	21	225	**41**	0	84	125	461
08:00 AM	4	112	0	116	0	0	0	0	0	203	24	**227**	39	0	**89**	**128**	**471**
08:15 AM	**5**	**128**	0	**133**	0	0	0	0	0	164	**28**	192	25	0	82	107	432
Total Volume	14	444	0	458	0	0	0	0	0	774	92	866	141	0	332	473	1797
% App. Total	3.1	96.9	0		0	0	0		0	89.4	10.6		29.8	0	70.2		
PHF	.700	.867	.000	.861	.000	.000	.000	.000	.000	.949	.821	.954	.860	.000	.933	.924	.954

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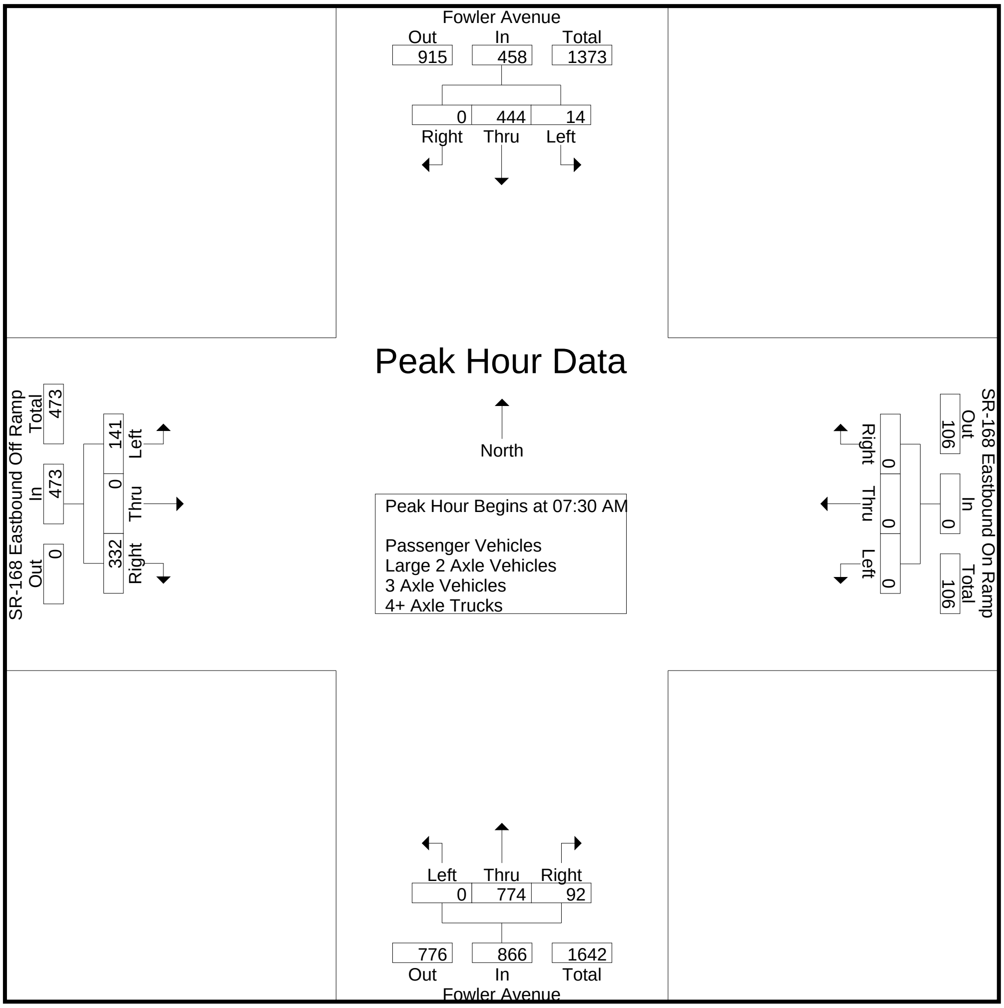
City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:15 AM				07:30 AM			
+0 mins.	4	112	0	116	0	0	0	0	0	193	**27**	220	36	0	77	113
+15 mins.	**5**	**128**	0	**133**	0	0	0	0	0	203	19	222	**41**	0	84	125
+30 mins.	2	108	0	110	0	0	0	0	0	**204**	21	225	39	0	**89**	**128**
+45 mins.	1	112	0	113	0	0	0	0	0	203	24	**227**	25	0	82	107
Total Volume	12	460	0	472	0	0	0	0	0	803	91	894	141	0	332	473
% App. Total	2.5	97.5	0		0	0	0		0	89.8	10.2		29.8	0	70.2	
PHF	.600	.898	.000	.887	.000	.000	.000	.000	.000	.984	.843	.985	.860	.000	.933	.924

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	94	0	97	0	0	0	0	0	142	24	166	28	1	36	65	328
07:15 AM	2	110	0	112	0	0	0	0	0	191	27	218	20	0	61	81	411
07:30 AM	1	97	0	98	0	0	0	0	0	203	19	222	35	0	72	107	427
07:45 AM	4	104	0	108	0	0	0	0	0	202	21	223	41	0	82	123	454
Total	10	405	0	415	0	0	0	0	0	738	91	829	124	1	251	376	1620
08:00 AM	4	109	0	113	0	0	0	0	0	200	23	223	38	0	85	123	459
08:15 AM	5	125	0	130	0	0	0	0	0	160	27	187	24	0	82	106	423
08:30 AM	2	108	0	110	0	0	0	0	0	135	21	156	26	0	69	95	361
08:45 AM	1	112	0	113	0	0	0	0	0	137	17	154	20	0	67	87	354
Total	12	454	0	466	0	0	0	0	0	632	88	720	108	0	303	411	1597
Grand Total	22	859	0	881	0	0	0	0	0	1370	179	1549	232	1	554	787	3217
Apprch %	2.5	97.5	0		0	0	0		0	88.4	11.6		29.5	0.1	70.4		
Total %	0.7	26.7	0	27.4	0	0	0	0	0	42.6	5.6	48.2	7.2	0	17.2	24.5	

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	97	0	98	0	0	0	0	0	**203**	19	222	35	0	72	107	427
07:45 AM	4	104	0	108	0	0	0	0	0	202	21	**223**	**41**	0	82	**123**	454
08:00 AM	4	109	0	113	0	0	0	0	0	200	23	223	38	0	**85**	123	**459**
08:15 AM	**5**	**125**	0	**130**	0	0	0	0	0	160	**27**	187	24	0	82	106	423
Total Volume	14	435	0	449	0	0	0	0	0	765	90	855	138	0	321	459	1763
% App. Total	3.1	96.9	0		0	0	0		0	89.5	10.5		30.1	0	69.9		
PHF	.700	.870	.000	.863	.000	.000	.000	.000	.000	.942	.833	.959	.841	.000	.944	.933	.960

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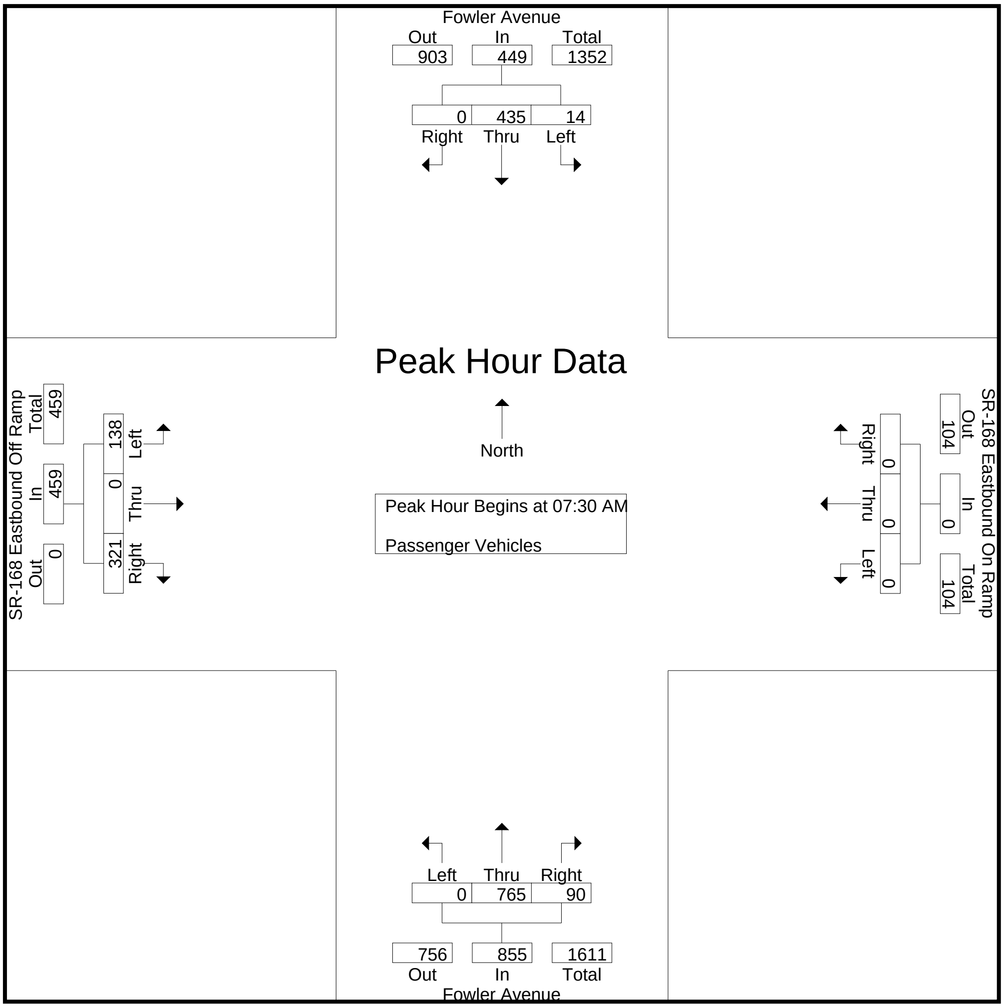
City of Clovis	File Name : 26_CVS_Fowl_168E AMC
N/S: Fowler Avenue	Site Code : 00322473
E/W: SR-168 Eastbound Ramps	Start Date : 5/24/2022
Weather: Clear	Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	1	97	0	98	0	0	0	0	0	**203**	19	222	35	0	72	107
+15 mins.	4	104	0	108	0	0	0	0	0	202	21	**223**	**41**	0	82	**123**
+30 mins.	4	109	0	113	0	0	0	0	0	200	23	223	38	0	**85**	123
+45 mins.	**5**	**125**	0	**130**	0	0	0	0	0	160	**27**	187	24	0	82	106
Total Volume	14	435	0	449	0	0	0	0	0	765	90	855	138	0	321	459
% App. Total	3.1	96.9	0		0	0	0		0	89.5	10.5		30.1	0	69.9	
PHF	.700	.870	.000	.863	.000	.000	.000	.000	.000	.942	.833	.959	.841	.000	.944	.933

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	1	3
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	2	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
07:45 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	1	0	1	0	0	0	0	0	4	1	5	3	0	3	6	12
08:00 AM	0	2	0	2	0	0	0	0	0	2	1	3	1	0	2	3	8
08:15 AM	0	3	0	3	0	0	0	0	0	2	1	3	1	0	0	1	7
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	1	0	1	2	4
Total	0	5	0	5	0	0	0	0	0	6	2	8	4	0	4	8	21
Grand Total	0	6	0	6	0	0	0	0	0	10	3	13	7	0	7	14	33
Apprch %	0	100	0		0	0	0		0	76.9	23.1		50	0	50		
Total %	0	18.2	0	18.2	0	0	0	0	0	30.3	9.1	39.4	21.2	0	21.2	42.4	

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**2**	**3**	3
07:45 AM	0	1	0	1	0	0	0	0	0	**2**	0	2	0	0	0	0	3
08:00 AM	0	2	0	2	0	0	0	0	0	2	**1**	**3**	1	0	2	3	**8**
08:15 AM	0	**3**	0	**3**	0	0	0	0	0	2	1	3	1	0	0	1	7
Total Volume	0	6	0	6	0	0	0	0	0	6	2	8	3	0	4	7	21
% App. Total	0	100	0		0	0	0		0	75	25		42.9	0	57.1		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.750	.500	.667	.750	.000	.500	.583	.656

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E AMC
Site Code : 00322473
Start Date : 5/24/2022
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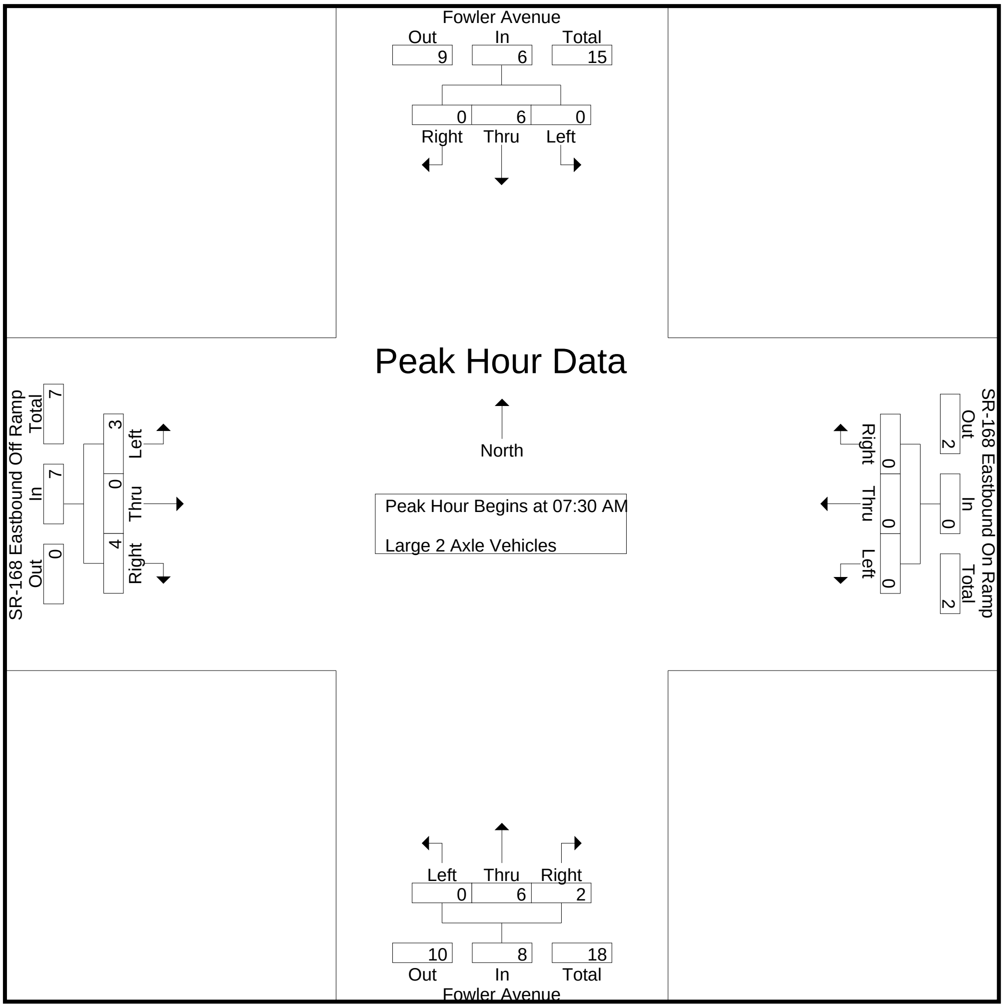

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**2**	**3**
+15 mins.	0	1	0	1	0	0	0	0	0	**2**	0	2	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	0	2	**1**	**3**	1	0	2	3
+45 mins.	0	**3**	0	**3**	0	0	0	0	0	2	1	3	1	0	0	1
Total Volume	0	6	0	6	0	0	0	0	0	6	2	8	3	0	4	7
% App. Total	0	100	0		0	0	0		0	75	25		42.9	0	57.1	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.750	.500	.667	.750	.000	.500	.583

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
07:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	0	3	0	0	0	0	0	0	0	0	1	0	2	3	6
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Grand Total	0	4	0	4	0	0	0	0	0	1	0	1	1	0	2	3	8
Apprch %	0	100	0		0	0	0		0	100	0		33.3	0	66.7		
Total %	0	50	0	50	0	0	0	0	0	12.5	0	12.5	12.5	0	25	37.5	

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**	**2**
07:45 AM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	3	0	3	0	0	0	0	0	0	0	0	0	0	2	2	5
% App. Total	0	100	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.625

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City of Clovis
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File Name : 26_CVS_Fowl_168E AMC
Site Code : 00322473
Start Date : 5/24/2022
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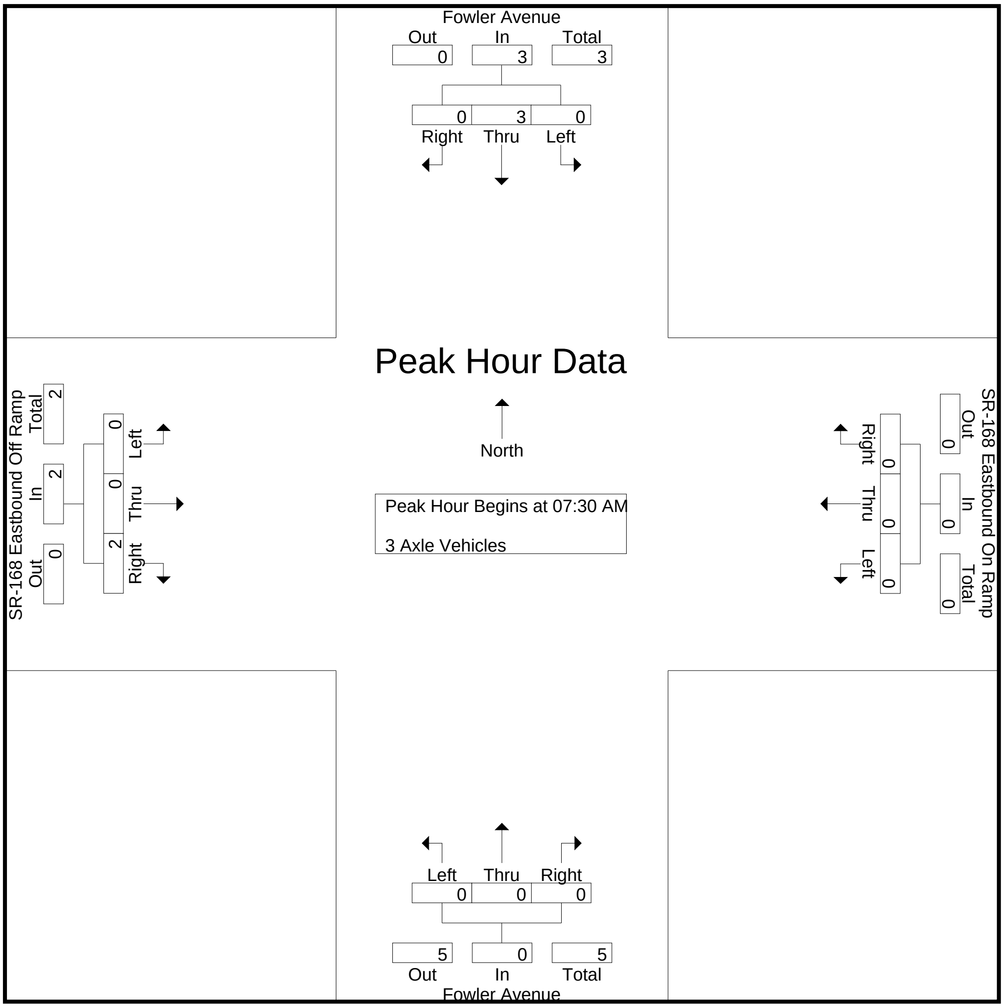

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**
+15 mins.	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	3	0	3	0	0	0	0	0	0	0	0	0	0	2	2
% App. Total	0	100	0		0	0	0		0	0	0		0	0	100	
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	4	4	6
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	3
08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1	3
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	6	0	6	0	0	3	3	9
Grand Total	0	0	0	0	0	0	0	0	0	8	0	8	0	0	7	7	15
Apprch %	0	0	0		0	0	0		0	100	0		0	0	100		
Total %	0	0	0	0	0	0	0	0	0	53.3	0	53.3	0	0	46.7	46.7	

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**	2
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	**3**
08:15 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	3	0	3	0	0	5	5	8
% App. Total	0	0	0		0	0	0		0	100	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.625	.625	.667

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City of Clovis
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File Name : 26_CVS_Fowl_168E AMC
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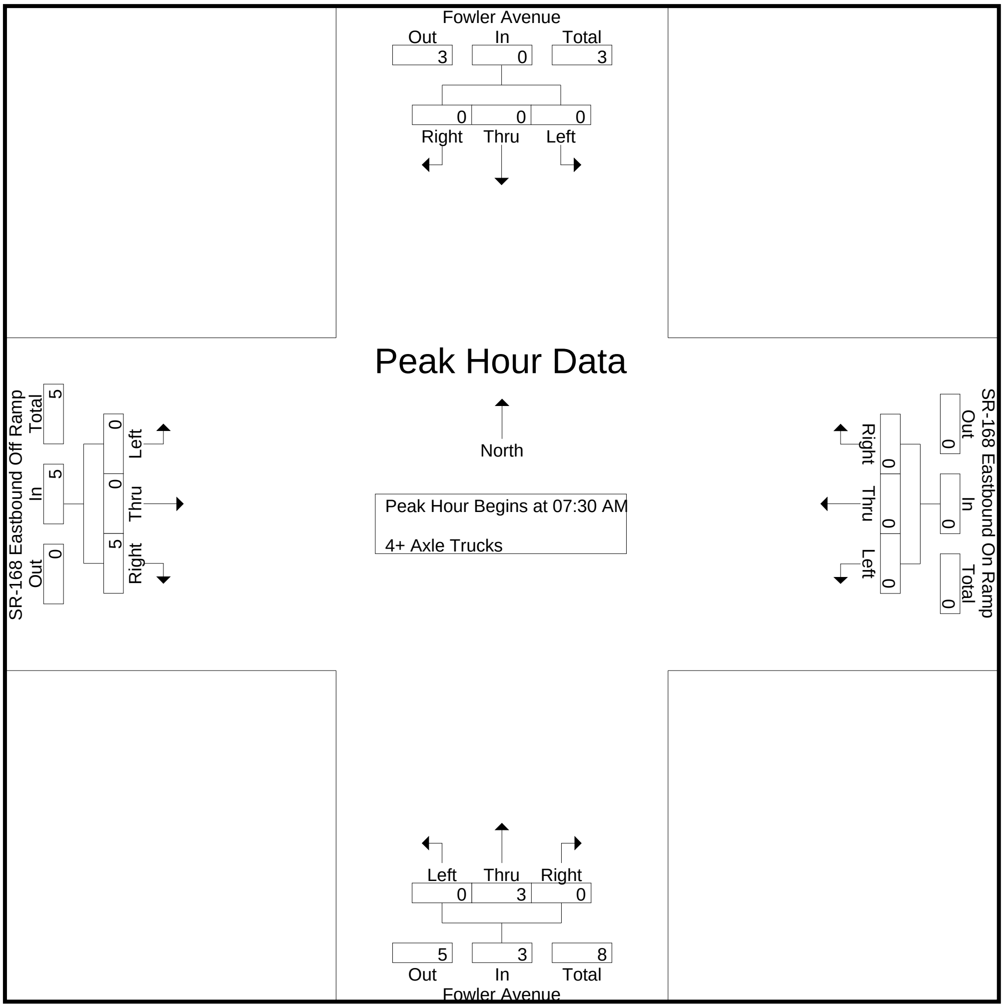

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2
+45 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	3	0	3	0	0	5	5
% App. Total	0	0	0		0	0	0		0	100	0		0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.625	.625

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City of Clovis
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Weather: Clear

File Name : 26_CVS_Fowl_168E PMC
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	150	0	153	0	0	0	0	0	209	60	269	79	0	125	204	626
04:15 PM	8	153	0	161	0	0	0	0	0	198	62	260	96	0	138	234	655
04:30 PM	4	141	0	145	0	0	0	0	0	189	74	263	72	0	126	198	606
04:45 PM	5	122	0	127	0	0	0	0	0	216	85	301	77	0	147	224	652
Total	20	566	0	586	0	0	0	0	0	812	281	1093	324	0	536	860	2539
05:00 PM	6	136	0	142	0	0	0	0	0	237	63	300	77	0	154	231	673
05:15 PM	7	132	0	139	0	0	0	0	0	216	69	285	79	0	157	236	660
05:30 PM	4	128	0	132	0	0	0	0	0	195	77	272	81	0	127	208	612
05:45 PM	6	148	0	154	0	0	0	0	0	169	68	237	64	0	126	190	581
Total	23	544	0	567	0	0	0	0	0	817	277	1094	301	0	564	865	2526
Grand Total	43	1110	0	1153	0	0	0	0	0	1629	558	2187	625	0	1100	1725	5065
Apprch %	3.7	96.3	0		0	0	0		0	74.5	25.5		36.2	0	63.8		
Total %	0.8	21.9	0	22.8	0	0	0	0	0	32.2	11	43.2	12.3	0	21.7	34.1	
Passenger Vehicles	43	1094	0	1137	0	0	0	0	0	1616	555	2171	618	0	1082	1700	5008
% Passenger Vehicles	100	98.6	0	98.6	0	0	0	0	0	99.2	99.5	99.3	98.9	0	98.4	98.6	98.9
Large 2 Axle Vehicles	0	13	0	13	0	0	0	0	0	9	2	11	7	0	8	15	39
% Large 2 Axle Vehicles	0	1.2	0	1.1	0	0	0	0	0	0.6	0.4	0.5	1.1	0	0.7	0.9	0.8
3 Axle Vehicles	0	3	0	3	0	0	0	0	0	1	1	2	0	0	2	2	7
% 3 Axle Vehicles	0	0.3	0	0.3	0	0	0	0	0	0.1	0.2	0.1	0	0	0.2	0.1	0.1
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	3	0	3	0	0	8	8	11
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.2	0	0.1	0	0	0.7	0.5	0.2

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	5	122	0	127	0	0	0	0	0	216	**85**	**301**	77	0	147	224	652
05:00 PM	6	**136**	0	**142**	0	0	0	0	0	**237**	63	300	77	0	154	231	**673**
05:15 PM	**7**	132	0	139	0	0	0	0	0	216	69	285	79	0	**157**	**236**	660
05:30 PM	4	128	0	132	0	0	0	0	0	195	77	272	**81**	0	127	208	612
Total Volume	22	518	0	540	0	0	0	0	0	864	294	1158	314	0	585	899	2597
% App. Total	4.1	95.9	0		0	0	0		0	74.6	25.4		34.9	0	65.1		
PHF	.786	.952	.000	.951	.000	.000	.000	.000	.000	.911	.865	.962	.969	.000	.932	.952	.965

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City of Clovis
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File Name : 26_CVS_Fowl_168E PMC
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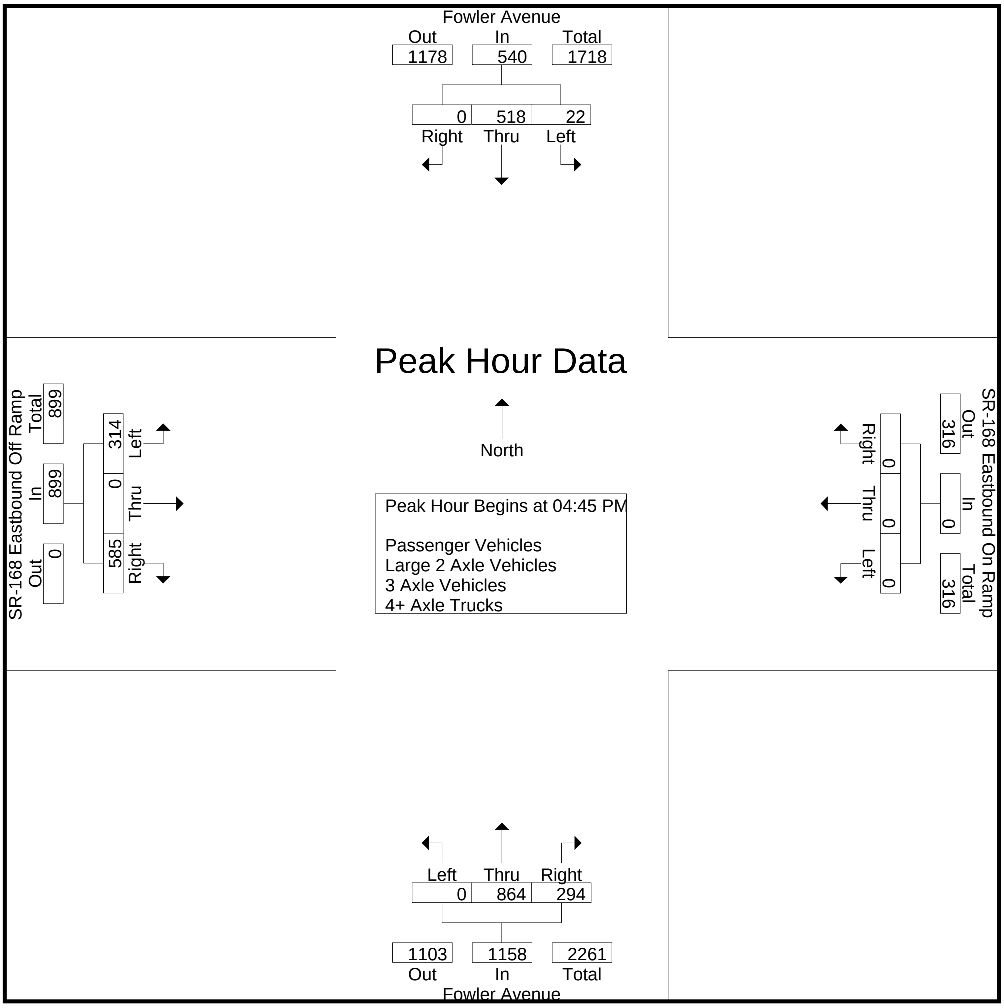

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:45 PM				04:45 PM			
+0 mins.	3	150	0	153	0	0	0	0	0	216	**85**	**301**	77	0	147	224
+15 mins.	**8**	**153**	0	**161**	0	0	0	0	0	**237**	63	300	77	0	154	231
+30 mins.	4	141	0	145	0	0	0	0	0	216	69	285	79	0	**157**	**236**
+45 mins.	5	122	0	127	0	0	0	0	0	195	77	272	**81**	0	127	208
Total Volume	20	566	0	586	0	0	0	0	0	864	294	1158	314	0	585	899
% App. Total	3.4	96.6	0		0	0	0		0	74.6	25.4		34.9	0	65.1	
PHF	.625	.925	.000	.910	.000	.000	.000	.000	.000	.911	.865	.962	.969	.000	.932	.952

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Weather: Clear

File Name : 26_CVS_Fowl_168E PMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Passenger Vehicles

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	147	0	150	0	0	0	0	0	208	60	268	79	0	122	201	619
04:15 PM	8	149	0	157	0	0	0	0	0	197	62	259	95	0	137	232	648
04:30 PM	4	141	0	145	0	0	0	0	0	186	73	259	72	0	124	196	600
04:45 PM	5	119	0	124	0	0	0	0	0	214	85	299	76	0	143	219	642
Total	20	556	0	576	0	0	0	0	0	805	280	1085	322	0	526	848	2509
05:00 PM	6	134	0	140	0	0	0	0	0	236	61	297	76	0	150	226	663
05:15 PM	7	130	0	137	0	0	0	0	0	213	69	282	77	0	155	232	651
05:30 PM	4	127	0	131	0	0	0	0	0	195	77	272	80	0	125	205	608
05:45 PM	6	147	0	153	0	0	0	0	0	167	68	235	63	0	126	189	577
Total	23	538	0	561	0	0	0	0	0	811	275	1086	296	0	556	852	2499
Grand Total	43	1094	0	1137	0	0	0	0	0	1616	555	2171	618	0	1082	1700	5008
Apprch %	3.8	96.2	0		0	0	0		0	74.4	25.6		36.4	0	63.6		
Total %	0.9	21.8	0	22.7	0	0	0	0	0	32.3	11.1	43.4	12.3	0	21.6	33.9	

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	5	119	0	124	0	0	0	0	0	214	**85**	**299**	76	0	143	219	642
05:00 PM	6	**134**	0	**140**	0	0	0	0	0	**236**	61	297	76	0	150	226	**663**
05:15 PM	**7**	130	0	137	0	0	0	0	0	213	69	282	77	0	**155**	**232**	651
05:30 PM	4	127	0	131	0	0	0	0	0	195	77	272	**80**	0	125	205	608
Total Volume	22	510	0	532	0	0	0	0	0	858	292	1150	309	0	573	882	2564
% App. Total	4.1	95.9	0		0	0	0		0	74.6	25.4		35	0	65		
PHF	.786	.951	.000	.950	.000	.000	.000	.000	.000	.909	.859	.962	.966	.000	.924	.950	.967

AGENDA ITEM NO. 6.

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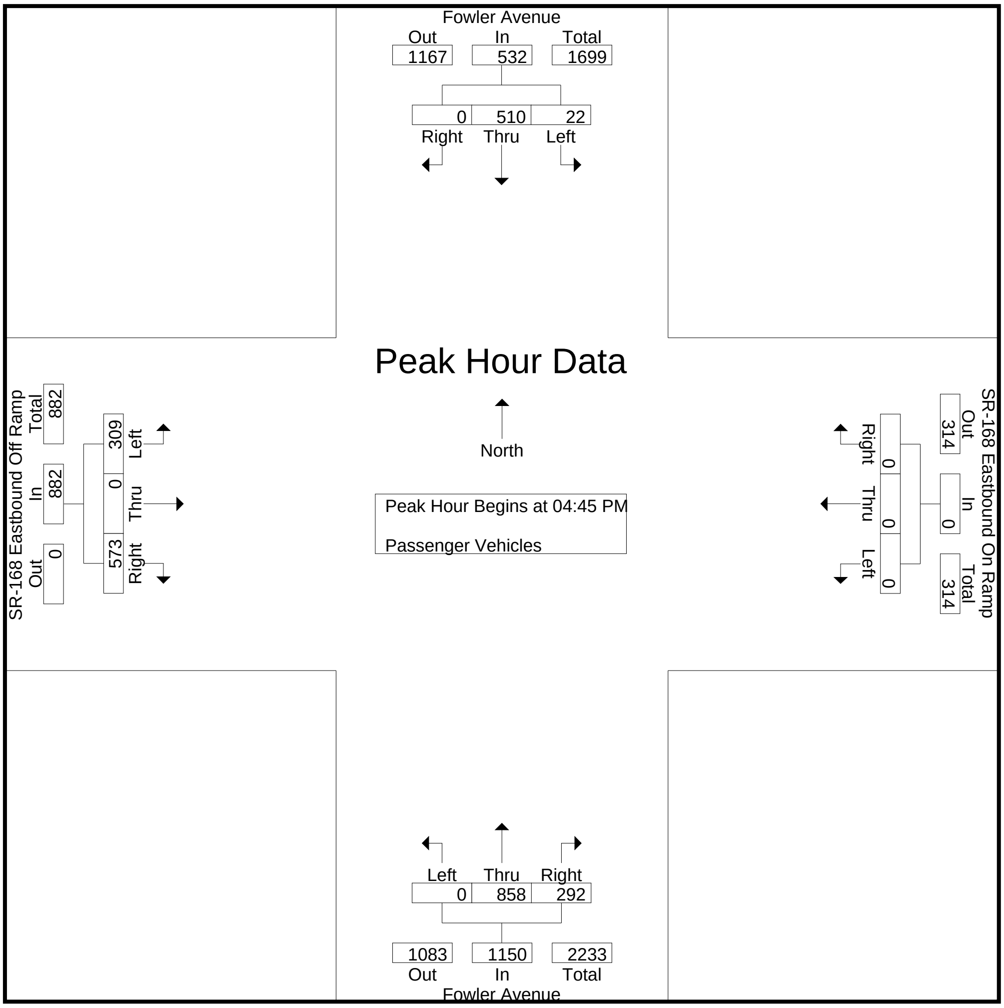

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	5	119	0	124	0	0	0	0	0	214	**85**	**299**	76	0	143	219
+15 mins.	6	**134**	0	**140**	0	0	0	0	0	**236**	61	297	76	0	150	226
+30 mins.	**7**	130	0	137	0	0	0	0	0	213	69	282	77	0	**155**	**232**
+45 mins.	4	127	0	131	0	0	0	0	0	195	77	272	**80**	0	125	205
Total Volume	22	510	0	532	0	0	0	0	0	858	292	1150	309	0	573	882
% App. Total	4.1	95.9	0		0	0	0		0	74.6	25.4		35	0	65	
PHF	.786	.951	.000	.950	.000	.000	.000	.000	.000	.909	.859	.962	.966	.000	.924	.950

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Weather: Clear

File Name : 26_CVS_Fowl_168E PMC
Site Code : 00322473
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Groups Printed- Large 2 Axle Vehicles

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2	2	4
04:15 PM	0	4	0	4	0	0	0	0	0	1	0	1	1	0	1	2	7
04:30 PM	0	0	0	0	0	0	0	0	0	3	1	4	0	0	1	1	5
04:45 PM	0	2	0	2	0	0	0	0	0	1	0	1	1	0	1	2	5
Total	0	8	0	8	0	0	0	0	0	5	1	6	2	0	5	7	21
05:00 PM	0	1	0	1	0	0	0	0	0	1	1	2	1	0	0	1	4
05:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	2	0	1	3	6
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	2	3	4
05:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	1	0	0	1	4
Total	0	5	0	5	0	0	0	0	0	4	1	5	5	0	3	8	18
Grand Total	0	13	0	13	0	0	0	0	0	9	2	11	7	0	8	15	39
Apprch %	0	100	0		0	0	0		0	81.8	18.2		46.7	0	53.3		
Total %	0	33.3	0	33.3	0	0	0	0	0	23.1	5.1	28.2	17.9	0	20.5	38.5	

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**2**	0	**2**	0	0	0	0	0	**1**	0	1	1	0	1	2	5
05:00 PM	0	1	0	1	0	0	0	0	0	1	**1**	**2**	1	0	0	1	4
05:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	**2**	0	1	**3**	**6**
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	**2**	3	4
Total Volume	0	6	0	6	0	0	0	0	0	3	1	4	5	0	4	9	19
% App. Total	0	100	0		0	0	0		0	75	25		55.6	0	44.4		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.750	.250	.500	.625	.000	.500	.750	.792

AGENDA ITEM NO. 6.

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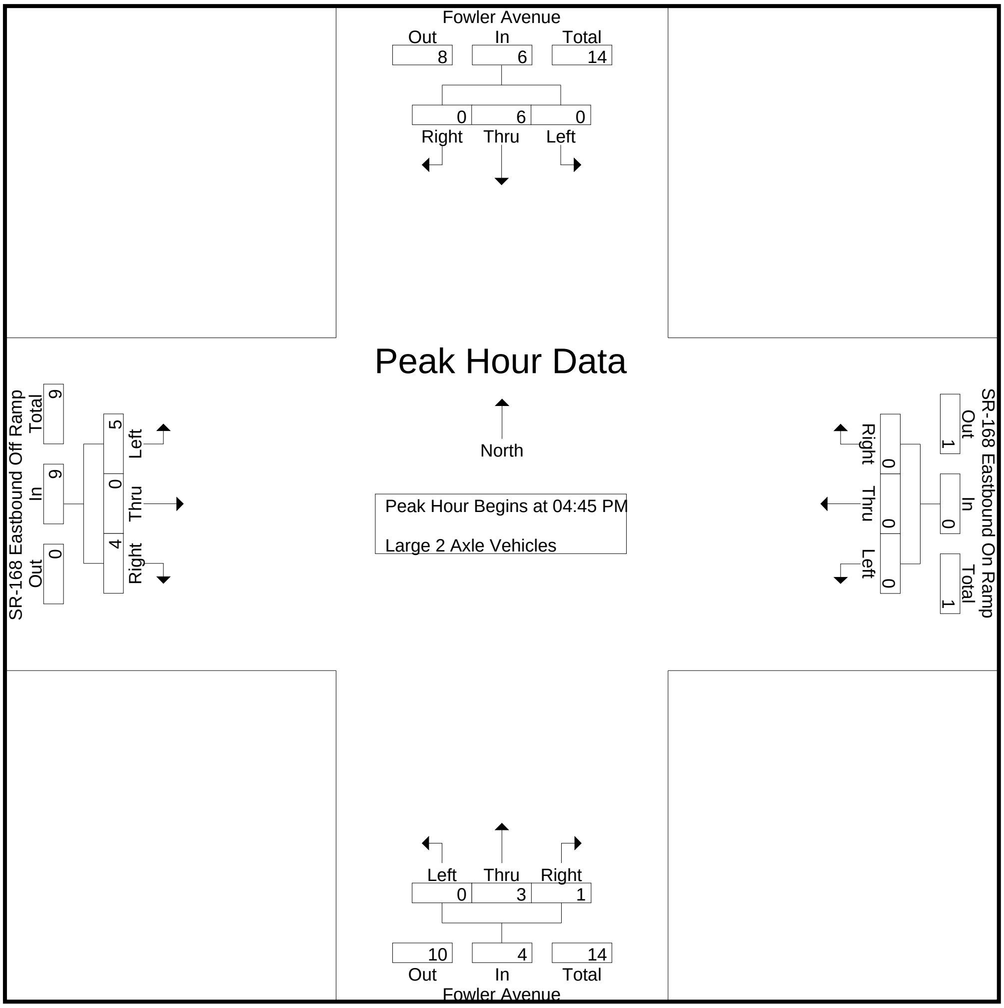
City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**2**	0	**2**	0	0	0	0	0	**1**	0	1	1	0	1	2
+15 mins.	0	1	0	1	0	0	0	0	0	1	**1**	**2**	1	0	0	1
+30 mins.	0	2	0	2	0	0	0	0	0	1	0	1	**2**	0	1	**3**
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	1	0	**2**	3
Total Volume	0	6	0	6	0	0	0	0	0	3	1	4	5	0	4	9
% App. Total	0	100	0		0	0	0		0	75	25		55.6	0	44.4	
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.750	.250	.500	.625	.000	.500	.750

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
05:00 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	1	1	3
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	1	2	0	0	1	1	4
Grand Total	0	3	0	3	0	0	0	0	0	1	1	2	0	0	2	2	7
Apprch %	0	100	0		0	0	0		0	50	50		0	0	100		
Total %	0	42.9	0	42.9	0	0	0	0	0	14.3	14.3	28.6	0	0	28.6	28.6	

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	**1**	**1**	2
05:00 PM	0	1	0	1	0	0	0	0	0	0	**1**	**1**	0	0	1	1	**3**
05:15 PM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	1	1	2	0	0	2	2	6
% App. Total	0	100	0		0	0	0		0	50	50		0	0	100		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.250	.500	.000	.000	.500	.500	.500

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E PMC
Site Code : 00322473
Start Date : 5/24/2022
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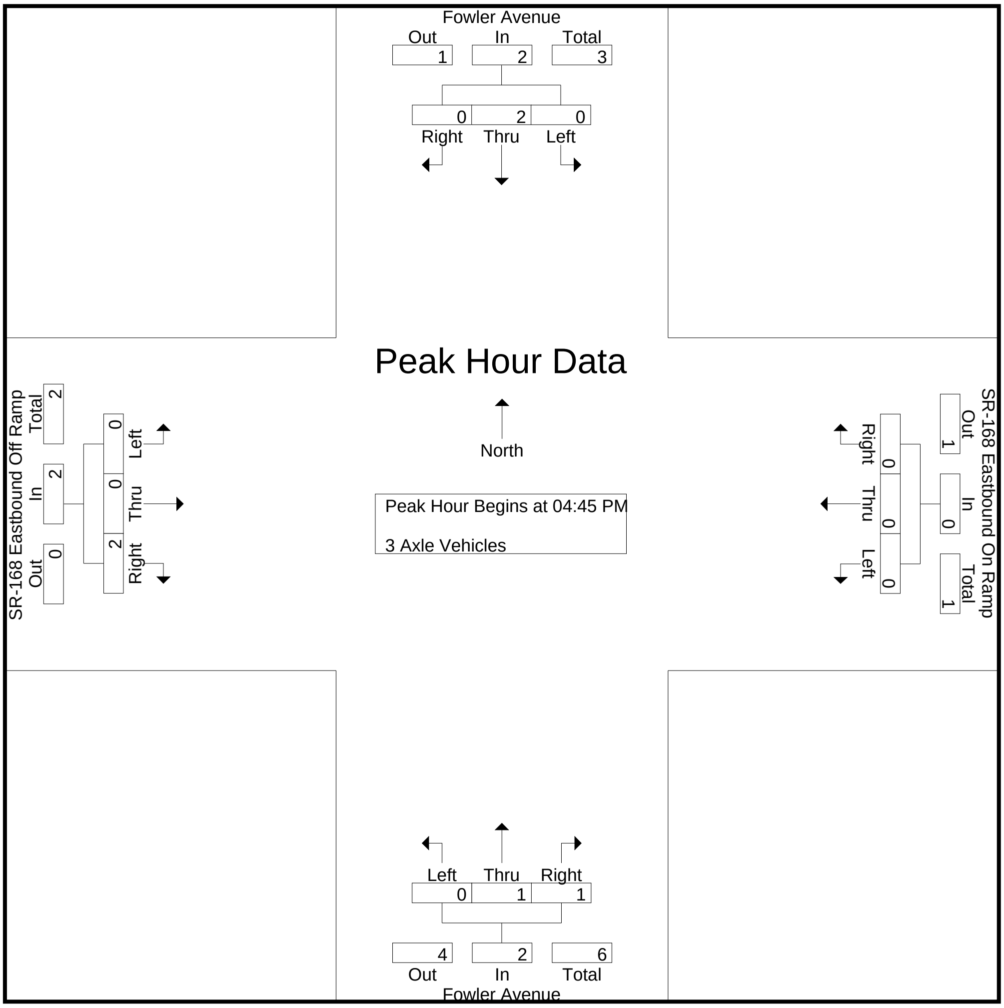

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	**1**	**1**
+15 mins.	0	1	0	1	0	0	0	0	0	0	**1**	**1**	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	1	1	2	0	0	2	2
% App. Total	0	100	0		0	0	0		0	50	50		0	0	100	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.250	.500	.000	.000	.500	.500

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	3
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	4	4	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	4	4	5
Grand Total	0	0	0	0	0	0	0	0	0	3	0	3	0	0	8	8	11
Apprch %	0	0	0		0	0	0		0	100	0		0	0	100		
Total %	0	0	0	0	0	0	0	0	0	27.3	0	27.3	0	0	72.7	72.7	

	Fowler Avenue Southbound				SR-168 Eastbound On Ramp Westbound				Fowler Avenue Northbound				SR-168 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	2	2	**3**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	**3**	3
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	6	6	8
% App. Total	0	0	0		0	0	0		0	100	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.500	.500	.667

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City of Clovis
N/S: Fowler Avenue
E/W: SR-168 Eastbound Ramps
Weather: Clear

File Name : 26_CVS_Fowl_168E PMC
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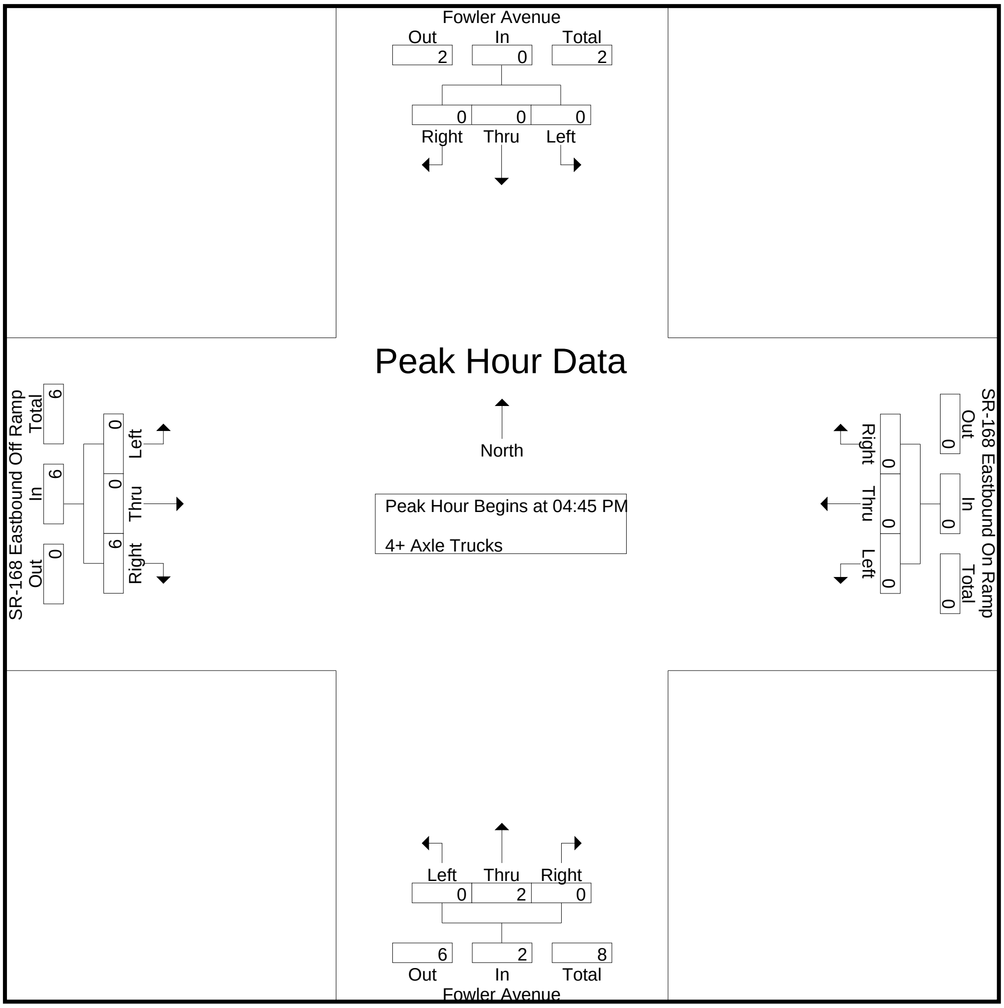

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	2	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	**3**
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	6	6
% App. Total	0	0	0		0	0	0		0	100	0		0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.500	.500

Location: Clovis
N/S: Fowler Avenue
E/W: SR-168 EB Ramps

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Fowler Avenue	East Leg SR-168 EB Ramps	South Leg Fowler Avenue	West Leg SR-168 EB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	1

	North Leg Fowler Avenue	East Leg SR-168 EB Ramps	South Leg Fowler Avenue	West Leg SR-168 EB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Fowler Avenue
E/W: SR-168 EB Ramps

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Fowler Avenue			Westbound SR-168 EB Ramps			Northbound Fowler Avenue			Eastbound SR-168 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

	Southbound Fowler Avenue			Westbound SR-168 EB Ramps			Northbound Fowler Avenue			Eastbound SR-168 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	1	0	0	0	0	3

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City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	4	4	0	0	0	0	0	0	0	0	5	0	0	5	9
07:30 AM	0	0	5	5	0	0	0	0	0	0	0	0	3	0	0	3	8
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	3	4
Total	0	0	10	10	0	0	0	0	0	0	0	0	11	0	0	11	21
08:00 AM	0	0	5	5	0	0	0	0	0	0	0	0	4	0	0	4	9
08:15 AM	0	0	4	4	0	0	0	0	0	0	0	0	2	0	0	2	6
08:30 AM	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1	3
08:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	12	12	0	0	0	0	0	0	0	0	8	0	0	8	20
Grand Total	0	0	22	22	0	0	0	0	0	0	0	0	19	0	0	19	41
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	53.7	53.7	0	0	0	0	0	0	0	0	46.3	0	0	46.3	
Passenger Vehicles	0	0	20	20	0	0	0	0	0	0	0	0	18	0	0	18	38
% Passenger Vehicles	0	0	90.9	90.9	0	0	0	0	0	0	0	0	94.7	0	0	94.7	92.7
Large 2 Axle Vehicles	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1	3
% Large 2 Axle Vehicles	0	0	9.1	9.1	0	0	0	0	0	0	0	0	5.3	0	0	5.3	7.3
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	4	4	0	0	0	0	0	0	0	0	**5**	0	0	**5**	**9**
07:30 AM	0	0	**5**	**5**	0	0	0	0	0	0	0	0	3	0	0	3	8
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	3	4
08:00 AM	0	0	5	5	0	0	0	0	0	0	0	0	4	0	0	4	9
Total Volume	0	0	15	15	0	0	0	0	0	0	0	0	15	0	0	15	30
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.750	.750	.000	.000	.000	.000	.000	.000	.000	.000	.750	.000	.000	.750	.833

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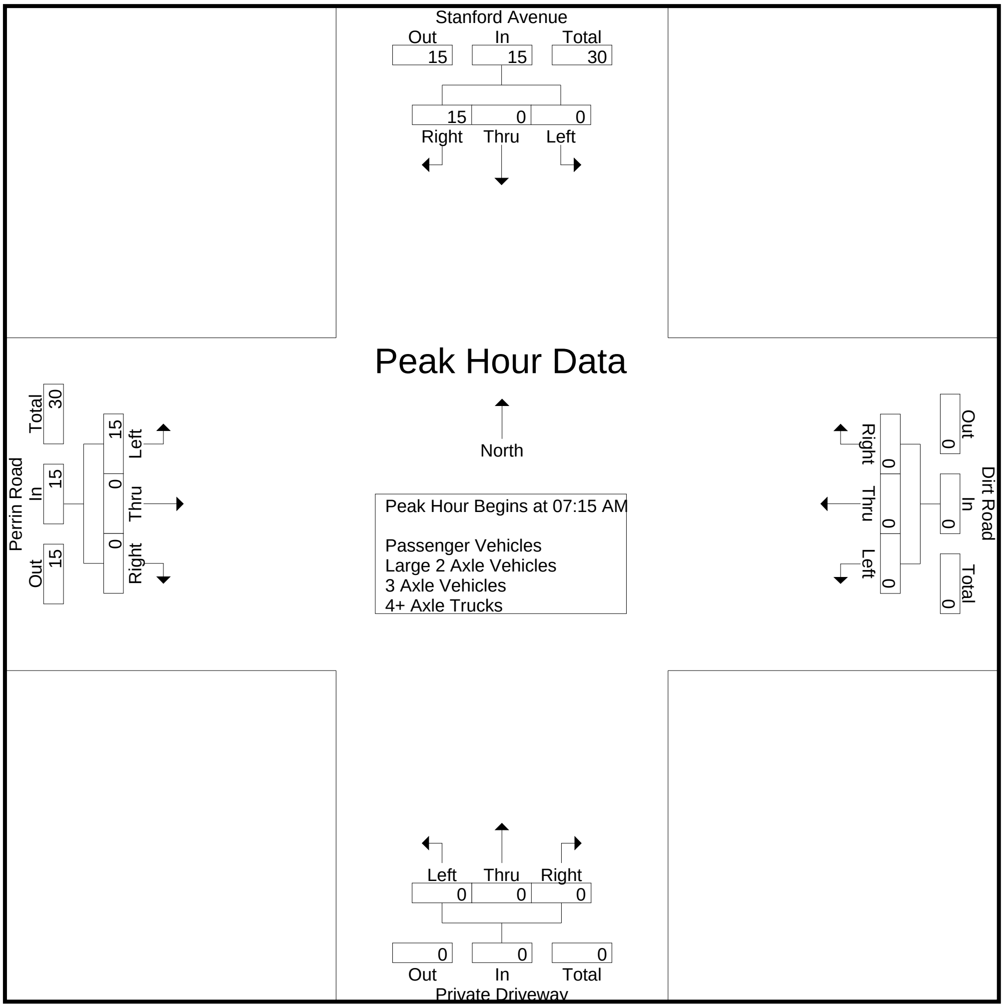
City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	0	0	4	4	0	0	0	0	0	0	0	0	**5**	0	0	**5**
+15 mins.	0	0	**5**	**5**	0	0	0	0	0	0	0	0	3	0	0	3
+30 mins.	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	3
+45 mins.	0	0	5	5	0	0	0	0	0	0	0	0	4	0	0	4
Total Volume	0	0	15	15	0	0	0	0	0	0	0	0	15	0	0	15
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.750	.750	.000	.000	.000	.000	.000	.000	.000	.000	.750	.000	.000	.750

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City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	3	3	0	0	0	0	0	0	0	0	5	0	0	5	8
07:30 AM	0	0	5	5	0	0	0	0	0	0	0	0	2	0	0	2	7
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	3	4
Total	0	0	9	9	0	0	0	0	0	0	0	0	10	0	0	10	19
08:00 AM	0	0	5	5	0	0	0	0	0	0	0	0	4	0	0	4	9
08:15 AM	0	0	4	4	0	0	0	0	0	0	0	0	2	0	0	2	6
08:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
08:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	11	11	0	0	0	0	0	0	0	0	8	0	0	8	19
Grand Total	0	0	20	20	0	0	0	0	0	0	0	0	18	0	0	18	38
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	52.6	52.6	0	0	0	0	0	0	0	0	47.4	0	0	47.4	

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	3	3	0	0	0	0	0	0	0	0	**5**	0	0	**5**	8
07:30 AM	0	0	**5**	**5**	0	0	0	0	0	0	0	0	2	0	0	2	7
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	3	4
08:00 AM	0	0	5	5	0	0	0	0	0	0	0	0	4	0	0	4	**9**
Total Volume	0	0	14	14	0	0	0	0	0	0	0	0	14	0	0	14	28
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.700	.700	.000	.000	.000	.000	.000	.000	.000	.000	.700	.000	.000	.700	.778

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City of Clovis
N/S: Stanford Avenue
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Weather: Clear

File Name : 19_CVS_Stan_Per AMC
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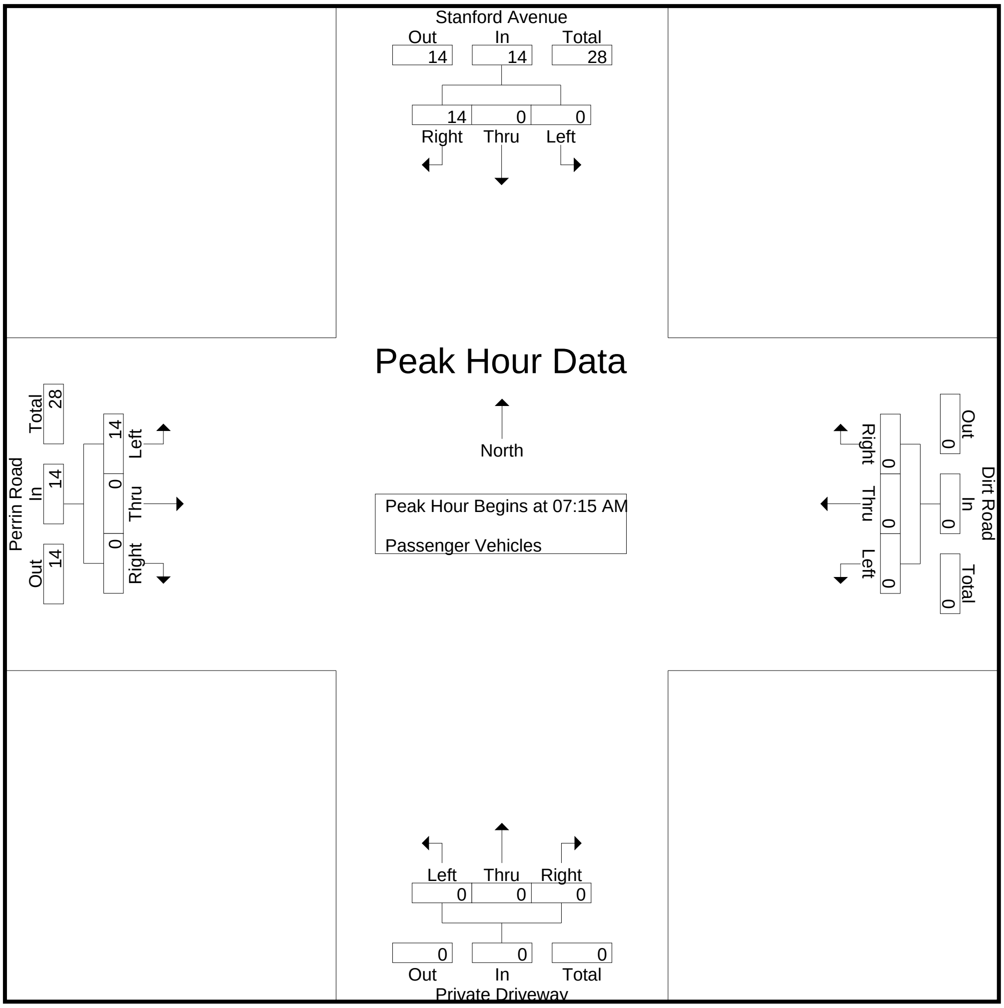

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	3	3	0	0	0	0	0	0	0	0	**5**	0	0	**5**
+15 mins.	0	0	**5**	**5**	0	0	0	0	0	0	0	0	2	0	0	2
+30 mins.	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	3
+45 mins.	0	0	5	5	0	0	0	0	0	0	0	0	4	0	0	4
Total Volume	0	0	14	14	0	0	0	0	0	0	0	0	14	0	0	14
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.700	.700	.000	.000	.000	.000	.000	.000	.000	.000	.700	.000	.000	.700

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City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per AMC
Site Code : 00322473
Start Date : 5/24/2022
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Groups Printed- Large 2 Axle Vehicles

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1	3
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	66.7	66.7	0	0	0	0	0	0	0	0	33.3	0	0	33.3	

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.500

AGENDA ITEM NO. 6.

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City of Clovis
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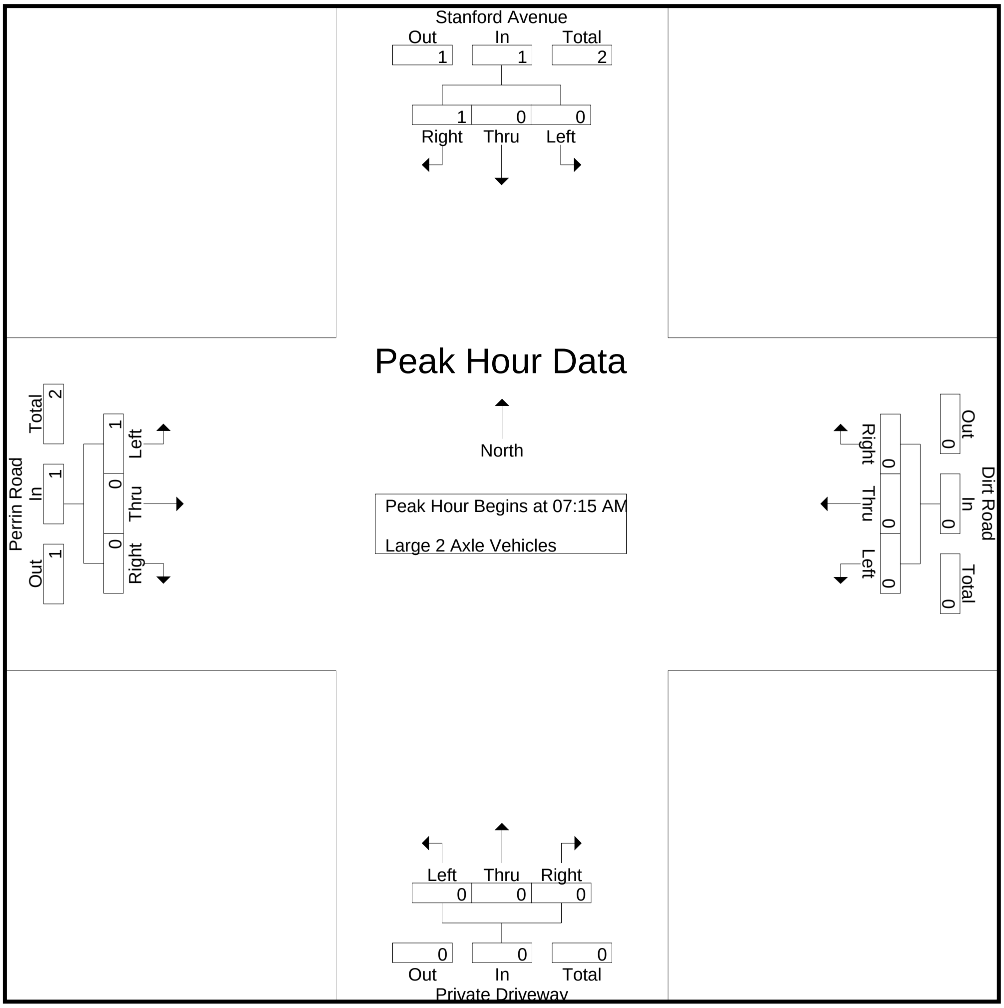

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250

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City of Clovis
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Weather: Clear

File Name : 19_CVS_Stan_Per AMC
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Groups Printed- 3 Axle Vehicles

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per AMC
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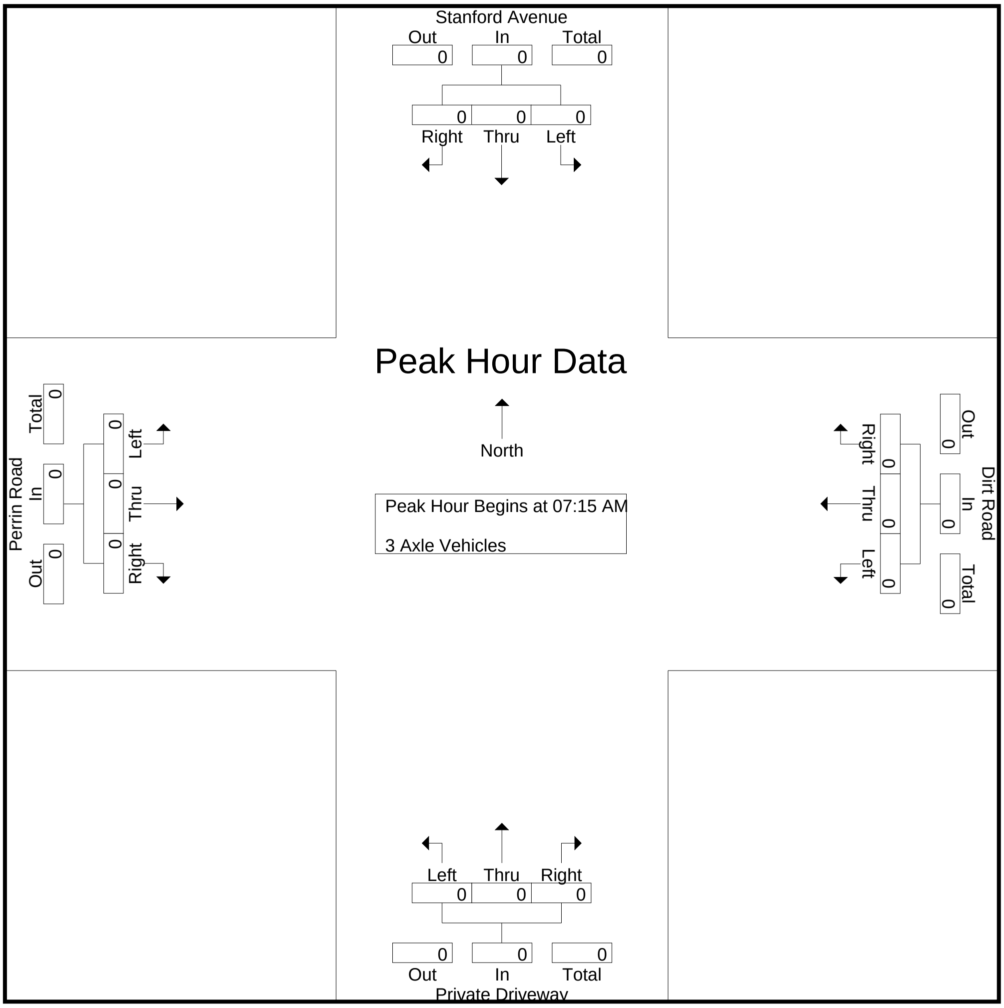

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per AMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per AMC
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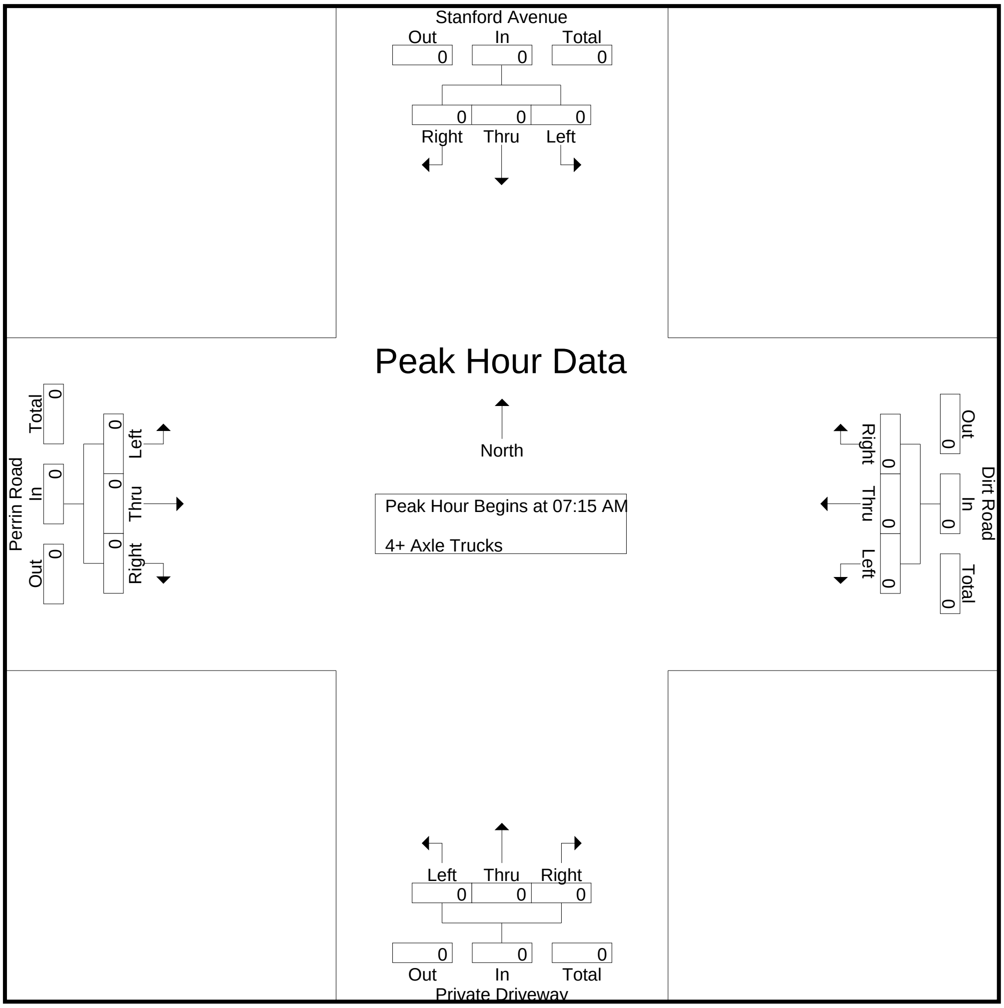

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
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Weather: Clear

File Name : 19_CVS_Stan_Per PMC
Site Code : 00322473
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	3	3	0	0	0	0	0	0	0	0	2	0	0	2	5
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	4	0	0	4	5
04:30 PM	0	0	4	4	0	0	0	0	0	0	0	0	4	0	0	4	8
04:45 PM	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1	4
Total	0	0	11	11	0	0	0	0	0	0	0	0	11	0	0	11	22
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2	3
05:15 PM	0	0	4	4	0	0	0	0	0	0	0	0	6	0	0	6	10
05:30 PM	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	0	2	2	0	0	0	0	0	0	0	0	4	0	0	4	6
Total	0	0	10	10	0	0	0	0	0	0	0	0	12	0	0	12	22
Grand Total	0	0	21	21	0	0	0	0	0	0	0	0	23	0	0	23	44
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	47.7	47.7	0	0	0	0	0	0	0	0	52.3	0	0	52.3	
Passenger Vehicles	0	0	21	21	0	0	0	0	0	0	0	0	23	0	0	23	44
% Passenger Vehicles	0	0	100	100	0	0	0	0	0	0	0	0	100	0	0	100	100
Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**4**	**4**	0	0	0	0	0	0	0	0	4	0	0	4	8
04:45 PM	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1	4
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2	3
05:15 PM	0	0	4	4	0	0	0	0	0	0	0	0	**6**	0	0	**6**	**10**
Total Volume	0	0	12	12	0	0	0	0	0	0	0	0	13	0	0	13	25
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.750	.750	.000	.000	.000	.000	.000	.000	.000	.000	.542	.000	.000	.542	.625

Counts Unlimited, Inc.
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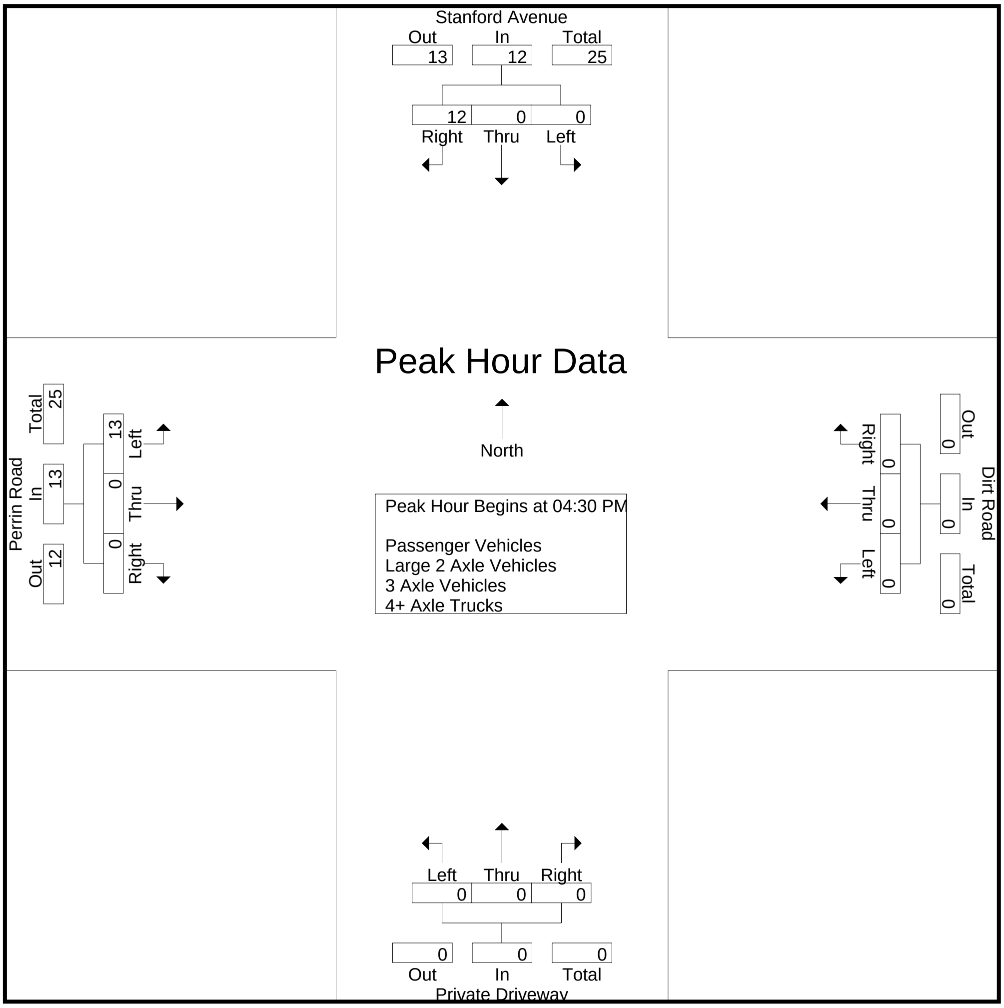
Corona, CA 92878
(951)268-6268

City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:00 PM				04:30 PM			
+0 mins.	0	0	**4**	**4**	0	0	0	0	0	0	0	0	4	0	0	4
+15 mins.	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1
+30 mins.	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2
+45 mins.	0	0	4	4	0	0	0	0	0	0	0	0	**6**	0	0	**6**
Total Volume	0	0	12	12	0	0	0	0	0	0	0	0	13	0	0	13
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.750	.750	.000	.000	.000	.000	.000	.000	.000	.000	.542	.000	.000	.542

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City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Passenger Vehicles

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	3	3	0	0	0	0	0	0	0	0	2	0	0	2	5
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	4	0	0	4	5
04:30 PM	0	0	4	4	0	0	0	0	0	0	0	0	4	0	0	4	8
04:45 PM	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1	4
Total	0	0	11	11	0	0	0	0	0	0	0	0	11	0	0	11	22
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2	3
05:15 PM	0	0	4	4	0	0	0	0	0	0	0	0	6	0	0	6	10
05:30 PM	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	0	2	2	0	0	0	0	0	0	0	0	4	0	0	4	6
Total	0	0	10	10	0	0	0	0	0	0	0	0	12	0	0	12	22
Grand Total	0	0	21	21	0	0	0	0	0	0	0	0	23	0	0	23	44
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	47.7	47.7	0	0	0	0	0	0	0	0	52.3	0	0	52.3	

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**4**	**4**	0	0	0	0	0	0	0	0	4	0	0	4	8
04:45 PM	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1	4
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2	3
05:15 PM	0	0	4	4	0	0	0	0	0	0	0	0	**6**	0	0	**6**	**10**
Total Volume	0	0	12	12	0	0	0	0	0	0	0	0	13	0	0	13	25
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.750	.750	.000	.000	.000	.000	.000	.000	.000	.000	.542	.000	.000	.542	.625

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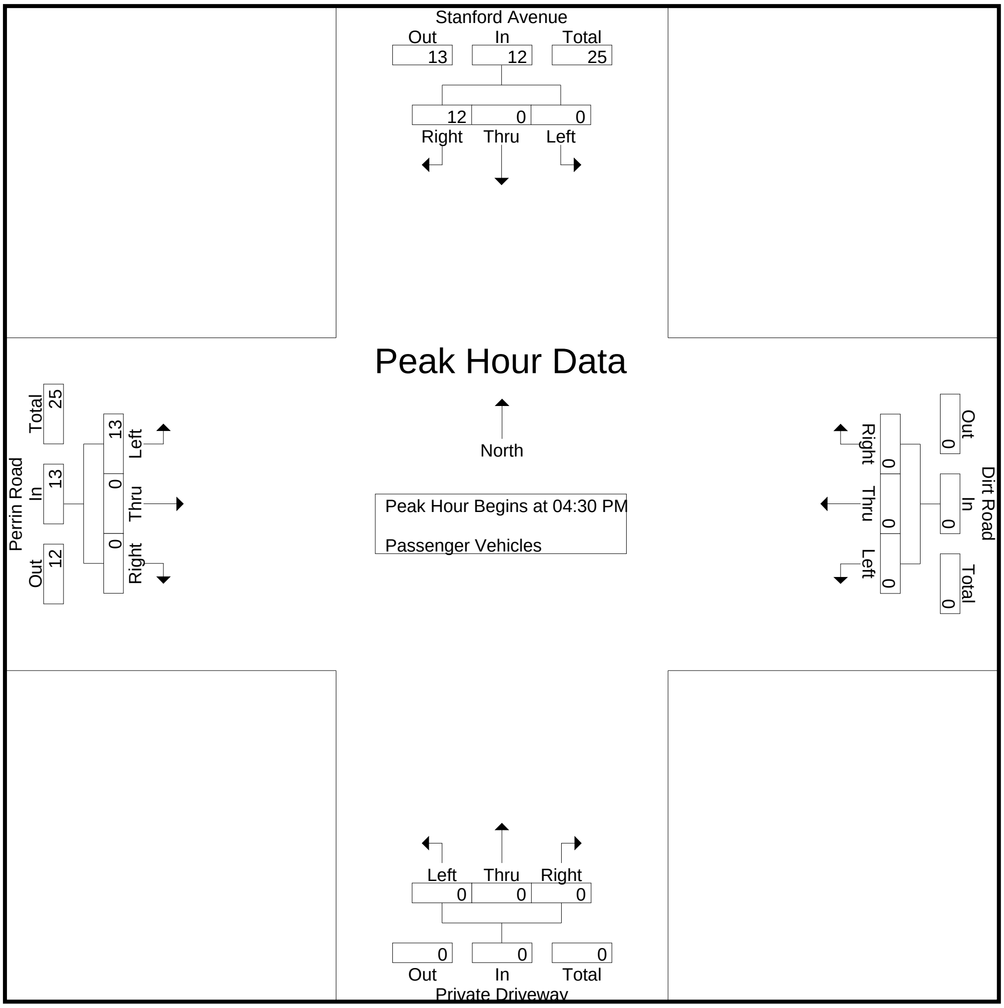
City of Clovis	File Name : 19_CVS_Stan_Per PMC
N/S: Stanford Avenue	Site Code : 00322473
E/W: Perrin Road	Start Date : 5/24/2022
Weather: Clear	Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	**4**	**4**	0	0	0	0	0	0	0	0	4	0	0	4
+15 mins.	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1
+30 mins.	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2
+45 mins.	0	0	4	4	0	0	0	0	0	0	0	0	**6**	0	0	**6**
Total Volume	0	0	12	12	0	0	0	0	0	0	0	0	13	0	0	13
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.750	.750	.000	.000	.000	.000	.000	.000	.000	.000	.542	.000	.000	.542

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City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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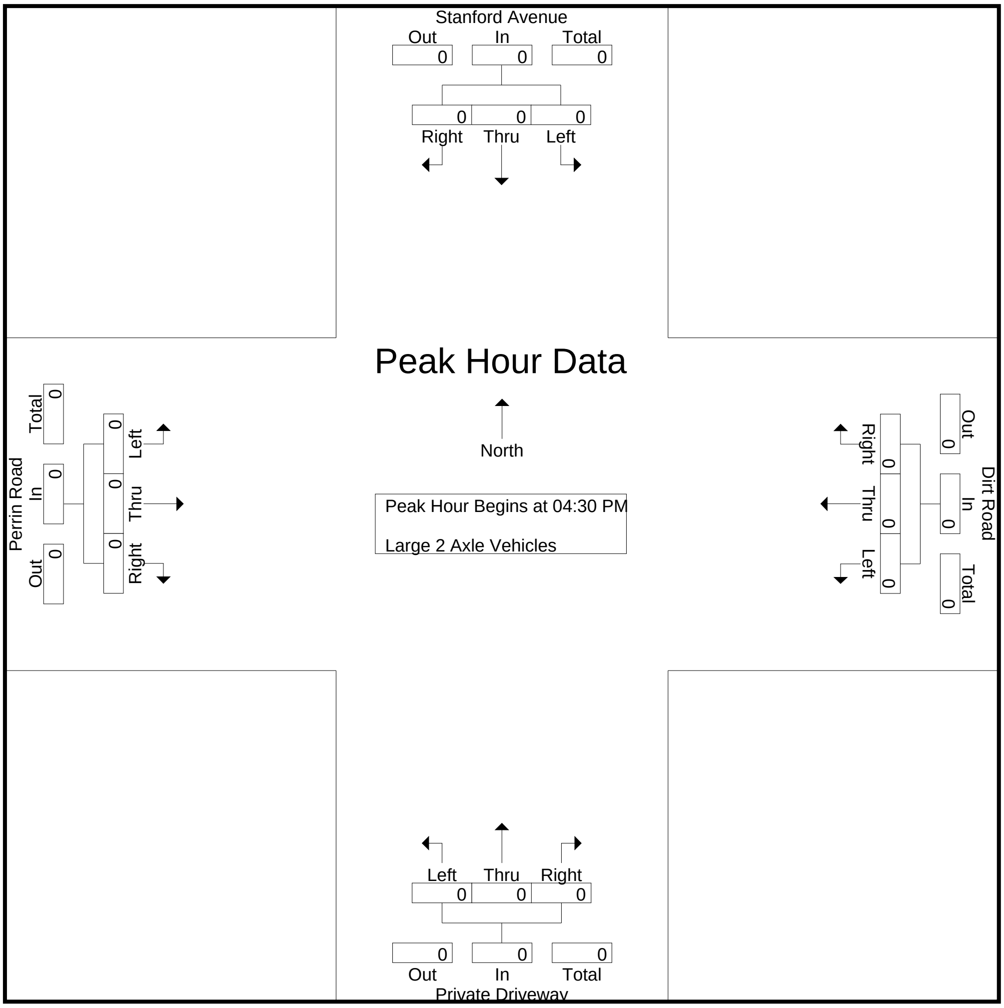
City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 3 Axle Vehicles

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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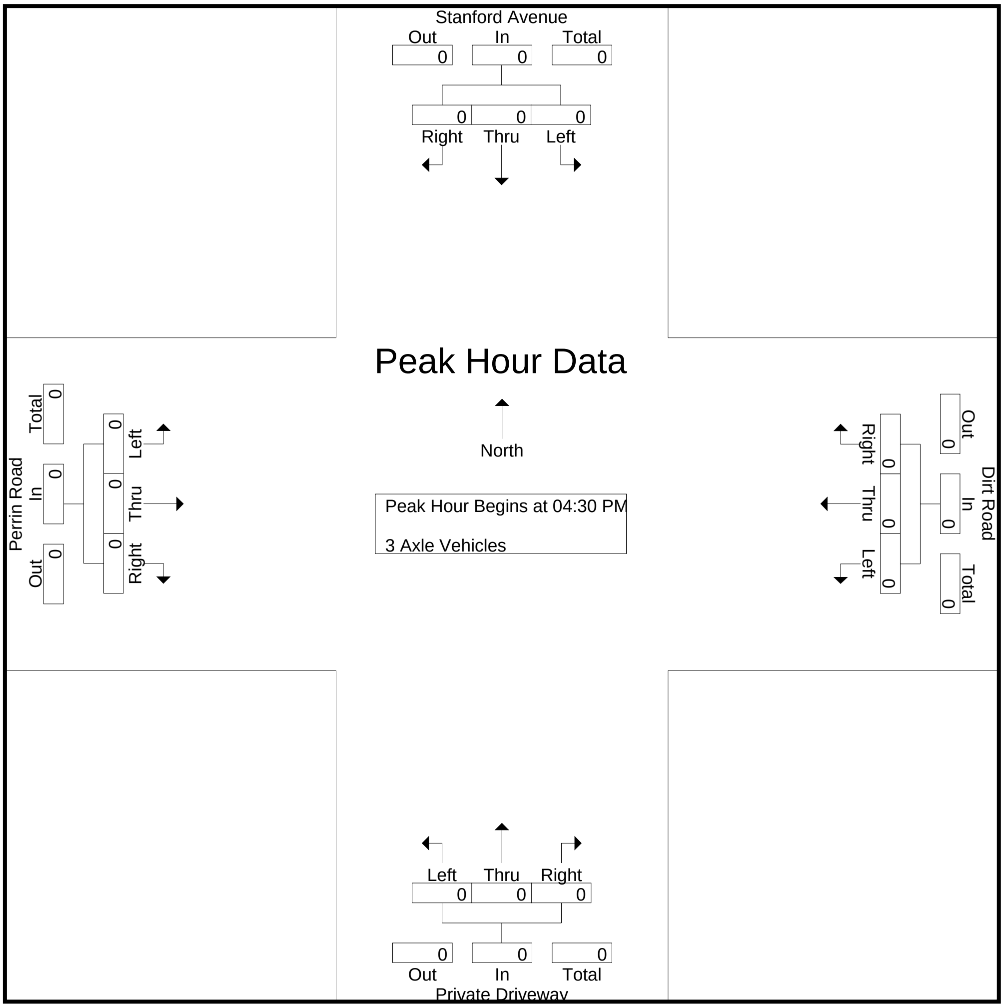
City of Clovis	File Name : 19_CVS_Stan_Per PMC
N/S: Stanford Avenue	Site Code : 00322473
E/W: Perrin Road	Start Date : 5/24/2022
Weather: Clear	Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 1

Groups Printed- 4+ Axle Trucks

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Stanford Avenue Southbound				Dirt Road Westbound				Private Driveway Northbound				Perrin Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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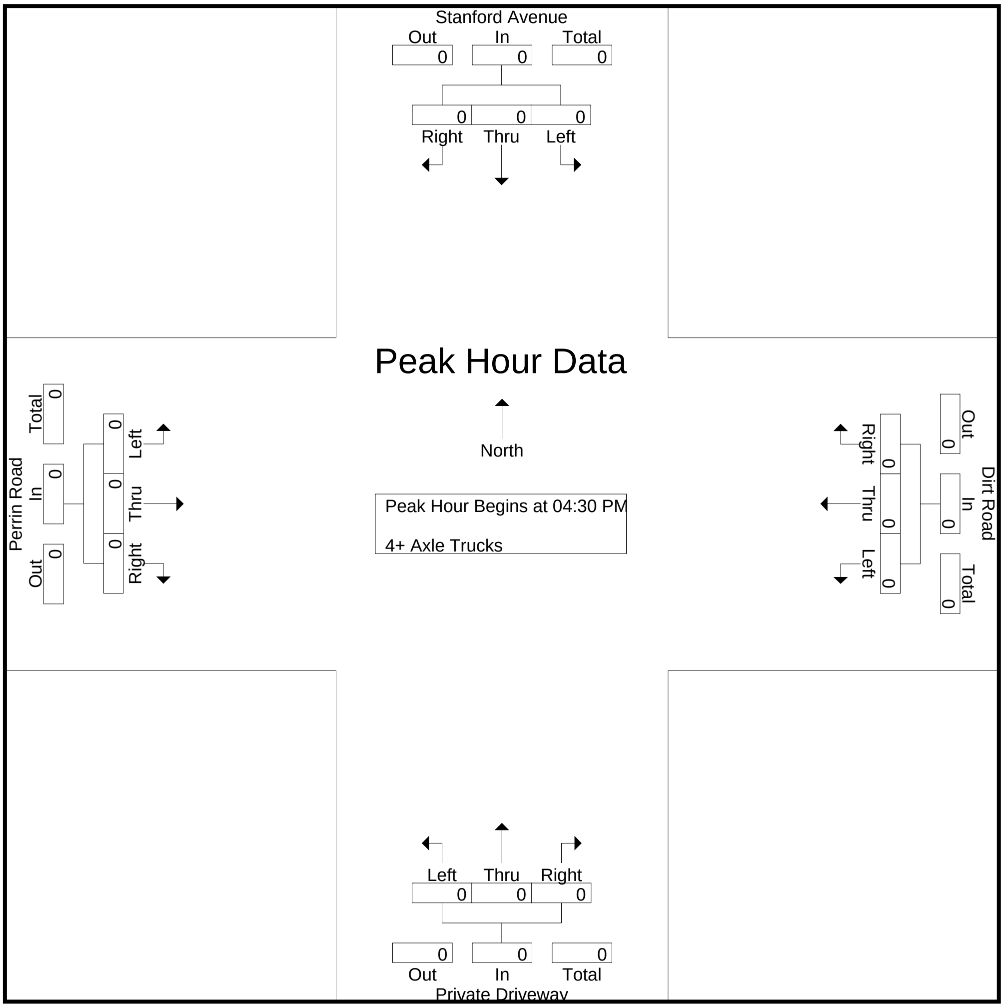
City of Clovis
N/S: Stanford Avenue
E/W: Perrin Road
Weather: Clear

File Name : 19_CVS_Stan_Per PMC
Site Code : 00322473
Start Date : 5/24/2022
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Clovis
N/S: Stanford Avenue
E/W: Perrin Road

Date: 5/24/2022
Day: Tuesday

PEDESTRIANS

	North Leg Stanford Avenue	East Leg Dirt Road	South Leg Private Driveway	West Leg Perrin Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Stanford Avenue	East Leg Dirt Road	South Leg Private Driveway	West Leg Perrin Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Clovis
N/S: Stanford Avenue
E/W: Perrin Road

Date: 5/24/2022
Day: Tuesday

BICYCLES

	Southbound Stanford Avenue			Westbound Dirt Road			Northbound Private Driveway			Eastbound Perrin Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Stanford Avenue			Westbound Dirt Road			Northbound Private Driveway			Eastbound Perrin Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	2	0	0	0	0	0	0	2

Counts Unlimited, Inc.

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City of Clovis
Behymer Avenue
B/ Willow Avenue - Minnewawa Avenue
24 Hour Directional Volume Count

CVS002
Site Code: 003-22473

Start	24-May-22	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	17			0	14				
12:15		0	28			1	23				
12:30		1	7			3	15				
12:45		0	22	3	74	1	21	5	73	8	147
01:00		1	17			1	20				
01:15		0	21			2	15				
01:30		0	14			0	12				
01:45		0	16	1	68	1	16	4	63	5	131
02:00		0	17			0	20				
02:15		0	13			2	22				
02:30		1	**34**			1	32				
02:45		1	**69**	2	133	0	33	3	107	5	240
03:00		1	**38**			1	37				
03:15		1	**44**			1	31				
03:30		2	28			1	26				
03:45		0	33	4	143	0	27	3	121	7	264
04:00		1	31			1	27				
04:15		1	14			1	20				
04:30		0	21			0	27				
04:45		1	38	3	104	2	**31**	4	105	7	209
05:00		2	19			5	**38**				
05:15		3	24			3	**33**				
05:30		3	21			3	**32**				
05:45		5	24	13	88	9	30	20	133	33	221
06:00		4	21			6	18				
06:15		10	18			8	22				
06:30		8	22			15	17				
06:45		29	19	51	80	20	21	49	78	100	158
07:00		22	19			18	16				
07:15		20	20			**43**	19				
07:30		**43**	14			**42**	12				
07:45		**44**	22	129	75	**50**	18	153	65	282	140
08:00		**54**	10			**54**	11				
08:15		**49**	14			28	9				
08:30		21	12			26	12				
08:45		15	10	139	46	23	4	131	36	270	82
09:00		14	10			13	11				
09:15		12	8			18	6				
09:30		19	7			13	7				
09:45		9	5	54	30	16	7	60	31	114	61
10:00		18	4			12	10				
10:15		13	4			13	7				
10:30		16	7			14	3				
10:45		14	3	61	18	21	7	60	27	121	45
11:00		24	3			11	6				
11:15		11	4			16	5				
11:30		14	2			18	1				
11:45		24	2	73	11	24	2	69	14	142	25
Total		533	870	533	870	561	853	561	853	1094	1723
Combined Total		1403		1403		1414		1414		2817	
AM Peak	-	07:30	-	-	-	07:15	-	-	-	-	-
Vol.	-	190	-	-	-	189	-	-	-	-	-
P.H.F.		0.880				0.875					
PM Peak	-	-	02:30	-	-	-	04:45	-	-	-	-
Vol.	-	-	185	-	-	-	134	-	-	-	-
P.H.F.			0.670				0.882				
Percentage		38.0%	62.0%			39.7%	60.3%				
ADT/AADT		ADT 2,817		AADT 2,817							

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City of Clovis
Behymer Boulevard
B/ Willow Avenue - Minnewawa Avenue
24 Hour Directional Volume Count

CVS001
Site Code: 003-22602

Start Time	22-Jun-22 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	**35**			0	26				
12:15		0	**28**			2	14				
12:30		2	**36**			1	14				
12:45		2	**22**	4	121	1	17	4	71	8	192
01:00		0	22			2	20				
01:15		0	22			2	27				
01:30		0	25			0	27				
01:45		0	15	0	84	1	18	5	92	5	176
02:00		2	18			0	26				
02:15		1	14			1	12				
02:30		1	25			1	13				
02:45		3	17	7	74	0	29	2	80	9	154
03:00		0	26			1	13				
03:15		1	19			0	18				
03:30		1	17			1	15				
03:45		3	20	5	82	2	24	4	70	9	152
04:00		0	22			1	23				
04:15		0	18			0	21				
04:30		1	24			1	24				
04:45		2	18	3	82	2	28	4	96	7	178
05:00		3	18			1	**32**				
05:15		3	29			4	**32**				
05:30		1	38			4	**36**				
05:45		6	22	13	107	9	**44**	18	144	31	251
06:00		7	27			14	25				
06:15		10	23			8	27				
06:30		5	14			7	20				
06:45		16	20	38	84	17	21	46	93	84	177
07:00		10	17			11	17				
07:15		15	17			17	10				
07:30		**18**	13			**28**	15				
07:45		**32**	21	75	68	**43**	8	99	50	174	118
08:00		**33**	11			**27**	9				
08:15		**21**	16			**30**	20				
08:30		13	14			28	10				
08:45		27	14	94	55	33	13	118	52	212	107
09:00		17	16			26	11				
09:15		19	19			23	17				
09:30		23	15			14	7				
09:45		19	6	78	56	23	14	86	49	164	105
10:00		28	4			20	8				
10:15		17	15			24	9				
10:30		22	10			18	8				
10:45		32	4	99	33	19	3	81	28	180	61
11:00		21	4			18	5				
11:15		27	11			30	4				
11:30		19	8			22	0				
11:45		16	4	83	27	30	3	100	12	183	39
Total		499	873	499	873	567	837	567	837	1066	1710
Combined Total		1372		1372		1404		1404		2776	
AM Peak	-	07:30	-	-	-	07:30	-	-	-	-	-
Vol.	-	104	-	-	-	128	-	-	-	-	-
P.H.F.		0.788				0.744					
PM Peak	-	-	12:00	-	-	-	05:00	-	-	-	-
Vol.	-	-	121	-	-	-	144	-	-	-	-
P.H.F.			0.840				0.818				
Percentage		36.4%	63.6%			40.4%	59.6%				
ADT/AADT		ADT 2,776		AADT 2,776							

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City of Clovis
Behymer Boulevard
B/ Minnewawa Avenue - Sunnyside Avenue
24 Hour Directional Volume Count

CVS002
Site Code: 003-22602

Start	22-Jun-22	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		3	38			2	46				
12:15		1	59			4	36				
12:30		3	50			1	25				
12:45		3	29	10	176	1	32	8	139	18	315
01:00		1	28			3	38				
01:15		3	29			3	34				
01:30		2	29			2	39				
01:45		0	27	6	113	1	26	9	137	15	250
02:00		5	23			0	33				
02:15		5	29			1	18				
02:30		2	37			2	22				
02:45		4	37	16	126	0	31	3	104	19	230
03:00		1	40			0	24				
03:15		1	36			2	37				
03:30		0	41			0	29				
03:45		2	40	4	157	1	33	3	123	7	280
04:00		1	41			4	32				
04:15		0	38			1	36				
04:30		1	38			3	40				
04:45		3	35	5	152	4	45	12	153	17	305
05:00		1	36			3	**46**				
05:15		6	**49**			6	**59**				
05:30		8	**61**			12	**42**				
05:45		8	**34**	23	180	22	**58**	43	205	66	385
06:00		12	**45**			19	29				
06:15		13	43			21	47				
06:30		19	31			30	34				
06:45		23	30	67	149	35	30	105	140	172	289
07:00		29	28			24	18				
07:15		16	20			29	24				
07:30		**29**	27			56	24				
07:45		**41**	26	115	101	**86**	19	195	85	310	186
08:00		**43**	19			**59**	16				
08:15		**44**	20			**65**	28				
08:30		29	20			**57**	22				
08:45		40	33	156	92	73	20	254	86	410	178
09:00		25	24			46	20				
09:15		32	24			35	13				
09:30		25	24			38	9				
09:45		23	11	105	83	43	10	162	52	267	135
10:00		35	7			36	10				
10:15		25	11			40	6				
10:30		29	11			26	8				
10:45		40	4	129	33	40	7	142	31	271	64
11:00		35	6			24	10				
11:15		26	10			43	1				
11:30		31	6			33	2				
11:45		27	7	119	29	45	7	145	20	264	49
Total		755	1391	755	1391	1081	1275	1081	1275	1836	2666
Combined Total		2146		2146		2356		2356		4502	
AM Peak	-	07:30	-	-	-	07:45	-	-	-	-	-
Vol.	-	157	-	-	-	267	-	-	-	-	-
P.H.F.		0.892				0.776					
PM Peak	-	-	05:15	-	-	-	05:00	-	-	-	-
Vol.	-	-	189	-	-	-	205	-	-	-	-
P.H.F.			0.775				0.869				
Percentage		35.2%	64.8%			45.9%	54.1%				
ADT/AADT		ADT 4,502		AADT 4,502							

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City of Clovis
Behymer Boulevard
B/ Sunnyside Avenue - Fowler Avenue
24 Hour Directional Volume Count

CVS003
Site Code: 003-22602

Start	22-Jun-22	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		3	31			3	47				
12:15		2	58			4	29				
12:30		2	51			0	29				
12:45		2	27	9	167	1	28	8	133	17	300
01:00		1	23			6	41				
01:15		3	28			3	28				
01:30		2	30			1	37				
01:45		0	24	6	105	1	23	11	129	17	234
02:00		5	22			0	32				
02:15		6	30			1	12				
02:30		1	38			2	29				
02:45		4	33	16	123	0	23	3	96	19	219
03:00		1	39			0	24				
03:15		1	32			2	42				
03:30		1	41			0	22				
03:45		1	35	4	147	3	38	5	126	9	273
04:00		0	44			3	34				
04:15		1	32			1	35				
04:30		2	36			5	35				
04:45		1	34	4	146	2	48	11	152	15	298
05:00		1	33			3	**48**				
05:15		7	**47**			10	**55**				
05:30		10	**59**			11	**38**				
05:45		8	**39**	26	178	20	**55**	44	196	70	374
06:00		14	**42**			26	31				
06:15		10	35			17	45				
06:30		22	29			28	39				
06:45		23	38	69	144	33	28	104	143	173	287
07:00		26	24			15	13				
07:15		18	19			35	30				
07:30		**25**	26			**66**	16				
07:45		**38**	23	107	92	**75**	25	191	84	298	176
08:00		**43**	18			**56**	18				
08:15		**42**	22			**56**	25				
08:30		25	21			48	17				
08:45		37	27	147	88	67	22	227	82	374	170
09:00		25	22			39	23				
09:15		30	24			32	12				
09:30		23	21			29	8				
09:45		26	11	104	78	44	11	144	54	248	132
10:00		26	10			32	7				
10:15		20	12			42	8				
10:30		30	7			25	6				
10:45		25	4	101	33	38	11	137	32	238	65
11:00		30	6			21	6				
11:15		25	11			38	0				
11:30		31	5			36	4				
11:45		27	7	113	29	43	7	138	17	251	46
Total		706	1330	706	1330	1023	1244	1023	1244	1729	2574
Combined Total		2036		2036		2267		2267		4303	
AM Peak	-	07:30	-	-	-	07:30	-	-	-	-	-
Vol.	-	148	-	-	-	253	-	-	-	-	-
P.H.F.		0.860				0.843					
PM Peak	-	-	05:15	-	-	-	05:00	-	-	-	-
Vol.	-	-	187	-	-	-	196	-	-	-	-
P.H.F.			0.792				0.891				
Percentage		34.7%	65.3%			45.1%	54.9%				
ADT/AADT		ADT 4,303			AADT 4,303						

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City of Clovis
Shepherd Avenue
B/ Willow Avenue - Minnewawa Avenue
24 Hour Directional Volume Count

CVS004
Site Code: 003-22473

Start	24-May-22	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		17	85			13	70				
12:15		8	110			10	93				
12:30		10	82			5	90				
12:45		3	105	38	382	6	95	34	348	72	730
01:00		4	90			6	83				
01:15		3	84			3	88				
01:30		5	87			4	69				
01:45		3	89	15	350	6	87	19	327	34	677
02:00		2	92			5	70				
02:15		3	88			0	77				
02:30		4	119			0	83				
02:45		2	122	11	421	1	94	6	324	17	745
03:00		2	108			1	93				
03:15		2	137			3	120				
03:30		1	125			1	106				
03:45		3	102	8	472	5	104	10	423	18	895
04:00		4	109			3	116				
04:15		4	103			7	104				
04:30		5	134			8	109				
04:45		8	124	21	470	14	125	32	454	53	924
05:00		3	**139**			11	**107**				
05:15		8	**128**			17	**135**				
05:30		30	**145**			21	**126**				
05:45		38	**126**	79	538	31	**127**	80	495	159	1033
06:00		34	134			28	91				
06:15		34	110			44	117				
06:30		49	121			50	108				
06:45		59	94	176	459	72	73	194	389	370	848
07:00		69	105			93	83				
07:15		**109**	106			88	75				
07:30		**124**	96			**102**	52				
07:45		**123**	78	425	385	**130**	61	413	271	838	656
08:00		**109**	70			**99**	61				
08:15		86	93			**98**	70				
08:30		81	77			87	51				
08:45		72	91	348	331	107	49	391	231	739	562
09:00		56	69			92	40				
09:15		59	65			60	36				
09:30		84	62			98	24				
09:45		80	36	279	232	99	32	349	132	628	364
10:00		62	39			76	26				
10:15		67	30			84	30				
10:30		73	23			63	29				
10:45		84	21	286	113	80	19	303	104	589	217
11:00		66	24			95	9				
11:15		74	11			88	11				
11:30		84	12			101	9				
11:45		76	6	300	53	112	10	396	39	696	92
Total		1986	4206	1986	4206	2227	3537	2227	3537	4213	7743
Combined Total		6192		6192		5764		5764		11956	
AM Peak	-	07:15	-	-	-	07:30	-	-	-	-	-
Vol.	-	465	-	-	-	429	-	-	-	-	-
P.H.F.		0.938				0.825					
PM Peak	-	-	05:00	-	-	-	05:00	-	-	-	-
Vol.	-	-	538	-	-	-	495	-	-	-	-
P.H.F.			0.928				0.917				
Percentage		32.1%	67.9%			38.6%	61.4%				
ADT/AADT		ADT 11,956		AADT 11,956							

AGENDA ITEM NO. 6.

Counts Unlimited, Inc.

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City of Clovis
Shepherd Avenue
B/ Minnewawa Avenue - Clovis Avenue
24 Hour Directional Volume Count

CVS005
Site Code: 003-22473

Start Time	24-May-22 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		9	85			16	66				
12:15		10	93			11	85				
12:30		9	85			7	84				
12:45		5	106	33	369	8	84	42	319	75	688
01:00		2	82			4	82				
01:15		2	74			5	78				
01:30		6	93			3	84				
01:45		6	81	16	330	5	86	17	330	33	660
02:00		2	75			4	74				
02:15		2	80			1	88				
02:30		3	87			0	124				
02:45		3	**129**	10	371	3	97	8	383	18	754
03:00		3	**142**			0	101				
03:15		3	**127**			1	122				
03:30		2	**114**			0	99				
03:45		2	106	10	489	6	106	7	428	17	917
04:00		4	101			7	106				
04:15		3	96			5	121				
04:30		6	97			9	108				
04:45		9	112	22	406	11	**110**	32	445	54	851
05:00		7	120			14	**104**				
05:15		7	123			15	**142**				
05:30		18	117			13	**114**				
05:45		40	113	72	473	27	105	69	465	141	938
06:00		42	109			30	93				
06:15		32	126			45	101				
06:30		52	98			65	94				
06:45		72	93	198	426	69	76	209	364	407	790
07:00		55	74			85	73				
07:15		89	95			**105**	71				
07:30		**115**	76			**137**	57				
07:45		**136**	77	395	322	**95**	72	422	273	817	595
08:00		**135**	59			**92**	63				
08:15		**98**	84			98	72				
08:30		79	78			96	58				
08:45		79	82	391	303	101	37	387	230	778	533
09:00		53	54			81	40				
09:15		66	65			62	38				
09:30		70	57			72	28				
09:45		84	40	273	216	98	39	313	145	586	361
10:00		68	29			59	31				
10:15		80	32			82	18				
10:30		63	30			69	25				
10:45		72	14	283	105	83	24	293	98	576	203
11:00		79	20			61	9				
11:15		68	11			94	14				
11:30		69	9			100	9				
11:45		86	11	302	51	95	11	350	43	652	94
Total		2005	3861	2005	3861	2149	3523	2149	3523	4154	7384
Combined Total		5866		5866		5672		5672		11538	
AM Peak	-	07:30	-	-	-	07:15	-	-	-	-	-
Vol.	-	484	-	-	-	429	-	-	-	-	-
P.H.F.		0.890				0.783					
PM Peak	-	-	02:45	-	-	-	04:45	-	-	-	-
Vol.	-	-	512	-	-	-	470	-	-	-	-
P.H.F.			0.901				0.827				
Percentage		34.2%	65.8%			37.9%	62.1%				
ADT/AADT		ADT 11,538		AADT 11,538							

Counts Unlimited, Inc.

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City of Clovis
Shepherd Avenue
B/ Clovis Avenue - Sunnyside Avenue
24 Hour Directional Volume Count

CVS006
Site Code: 003-22473

Start	24-May-22	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		9	67			11	55				
12:15		7	79			8	58				
12:30		7	75			4	58				
12:45		2	86	25	307	6	59	29	230	54	537
01:00		2	65			4	75				
01:15		4	61			3	56				
01:30		7	83			2	65				
01:45		6	67	19	276	5	52	14	248	33	524
02:00		3	71			5	65				
02:15		2	81			0	66				
02:30		3	73			0	97				
02:45		3	**129**	11	354	3	74	8	302	19	656
03:00		1	**128**			0	89				
03:15		2	**129**			1	84				
03:30		2	**94**			2	86				
03:45		0	79	5	430	4	91	7	350	12	780
04:00		4	83			5	80				
04:15		0	82			4	99				
04:30		3	81			8	94				
04:45		7	101	14	347	10	**87**	27	360	41	707
05:00		3	107			10	**95**				
05:15		6	105			15	**110**				
05:30		17	105			13	**96**				
05:45		31	102	57	419	23	86	61	387	118	806
06:00		39	88			29	71				
06:15		24	110			39	80				
06:30		47	89			55	79				
06:45		54	85	164	372	63	64	186	294	350	666
07:00		44	68			86	58				
07:15		**96**	87			**118**	52				
07:30		**102**	69			**137**	42				
07:45		**125**	68	367	292	**98**	47	439	199	806	491
08:00		**104**	55			**90**	40				
08:15		76	87			94	58				
08:30		63	75			80	53				
08:45		63	68	306	285	86	34	350	185	656	470
09:00		60	54			63	33				
09:15		71	47			62	25				
09:30		58	47			73	24				
09:45		72	38	261	186	88	30	286	112	547	298
10:00		58	27			64	20				
10:15		81	28			63	14				
10:30		60	25			50	22				
10:45		57	13	256	93	78	17	255	73	511	166
11:00		70	15			64	10				
11:15		57	9			82	10				
11:30		63	7			83	9				
11:45		71	7	261	38	95	8	324	37	585	75
Total		1746	3399	1746	3399	1986	2777	1986	2777	3732	6176
Combined Total		5145		5145		4763		4763		9908	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	427	-	-	-	443	-	-	-	-	-
P.H.F.		0.854				0.808					
PM Peak	-	-	02:45	-	-	-	04:45	-	-	-	-
Vol.	-	-	480	-	-	-	388	-	-	-	-
P.H.F.			0.930				0.882				
Percentage		33.9%	66.1%			41.7%	58.3%				
ADT/AADT		ADT 9,908		AADT 9,908							

Counts Unlimited, Inc.

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City of Clovis
Shepherd Avenue
B/ Sunnyside Avenue - Fowler Avenue
24 Hour Directional Volume Count

CVS007
Site Code: 003-22473

Start	24-May-22	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		7	61			11	49				
12:15		8	68			6	57				
12:30		6	63			2	45				
12:45		3	70	24	262	5	63	24	214	48	476
01:00		2	54			4	66				
01:15		3	50			4	44				
01:30		7	69			2	50				
01:45		7	54	19	227	4	50	14	210	33	437
02:00		2	62			3	51				
02:15		2	62			0	62				
02:30		3	64			0	87				
02:45		3	**114**	10	302	3	69	6	269	16	571
03:00		0	**116**			1	73				
03:15		0	**111**			1	71				
03:30		4	**94**			0	60				
03:45		0	90	4	411	3	62	5	266	9	677
04:00		3	79			4	72				
04:15		0	76			4	80				
04:30		1	73			7	76				
04:45		6	90	10	318	8	73	23	301	33	619
05:00		2	96			12	**76**				
05:15		4	95			11	**93**				
05:30		9	92			7	**89**				
05:45		19	86	34	369	23	**74**	53	332	87	701
06:00		33	79			27	58				
06:15		24	100			30	68				
06:30		32	79			41	70				
06:45		46	75	135	333	60	55	158	251	293	584
07:00		30	68			76	42				
07:15		**63**	83			**137**	42				
07:30		**79**	64			**113**	35				
07:45		**105**	56	277	271	**67**	38	393	157	670	428
08:00		**100**	43			**85**	31				
08:15		52	74			90	44				
08:30		51	70			71	49				
08:45		46	58	249	245	73	24	319	148	568	393
09:00		48	49			53	21				
09:15		43	43			56	18				
09:30		53	39			66	27				
09:45		58	45	202	176	79	28	254	94	456	270
10:00		52	26			62	17				
10:15		57	25			49	12				
10:30		55	26			45	19				
10:45		48	15	212	92	67	13	223	61	435	153
11:00		57	14			62	10				
11:15		48	7			75	8				
11:30		57	7			79	7				
11:45		61	5	223	33	72	5	288	30	511	63
Total		1399	3039	1399	3039	1760	2333	1760	2333	3159	5372
Combined Total		4438		4438		4093		4093		8531	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	347	-	-	-	402	-	-	-	-	-
P.H.F.		0.826				0.734					
PM Peak	-	-	02:45	-	-	-	05:00	-	-	-	-
Vol.	-	-	435	-	-	-	332	-	-	-	-
P.H.F.			0.938				0.892				
Percentage		31.5%	68.5%			43.0%	57.0%				
ADT/AADT		ADT 8,531		AADT 8,531							

Counts Unlimited, Inc.

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City of Clovis
Herndon Avenue
B/ State Route 168 Eastbound - Clovis Avenue
24 Hour Directional Volume Count

CVS008
Site Code: 003-22473

Start	24-May-22	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		36	465			49	397				
12:15		44	400			38	404				
12:30		38	411			32	433				
12:45		27	354	145	1630	18	451	137	1685	282	3315
01:00		18	374			16	387				
01:15		18	362			21	369				
01:30		14	381			14	355				
01:45		18	384	68	1501	19	370	70	1481	138	2982
02:00		17	412			25	411				
02:15		16	402			22	399				
02:30		11	366			15	382				
02:45		16	388	60	1568	8	358	70	1550	130	3118
03:00		9	421			13	437				
03:15		6	458			21	408				
03:30		19	432			11	427				
03:45		27	457	61	1768	17	377	62	1649	123	3417
04:00		18	384			25	375				
04:15		23	**538**			21	**415**				
04:30		40	**491**			41	**423**				
04:45		67	**528**	148	1941	43	**402**	130	1615	278	3556
05:00		42	**485**			50	**474**				
05:15		64	497			40	412				
05:30		100	499			75	377				
05:45		153	489	359	1970	114	404	279	1667	638	3637
06:00		90	450			101	385				
06:15		101	406			147	379				
06:30		148	321			244	327				
06:45		163	364	502	1541	266	309	758	1400	1260	2941
07:00		174	260			331	283				
07:15		228	301			**399**	269				
07:30		284	263			**437**	268				
07:45		331	247	1017	1071	**452**	239	1619	1059	2636	2130
08:00		355	269			**382**	244				
08:15		282	223			391	231				
08:30		320	248			385	238				
08:45		312	220	1269	960	314	207	1472	920	2741	1880
09:00		245	202			285	185				
09:15		276	173			298	190				
09:30		278	178			318	162				
09:45		299	149	1098	702	331	174	1232	711	2330	1413
10:00		321	106			316	158				
10:15		301	89			326	140				
10:30		369	81			347	120				
10:45		352	94	1343	370	338	72	1327	490	2670	860
11:00		**401**	54			304	79				
11:15		**375**	65			392	70				
11:30		**390**	76			392	61				
11:45		**439**	57	1605	252	403	35	1491	245	3096	497
Total		7675	15274	7675	15274	8647	14472	8647	14472	16322	29746
Combined Total		22949		22949		23119		23119		46068	
AM Peak	-	11:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	1605	-	-	-	1670	-	-	-	-	-
P.H.F.		0.914				0.924					
PM Peak	-	-	04:15	-	-	-	04:15	-	-	-	-
Vol.	-	-	2042	-	-	-	1714	-	-	-	-
P.H.F.			0.949				0.904				
Percentage		33.4%	66.6%			37.4%	62.6%				
ADT/AADT		ADT 46,068		AADT 46,068							

Counts Unlimited, Inc.

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City of Clovis
Willow Avenue
B/ Behymer Avenue - Shepherd Avenue
24 Hour Directional Volume Count

CVS010
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		26	127			13	141				
12:15		23	112			16	112				
12:30		11	136			14	118				
12:45		9	120	69	495	13	142	56	513	125	1008
01:00		15	136			8	148				
01:15		2	111			8	104				
01:30		10	112			8	131				
01:45		5	114	32	473	4	121	28	504	60	977
02:00		13	127			5	112				
02:15		4	159			10	123				
02:30		8	201			9	130				
02:45		0	200	25	687	8	**249**	32	614	57	1301
03:00		7	185			6	**193**				
03:15		4	153			5	**196**				
03:30		5	172			6	**176**				
03:45		3	195	19	705	7	156	24	721	43	1426
04:00		2	165			2	146				
04:15		1	175			13	173				
04:30		8	**218**			18	133				
04:45		13	**203**	24	761	22	155	55	607	79	1368
05:00		11	**187**			27	136				
05:15		18	**244**			25	164				
05:30		35	201			37	162				
05:45		48	201	112	833	40	149	129	611	241	1444
06:00		34	163			56	129				
06:15		29	150			64	144				
06:30		54	123			93	121				
06:45		64	132	181	568	128	106	341	500	522	1068
07:00		81	131			129	144				
07:15		**125**	137			137	90				
07:30		**196**	104			**255**	116				
07:45		**235**	94	637	466	**233**	95	754	445	1391	911
08:00		**138**	94			**247**	89				
08:15		125	106			**203**	102				
08:30		106	82			124	76				
08:45		123	97	492	379	126	79	700	346	1192	725
09:00		80	96			94	55				
09:15		79	90			120	65				
09:30		97	51			111	62				
09:45		97	46	353	283	111	46	436	228	789	511
10:00		84	44			105	44				
10:15		78	63			108	40				
10:30		87	65			103	47				
10:45		91	34	340	206	114	31	430	162	770	368
11:00		105	26			112	27				
11:15		112	22			117	23				
11:30		108	24			117	21				
11:45		115	28	440	100	132	11	478	82	918	182
Total		2724	5956	2724	5956	3463	5333	3463	5333	6187	11289
Combined Total		8680		8680		8796		8796		17476	
AM Peak	-	07:15	-	-	-	07:30	-	-	-	-	-
Vol.	-	694	-	-	-	938	-	-	-	-	-
P.H.F.		0.738				0.920					
PM Peak	-	-	04:30	-	-	-	02:45	-	-	-	-
Vol.	-	-	852	-	-	-	814	-	-	-	-
P.H.F.			0.873				0.817				
Percentage		31.4%	68.6%			39.4%	60.6%				
ADT/AADT		ADT 17,476		AADT 17,476							

Counts Unlimited, Inc.

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City of Clovis
Minnewawa Avenue
B/ Behymer Avenue - Shepherd Avenue
24 Hour Directional Volume Count

CVS012
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		12	35			5	41				
12:15		8	39			13	45				
12:30		6	47			8	46				
12:45		4	30	30	151	7	38	33	170	63	321
01:00		4	40			6	52				
01:15		9	46			3	36				
01:30		5	42			4	38				
01:45		1	45	19	173	7	47	20	173	39	346
02:00		4	37			3	42				
02:15		3	51			3	55				
02:30		1	59			5	61				
02:45		1	72	9	219	4	54	15	212	24	431
03:00		3	52			4	49				
03:15		2	50			3	51				
03:30		2	58			2	54				
03:45		2	49	9	209	5	47	14	201	23	410
04:00		3	53			1	53				
04:15		1	59			6	58				
04:30		7	59			8	51				
04:45		3	51	14	222	5	**61**	20	223	34	445
05:00		6	**56**			8	**42**				
05:15		21	**80**			12	**67**				
05:30		17	**70**			16	**56**				
05:45		20	**54**	64	260	21	32	57	197	121	457
06:00		23	44			12	41				
06:15		24	40			29	47				
06:30		35	34			36	26				
06:45		40	41	122	159	35	31	112	145	234	304
07:00		35	49			35	34				
07:15		**52**	40			**56**	31				
07:30		**55**	33			**93**	16				
07:45		**96**	35	238	157	**68**	25	252	106	490	263
08:00		**58**	43			**64**	20				
08:15		43	30			56	22				
08:30		38	30			51	35				
08:45		40	23	179	126	40	21	211	98	390	224
09:00		34	26			39	13				
09:15		31	13			37	16				
09:30		37	23			48	14				
09:45		34	19	136	81	45	8	169	51	305	132
10:00		30	23			32	5				
10:15		26	13			42	23				
10:30		25	11			33	16				
10:45		37	14	118	61	34	10	141	54	259	115
11:00		34	8			43	6				
11:15		39	11			38	6				
11:30		39	6			45	10				
11:45		31	9	143	34	45	9	171	31	314	65
Total		1081	1852	1081	1852	1215	1661	1215	1661	2296	3513
Combined Total		2933		2933		2876		2876		5809	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	261	-	-	-	281	-	-	-	-	-
P.H.F.		0.680				0.755					
PM Peak	-	-	05:00	-	-	-	04:45	-	-	-	-
Vol.	-	-	260	-	-	-	226	-	-	-	-
P.H.F.			0.813				0.843				
Percentage		36.9%	63.1%			42.2%	57.8%				
ADT/AADT		ADT 5,809		AADT 5,809							

AGENDA ITEM NO. 6.

Counts Unlimited, Inc.

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City of Clovis
Clovis Avenue
B/ Shepherd Avenue - Teague Avenue
24 Hour Directional Volume Count

CVS014
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		8	27			2	33				
12:15		5	46			3	36				
12:30		5	48			6	34				
12:45		2	49	20	170	1	46	12	149	32	319
01:00		0	33			0	48				
01:15		4	48			0	37				
01:30		4	45			2	35				
01:45		2	50	10	176	1	31	3	151	13	327
02:00		3	34			2	33				
02:15		2	45			0	36				
02:30		0	38			0	48				
02:45		2	**64**	7	181	2	56	4	173	11	354
03:00		0	**50**			1	52				
03:15		0	**92**			1	**51**				
03:30		1	**52**			2	**59**				
03:45		2	47	3	241	1	**53**	5	215	8	456
04:00		4	59			1	**56**				
04:15		2	54			3	38				
04:30		3	52			7	51				
04:45		4	64	13	229	5	51	16	196	29	425
05:00		6	68			4	63				
05:15		6	60			9	46				
05:30		10	61			10	44				
05:45		11	48	33	237	15	29	38	182	71	419
06:00		20	55			19	39				
06:15		15	51			17	49				
06:30		34	34			26	28				
06:45		41	40	110	180	27	33	89	149	199	329
07:00		28	35			30	27				
07:15		**62**	42			**71**	27				
07:30		**63**	38			**101**	20				
07:45		**48**	55	201	170	**69**	28	271	102	472	272
08:00		**36**	37			**53**	21				
08:15		49	38			47	18				
08:30		34	34			41	24				
08:45		32	27	151	136	41	23	182	86	333	222
09:00		30	30			15	22				
09:15		24	26			30	18				
09:30		38	18			40	16				
09:45		28	24	120	98	41	12	126	68	246	166
10:00		27	16			49	6				
10:15		36	13			23	14				
10:30		31	13			30	16				
10:45		29	14	123	56	31	8	133	44	256	100
11:00		26	8			35	9				
11:15		39	10			41	7				
11:30		43	5			36	6				
11:45		40	6	148	29	42	5	154	27	302	56
Total		939	1903	939	1903	1033	1542	1033	1542	1972	3445
Combined Total		2842		2842		2575		2575		5417	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	209	-	-	-	294	-	-	-	-	-
P.H.F.		0.829				0.728					
PM Peak	-	-	02:45	-	-	-	03:15	-	-	-	-
Vol.	-	-	258	-	-	-	219	-	-	-	-
P.H.F.			0.701				0.928				
Percentage		33.0%	67.0%			40.1%	59.9%				
ADT/AADT		ADT 5,417		AADT 5,417							

Counts Unlimited, Inc.

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City of Clovis
Clovis Avenue
B/ Teague Avenue - Nees Avenue
24 Hour Directional Volume Count

CVS015
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		9	68			4	77				
12:15		8	94			2	62				
12:30		8	91			6	71				
12:45		3	64	28	317	3	83	15	293	43	610
01:00		1	63			1	55				
01:15		5	80			0	54				
01:30		2	94			1	60				
01:45		1	67	9	304	1	58	3	227	12	531
02:00		4	65			3	58				
02:15		3	80			2	59				
02:30		2	87			1	71				
02:45		2	108	11	340	1	**98**	7	286	18	626
03:00		2	101			1	**110**				
03:15		0	111			2	**147**				
03:30		1	97			1	**107**				
03:45		3	91	6	400	3	89	7	453	13	853
04:00		2	118			4	74				
04:15		2	97			10	88				
04:30		1	**117**			9	70				
04:45		3	**110**	8	442	14	73	37	305	45	747
05:00		11	**144**			15	105				
05:15		9	**134**			17	69				
05:30		9	106			23	76				
05:45		24	95	53	479	29	61	84	311	137	790
06:00		20	97			26	78				
06:15		22	92			45	75				
06:30		42	64			43	60				
06:45		65	65	149	318	65	55	179	268	328	586
07:00		69	58			81	45				
07:15		**128**	64			95	49				
07:30		**173**	78			**160**	30				
07:45		**105**	80	475	280	**148**	46	484	170	959	450
08:00		**88**	79			**117**	31				
08:15		62	69			**131**	37				
08:30		58	63			101	36				
08:45		50	61	258	272	71	37	420	141	678	413
09:00		48	66			60	32				
09:15		52	54			67	30				
09:30		48	38			70	28				
09:45		58	34	206	192	67	23	264	113	470	305
10:00		53	29			65	16				
10:15		69	32			69	9				
10:30		50	19			58	15				
10:45		57	19	229	99	59	10	251	50	480	149
11:00		74	19			52	14				
11:15		58	14			85	7				
11:30		85	12			56	12				
11:45		71	12	288	57	85	10	278	43	566	100
Total		1720	3500	1720	3500	2029	2660	2029	2660	3749	6160
Combined Total		5220		5220		4689		4689		9909	
AM Peak	-	07:15	-	-	-	07:30	-	-	-	-	-
Vol.	-	494	-	-	-	556	-	-	-	-	-
P.H.F.		0.714				0.869					
PM Peak	-	-	04:30	-	-	-	02:45	-	-	-	-
Vol.	-	-	505	-	-	-	462	-	-	-	-
P.H.F.			0.877				0.786				
Percentage		33.0%	67.0%			43.3%	56.7%				
ADT/AADT		ADT 9,909		AADT 9,909							

Counts Unlimited, Inc.

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City of Clovis
Clovis Avenue
B/ Nees Avenue - Alluvial Avenue
24 Hour Directional Volume Count

CVS016
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		8	91			9	112				
12:15		9	134			8	85				
12:30		12	112			9	93				
12:45		4	77	33	414	3	114	29	404	62	818
01:00		3	81			2	88				
01:15		8	97			2	81				
01:30		2	103			1	100				
01:45		1	89	14	370	2	85	7	354	21	724
02:00		6	91			7	97				
02:15		4	101			2	97				
02:30		3	94			3	94				
02:45		1	117	14	403	2	**137**	14	425	28	828
03:00		2	114			2	**148**				
03:15		0	118			2	**169**				
03:30		1	108			3	**157**				
03:45		4	113	7	453	4	105	11	579	18	1032
04:00		1	121			5	112				
04:15		2	131			10	118				
04:30		5	**126**			8	100				
04:45		4	**128**	12	506	14	134	37	464	49	970
05:00		14	**159**			15	141				
05:15		9	**155**			18	125				
05:30		19	123			24	122				
05:45		29	102	71	539	35	93	92	481	163	1020
06:00		21	109			36	123				
06:15		25	122			45	109				
06:30		52	81			63	95				
06:45		71	71	169	383	80	86	224	413	393	796
07:00		64	75			99	73				
07:15		**100**	73			115	77				
07:30		**97**	92			**195**	68				
07:45		**90**	90	351	330	**188**	73	597	291	948	621
08:00		**85**	94			**137**	53				
08:15		61	76			**140**	48				
08:30		67	63			117	54				
08:45		53	65	266	298	107	53	501	208	767	506
09:00		63	56			82	43				
09:15		52	60			83	38				
09:30		59	43			97	36				
09:45		75	46	249	205	92	29	354	146	603	351
10:00		74	33			80	20				
10:15		83	38			95	21				
10:30		71	20			77	19				
10:45		79	25	307	116	89	14	341	74	648	190
11:00		85	20			81	15				
11:15		70	15			119	11				
11:30		102	16			74	10				
11:45		88	19	345	70	110	11	384	47	729	117
Total		1838	4087	1838	4087	2591	3886	2591	3886	4429	7973
Combined Total		5925		5925		6477		6477		12402	
AM Peak	-	07:15	-	-	-	07:30	-	-	-	-	-
Vol.	-	372	-	-	-	660	-	-	-	-	-
P.H.F.		0.930				0.846					
PM Peak	-	-	04:30	-	-	-	02:45	-	-	-	-
Vol.	-	-	568	-	-	-	611	-	-	-	-
P.H.F.			0.893				0.904				
Percentage		31.0%	69.0%			40.0%	60.0%				
ADT/AADT		ADT 12,402		AADT 12,402							

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City of Clovis
Clovis Avenue
B/ Alluvial Avenue - Herndon Avenue
24 Hour Directional Volume Count

CVS017
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		12	235			15	192				
12:15		20	187			13	173				
12:30		17	230			15	173				
12:45		10	191	59	843	6	199	49	737	108	1580
01:00		11	207			7	172				
01:15		12	194			8	147				
01:30		4	165			6	155				
01:45		6	171	33	737	3	159	24	633	57	1370
02:00		10	178			6	165				
02:15		5	223			12	148				
02:30		6	205			5	153				
02:45		3	197	24	803	3	162	26	628	50	1431
03:00		4	210			2	179				
03:15		4	212			3	176				
03:30		5	190			2	236				
03:45		10	230	23	842	6	161	13	752	36	1594
04:00		7	191			6	153				
04:15		8	256			6	158				
04:30		9	173			13	197				
04:45		18	**217**	42	837	14	**178**	39	686	81	1523
05:00		20	**256**			18	**187**				
05:15		18	**247**			22	**231**				
05:30		40	**210**			37	**200**				
05:45		51	214	129	927	53	167	130	785	259	1712
06:00		39	203			46	140				
06:15		51	171			64	185				
06:30		65	145			99	147				
06:45		94	156	249	675	126	150	335	622	584	1297
07:00		98	146			145	112				
07:15		147	129			151	123				
07:30		177	177			**217**	99				
07:45		162	149	584	601	**240**	88	753	422	1337	1023
08:00		156	143			**187**	65				
08:15		143	118			**194**	90				
08:30		135	131			184	69				
08:45		143	108	577	500	186	82	751	306	1328	806
09:00		153	102			144	77				
09:15		110	93			145	65				
09:30		147	80			143	50				
09:45		156	62	566	337	154	52	586	244	1152	581
10:00		172	72			125	28				
10:15		161	49			158	40				
10:30		150	46			136	35				
10:45		**184**	46	667	213	167	24	586	127	1253	340
11:00		**162**	35			148	29				
11:15		**175**	23			152	15				
11:30		**182**	33			153	16				
11:45		180	33	699	124	181	14	634	74	1333	198
Total		3652	7439	3652	7439	3926	6016	3926	6016	7578	13455
Combined Total		11091		11091		9942		9942		21033	
AM Peak	-	10:45	-	-	-	07:30	-	-	-	-	-
Vol.	-	703	-	-	-	838	-	-	-	-	-
P.H.F.		0.955				0.873					
PM Peak	-	-	04:45	-	-	-	04:45	-	-	-	-
Vol.	-	-	930	-	-	-	796	-	-	-	-
P.H.F.			0.908				0.861				
Percentage		32.9%	67.1%			39.5%	60.5%				
ADT/AADT		ADT 21,033		AADT 21,033							

Counts Unlimited, Inc.

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City of Clovis
Sunnyside Avenue
B/ Project Driveway - Shepherd Avenue
24 Hour Directional Volume Count

CVS018
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	10			0	5				
12:15		0	2			0	4				
12:30		0	4			0	5				
12:45		0	5	1	21	0	5	0	19	1	40
01:00		0	9			0	3				
01:15		2	7			0	2				
01:30		0	8			0	8				
01:45		0	6	2	30	0	3	0	16	2	46
02:00		0	7			0	8				
02:15		0	6			0	2				
02:30		0	5			0	8				
02:45		0	5	0	23	0	4	0	22	0	45
03:00		0	**12**			0	7				
03:15		0	**7**			0	4				
03:30		0	**9**			0	7				
03:45		0	**6**	0	34	0	**13**	0	31	0	65
04:00		0	6			2	**9**				
04:15		0	5			0	**6**				
04:30		0	9			1	**10**				
04:45		0	4	0	24	1	5	4	30	4	54
05:00		1	8			0	7				
05:15		0	10			1	7				
05:30		0	4			1	7				
05:45		1	10	2	32	0	3	2	24	4	56
06:00		2	8			0	3				
06:15		1	2			4	4				
06:30		1	3			2	0				
06:45		3	2	7	15	2	3	8	10	15	25
07:00		2	4			3	6				
07:15		7	5			2	2				
07:30		3	8			8	3				
07:45		4	3	16	20	2	5	15	16	31	36
08:00		6	2			10	1				
08:15		**11**	4			9	2				
08:30		**6**	4			3	0				
08:45		**7**	3	30	13	6	3	28	6	58	19
09:00		**7**	1			7	1				
09:15		5	1			3	1				
09:30		5	4			2	2				
09:45		10	1	27	7	7	1	19	5	46	12
10:00		5	1			**8**	2				
10:15		6	2			**10**	0				
10:30		5	1			**6**	1				
10:45		4	1	20	5	**9**	0	33	3	53	8
11:00		6	0			2	1				
11:15		4	1			8	0				
11:30		7	0			5	0				
11:45		5	0	22	1	9	0	24	1	46	2
Total		127	225	127	225	133	183	133	183	260	408
Combined Total		352		352		316		316		668	
AM Peak	-	08:15	-	-	-	10:00	-	-	-	-	-
Vol.	-	31	-	-	-	33	-	-	-	-	-
P.H.F.		0.705				0.825					
PM Peak	-	-	03:00	-	-	-	03:45	-	-	-	-
Vol.	-	-	34	-	-	-	38	-	-	-	-
P.H.F.			0.708				0.731				
Percentage		36.1%	63.9%			42.1%	57.9%				
ADT/AADT		ADT 668		AADT 668							

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City of Clovis
Sunnyside Avenue
B/ Shepherd Avenue - Teague Avenue
24 Hour Directional Volume Count

CVS019
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		5	25			1	23				
12:15		1	13			1	24				
12:30		1	24			0	27				
12:45		1	15	8	77	0	29	2	103	10	180
01:00		0	19			0	19				
01:15		0	22			0	19				
01:30		1	18			0	21				
01:45		0	20	1	79	0	25	0	84	1	163
02:00		1	27			0	27				
02:15		0	22			0	29				
02:30		1	29			0	25				
02:45		0	18	2	96	0	27	0	108	2	204
03:00		0	26			0	16				
03:15		0	28			1	30				
03:30		0	35			1	23				
03:45		0	31	0	120	0	18	2	87	2	207
04:00		0	23			3	21				
04:15		0	**30**			0	22				
04:30		0	**26**			3	22				
04:45		2	**36**	2	115	3	**29**	9	94	11	209
05:00		1	**35**			2	**26**				
05:15		2	28			4	**30**				
05:30		7	23			11	**26**				
05:45		3	23	13	109	9	25	26	107	39	216
06:00		8	26			8	19				
06:15		7	18			9	23				
06:30		15	12			15	20				
06:45		13	17	43	73	19	23	51	85	94	158
07:00		11	24			16	14				
07:15		15	21			25	12				
07:30		20	14			**29**	14				
07:45		17	17	63	76	**40**	21	110	61	173	137
08:00		**31**	13			**46**	13				
08:15		**18**	16			**32**	11				
08:30		**19**	14			23	10				
08:45		**25**	9	93	52	24	17	125	51	218	103
09:00		23	8			23	10				
09:15		13	7			25	8				
09:30		20	4			17	8				
09:45		22	7	78	26	18	6	83	32	161	58
10:00		12	4			20	3				
10:15		19	7			29	4				
10:30		19	6			17	3				
10:45		26	3	76	20	28	0	94	10	170	30
11:00		19	2			19	4				
11:15		15	5			20	3				
11:30		18	2			16	0				
11:45		26	2	78	11	23	2	78	9	156	20
Total		457	854	457	854	580	831	580	831	1037	1685
Combined Total		1311		1311		1411		1411		2722	
AM Peak	-	08:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	93	-	-	-	147	-	-	-	-	-
P.H.F.		0.750				0.799					
PM Peak	-	-	04:15	-	-	-	04:45	-	-	-	-
Vol.	-	-	127	-	-	-	111	-	-	-	-
P.H.F.			0.882				0.925				
Percentage		34.9%	65.1%			41.1%	58.9%				
ADT/AADT		ADT 2,722		AADT 2,722							

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City of Clovis
Sunnyside Avenue
B/ Teague Avenue - Nees Avenue
24 Hour Directional Volume Count

CVS020
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	20			1	24				
12:15		1	19			1	22				
12:30		1	19			0	30				
12:45		2	22	8	80	0	28	2	104	10	184
01:00		0	19			0	27				
01:15		0	25			0	18				
01:30		1	14			0	23				
01:45		0	21	1	79	0	26	0	94	1	173
02:00		1	27			0	28				
02:15		0	18			0	28				
02:30		1	26			0	23				
02:45		0	24	2	95	0	30	0	109	2	204
03:00		0	**37**			0	17				
03:15		0	**35**			1	32				
03:30		0	**38**			0	25				
03:45		0	**32**	0	142	1	24	2	98	2	240
04:00		0	26			3	24				
04:15		0	26			0	28				
04:30		0	30			3	16				
04:45		2	30	2	112	2	**32**	8	100	10	212
05:00		1	47			4	**26**				
05:15		2	23			3	**39**				
05:30		7	27			7	**26**				
05:45		7	26	17	123	11	26	25	117	42	240
06:00		7	24			5	24				
06:15		10	19			14	23				
06:30		22	15			14	17				
06:45		16	16	55	74	23	26	56	90	111	164
07:00		10	25			21	12				
07:15		25	19			28	14				
07:30		12	12			**41**	16				
07:45		16	27	63	83	**37**	17	127	59	190	142
08:00		**28**	18			**51**	21				
08:15		**22**	18			**31**	10				
08:30		**19**	16			29	10				
08:45		**18**	10	87	62	34	18	145	59	232	121
09:00		22	9			25	10				
09:15		8	13			16	8				
09:30		20	4			15	7				
09:45		25	9	75	35	21	7	77	32	152	67
10:00		11	8			18	6				
10:15		17	8			24	2				
10:30		11	8			22	4				
10:45		22	4	61	28	28	0	92	12	153	40
11:00		20	3			28	4				
11:15		19	2			19	3				
11:30		17	1			22	0				
11:45		23	4	79	10	29	2	98	9	177	19
Total		450	923	450	923	632	883	632	883	1082	1806
Combined Total		1373		1373		1515		1515		2888	
AM Peak	-	08:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	87	-	-	-	160	-	-	-	-	-
P.H.F.		0.777				0.784					
PM Peak	-	-	03:00	-	-	-	04:45	-	-	-	-
Vol.	-	-	142	-	-	-	123	-	-	-	-
P.H.F.			0.934				0.788				
Percentage		32.8%	67.2%			41.7%	58.3%				
ADT/AADT		ADT 2,888		AADT 2,888							

Counts Unlimited, Inc.

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City of Clovis
Fowler Avenue
B/ Behymer Avenue - Ticonderoga
24 Hour Directional Volume Count

CVS021
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	38			4	40				
12:15		3	38			3	46				
12:30		3	34			1	33				
12:45		7	40	17	150	1	27	9	146	26	296
01:00		2	35			2	38				
01:15		1	25			3	41				
01:30		5	34			0	35				
01:45		1	37	9	131	1	34	6	148	15	279
02:00		1	35			2	46				
02:15		3	73			2	31				
02:30		1	75			6	**52**				
02:45		1	47	6	230	3	**127**	13	256	19	486
03:00		1	48			3	**114**				
03:15		1	55			3	**55**				
03:30		0	35			1	46				
03:45		3	65	5	203	1	58	8	273	13	476
04:00		0	64			3	67				
04:15		2	48			7	68				
04:30		3	**65**			5	46				
04:45		5	**63**	10	240	10	55	25	236	35	476
05:00		8	**64**			6	55				
05:15		9	**68**			7	50				
05:30		13	50			11	53				
05:45		18	57	48	239	18	44	42	202	90	441
06:00		13	39			22	56				
06:15		24	46			15	42				
06:30		44	44			28	45				
06:45		50	57	131	186	42	42	107	185	238	371
07:00		68	42			47	30				
07:15		**109**	41			57	29				
07:30		**167**	27			**61**	29				
07:45		**131**	29	475	139	**101**	37	266	125	741	264
08:00		**77**	31			**88**	33				
08:15		46	25			**67**	27				
08:30		58	27			38	29				
08:45		34	19	215	102	38	22	231	111	446	213
09:00		35	22			33	26				
09:15		31	20			38	22				
09:30		32	19			33	18				
09:45		35	19	133	80	26	12	130	78	263	158
10:00		31	19			39	7				
10:15		31	20			34	12				
10:30		43	10			38	14				
10:45		30	10	135	59	34	11	145	44	280	103
11:00		30	2			43	8				
11:15		50	7			47	5				
11:30		34	6			34	8				
11:45		46	3	160	18	30	3	154	24	314	42
Total		1344	1777	1344	1777	1136	1828	1136	1828	2480	3605
Combined Total		3121		3121		2964		2964		6085	
AM Peak	-	07:15	-	-	-	07:30	-	-	-	-	-
Vol.	-	484	-	-	-	317	-	-	-	-	-
P.H.F.		0.725				0.785					
PM Peak	-	-	04:30	-	-	-	02:30	-	-	-	-
Vol.	-	-	260	-	-	-	348	-	-	-	-
P.H.F.			0.867				0.685				
Percentage		43.1%	56.9%			38.3%	61.7%				
ADT/AADT		ADT 6,085		AADT 6,085							

AGENDA ITEM NO. 6.

Counts Unlimited, Inc.

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City of Clovis
Fowler Avenue
B/ Ticonderoga - Shepherd Avenue
24 Hour Directional Volume Count

CVS022
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	36			4	43				
12:15		3	37			3	46				
12:30		3	35			1	32				
12:45		7	40	17	148	1	27	9	148	26	296
01:00		2	34			2	38				
01:15		0	24			3	41				
01:30		5	33			0	36				
01:45		1	36	8	127	1	34	6	149	14	276
02:00		1	36			2	45				
02:15		3	72			2	31				
02:30		1	72			6	**50**				
02:45		1	45	6	225	3	**125**	13	251	19	476
03:00		1	45			3	**115**				
03:15		1	56			3	**54**				
03:30		0	34			0	46				
03:45		3	65	5	200	1	59	7	274	12	474
04:00		1	66			3	69				
04:15		2	52			7	68				
04:30		3	**65**			5	48				
04:45		5	**63**	11	246	10	55	25	240	36	486
05:00		8	**62**			6	58				
05:15		9	**67**			7	51				
05:30		13	50			10	52				
05:45		19	58	49	237	18	45	41	206	90	443
06:00		15	39			23	57				
06:15		24	46			15	42				
06:30		43	41			28	46				
06:45		50	57	132	183	41	43	107	188	239	371
07:00		68	42			50	29				
07:15		**112**	40			57	30				
07:30		**168**	27			**59**	28				
07:45		**127**	30	475	139	**102**	37	268	124	743	263
08:00		**78**	30			**89**	33				
08:15		46	25			**64**	28				
08:30		58	26			38	29				
08:45		34	21	216	102	40	23	231	113	447	215
09:00		34	22			34	26				
09:15		31	20			39	21				
09:30		31	19			33	18				
09:45		34	20	130	81	25	12	131	77	261	158
10:00		31	18			38	7				
10:15		30	20			34	13				
10:30		43	10			36	14				
10:45		30	10	134	58	35	11	143	45	277	103
11:00		31	2			42	8				
11:15		50	6			48	5				
11:30		32	6			35	8				
11:45		47	3	160	17	32	3	157	24	317	41
Total		1343	1763	1343	1763	1138	1839	1138	1839	2481	3602
Combined Total		3106		3106		2977		2977		6083	
AM Peak	-	07:15	-	-	-	07:30	-	-	-	-	-
Vol.	-	485	-	-	-	314	-	-	-	-	-
P.H.F.		0.722				0.770					
PM Peak	-	-	04:30	-	-	-	02:30	-	-	-	-
Vol.	-	-	257	-	-	-	344	-	-	-	-
P.H.F.			0.959				0.688				
Percentage		43.2%	56.8%			38.2%	61.8%				
ADT/AADT		ADT 6,083		AADT 6,083							

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City of Clovis
Fowler Avenue
B/ Shepherd Avenue - Teague Avenue
24 Hour Directional Volume Count

CVS023
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		8	49			3	38				
12:15		4	56			3	46				
12:30		2	49			3	65				
12:45		4	49	18	203	0	49	9	198	27	401
01:00		3	45			2	41				
01:15		3	34			4	37				
01:30		2	50			2	51				
01:45		0	59	8	188	2	48	10	177	18	365
02:00		0	46			1	55				
02:15		1	51			0	57				
02:30		1	54			4	**69**				
02:45		1	60	3	211	1	**83**	6	264	9	475
03:00		0	70			0	**80**				
03:15		1	94			1	**76**				
03:30		0	70			2	54				
03:45		1	73	2	307	4	56	7	266	9	573
04:00		1	74			2	83				
04:15		1	86			5	63				
04:30		0	61			7	72				
04:45		11	**80**	13	301	13	56	27	274	40	575
05:00		6	**88**			12	66				
05:15		5	**70**			13	67				
05:30		11	**85**			11	67				
05:45		27	59	49	302	17	50	53	250	102	552
06:00		26	59			28	63				
06:15		39	76			32	63				
06:30		22	64			28	53				
06:45		42	63	129	262	34	45	122	224	251	486
07:00		29	64			45	38				
07:15		31	45			67	46				
07:30		38	37			**67**	50				
07:45		46	47	144	193	**60**	41	239	175	383	368
08:00		57	41			**61**	32				
08:15		52	35			**76**	33				
08:30		42	37			57	34				
08:45		37	34	188	147	50	29	244	128	432	275
09:00		34	38			36	28				
09:15		27	29			51	23				
09:30		30	27			37	17				
09:45		37	24	128	118	29	7	153	75	281	193
10:00		41	23			39	14				
10:15		35	15			49	11				
10:30		40	11			51	7				
10:45		41	15	157	64	40	7	179	39	336	103
11:00		**41**	8			51	5				
11:15		**55**	6			54	4				
11:30		**50**	5			51	5				
11:45		**62**	7	208	26	50	2	206	16	414	42
Total		1047	2322	1047	2322	1255	2086	1255	2086	2302	4408
Combined Total		3369		3369		3341		3341		6710	
AM Peak	-	11:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	208	-	-	-	264	-	-	-	-	-
P.H.F.		0.839				0.868					
PM Peak	-	-	04:45	-	-	-	02:30	-	-	-	-
Vol.	-	-	323	-	-	-	308	-	-	-	-
P.H.F.			0.918				0.928				
Percentage		31.1%	68.9%			37.6%	62.4%				
ADT/AADT		ADT 6,710		AADT 6,710							

Counts Unlimited, Inc.

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City of Clovis
Fowler Avenue
B/ Teague Avenue - Nees Avenue
24 Hour Directional Volume Count

CVS024
Site Code: 003-22473

Start Time	24-May-22 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		7	53			3	48				
12:15		4	57			3	44				
12:30		1	52			3	62				
12:45		5	48	17	210	0	46	9	200	26	410
01:00		3	46			1	45				
01:15		3	32			4	37				
01:30		2	49			2	50				
01:45		0	59	8	186	2	47	9	179	17	365
02:00		0	47			1	57				
02:15		1	54			0	55				
02:30		1	56			4	**68**				
02:45		1	58	3	215	1	**78**	6	258	9	473
03:00		0	64			1	**70**				
03:15		0	74			1	**81**				
03:30		0	71			2	54				
03:45		1	69	1	278	4	60	8	265	9	543
04:00		1	75			2	84				
04:15		1	88			5	59				
04:30		0	58			6	68				
04:45		10	**83**	12	304	15	56	28	267	40	571
05:00		4	**89**			12	62				
05:15		5	**71**			16	66				
05:30		10	**85**			14	66				
05:45		28	57	47	302	16	46	58	240	105	542
06:00		27	56			28	64				
06:15		39	77			33	60				
06:30		21	66			30	52				
06:45		41	61	128	260	35	47	126	223	254	483
07:00		33	61			48	34				
07:15		31	46			69	41				
07:30		38	34			**66**	47				
07:45		44	47	146	188	**53**	41	236	163	382	351
08:00		46	37			**64**	35				
08:15		41	31			**75**	32				
08:30		41	40			58	30				
08:45		35	35	163	143	51	27	248	124	411	267
09:00		35	34			36	27				
09:15		28	30			53	26				
09:30		28	23			40	17				
09:45		39	24	130	111	31	6	160	76	290	187
10:00		40	22			40	14				
10:15		36	16			49	9				
10:30		41	10			51	7				
10:45		41	15	158	63	45	7	185	37	343	100
11:00		**45**	8			53	4				
11:15		**54**	6			52	4				
11:30		**54**	5			50	5				
11:45		**52**	7	205	26	52	2	207	15	412	41
Total		1018	2286	1018	2286	1280	2047	1280	2047	2298	4333
Combined Total		3304		3304		3327		3327		6631	
AM Peak	-	11:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	205	-	-	-	258	-	-	-	-	-
P.H.F.		0.949				0.860					
PM Peak	-	-	04:45	-	-	-	02:30	-	-	-	-
Vol.	-	-	328	-	-	-	297	-	-	-	-
P.H.F.			0.921				0.917				
Percentage		30.8%	69.2%			38.5%	61.5%				
ADT/AADT		ADT 6,631		AADT 6,631							

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City of Clovis
Fowler Avenue
B/ Nees Avenue - State Route 168 Westbound
24 Hour Directional Volume Count

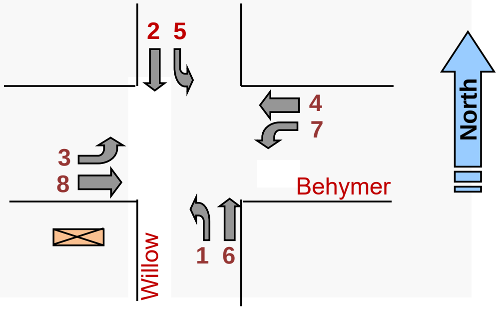
CVS025
Site Code: 003-22473

Start	24-May-22	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		19	211			10	112				
12:15		16	189			6	130				
12:30		4	177			5	125				
12:45		11	218	50	795	2	115	23	482	73	1277
01:00		8	153			6	98				
01:15		4	189			5	103				
01:30		5	179			1	110				
01:45		1	171	18	692	3	110	15	421	33	1113
02:00		7	196			1	99				
02:15		7	217			2	127				
02:30		6	220			5	138				
02:45		6	245	26	878	6	95	14	459	40	1337
03:00		5	246			1	128				
03:15		2	253			1	**189**				
03:30		5	243			2	**156**				
03:45		11	250	23	992	12	**133**	16	606	39	1598
04:00		9	287			6	**150**				
04:15		10	292			7	157				
04:30		9	258			13	145				
04:45		27	**290**	55	1127	29	124	55	576	110	1703
05:00		31	**312**			19	140				
05:15		31	**290**			25	137				
05:30		61	**275**			20	131				
05:45		89	230	212	1107	39	153	103	561	315	1668
06:00		100	259			52	128				
06:15		101	194			52	121				
06:30		122	172			47	116				
06:45		166	159	489	784	47	115	198	480	687	1264
07:00		170	173			97	111				
07:15		**211**	161			112	99				
07:30		**238**	171			98	109				
07:45		**243**	177	862	682	108	89	415	408	1277	1090
08:00		**238**	167			113	71				
08:15		184	129			130	73				
08:30		161	144			110	70				
08:45		157	112	740	552	113	66	466	280	1206	832
09:00		127	98			104	57				
09:15		136	103			96	40				
09:30		141	114			90	45				
09:45		145	103	549	418	91	30	381	172	930	590
10:00		173	113			114	20				
10:15		136	79			112	16				
10:30		176	59			115	17				
10:45		194	54	679	305	109	10	450	63	1129	368
11:00		165	35			**116**	17				
11:15		192	32			**128**	7				
11:30		179	16			**120**	9				
11:45		194	23	730	106	**134**	5	498	38	1228	144
Total		4433	8438	4433	8438	2634	4546	2634	4546	7067	12984
Combined Total		12871		12871		7180		7180		20051	
AM Peak	-	07:15	-	-	-	11:00	-	-	-	-	-
Vol.	-	930	-	-	-	498	-	-	-	-	-
P.H.F.		0.957				0.929					
PM Peak	-	-	04:45	-	-	-	03:15	-	-	-	-
Vol.	-	-	1167	-	-	-	628	-	-	-	-
P.H.F.			0.935				0.831				
Percentage		34.4%	65.6%			36.7%	63.3%				
ADT/AADT		ADT 20,051		AADT 20,051							

AGENDA ITEM NO. 6.

City of FRESNO

Movement	NL	ST	EL	WT	SL	NT	WL	ET		
Times [1.1.1]	1	2	3	4	5	6	7	8	9	10
Min Green	8	8	8	8	8	8	8	8		0
Gap, Ext	2	5.8	2	5.1	2	5.8	2	3.5		0
Max 1	20	45	20	30	20	45	20	30		0
Max 2	12	35	12	20	12	35	12	20		0
Yel Clearance	4.3	4.7	5.2	5.5	4.3	4.7	3.6	5.5		0
Red Clearance	1	1	1	1	1	1	1	1		0
Walk	0	5	0	5		5		5		0
Ped Clearance	0	32	0	38		30		36		0
Red Revert	2	2	2	2	2	2	2	2		0
Add Initial	0		0			0		0		0
Max Initial	0		0			0		0		0
Time B4 Reduct	0	8	0	8		8		8		0
Cars B4 Reduct	0		0			0		0		0
Time To Reduce	0	25	0	15		25		15		0
Reduce By	0		0			0		0		0
Min Gap	2	2	2	2	2	2	2	2		0
DyMaxLim	0		0			0		0		0
Max Step	0		0			0		0		0
Options [1.1.2]	1	2	3	4	5	6	7	8	9	10
Enable	X	X	X	X	X	X	X	X		
Min Recall										
Max Recall										
Ped Recall										
Soft Recall		X				X				
Lock Calls										
Auto Flash Entry										
Auto Flash Exit										
Dual Entry		X		X		X		X		
Enable Simul Gap										
Gaurantee Passage										
Rest In Walk										
Conditonal Service										
Non-Actuated 1										
Non-Actuated 2										
Add Init Calc										



Phase Options+ [1.1.3]

Options+	1	2	3	4	5	6	7	8	9	10
Reservice										
PedClr Thru Yel										
SkipRed-NoCall										
Red Rest										
Max II										
*Max III										
Max Inhibit										
Ped Delay										
Red Rest on Gap										
Conflicting Phase	0	0	0	0	0	0	0	0	0	0
Grn/Ped Delay										
Omit Yel, Yel P	0	0	0	0	0	0	0	0	0	0
Ped Out/Olp Ped										
StartYel, Next P	0	0	0	0	0	0	0	0	0	0
*StartupVehCall	1	2	3	4	5	6	7	8		
*StartupPedCall										

Phase Concurrency [1.1.4]

Phase	Ring	StartUp	Concurrent Phases						
1	1	RED	5	6	0	0			
2	1	GREEN	5	6	0	0			
3	1	RED	7	8	0	0			
4	1	RED	7	8	0	0			
5	2	RED	1	2	0	0			
6	2	GREEN	1	2	0	0			
7	2	RED	3	4	0	0			
8	2	RED	3	4	0	0			
9	0	RED	0	0	0	0			
10	0	RED	0	0	0	0			
11	0	RED	0	0	0	0			
12	0	RED	0	0	0	0			

Comm Ports [6.6]

Channel	Port	Echo	Mode
Async 1	SP1	NONE	0
Async 2	SP2	NONE	0
Async 3	SP8	NONE	0
Async 4	OFF	NONE	0
Sync 1	SP5S		
Sync 2	OFF		
TS2CVM	NONE		
Opticom	NONE		
GPS	NONE		

Unit Params [1.2.1]

Screen Size	8	Metric	OFF
Startup Flash	0	Red Revert	2
MCE Timeout	0	Auto Ped Clear	OFF
Loc Flsh Start	RSt	Display Time	60
Yellow < 3"	OFF	Tone Disable	ON
Allow Skip Yel	OFF	AudioPedTime	0
Start Red Tm	6	Phase Mode	STD8
Startup Calls	UseProg	CNA FreeTime	0
TOD Dimming	OFF	Diamond Mode	4Ph
ST over Prmpt	OFF	Free Ring Seq	1
Feature Profile	1	IO Mode	USER
Mx Seek TrkTm	0	Max Cyc Timer	0
Mx Seek Dwell	0	CycFlt Actn	ALARM
Prmpt/Ext Coor	EXT	Clrnc Decide	OFF
Aux Switch	STOPTM	LPAlt Srs	3-6
*InhFYA Red St	OFF	Security Delay	0
RingA1go	0		

* - 76.12B or newer

Times+ [1.1.7]

	1	2	3	4	5	6	7	8
Walk2	0	0	0	0	0	0	0	0
BikeClr	0	0	0	0	0	0	0	0
GrnFlash	0	0	0	0	0	0	0	0
SfClrMn	0	0	0	0	0	0	0	0
SfClrNoFlsh	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
NoPed Reserv								

Comm [6.2]

Port	Baud Rate	FCM
1	38400	6
2	9600	6
3	9600	6
4	9600	6

Comm [6.5]

					Host IPs			
IP Address:	10	53	26	131	ATMS			
Mask:	255	255	255	0	10	50	10	22
Gateway:	10	53	26	1	SG			
Port #:	5126				0	0	0	0

Phase Seq. (2 ring) Chart [1.2.4]

Seq #	Ring	Phases					
1	1	1	2	3	4	0	0
	2	5	6	7	8	0	0
2	1	1	2	3	4	0	0
	2	6	5	7	8	0	0
3	1	2	1	3	4	0	0
	2	5	6	7	8	0	0
4	1	2	1	3	4	0	0
	2	6	5	7	8	0	0
5	1	1	2	3	4	0	0
	2	5	6	8	7	0	0
6	1	1	2	3	4	0	0
	2	6	5	8	7	0	0
7	1	2	1	3	4	0	0
	2	5	6	8	7	0	0
8	1	2	1	3	4	0	0
	2	6	5	8	7	0	0
9	1	1	2	4	3	0	0
	2	5	6	7	8	0	0
10	1	1	2	4	3	0	0
	2	6	5	7	8	0	0
11	1	2	1	4	3	0	0
	2	5	6	7	8	0	0
12	1	2	1	4	3	0	0
	2	6	5	7	8	0	0
13	1	1	2	4	3	0	0
	2	5	6	8	7	0	0
14	1	1	2	4	3	0	0
	2	6	5	8	7	0	0
15	1	2	1	4	3	0	0
	2	5	6	8	7	0	0
16	1	2	1	4	3	0	0
	2	6	5	8	7	0	0

Advance Warning [1.1.9]

	Ph	Tm
Aux Out #1	0	0
Aux Out #2	0	0

NAME: Behymer & Willow **ID:** 285 **Configuration:** Standard File

V76.12/13
Updated 12/6/17

Prepared by:	JT	**Date Installed / By:**	2/29/2020 (JT)
Checked by:	JT	**Date Superseded:**	

Date Printed:
2/28/20

AGENDA ITEM NO. 6.

[2.1] Coord Modes+

Test OpMode	0	
Correction	SHRT/LNG	
Maximum	MAX INH	
Force Mode	FIXED	
Flash Mode	CHANNEL	

Coord Modes+ (Page 2)

FreeonSeqCh	ON	
Closed Loop	OFF	
External	OFF	
Latch Sec Frc	OFF	
Stop-in-Walk	OFF	
Ped Recycle	P1256_INH	
Expand Splt	OFF	
Easy Float	OFF	
Auto Reset	ON	
NTCIP Yield	+	0

Leave Walk

Before	TIMED
After	TIMED

Intersection Name: Behymer & Willow

ID: 285

Date Printed: 2/28/2020

[2.4] Patterns

Pat#	Cyc	Off	Split	Seq
1	0	0	1	1
2	0	0	2	1
3	0	0	3	1
4	0	0	4	1
5	0	0	5	1
6	0	0	6	1
7	0	0	7	1
8	0	0	8	1
9	0	0	9	1
10	0	0	10	1
11	0	0	0	1
12	0	0	0	1
13	0	0	0	1

[2.7.1-24] Splits

Split	[2.7]	1	2	3	4	5	6	7	8	9	10
1	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
2	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
3	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
4	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
5	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
6	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
7	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
8	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
9	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
10	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
11	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
12	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
13	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON

[2.5] Transition

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	Hold	Flt	Veh	Ped	MI
1	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
2	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
3	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
4	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
5	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
6	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
7	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
8	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
9	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	OFF
10	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	OFF
11		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
12	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
13		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF

AGENDA ITEM NO. 6.

[2.1] Coord Modes+

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX INH
Force Mode	FIXED
Flash Mode	CHANNEL

Coord Modes+ (Page 2)

FreeonSeqCh	ON
Closed Loop	OFF
External	OFF
Latch Sec Frc	OFF
Stop-in-Walk	OFF
Ped Recycle	P1256_INH
Expand Splt	OFF
Easy Float	OFF
Auto Reset	ON
NTCIP Yield	+ 0
Leave Walk	
Before	TIMED
After	TIMED

Intersection Name: **Behymer & Willow**

ID: **285**

City of FRESNO

Date Printed: 2/28/2020

[2.4] Patterns / [2.7.1-24] Splits

Pat#	Cyc	Off	Split	Seq	Split	[2.7]	1	2	3	4	5	6	7	8	9	10
20	0	0	0	1	20	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
21	0	0	0	1	21	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
22	0	0	0	1	22	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
23	0	0	0	1	23	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
24	0	0	0	1	24	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
25	0	0	0	1	25	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
26	0	0	0	1	26	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
27	0	0	0	1	27	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
28	0	0	0	1	28	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
29	0	0	0	1	29	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
30	0	0	0	1	30	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
31	0	0	0	1	31	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
32	0	0	0	1	32	Split	0	0	0	0	0	0	0	0	0	0
						Crd-P										
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON

[2.5] Transition

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	Ret Hold	Flt	Min Veh	Min Ped	MI
20		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
21	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
22		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
23	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
24		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
25	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
26		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
27	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
28		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
29	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
30		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
31	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
32		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF

[2.7.X.3] TSP Split Table

Pat#	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
1	0	0	1	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						

Pat#	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
2	0	0	2	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						

Pat#	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
3	0	0	3	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						

Pat#	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
4	0	0	4	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						

Pat#	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
5	0	0	5	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						

Pat#	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
6	0	0	6	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						

Pat#	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
9 - FREE	0	0	9	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						

[2.9.2.(1-8)] Strategy Tables

AGENDA ITEM NO. 6.

STRATEGY_1

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_2

SvcPhases	0			
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_3

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_4

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_5

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_6

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_7

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_8

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

AGENDA ITEM NO. 6.

Overlap 1-8 Program Parms & Parm+ [1.5.2.1] [1.5.2.8]

1 A		Included Ø									NORMAL	
		Modifier Ø									Grn	
		Conflict Ø									Yel	3
		Conflict Olap									Red	1
		Conflict Ped										
2 B		Included Ø									NORMAL	
		Modifier Ø									Grn	
		Conflict Ø									Yel	3
		Conflict Olap									Red	1
		Conflict Ped										
3 C		Included Ø									NORMAL	
		Modifier Ø									Grn	
		Conflict Ø									Yel	3
		Conflict Olap									Red	1
		Conflict Ped										
4 D		Included Ø									NORMAL	
		Modifier Ø									Grn	
		Conflict Ø									Yel	3
		Conflict Olap									Red	1
		Conflict Ped										
5 E		Included Ø									NORMAL	
		Modifier Ø									Grn	
		Conflict Ø									Yel	3
		Conflict Olap									Red	1
		Conflict Ped										
6 F		Included Ø									NORMAL	
		Modifier Ø									Grn	
		Conflict Ø									Yel	3
		Conflict Olap									Red	1
		Conflict Ped										
7 G		Included Ø									NORMAL	
		Modifier Ø									Grn	
		Conflict Ø									Yel	3
		Conflict Olap									Red	1
		Conflict Ped										
8 H		Included Ø									NORMAL	
		Modifier Ø									Grn	
		Conflict Ø									Yel	3
		Conflict Olap									Red	1
		Conflict Ped										

OLP GENERAL PARAMETERS [1.5.1]

Lock Inhibit	OFF
Conflict Lock Enable	OFF
Parent P Clearance	ON
Xtra Incl Phases	OFF
InhibitLockInterval	Always

Channel Parameters [1.8.3]

Pre Invert Rail Input	OFF

Preemption Options+ [3.Pre #.6]

Pre #	Enable	Type	Output	Pattern	Skip	Co+Pre	Flash	Max/Min
1	OFF	RAIL	TS2		OFF	OFF	OFF	MAX
2	OFF	RAIL	TS2	0	OFF	OFF	OFF	MAX
3	ON	EMERG	TS2		OFF	OFF	OFF	MAX
4	ON	EMERG	TS2	0	OFF	OFF	OFF	MAX
5	ON	EMERG	TS2		OFF	OFF	OFF	MAX
6	ON	EMERG	TS2	0	OFF	OFF	OFF	MAX

Preemption Times [3.#.1]

Pre #	Delay	MinDura	MaxPres	MinGrn	MinWlk	PedClr	Track Grn	Min Dwell
1								
2	0	0	0	0	0	0	0	0
3		10	60	6		33		10
4	0	10	60	6	0	33	0	10
5		10	60	6		33		10
6	0	10	60	6	0	33	0	10

Preemption, Options [3.#.3]

Pre #	Lock Input	Over-ride Auto Flash		Over-ride Higher Preempt		Flash Dwell		Link
1	OFF		OFF		OFF		ON	
2	OFF		OFF		OFF		OFF	0
3	OFF		OFF		OFF		OFF	
4	OFF		OFF		OFF		OFF	0
5	OFF		OFF		OFF		OFF	
6	OFF		OFF		OFF		OFF	0

Preemption, Times+ [3.#.4]

Pre No.	Extend Dwell	Return Max	Ped Clr	Yel	Red
1					
2	0	0	0	0	0
3		20	10	3.9	2
4	0	20	10	3.9	2
5		20	10	3.9	2
6	0	20	10	3.9	2

Pre 1 = RR1
Pre 2 = RR2
Pre 3 = EVA
Pre 4 = EVB
Pre 5 = EVC
Pre 6 = EVD

Phases [3.#.2] - set the Dwell Phases

Pre #	Column	1	2	3	4	5	6	7	8	9	10
1	Dwell Veh										
	Peds										
2	Dwell Veh										
	Peds										
3	Dwell Veh	2	5								
	Peds										
4	Dwell Veh	4	7								
	Peds										
5	Dwell Veh	6	1								
	Peds										
6	Dwell Veh	8	3								
	Peds										

Phases [3.#.2] - Trk Veh

Pre #	Phases			
1				
2				
3				
4				
5				
6				

Exit Phases [3.#.2]

No.	Exit Phase			
1				
2				
3	2	5		
4	4	7		
5	1	6		
6	3	8		

Overlaps+ [3.#.5]

Pre #			Preempt Overlaps +									
1	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
2	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
3	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
4	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
5	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
6	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											

Prog Parms+ (MM>1>5>2>X>3)

OverlapB+: 1-A

Leading Green	OFF			FYA MCE Disable	OFF
Transit Input	0			FYA Skip Red	OFF
FYA Delay Time	0			FYA AfterPreempt	OFF
Ped Call Clear	OFF				
Ped ClearTime	0			FYA ImmedReturn	OFF
Green Ext Inh	0	0	0	0	0

OverlapB+: 2-B

Leading Green	OFF			FYA MCE Disable	OFF
Transit Input	0			FYA Skip Red	OFF
FYA Delay Time	0			FYA AfterPreempt	OFF
Ped Call Clear	OFF				
Ped ClearTime	0			FYA ImmedReturn	OFF
Green Ext Inh	0	0	0	0	0

OverlapB+: 3-C

Leading Green	OFF				FYA MCE Disable	OFF
Transit Input	0				FYA Skip Red	OFF
FYA Delay Time	0				FYA AfterPreempt	OFF
Ped Call Clear	OFF					
Ped ClearTime	0				FYA ImmedReturn	OFF
Green Ext Inh	0	0	0	0	0	0

OverlapB+: 4-D

Leading Green	OFF				FYA MCE Disable	OFF
Transit Input	0				FYA Skip Red	OFF
FYA Delay Time	0				FYA AfterPreempt	OFF
Ped Call Clear	OFF					
Ped ClearTime	0				FYA ImmedReturn	OFF
Green Ext Inh	0	0	0	0	0	0

City of FRESNO

ID: 285 **Name:** **Behymer & Willow**

Date Printed: 2/28/2020

AGENDA ITEM NO. 6.

CHANNEL SETTINGS [1.8] plus UNIT PARAMETERS [1.2.1]

CHANNEL SETTINGS [1.8.1] / Chan Settings [1.8.2]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8								
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz		X		X		X		X																
	Page 1								Page 2															

CHANNEL PARMETERS [1.8.3]

CH 17-24 Mapping:	DEFAULT
D-Conn Mapping:	NONE
Invert Rail Inputs:	OFF
C1-C11-ABC IO Mode:	USER

IO PARAMETERS [1.8.6]

C1-C11-ABC IO Mode:	USER
D-Conn Mapping:	NONE
T & F BIU Mapping	DEFAULT
Invert Rail Inputs:	OFF
EVP Ped Confirm	OFF

CHANNELS+ [1.8.4]

Channel	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Flash Green	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flash Red	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flash Yellow	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Inh Red Fl in Preempt	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Olap Ovrd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override Type	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 285 **NAME:** Behymer & Willow

I/O LOGIC [1.8.7]

Row#	Result			Operand_1					Operand_2					Operand_3					Timer	
	I/O	Fcn	=	Inv	Src	I/0	Fun	Logic Func	Inv	Src	I/0	Fun	Logic Func	Inv	Src	I/0	Fun	Logic Func	Dly	Sec
1	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
2	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
3	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
4	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
5	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
6	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
7	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
8	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
9	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
10	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0

Prt Date: 2/28/2020

Ped Parms (MM>5>4)

Det#	Call	No Act	Max Pres	Err Cnt
1	0	0	0	0
2	2	0	0	0
3	0	0	0	0
4	4	0	0	0
5	0	0	0	0
6	6	0	0	0
7	0	0	0	0
8	8	0	0	0

PAGE 6

AGENDA ITEM NO. 6.

Veh Par 1-32 [5.1] | Vehicle Options 1-32 [5.2] | Parameters+ 1-32 [5.3]

Det	Input	Call	Swi	Dlay	Ext	Que	No	Max	Err	Fail	Det	Call	Ext	Que	Add	Red	Yell	occ	vol	Det	Occupancy			Delay		Type			
#	Slot	Ø	Ø				Act	Pres	Cnt	Time	#				Init	Lock	Lock			#	G	Y	R	1	2				#
1	1I1U	1					0	0	0	255	1	X	X	-	-	-	-	X	X	1	X	X	-			NORM		NBL1	1
2	2I2U	2	0	0	0	0	0	0	0	255	2	-	X	-	-	-	-	X	X	2	X	X	-	0	0	NORM	0		2
3	2I2L	2	0	0	2	0	0	0	0	255	3	X	-	-	-	-	-	X	X	3	X	X	-	0	0	STOPB	0		3
4	2I3U	2	0	0	2	0	0	0	0	255	4	X	-	-	-	-	-	X	X	4	X	X	-	0	0	STOPB	0	SBT3	4
5	2I3L	2	0	0	2	0	0	0	0	255	5	X	-	-	-	-	-	X	X	5	X	X	-	0	0	STOPB	0	SBR1	5
6	2I4U	2	0	0	2	0	0	0	0	255	6	X	-	-	-	-	-	X	X	6	X	X	-	0	0	STOPB	0	SBT1	6
7	3I5U	3					0	0	0	255	7	X	X	-	-	-	-	X	X	7	X	X	-			NORM		EBL1	7
8	4I6U	4	0	0	0	0	0	0	0	255	8	-	X	-	-	-	-	X	X	8	X	X	-	0	0	NORM	0		8
9	4I6L	4	0	10	2	0	0	0	0	255	9	X	-	-	-	-	-	X	X	9	X	X	-	0	0	STOPB	0		9
10	4I7U	4	0	0	2	0	0	0	0	255	10	X	-	-	-	-	-	X	X	10	X	X	-	0	0	STOPB	0		10
11	4I7L	4		15	2		0	0	0	255	11	X	-	-	-	-	-	X	X	11	X	X	-			STOPB			11
12	4I8U	4			2		0	0	0	255	12	X	-	-	-	-	-	X	X	12	X	X	-			STOPB		WBT1	12
13	1I9U	1	0	0	0	0	0	0	0	255	13	X	X	-	-	-	-	X	X	13	X	X	-	0	0	NORM	0		13
14	3I9L	3	0	0	0	0	0	0	0	255	14	X	X	-	-	-	-	X	X	14	X	X	-	0	0	NORM	0		14
15	5J1U	5	0	0	0	0	0	0	0	255	15	X	X	-	-	-	-	X	X	15	X	X	-	0	0	NORM	0	SBL1	15
16	6J2U	6					0	0	0	255	16	-	X	-	-	-	-	X	X	16	X	X	-			NORM			16
17	6J2L	6			2		0	0	0	255	17	X	-	-	-	-	-	X	X	17	X	X	-			STOPB			17
18	6J3U	6			2		0	0	0	255	18	X	-	-	-	-	-	X	X	18	X	X	-			STOPB		NBT3	18
19	6J3L	6			2		0	0	0	255	19	X	-	-	-	-	-	X	X	19	X	X	-			STOPB		NBR1	19
20	6J4U	6			2		0	0	0	255	20	X	-	-	-	-	-	X	X	20	X	X	-			STOPB		NBT1	20
21	7J5U	7					0	0	0	255	21	X	X	-	-	-	-	X	X	21	X	X	-			NORM		WBL1	21
22	8J6U	8	0	0	0	0	0	0	0	255	22	-	X	-	-	-	-	X	X	22	X	X	-	0	0	NORM	0		22
23	8J6L	8	0	0	2	0	0	0	0	255	23	X	-	-	-	-	-	X	X	23	X	X	-	0	0	STOPB	0		23
24	8J7U	8	0	0	2	0	0	0	0	255	24	X	-	-	-	-	-	X	X	24	X	X	-	0	0	STOPB	0	EBT3	24
25	8J7L	8	0	15	2	0	0	0	0	255	25	X	-	-	-	-	-	X	X	25	X	X	-	0	0	STOPB	0	EBR1	25
26	8J8U	8	0	0	2	0	0	0	0	255	26	X	-	-	-	-	-	X	X	26	X	X	-	0	0	STOPB	0	EBT1	26
27	5J9U	5					0	0	0	255	27	X	X	-	-	-	-	X	X	27	X	X	-			NORM			27
28	7J9L	7					0	0	0	255	28	X	X	-	-	-	-	X	X	28	X	X	-			NORM			28
29	2I11U	2	0	0	2	0	0	0	0	255	29	X	-	-	-	-	-	X	X	29	X	X	-	0	0	STOPB	0		29
30	4I11L	4	0	15	2	0	0	0	0	255	30	X	-	-	-	-	-	X	X	30	X	X	-	0	0	STOPB	0		30
31	6J11U	6			2		0	0	0	255	31	X	-	-	-	-	-	X	X	31	X	X	-			STOPB			31
32	8J11L	8		15	2		0	0	0	255	32	X	-	-	-	-	-	X	X	32	X	X	-			STOPB			32
33	1I1L	1	0	0	0	0	0	0	0	255	33	X	X	-	-	-	-	X	X	33	X	X	-	0	0	NORM	0	NBL2	33
34	2I4L	2			2		0	0	0	255	34	X	-	-	-	-	-	X	X	34	X	X	-			STOPB		SBT2	34
35	3I5L	3	0	0	0	0	0	0	0	255	35	X	X	-	-	-	-	X	X	35	X	X	-	0	0	NORM	0	EBL2	35
36	4I8L	4		15	2		0	0	0	255	36	X	-	-	-	-	-	X	X	36	X	X	-			STOPB		WBR1	36
37	5J1L	5	0	0	0	0	0	0	0	255	37	X	X	-	-	-	-	X	X	37	X	X	-	0	0	NORM	0	SBL2	37
38	6J4L	6			2		0	0	0	255	38	X	-	-	-	-	-	X	X	38	X	X	-			STOPB		NBT2	38
39	7J5L	7	0	0	0	0	0	0	0	255	39	X	X	-	-	-	-	X	X	39	X	X	-	0	0	NORM	0		39
40	8J8L	8			2		0	0	0	255	40	X	-	-	-	-	-	X	X	40	X	X	-			STOPB		EBT2	40
41	4I10U	4					0	0	0	255	41	-	X	-	-	-	-	X	X	41	X	X	-			NORM			41
42	4I10L	4					0	0	0	255	42	-	X	-	-	-	-	X	X	42	X	X	-			NORM			42
43	8J10U	8					0	0	0	255	43	-	X	-	-	-	-	X	X	43	X	X	-			NORM			43
44	8J10L	8					0	0	0	255	44	-	X	-	-	-	-	X	X	44	X	X	-			NORM			44

ID: 285 **Name:** Behymer & Willow

Vol/Occ Period	0	**Seconds**
	5	**Minutes**

2/28/2020

AGENDA ITEM NO. 6.

Alt# 1 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	-	-	-	-	-	-	-	-
Guar Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0

Alt# 2 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	-	-	-	-	-	-	-	-
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0

Alt# 3 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	-	-	-	-	-	-	-	-
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0

Alt# 4 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	-	-	-	-	-	-	-	-
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0

Alternate Tables [2.6]

Pat#	POpt	PTime	DetGrp	Call/Inh	Olp Off											
					1	2	3	4	5	6	7	8				
1	0	0	0	0									0	Off		DFT
2													0	Off		DFT
3	0	0	0	0									0	Off		DFT
4													0	Off		DFT
5	0	0	0	0									0	Off		DFT
6													0	Off		DFT
7	0	0	0	0									0	Off		DFT
8													0	Off		DFT
9	0	0	0	0									0	Off		DFT
10													0	Off		DFT
11	0	0	0	0									0	Off		DFT
12													0	Off		DFT
13	0	0	0	0									0	Off		DFT
14													0	Off		DFT
15	0	0	0	0									0	Off		DFT
16													0	Off		DFT
17	0	0	0	0									0	Off		DFT
18													0	Off		DFT
19	0	0	0	0									0	Off		DFT
20													0	Off		DFT
21	0	0	0	0									0	Off		DFT
22													0	Off		DFT
23	0	0	0	0									0	Off		DFT
24													0	Off		DFT

Time Base Parameters [4.6]

Daylight Savings Time	ENABLE	
Time Base Sync Ref	0	
GMT Offset	-	8
Daylight Savings	Mon	Week
Spring	3	2
Fall	11	1

NOTE: % and MI parameters are not used and are not shown above.

City of FRESNO

NAME: **Behymer & Willow**

2/28/2020

ID: **285**

AGENDA ITEM NO. 6.

Annual Schedule [4.3]	Month												Day of Week							Date																															Day Plan
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
3	X	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3
4											X						X			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	-	-	-	4
5																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
6																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
7																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
8																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
9																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
10																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
11																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
12																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
13																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
14																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
15																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
16																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
17																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
18																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

NAME: Behymer & Willow

ID No. 285

DAY PLANS [4.4]

Plan 1				Plan 2				Plan 3				Plan 4				Plan 5				Plan 6				Plan 7				Plan 8				Plan 9				Plan 10			
Evt	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act
1		**1**	**54**	1		**1**	**54**	1		**1**	**54**	1	**0**	**1**	**54**	1				1				1				1				1				1			
2	0	0	0	2	0	0	0	2	0	0	0	2	**0**	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0
3				3				3				3	**0**			3				3				3				3				3				3			
4	0	0	0	4	0	0	0	4	0	0	0	4	**0**	0	0	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0
5				5				5				5	**0**			5				5				5				5				5				5			
6	0	0	0	6	0	0	0	6	0	0	0	6	**0**	0	0	6	0	0	0	6	0	0	0	6	0	0	0	6	0	0	0	6	0	0	0	6	0	0	0
7				7				7				7	**0**			7				7				7				7				7				7			
8	0	0	0	8	0	0	0	8	0	0	0	8	**0**	0	0	8	0	0	0	8	0	0	0	8	0	0	0	8	0	0	0	8	0	0	0	8	0	0	0
9				9				9				9	**0**			9				9				9				9				9				9			
10	0	0	0	10	0	0	0	10	0	0	0	10	**0**	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10			

AGENDA ITEM NO. 6.

#	Alarm	Ev	Alr
1	Power Up Alarm.	X	X
2	Stop Timing	X	X
3	Cabinet Door Activation	-	-
4	Coordination Failure	X	X
5	External Alarm # 1	-	-
6	External Alarm # 2	-	-
7	External Alarm # 3	-	-
8	External Alarm # 4	-	-
9	Closed Loop Disabled	-	-
10	External Alarm # 5	-	-
11	External Alarm # 6	-	-
12	Manual Control Enable	X	X
13	Coord Free Input	-	-
14	Local Flash Input	X	X
15	CMU/MMU Flash Input	-	-
16	MMU Fault	X	X
17	Cycle Fault	X	-
18	Cycle Failure	X	-
19	Coordination Fault	X	X
20	Controller Fault	X	X
25	EEPROM CRC Fault	X	X
30	Coord Diagnostic Fault	X	X
37	Download Request	X	X
38	Pattern Change	-	-
49	Preempt 1 Input	X	X
50	Preempt 2 Input	X	X
51	Preempt 3 Input	X	X
52	Preempt 4 Input	X	X
53	Preempt 5 Input	X	X
54	Preempt 6 Input	X	X
55	Preempt 7 Input	-	-
56	Preempt 8 Input	-	-
57	Preempt 9 Input	-	-
58	Preempt 10 Input	-	-
59	EEPROM Compare Fault	X	X
60	Coordination Failure	X	X
63	TSP Active Trigger	-	-
73	Controller Access	X	X
81	FIO Changed Status	X	X

#1 Bus Preempt		Times		Prior. Phases			
Enable	OFF	Min	0	0	0	0	0
Coor+Pre	OFF	Max	0	---TSP---			
Lock Mode	MAX	Lock	0	Headway	0		
No Skip	OFF	Alt Table	0	GrpLock	OFF		
Qjump	OFF	HoldDwell	#N/A	FreeMod	OFF		

#2 Bus Preempt		Times		Prior. Phases			
Enable	OFF	Min	0	0	0	0	0
Coor+Pre	OFF	Max	0	---TSP---			
Lock Mode	MAX	Lock	0	Headway	0		
No Skip	OFF	Alt Table	0	GrpLock	OFF		
Qjump	OFF	HoldDwell	#N/A	FreeMod	OFF		

#3 Bus Preempt		Times		Prior. Phases			
Enable	OFF	Min	0	0	0	0	0
Coor+Pre	OFF	Max	0	---TSP---			
Lock Mode	MAX	Lock	0	Headway	0		
No Skip	OFF	Alt Table	0	GrpLock	OFF		
Qjump	OFF	HoldDwell	#N/A	FreeMod	OFF		

#4 Bus Preempt		Times		Prior. Phases			
Enable	OFF	Min	0	0	0	0	0
Coor+Pre	OFF	Max	0	---TSP---			
Lock Mode	MAX	Lock	0	Headway	0		
No Skip	OFF	Alt Table	0	GrpLock	OFF		
Qjump	OFF	HoldDwell	#N/A	FreeMod	OFF		

I/O INPUT TABLE

	1	2	3	4	5	6	7	8
1	2	16	8	22	3	17	9	23
2	6	20	12	26	198	199	30	31
3	15	1	21	7	27	13	28	14
4	189	189	189	189	4	18	10	24
5	130	134	132	136	200	201	202	203
6	32	5	19	11	25	29	208	207
7	33	34	35	36	37	38	39	40
8	41	42	43	44	189	189	189	189

ACTION Table [4.5]

Act	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8	P1	P2
1	**1**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
2	**2**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
3	**3**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
4	**4**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
5	**5**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
6	**6**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
7	**7**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
8	**8**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
9	**9**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
10	**10**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
11	**11**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
12	**12**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
13	**13**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
14	**14**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
15	**15**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
16	**0**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
54	**254**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**
55	**0**	-	-	-	-	-	-	-	-	-	-	-	**0**	**0**

Alarm Parameters [1.6.7.1]	
Pattern Events:	ON
Local Txmt Alarms:	OFF
Reassign User Alarm #1 In (5):	0
Reassign User Alarm #2 In (6):	0
Preempt Events:	ON

City of
FRESNO

Date Printed
2/28/2020

ID: **285** **Name:** **Behymer & Willow**

P

I/O Inputs - 1.8.9.1.5

C-1 PIN	I/O Source	Function	Input Name
39	I1-1	2	Veh Det 2
40	I1-2	16	Veh Det 16
41	I1-3	8	Veh Det 8
42	I1-4	22	Veh Det 22
43	I1-5	3	Veh Det 3
44	I1-6	17	Veh Det 17
45	I1-7	9	Veh Det 9
46	I1-8	23	Veh Det 23
47	I2-1	6	Veh Det 6
48	I2-2	20	Veh Det 20
49	I2-3	12	Veh Det 12
50	I2-4	26	Veh Det 26
51	I2-5	198	Pre 1 In
52	I2-6	199	Pre 2 In
53	I2-7	30	Veh Det 30
54	I2-8	31	Veh Det 31
55	I3-1	15	Veh Det 15
56	I3-2	1	Veh Det 1
57	I3-3	21	Veh Det 21
58	I3-4	7	Veh Det 7
59	I3-5	27	Veh Det 27
60	I3-6	13	Veh Det 13
61	I3-7	28	Veh Det 28
62	I3-8	14	Veh Det 14
63	I4-5	4	Veh Det 4
64	I4-6	18	Veh Det 18
65	I4-7	10	Veh Det 10
66	I4-8	24	Veh Det 24
67	I5-1	130	Ped Call 2
68	I5-2	134	Ped Call 6
69	I5-3	132	Ped Call 4
70	I5-4	136	Ped Call 8
71	I5-5	200	Pre 3 In
72	I5-6	201	Pre 4 In
73	I5-7	202	Pre 5 In
74	I5-8	203	Pre 6 In
75	I6-1	32	Veh Det 32
76	I6-2	5	Veh Det 5
77	I6-3	19	Veh Det 19
78	I6-4	11	Veh Det 11
79	I6-5	25	Veh Det 25
80	I6-6	29	Veh Det 29
81	I6-7	208	Local Flash
82	I6-8	207	Comp StopTm

I/O OUTPUTS - 1.8.9.2.5

C-1 PIN	I/O Source	Function	Output Name
1	Logic Grd		
2	O1-1	14	Red Ch 14
3	O1-2	62	Grn Chan 14
4	O1-3	4	Red Ch 4
5	O1-4	28	Yel Chan 4
6	O1-5	52	Grn Chan 4
7	O1-6	3	Red Ch 3
8	O1-7	27	Yel Chan 3
9	O1-8	51	Grn Chan 3
10	O2-1	13	Red Ch 13
11	O2-2	61	Grn Chan 13
12	O2-3	2	Red Ch 2
13	O2-4	26	Yel Chan 2
14	Logic Grd		
15	O2-5	50	Grn Chan 2
16	O2-6	1	Red Ch 1
17	O2-7	25	Yel Chan 1
18	O2-8	49	Grn Chan 1
19	O3-1	16	Red Ch 16
20	O3-2	64	Grn Chan 16
21	O3-3	8	Red Ch 8
22	O3-4	32	Yel Chan 8
23	O3-5	56	Grn Chan 8
24	O3-6	7	Red Ch 7
25	O3-7	31	Yel Chan 7
26	O3-8	55	Grn Chan 7
27	O4-1	15	Red Ch 15
28	O4-2	63	Grn Chan 15
29	O4-3	6	Red Ch 6
30	O4-4	30	Yel Chan 6
31	O4-5	54	Grn Chan 6
32	O4-6	5	Red Ch 5
33	O4-7	29	Yel Chan 5
34	O4-8	53	Grn Chan 5
35	O5-1	37	Yel Chan 13
36	O5-2	39	Yel Chan 15
37	O5-3	38	Yel Chan 14
38	O5-4	40	Yel Chan 16
100	O5-5	42	Yel Chan 18
101	O5-6	41	Yel Chan 17
102	O5-7	115	Not Used
103	O5-8	114	Watchdog

C-1 PIN	I/O Source	Function	Output Name
83	O6-1	18	Red Ch 18
84	O6-2	66	Grn Chan 18
85	O6-3	12	Red Ch 12
86	O6-4	36	Yel Chan 12
87	O6-5	60	Grn Chan 12
88	O6-6	11	Red Ch 11
89	O6-7	35	Yel Chan 11
90	O6-8	59	Grn Chan 11
91	O7-1	17	Red Ch 17
92	Logic Grd		
93	O7-2	65	Grn Chan 17
94	O7-3	10	Red Ch 10
95	O7-4	34	Yel Chan 10
96	O7-5	58	Grn Chan 10
97	O7-6	9	Red Ch 9
98	O7-7	33	Yel Chan 9
99	O7-8	57	Grn Chan 9

I/O Outputs - 1.8.9.2.5

C-11 OUTPUTS

1	O8-1	115	Not Used
2	O8-2	115	Not Used
3	O8-3	115	Not Used
4	O8-4	115	Not Used

I/O Inputs - 1.8.9.1.5

C-11 INPUTS

15	I7-1	33	Veh Det 33
16	I7-2	34	Veh Det 34
17	I7-3	35	Veh Det 35
18	I7-4	36	Veh Det 36
19	I7-5	37	Veh Det 37
20	I7-6	38	Veh Det 38
21	I7-7	39	Veh Det 39
22	I7-8	40	Veh Det 40
23	I8-1	41	Veh Det 41
24	I8-2	42	Veh Det 42
25	I8-3	43	Veh Det 43
26	I8-4	44	Veh Det 44
27	I8-5	189	Unused
28	I8-6	189	Unused
29	I8-7	189	Unused
30	I8-8	189	Unused

City of FRESNO

ID: 285

NAME: Behymer & Willow

Date Printed:
2/28/2020

Page

ID Number: 285

LOCATION: Behymer & Willow

City of Fresno
332 Cabinet
44 Detector Plus Setup

	DETECTOR ASSIGNMENTS											ISOLATORS		
"I"	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	I14
UPPER	Ph 1 Call&Ext T2-1&2 C1-56 Det 1 NBL1	Ph 2 Ext T2-5&6 C1-39 Det 2 SB Far	Ph 2 Call&TP3 T2-9&10 C1-63 Det 4 SB Mid	Ph 2 Call&TP3 T4-1&2 C1-47 Det 6 SBT1	Ph 3 Call&Ext T4-5&6 C1-58 Det 7 EBL1	Ph 4 Ext T4-9&10 C1-41 Det 8 WB Far	Ph 4 Call&TP3 T6-1&2 C1-65 Det 10 WB Mid	Ph 4 Call&TP3 T6-5&6 C1-49 Det 12 WBT1	Ph 1 Call&Ext T6-9&10 C1-60 Det 13 NBLt Bk	Ph 2/4 Ext T10-5&6 C11-23 Det 41	Ph 2 Call&Ext T8-1 C1-80 Det 29 BIKE	Ph 2 PPB T8-4 C1-67	Ph 6 PPB T8-7 C1-68	FLASH SENSE T8-10 C1-81
LOWER	Ph 1 Call&Ext T2-3&4 C11-15 Det 33 NBL2	Ph 2 Call&TP3 T2-7&8 C1-43 Det 3 SB Bk	Ph 2 Call&Ext T2-11&12 C1-76 Det 5 SBRt	Ph 2 Call&TP3 T4-3&4 C11-16 Det 34 SBT2	Ph 3 Call&Ext T4-7&8 C11-17 Det 35 EBL2	Ph 4 Call&TP3 T4-11&12 C1-45 Det 9 WB Bk	Ph 4 Call&Ext T6-3&4 C1-78 Det 11 WBRt	Ph 4 Call&TP3 T6-7&8 C11-18 Det 36 WBT2	Ph 3 Call&Ext T6-11&12 C1-62 Det 14 EBLt Bk	Ph 2/4 Ext T10-7&8 C11-24 Det 42	Ph 4 Call&Ext T8-2 C1-53 Det 30 BIKE	Ph 4 PPB T8-5 C1-69	Ph 8 PPB T8-8 C1-70	STOP TIMING T8-11 C1-82
"J"	J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12	J13	J14
UPPER	Ph 5 Call&Ext T3-1&2 C1-55 Det 15 SBL1	Ph 6 Ext T3-5&6 C1-40 Det 16 NB Far	Ph 6 Call&TP3 T3-9&10 C1-64 Det 18 NB Mid	Ph 6 Call&TP3 T5-1&2 C1-48 Det 20 NBT1	Ph 7 Call&Ext T5-5&6 C1-57 Det 21 WBL1	Ph 8 Ext T5-9&10 C1-42 Det 22 EB Far	Ph 8 Call&TP3 T7-1&2 C1-66 Det 24 EB Mid	Ph 8 Call&TP3 T7-5&6 C1-50 Det 26 EBT1	Ph 5 Call&Ext T7-9&10 C1-59 Det 27 SBLt Bk	Ph 6/8 Ext T10-9&10 C11-25 Det 43	Ph 6 Call&Ext T9-1 C1-54 Det 31 BIKE	EMER A Ph 2 + 5 T9-4 C1-71	EMER B Ph 4 + 7 T9-5 C1-72	RR1 FLASH T9-10 C1-51
LOWER	Ph 5 Call&Ext T3-3&4 C11-19 Det 37 SBL2	Ph 6 Call&TP3 T3-7&8 C1-44 Det 17 NB Bk	Ph 6 Call&Ext T3-11&12 C1-77 Det 19 NBRt	Ph 6 Call&TP3 T5-3&4 C11-20 Det 38 NBT2	Ph 7 Call&Ext T5-7&8 C11-21 Det 39 WBL2	Ph 8 Call&TP3 T5-11&12 C1-46 Det 23 EB Bk	Ph 8 Call&Ext T7-3&4 C1-79 Det 25 EBRt	Ph 8 Call&TP3 T7-7&8 C11-22 Det 40 EBT2	Ph 7 Call&Ext T7-11&12 C1-61 Det 28 WBLt Bk	Ph 6/8 EXT T10-11&12 C11-26 Det 44	Ph 8 Call&Ext T9-2 C1-75 Det 32 BIKE	EMER C Ph 1 + 6 T9-7 C1-73	EMER D Ph 3 + 8 T9-8 C1-74	RR2 LTD OP T9-11 C1-52

COMMENTS:

TIMING UPDATES AND MODIFICATIONS

AGENDA ITEM NO. 6.

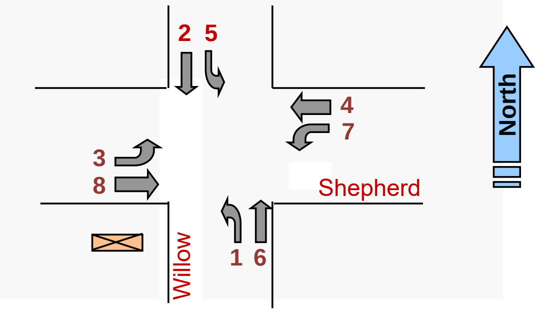
ID: 285 **NAME:** Behymer & Willow

DATE	CHANGES MADE	ATMS or CABINET	BY
2/28/2020	Updated All Red Start from 4 to 6 seconds. Updated timing calculations, FDW, and detector attributes.	ATMS	JT

AGENDA ITEM NO. 6.

City of
FRESNO

Movement	NL	ST	EL	WT	SL	NT	WL	ET		
Times [1.1.1]	1	2	3	4	5	6	7	8	9	10
Min Green	8	8	8	8	8	8	8	8		0
Gap, Ext	2	5.8	2	3.9	2	5.8	2	5.2		0
Max 1	25	35	25	25	25	35	25	25		0
Max 2	17	25	17	15	17	25	17	15		0
Yel Clearance	4.3	4.7	3.6	5.2	4.3	4.7	4.8	5.2		0
Red Clearance	2	1	2	1	2	1	2	1		0
Walk	0	5	0	5		5		5		0
Ped Clearance	0	30	0	34		29		36		0
Red Revert	2	2	2	2	2	2	2	2		0
Add Initial	0		0			0		0		0
Max Initial	0		0			0		0		0
Time B4 Reduct	0	8	0	8		8		8		0
Cars B4 Reduct	0		0			0		0		0
Time To Reduce	0	18	0	11		18		11		0
Reduce By	0		0			0		0		0
Min Gap	2	2	2	2	2	2	2	2		0
DyMaxLim	0	60	0			60		0		0
Max Step	0	10	0			10		0		0
Options [1.1.2]	1	2	3	4	5	6	7	8	9	10
Enable	X	X	X	X	X	X	X	X		
Min Recall										
Max Recall										
Ped Recall										
Soft Recall		X				X				
Lock Calls										
Auto Flash Entry										
Auto Flash Exit										
Dual Entry		X		X		X		X		
Enable Simul Gap										
Gaurantee Passage										
Rest In Walk										
Conditonal Service										
Non-Actuated 1										
Non-Actuated 2										
Add Init Calc										



Phase Options+ [1.1.3]

Options+	1	2	3	4	5	6	7	8	9	10
Reservice										
PedClr Thru Yel										
SkipRed-NoCall										
Red Rest										
Max II										
*Max III										
Max Inhibit										
Ped Delay										
Red Rest on Gap										
Conflicting Phase	0	0	0	0	0	0	0	0	0	0
Grn/Ped Delay										
Omit Yel, Yel P	0	0	0	0	0	0	0	0	0	0
Ped Out/Olp Ped										
StartYel, Next P	0	0	0	0	0	0	0	0	0	0
*StartupVehCall	1	2	3	4	5	6	7	8		
*StartupPedCall										

Phase Concurrency [1.1.4]

Phase	Ring	StartUp	Concurrent Phases			
1	1	RED	5	6	0	0
2	1	GREEN	5	6	0	0
3	1	RED	7	8	0	0
4	1	RED	7	8	0	0
5	2	RED	1	2	0	0
6	2	GREEN	1	2	0	0
7	2	RED	3	4	0	0
8	2	RED	3	4	0	0
9	0	RED	0	0	0	0
10	0	RED	0	0	0	0
11	0	RED	0	0	0	0
12	0	RED	0	0	0	0

Comm Ports [6.6]

Channel	Port	Echo	Mode
Async 1	SP1	NONE	0
Async 2	SP2	NONE	0
Async 3	SP8	NONE	0
Async 4	OFF	NONE	0
Sync 1	SP5S		
Sync 2	OFF		
TS2CVM	NONE		
Opticom	NONE		
GPS	NONE		

Unit Params [1.2.1]

Screen Size	8	**Metric**	OFF
Startup Flash	0	Red Revert	2
MCE Timeout	0	Auto Ped Clear	OFF
Loc Flsh Start	RSt	Display Time	60
Yellow < 3"	OFF	Tone Disable	ON
Allow Skip Yel	OFF	AudioPedTime	0
Start Red Tm	6	**Phase Mode**	STD8
Startup Calls	UseProg	CNA FreeTime	0
TOD Dimming	OFF	Diamond Mode	4Ph
ST over Prmpt	OFF	Free Ring Seq	1
Feature Profile	1	IO Mode	USER
Mx Seek TrkTm	0	Max Cyc Timer	0
Mx Seek Dwell	0	CycFlt Actn	ALARM
Prmpt/Ext Coor	EXT	Clrnc Decide	OFF
Aux Switch	STOPTM	**LPAlt Srs**	3-6
*InhFYA Red St	OFF	Security Delay	0
RingA1go	0		

* - 76.12B or newer

Times+ [1.1.7]

	1	2	3	4	5	6	7	8
Walk2	0	0	0	0	0	0	0	0
BikeClr	0	0	0	0	0	0	0	0
GrnFlash	0	0	0	0	0	0	0	0
SfClrMn	0	0	0	0	0	0	0	0
SfClrNoFlsh	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
NoPed Reserv								

Comm [6.2]

Port	Baud Rate	FCM
1	38400	6
2	9600	6
3	9600	6
4	9600	6

Comm [6.5]

					Host IPs			
IP Address:	10	53	24	131	ATMS			
Mask:	255	255	255	0	10	50	10	22
Gateway:	10	53	24	1	SG			
Port #:	5125				0	0	0	0

Phase Seq. (2 ring) Chart [1.2.4]

Seq #	Ring	Phases					
1	1	1	2	3	4	0	0
	2	5	6	7	8	0	0
2	1	1	2	3	4	0	0
	2	6	5	7	8	0	0
3	1	2	1	3	4	0	0
	2	5	6	7	8	0	0
4	1	2	1	3	4	0	0
	2	6	5	7	8	0	0
5	1	1	2	3	4	0	0
	2	5	6	8	7	0	0
6	1	1	2	3	4	0	0
	2	6	5	8	7	0	0
7	1	2	1	3	4	0	0
	2	5	6	8	7	0	0
8	1	2	1	3	4	0	0
	2	6	5	8	7	0	0
9	1	1	2	4	3	0	0
	2	5	6	7	8	0	0
10	1	1	2	4	3	0	0
	2	6	5	7	8	0	0
11	1	2	1	4	3	0	0
	2	5	6	7	8	0	0
12	1	2	1	4	3	0	0
	2	6	5	7	8	0	0
13	1	1	2	4	3	0	0
	2	5	6	8	7	0	0
14	1	1	2	4	3	0	0
	2	6	5	8	7	0	0
15	1	2	1	4	3	0	0
	2	5	6	8	7	0	0
16	1	2	1	4	3	0	0
	2	6	5	8	7	0	0

Advance Warning [1.1.9]

	Ph	Tm
Aux Out #1	0	0
Aux Out #2	0	0

NAME: Shepherd & Willow **ID:** 283 **Configuration:** Standard File

V76.12/13
Updated 12/6/17

Prepared by:	JT	**Date Installed / By:**	2/22/2020 (JT)
Checked by:	JT	**Date Superseded:**	

Date Printed:
2/22/20
Page 1

AGENDA ITEM NO. 6.

[2.1] Coord Modes+

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX INH
Force Mode	FIXED
Flash Mode	CHANNEL

Coord Modes+ (Page 2)

FreeonSeqCh	ON	
Closed Loop	OFF	
External	OFF	
Latch Sec Frc	OFF	
Stop-in-Walk	OFF	
Ped Recycle	P1256_INH	
Expand Splt	OFF	
Easy Float	OFF	
Auto Reset	ON	
NTCIP Yield	+	0

Leave Walk

Before	TIMED
After	TIMED

Intersection Name: **Shepherd & Willow**

ID: **283**

City of FRESNO

Date Printed:
2/22/2020

[2.4] Patterns					[2.7.1-24] Splits												[2.5] Transition														
Pat#	Cyc	Off	Split	Seq	Split	[2.7]	1	2	3	4	5	6	7	8	9	10	Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	Hold	Flt	Veh	Ped	MI
1	0	0	1	1	1	Split	0	0	0	0	0	0	0	0	0	0	1	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
2	0	0	2	1	2	Split	0	0	0	0	0	0	0	0	0	0	2	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
3	0	0	3	1	3	Split	0	0	0	0	0	0	0	0	0	0	3	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
4	0	0	4	1	4	Split	0	0	0	0	0	0	0	0	0	0	4	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
5	0	0	5	1	5	Split	0	0	0	0	0	0	0	0	0	0	5	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
6	0	0	6	1	6	Split	0	0	0	0	0	0	0	0	0	0	6	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
7	0	0	7	1	7	Split	0	0	0	0	0	0	0	0	0	0	7	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
8	0	0	8	1	8	Split	0	0	0	0	0	0	0	0	0	0	8	10	25	0	0	0	0	0	0	EndGRN	-	-	-	X	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
9	0	0	9	1	9	Split	0	0	0	0	0	0	0	0	0	0	9	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
10	0	0	10	1	10	Split	0	0	0	0	0	0	0	0	0	0	10	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
11	0	0	0	1	11	Split	0	0	0	0	0	0	0	0	0	0	11		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
12	0	0	0	1	12	Split	0	0	0	0	0	0	0	0	0	0	12	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															
13	0	0	0	1	13	Split	0	0	0	0	0	0	0	0	0	0	13		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
						Crd-P																									
						Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON															

[2.1] Coord Modes+

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX INH
Force Mode	FIXED
Flash Mode	CHANNEL

Coord Modes+ (Page 2)

FreeonSeqCh	ON
Closed Loop	OFF
External	OFF
Latch Sec Frc	OFF
Stop-in-Walk	OFF
Ped Recycle	P1256_INH
Expand Split	OFF
Easy Float	OFF
Auto Reset	ON
NTCIP Yield	+ 0

Leave Walk

Before	TIMED
After	TIMED

Intersection Name: Shepherd & Willow

City of FRESNO

ID: 283

Date Printed: 2/22/2020

[2.4] Patterns

Pat#	Cyc	Off	Split	Seq
20	0	0	0	1
21	0	0	0	1
22	0	0	0	1
23	0	0	0	1
24	0	0	0	1
25	0	0	0	1
26	0	0	0	1
27	0	0	0	1
28	0	0	0	1
29	0	0	0	1
30	0	0	0	1
31	0	0	0	1
32	0	0	0	1

[2.7.1-24] Splits

Split	[2.7]	1	2	3	4	5	6	7	8	9	10
20	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
21	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
22	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
23	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
24	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
25	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
26	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
27	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
28	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
29	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
30	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
31	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
32	Split	0	0	0	0	0	0	0	0	0	0
	Crd-P										
	Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON

[2.5] Transition

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	Ret Hold	Flt	Min Veh	Min Ped	MI
20		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
21	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
22		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
23	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
24		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
25	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
26		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
27	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
28		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
29	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
30		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
31	0	17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF
32		17	0	0	0	0	0	0	BegGRN	-	-	-	-	OFF

AGENDA ITEM NO. 6.

[2.7.X.3] TSP Split Table

Pat#	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
1	0	0	1	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						
2	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
	0	0	2	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						
3	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
	0	0	3	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						
4	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
	0	0	4	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						
5	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
	0	0	5	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						

[2.9.2.(1-8)] Strategy Tables

STRATEGY_1

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_2

SvcPhases	0			
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_3

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_4

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_5

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_6

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_7

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

STRATEGY_8

SvcPhases	0	0	0	0
Phs Omits	0	0	0	0
Ped Omits	0	0	0	0

Pat#	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
6	0	0	6	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						
9 - FREE	Cyc	Off	Split	Seq	SPLITS	1	2	3	4	5	6	7	8	9	10
	0	0	9	1		0	0	0	0	0	0	0	0	0	0
					TSP - Max Reduction	0	0	0	0	0	0	0	0	0	0
					TSP - Max Extend	0	0	0	0	0	0	0	0	0	0
					Request	1	2	3	4						
					Strategy	0	0	0	0						
					TimSvcDes	0	0	0	0						
					TimEstDep	0	0	0	0						

Overlap 1-8 Program Parms & Parm+ [1.5.2.1] [1.5.2.8]

	Included Ø									NORMAL	
1	Modifier Ø									Grn	
	Conflict Ø									Yel	3
A	Conflict Olap									Red	1
	Conflict Ped										
	Included Ø									NORMAL	
2	Modifier Ø									Grn	
	Conflict Ø									Yel	3
B	Conflict Olap									Red	1
	Conflict Ped										
	Included Ø									NORMAL	
3	Modifier Ø									Grn	
	Conflict Ø									Yel	3
C	Conflict Olap									Red	1
	Conflict Ped										
	Included Ø									NORMAL	
4	Modifier Ø									Grn	
	Conflict Ø									Yel	3
D	Conflict Olap									Red	1
	Conflict Ped										
	Included Ø									NORMAL	
5	Modifier Ø									Grn	
	Conflict Ø									Yel	3
E	Conflict Olap									Red	1
	Conflict Ped										
	Included Ø									NORMAL	
6	Modifier Ø									Grn	
	Conflict Ø									Yel	3
F	Conflict Olap									Red	1
	Conflict Ped										
	Included Ø									NORMAL	
7	Modifier Ø									Grn	
	Conflict Ø									Yel	3
G	Conflict Olap									Red	1
	Conflict Ped										
	Included Ø									NORMAL	
8	Modifier Ø									Grn	
	Conflict Ø									Yel	3
H	Conflict Olap									Red	1
	Conflict Ped										

OLP GENERAL PARAMETERS [1.5.1]

Lock Inhibit	OFF
Conflict Lock Enable	OFF
Parent P Clearance	ON
Xtra Incl Phases	OFF
InhibitLockInterval	Always

Channel Parameters [1.8.3]

Pre Invert Rail Input	OFF

Preemption Options+ [3.Pre #.6]

Pre #	Enable	Type	Output	Pattern	Skip	Co+Pre	Flash	Max/Min
1	OFF	RAIL	TS2		OFF	OFF	OFF	MAX
2	OFF	RAIL	TS2	0	OFF	OFF	OFF	MAX
3	ON	EMERG	TS2		OFF	OFF	OFF	MAX
4	ON	EMERG	TS2	0	OFF	OFF	OFF	MAX
5	ON	EMERG	TS2		OFF	OFF	OFF	MAX
6	ON	EMERG	TS2	0	OFF	OFF	OFF	MAX

Preemption Times [3.#.1]

Pre #	Delay	MinDura	MaxPres	MinGrn	MinWlk	PedClr	Track Grn	Min Dwell
1								
2	0	0	0	0	0	0	0	0
3		10	60	6		32		10
4	0	10	60	6	0	32	0	10
5		10	60	6		32		10
6	0	10	60	6	0	32	0	10

Preemption, Options [3.#.3]

Pre #	Lock Input	Over-ride Auto Flash		Over-ride Higher Preempt		Flash Dwell		Link
1	OFF		OFF		OFF		ON	
2	OFF		OFF		OFF		OFF	0
3	OFF		OFF		OFF		OFF	
4	OFF		OFF		OFF		OFF	0
5	OFF		OFF		OFF		OFF	
6	OFF		OFF		OFF		OFF	0

Preemption, Times+ [3.#.4]

Pre No.	Extend Dwell	Return Max	Ped Clr	Yel	Red
1					
2	0	0	0	0	0
3		20	10	3.9	2
4	0	20	10	3.9	2
5		20	10	3.9	2
6	0	20	10	3.9	2

Pre 1 = RR1
Pre 2 = RR2
Pre 3 = EVA
Pre 4 = EVB
Pre 5 = EVC
Pre 6 = EVD

Phases [3.#.2] - set the Dwell Phases

Pre #	Column	1	2	3	4	5	6	7	8	9	10
1	Dwell Veh										
	Peds										
2	Dwell Veh										
	Peds										
3	Dwell Veh	2	5								
	Peds										
4	Dwell Veh	4	7								
	Peds										
5	Dwell Veh	6	1								
	Peds										
6	Dwell Veh	8	3								
	Peds										

Phases [3.#.2] - Trk Veh

Pre #	Phases			
1				
2				
3				
4				
5				
6				

Exit Phases [3.#.2]

No.	Exit Phase			
1				
2				
3	2	5		
4	4	7		
5	1	6		
6	3	8		

Overlaps+ [3.#.5]

Pre #			Preempt Overlaps +									
1	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
2	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
3	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
4	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
5	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											
6	Track		0	0	0	0	0	0	0	0	0	0
	Dwell											

Prog Parms+ (MM>1>5>2>X>3)

OverlapB+: 1-A

Leading Green	OFF	FYA MCE Disable			OFF
Transit Input	0	FYA Skip Red			OFF
FYA Delay Time	0	FYA AfterPreempt			OFF
Ped Call Clear	OFF				
Ped ClearTime	0	FYA ImmedReturn			OFF
Green Ext Inh	0	0	0	0	0

OverlapB+: 2-B

Leading Green	OFF	FYA MCE Disable			OFF
Transit Input	0	FYA Skip Red			OFF
FYA Delay Time	0	FYA AfterPreempt			OFF
Ped Call Clear	OFF				
Ped ClearTime	0	FYA ImmedReturn			OFF
Green Ext Inh	0	0	0	0	0

OverlapB+: 3-C

Leading Green	OFF	FYA MCE Disable				OFF
Transit Input	0	FYA Skip Red				OFF
FYA Delay Time	0	FYA AfterPreempt				OFF
Ped Call Clear	OFF					
Ped ClearTime	0	FYA ImmedReturn				OFF
Green Ext Inh	0	0	0	0	0	0

OverlapB+: 4-D

Leading Green	OFF	FYA MCE Disable				OFF
Transit Input	0	FYA Skip Red				OFF
FYA Delay Time	0	FYA AfterPreempt				OFF
Ped Call Clear	OFF					
Ped ClearTime	0	FYA ImmedReturn				OFF
Green Ext Inh	0	0	0	0	0	0

City of FRESNO

ID: **283** **Name:** **Shepherd & Willow**

Date Printed:
2/22/2020

AGENDA ITEM NO. 6.

CHANNEL SETTINGS [1.8] plus UNIT PARAMETERS [1.2.1]

CHANNEL SETTINGS [1.8.1] / Chan Settings [1.8.2]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8								
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz		X		X		X		X																
	Page 1								Page 2															

CHANNEL PARMETERS [1.8.3]

CH 17-24 Mapping:	DEFAULT
D-Conn Mapping:	NONE
Invert Rail Inputs:	OFF
C1-C11-ABC IO Mode:	USER

IO PARAMETERS [1.8.6]

C1-C11-ABC IO Mode:	USER
D-Conn Mapping:	NONE
T & F BIU Mapping	DEFAULT
Invert Rail Inputs:	OFF
EVP Ped Confirm	OFF

CHANNELS+ [1.8.4]

Channel	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Flash Green	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flash Red	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flash Yellow	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Inh Red Fl in Preempt	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Olap Ovrd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Override Type	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 283 **NAME:** Shepherd & Willow

I/O LOGIC [1.8.7]

Prt Date: 2/22/2020

Row#	Result		=	Operand_1					Operand_2					Operand_3					Timer	
	I/O	Fcn	=	Inv	Src	I/0	Fun	Logic Func	Inv	Src	I/0	Fun	Logic Func	Inv	Src	I/0	Fun	Logic Func	Dly	Sec
1	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
2	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
3	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
4	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
5	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
6	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
7	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
8	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
9	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0
10	I	0	=	-	0	I	OFF	----	-	0	I	OFF	----	-	0	I	OFF	----	DLY	0

Ped Parms (MM>5>4)

Det#	Call	No Act	Max Pres	Err Cnt
1	0	0	0	0
2	2	0	0	0
3	0	0	0	0
4	4	0	0	0
5	0	0	0	0
6	6	0	0	0
7	0	0	0	0
8	8	0	0	0

AGENDA ITEM NO. 6.

Veh Par 1-32 [5.1]											Vehicle Options 1-32 [5.2]									Parameters+ 1-32 [5.3]									
Det #	Input Slot	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time	Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol	Det #	Occupancy			Delay		Type		Dir	#
																					G	Y	R	1	2				
1	1I1U	1					0	0	0	255	1	X	X	-	-	-	-	X	X	1	X	X	-			NORM		NBL1	1
2	2I2U	2	0	0	0	0	0	0	0	255	2	-	X	-	-	-	-	X	X	2	X	X	-	0	0	NORM	0		2
3	2I2L	2	0	0	2	0	0	0	0	255	3	X	-	-	-	-	-	X	X	3	X	X	-	0	0	STOPB	0		3
4	2I3U	2	0	0	2	0	0	0	0	255	4	X	-	-	-	-	-	X	X	4	X	X	-	0	0	STOPB	0	SBT3	4
5	2I3L	2	0	0	2	0	0	0	0	255	5	X	-	-	-	-	-	X	X	5	X	X	-	0	0	STOPB	0	SBR1	5
6	2I4U	2	0	0	2	0	0	0	0	255	6	X	-	-	-	-	-	X	X	6	X	X	-	0	0	STOPB	0	SBT1	6
7	3I5U	3					0	0	0	255	7	X	X	-	-	-	-	X	X	7	X	X	-			NORM		EBL1	7
8	4I6U	4	0	0	0	0	0	0	0	255	8	-	X	-	-	-	-	X	X	8	X	X	-	0	0	NORM	0		8
9	4I6L	4	0	0	2	0	0	0	0	255	9	X	-	-	-	-	-	X	X	9	X	X	-	0	0	STOPB	0		9
10	4I7U	4	0	0	2	0	0	0	0	255	10	X	-	-	-	-	-	X	X	10	X	X	-	0	0	STOPB	0	WBT3	10
11	4I7L	4		15	2		0	0	0	255	11	X	-	-	-	-	-	X	X	11	X	X	-			STOPB		WBR1	11
12	4I8U	4			2		0	0	0	255	12	X	-	-	-	-	-	X	X	12	X	X	-			STOPB		WBT1	12
13	1I9U	1	0	0	0	0	0	0	0	255	13	X	X	-	-	-	-	X	X	13	X	X	-	0	0	NORM	0		13
14	3I9L	3	0	0	0	0	0	0	0	255	14	X	X	-	-	-	-	X	X	14	X	X	-	0	0	NORM	0		14
15	5J1U	5	0	0	0	0	0	0	0	255	15	X	X	-	-	-	-	X	X	15	X	X	-	0	0	NORM	0	SBL1	15
16	6J2U	6					0	0	0	255	16	-	X	-	-	-	-	X	X	16	X	X	-			NORM			16
17	6J2L	6			2		0	0	0	255	17	X	-	-	-	-	-	X	X	17	X	X	-			STOPB			17
18	6J3U	6			2		0	0	0	255	18	X	-	-	-	-	-	X	X	18	X	X	-			STOPB		NBT3	18
19	6J3L	6			2		0	0	0	255	19	X	-	-	-	-	-	X	X	19	X	X	-			STOPB		NBR1	19
20	6J4U	6			2		0	0	0	255	20	X	-	-	-	-	-	X	X	20	X	X	-			STOPB		NBT1	20
21	7J5U	7					0	0	0	255	21	X	X	-	-	-	-	X	X	21	X	X	-			NORM		WBL1	21
22	8J6U	8	0	0	0	0	0	0	0	255	22	-	X	-	-	-	-	X	X	22	X	X	-	0	0	NORM	0		22
23	8J6L	8	0	0	2	0	0	0	0	255	23	X	-	-	-	-	-	X	X	23	X	X	-	0	0	STOPB	0		23
24	8J7U	8	0	0	2	0	0	0	0	255	24	X	-	-	-	-	-	X	X	24	X	X	-	0	0	STOPB	0	EBT3	24
25	8J7L	8	0	15	2	0	0	0	0	255	25	X	-	-	-	-	-	X	X	25	X	X	-	0	0	STOPB	0	EBR1	25
26	8J8U	8	0	0	2	0	0	0	0	255	26	X	-	-	-	-	-	X	X	26	X	X	-	0	0	STOPB	0	EBT1	26
27	5J9U	5					0	0	0	255	27	X	X	-	-	-	-	X	X	27	X	X	-			NORM			27
28	7J9L	7					0	0	0	255	28	X	X	-	-	-	-	X	X	28	X	X	-			NORM			28
29	2I11U	2	0	0	2	0	0	0	0	255	29	X	-	-	-	-	-	X	X	29	X	X	-	0	0	STOPB	0		29
30	4I11L	4	0	15	2	0	0	0	0	255	30	X	-	-	-	-	-	X	X	30	X	X	-	0	0	STOPB	0		30
31	6J11U	6			2		0	0	0	255	31	X	-	-	-	-	-	X	X	31	X	X	-			STOPB			31
32	8J11L	8		15	2		0	0	0	255	32	X	-	-	-	-	-	X	X	32	X	X	-			STOPB			32
33	1I1L	1	0	0	0	0	0	0	0	255	33	X	X	-	-	-	-	X	X	33	X	X	-	0	0	NORM	0	NBL2	33
34	2I4L	2			2		0	0	0	255	34	X	-	-	-	-	-	X	X	34	X	X	-			STOPB		SBT2	34
35	3I5L	3	0	0	0	0	0	0	0	255	35	X	X	-	-	-	-	X	X	35	X	X	-	0	0	NORM	0	EBL2	35
36	4I8L	4			2		0	0	0	255	36	X	-	-	-	-	-	X	X	36	X	X	-			STOPB		WBT2	36
37	5J1L	5	0	0	0	0	0	0	0	255	37	X	X	-	-	-	-	X	X	37	X	X	-	0	0	NORM	0	SBL2	37
38	6J4L	6			2		0	0	0	255	38	X	-	-	-	-	-	X	X	38	X	X	-			STOPB		NBT2	38
39	7J5L	7	0	0	0	0	0	0	0	255	39	X	X	-	-	-	-	X	X	39	X	X	-	0	0	NORM	0	WBL2	39
40	8J8L	8			2		0	0	0	255	40	X	-	-	-	-	-	X	X	40	X	X	-			STOPB		EBT2	40
41	4I10U	2					0	0	0	255	41	-	X	-	-	-	-	X	X	41	X	X	-			NORM			41
42	4I10L	2					0	0	0	255	42	-	X	-	-	-	-	X	X	42	X	X	-			NORM			42
43	8J10U	6					0	0	0	255	43	-	X	-	-	-	-	X	X	43	X	X	-			NORM			43
44	8J10L	6					0	0	0	255	44	-	X	-	-	-	-	X	X	44	X	X	-			NORM			44

ID:	**283**	**Name:**	**Shepherd & Willow**	**Vol/Occ Period**	0 **Seconds** 5 **Minutes**

2/22/2020

Alt# 1 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	-	-	-	-	-	-	-	-
Guar Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0

Alt# 2 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	-	-	-	-	-	-	-	-
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0

Alt# 3 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	-	-	-	-	-	-	-	-
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0

Alt# 4 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	-	-	-	-	-	-	-	-
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0

Alternate Tables [2.6]

Pat#	POpt	PTime	DetGrp	Call/Inh	Olp Off											
					1	2	3	4	5	6	7	8				
1	0	0	0	0									0	Off		DFT
2													0	Off		DFT
3	0	0	0	0									0	Off		DFT
4													0	Off		DFT
5	0	0	0	0									0	Off		DFT
6													0	Off		DFT
7	0	0	0	0									0	Off		DFT
8													0	Off		DFT
9	0	0	0	0									0	Off		DFT
10													0	Off		DFT
11	0	0	0	0									0	Off		DFT
12													0	Off		DFT
13	0	0	0	0									0	Off		DFT
14													0	Off		DFT
15	0	0	0	0									0	Off		DFT
16													0	Off		DFT
17	0	0	0	0									0	Off		DFT
18													0	Off		DFT
19	0	0	0	0									0	Off		DFT
20													0	Off		DFT
21	0	0	0	0									0	Off		DFT
22													0	Off		DFT
23	0	0	0	0									0	Off		DFT
24													0	Off		DFT

Time Base Parameters [4.6]

Daylight Savings Time	ENABLE	
Time Base Sync Ref	0	
GMT Offset	-	8
Daylight Savings	**Mon**	**Week**
Spring	3	2
Fall	11	1

NOTE: % and MI parameters are not used and are not shown above.

City of FRESNO

NAME: **Shepherd & Willow**

2/22/2020

ID: **283**

AGENDA ITEM NO. 6.

Annual Schedule [4.3]	Month												Day of Week							Date																																	Day Plan
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
3	X	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3
4											X						X			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	X	-	-	-	4
5																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
6																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
7																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
8																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
9																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
10																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
11																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
12																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
13																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
14																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
15																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
16																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
17																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
18																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

NAME: **Shepherd & Willow**

ID No. **283**

DAY PLANS [4.4]

Plan 1				Plan 2				Plan 3				Plan 4				Plan 5				Plan 6				Plan 7				Plan 8				Plan 9				Plan 10			
Evt	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act
1		**1**	**54**	1		**1**	**54**	1		**1**	**54**	1	**0**	**1**	**54**	1				1				1				1				1				1			
2	0	0	0	2	0	0	0	2	0	0	0	2	**0**	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0
3				3				3				3	**0**			3				3				3				3				3				3			
4	0	0	0	4	0	0	0	4	0	0	0	4	**0**	0	0	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0
5				5				5				5	**0**			5				5				5				5				5				5			
6	0	0	0	6	0	0	0	6	0	0	0	6	**0**	0	0	6	0	0	0	6	0	0	0	6	0	0	0	6	0	0	0	6	0	0	0	6	0	0	0
7				7				7				7	**0**			7				7				7				7				7				7			
8	0	0	0	8	0	0	0	8	0	0	0	8	**0**	0	0	8	0	0	0	8	0	0	0	8	0	0	0	8	0	0	0	8	0	0	0	8			
9				9				9				9	**0**			9				9				9				9				9				9			
10	0	0	0	10	0	0	0	10	0	0	0	10	**0**	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10	0	0	0	10			

AGENDA ITEM NO. 6.

#	Alarm	Ev	Alr
1	Power Up Alarm.	X	X
2	Stop Timing	X	X
3	Cabinet Door Activation	-	-
4	Coordination Failure	X	X
5	External Alarm # 1	-	-
6	External Alarm # 2	-	-
7	External Alarm # 3	-	-
8	External Alarm # 4	-	-
9	Closed Loop Disabled	-	-
10	External Alarm # 5	-	-
11	External Alarm # 6	-	-
12	Manual Control Enable	X	X
13	Coord Free Input	-	-
14	Local Flash Input	X	X
15	CMU/MMU Flash Input	-	-
16	MMU Fault	X	X
17	Cycle Fault	X	-
18	Cycle Failure	X	-
19	Coordination Fault	X	X
20	Controller Fault	X	X
25	EEPROM CRC Fault	X	X
30	Coord Diagnostic Fault	X	X
37	Download Request	X	X
38	Pattern Change	-	-
49	Preempt 1 Input	X	X
50	Preempt 2 Input	X	X
51	Preempt 3 Input	X	X
52	Preempt 4 Input	X	X
53	Preempt 5 Input	X	X
54	Preempt 6 Input	X	X
55	Preempt 7 Input	-	-
56	Preempt 8 Input	-	-
57	Preempt 9 Input	-	-
58	Preempt 10 Input	-	-
59	EEPROM Compare Fault	X	X
60	Coordination Failure	X	X
63	TSP Active Trigger	-	-
73	Controller Access	X	X
81	FIO Changed Status	X	X

#1 Bus Preempt		Times		Prior. Phases			
Enable	OFF	Min	0	0	0	0	0
Coor+Pre	OFF	Max	0	---TSP---			
Lock Mode	MAX	Lock	0	Headway	0		
No Skip	OFF	Alt Table	0	GrpLock	OFF		
Qjump	OFF	HoldDwell	#N/A	FreeMod	OFF		

#2 Bus Preempt		Times		Prior. Phases			
Enable	OFF	Min	0	0	0	0	0
Coor+Pre	OFF	Max	0	---TSP---			
Lock Mode	MAX	Lock	0	Headway	0		
No Skip	OFF	Alt Table	0	GrpLock	OFF		
Qjump	OFF	HoldDwell	#N/A	FreeMod	OFF		

#3 Bus Preempt		Times		Prior. Phases			
Enable	OFF	Min	0	0	0	0	0
Coor+Pre	OFF	Max	0	---TSP---			
Lock Mode	MAX	Lock	0	Headway	0		
No Skip	OFF	Alt Table	0	GrpLock	OFF		
Qjump	OFF	HoldDwell	#N/A	FreeMod	OFF		

#4 Bus Preempt		Times		Prior. Phases			
Enable	OFF	Min	0	0	0	0	0
Coor+Pre	OFF	Max	0	---TSP---			
Lock Mode	MAX	Lock	0	Headway	0		
No Skip	OFF	Alt Table	0	GrpLock	OFF		
Qjump	OFF	HoldDwell	#N/A	FreeMod	OFF		

I/O INPUT TABLE

	1	2	3	4	5	6	7	8
1	2	16	8	22	3	17	9	23
2	6	20	12	26	198	199	30	31
3	15	1	21	7	27	13	28	14
4	189	189	189	189	4	18	10	24
5	130	134	132	136	200	201	202	203
6	32	5	19	11	25	29	208	207
7	33	34	35	36	37	38	39	40
8	41	42	43	44	189	189	189	189

ACTION Table [4.5]

Act	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8	P1	P2
1	1	-	-	-	-	-	-	-	-	-	-	-	0	0
2	2	-	-	-	-	-	-	-	-	-	-	-	0	0
3	3	-	-	-	-	-	-	-	-	-	-	-	0	0
4	4	-	-	-	-	-	-	-	-	-	-	-	0	0
5	5	-	-	-	-	-	-	-	-	-	-	-	0	0
6	6	-	-	-	-	-	-	-	-	-	-	-	0	0
7	7	-	-	-	-	-	-	-	-	-	-	-	0	0
8	8	-	-	-	-	-	-	-	-	-	-	-	0	0
9	9	-	-	-	-	-	-	-	-	-	-	-	0	0
10	10	-	-	-	-	-	-	-	-	-	-	-	0	0
11	11	-	-	-	-	-	-	-	-	-	-	-	0	0
12	12	-	-	-	-	-	-	-	-	-	-	-	0	0
13	13	-	-	-	-	-	-	-	-	-	-	-	0	0
14	14	-	-	-	-	-	-	-	-	-	-	-	0	0
15	15	-	-	-	-	-	-	-	-	-	-	-	0	0
16	0	-	-	-	-	-	-	-	-	-	-	-	0	0
54	254	-	-	-	-	-	-	-	-	-	-	-	0	0
55	0	-	-	-	-	-	-	-	-	-	-	-	0	0

Alarm Parameters [1.6.7.1]

Pattern Events:	ON
Local Txmt Alarms:	OFF
Reassign User Alarm #1 In (5):	0
Reassign User Alarm #2 In (6):	0
Preempt Events:	ON

City of FRESNO

Date Printed
2/22/2020

ID: 283 **Name:** **Shepherd & Willow**

AGENDA ITEM NO. 6.

I/O Inputs - 1.8.9.1.5

C-1 PIN	I/O Source	Function	Input Name
39	I1-1	2	Veh Det 2
40	I1-2	16	Veh Det 16
41	I1-3	8	Veh Det 8
42	I1-4	22	Veh Det 22
43	I1-5	3	Veh Det 3
44	I1-6	17	Veh Det 17
45	I1-7	9	Veh Det 9
46	I1-8	23	Veh Det 23
47	I2-1	6	Veh Det 6
48	I2-2	20	Veh Det 20
49	I2-3	12	Veh Det 12
50	I2-4	26	Veh Det 26
51	I2-5	198	Pre 1 In
52	I2-6	199	Pre 2 In
53	I2-7	30	Veh Det 30
54	I2-8	31	Veh Det 31
55	I3-1	15	Veh Det 15
56	I3-2	1	Veh Det 1
57	I3-3	21	Veh Det 21
58	I3-4	7	Veh Det 7
59	I3-5	27	Veh Det 27
60	I3-6	13	Veh Det 13
61	I3-7	28	Veh Det 28
62	I3-8	14	Veh Det 14
63	I4-5	4	Veh Det 4
64	I4-6	18	Veh Det 18
65	I4-7	10	Veh Det 10
66	I4-8	24	Veh Det 24
67	I5-1	130	Ped Call 2
68	I5-2	134	Ped Call 6
69	I5-3	132	Ped Call 4
70	I5-4	136	Ped Call 8
71	I5-5	200	Pre 3 In
72	I5-6	201	Pre 4 In
73	I5-7	202	Pre 5 In
74	I5-8	203	Pre 6 In
75	I6-1	32	Veh Det 32
76	I6-2	5	Veh Det 5
77	I6-3	19	Veh Det 19
78	I6-4	11	Veh Det 11
79	I6-5	25	Veh Det 25
80	I6-6	29	Veh Det 29
81	I6-7	208	Local Flash
82	I6-8	207	Comp StopTm

I/O OUTPUTS - 1.8.9.2.5

C-1 PIN	I/O Source	Function	Output Name
1	Logic Grd		
2	O1-1	14	Red Ch 14
3	O1-2	62	Grn Chan 14
4	O1-3	4	Red Ch 4
5	O1-4	28	Yel Chan 4
6	O1-5	52	Grn Chan 4
7	O1-6	3	Red Ch 3
8	O1-7	27	Yel Chan 3
9	O1-8	51	Grn Chan 3
10	O2-1	13	Red Ch 13
11	O2-2	61	Grn Chan 13
12	O2-3	2	Red Ch 2
13	O2-4	26	Yel Chan 2
14	Logic Grd		
15	O2-5	50	Grn Chan 2
16	O2-6	1	Red Ch 1
17	O2-7	25	Yel Chan 1
18	O2-8	49	Grn Chan 1
19	O3-1	16	Red Ch 16
20	O3-2	64	Grn Chan 16
21	O3-3	8	Red Ch 8
22	O3-4	32	Yel Chan 8
23	O3-5	56	Grn Chan 8
24	O3-6	7	Red Ch 7
25	O3-7	31	Yel Chan 7
26	O3-8	55	Grn Chan 7
27	O4-1	15	Red Ch 15
28	O4-2	63	Grn Chan 15
29	O4-3	6	Red Ch 6
30	O4-4	30	Yel Chan 6
31	O4-5	54	Grn Chan 6
32	O4-6	5	Red Ch 5
33	O4-7	29	Yel Chan 5
34	O4-8	53	Grn Chan 5
35	O5-1	37	Yel Chan 13
36	O5-2	39	Yel Chan 15
37	O5-3	38	Yel Chan 14
38	O5-4	40	Yel Chan 16
100	O5-5	42	Yel Chan 18
101	O5-6	41	Yel Chan 17
102	O5-7	115	Not Used
103	O5-8	114	Watchdog

C-1 PIN	I/O Source	Function	Output Name
83	O6-1	18	Red Ch 18
84	O6-2	66	Grn Chan 18
85	O6-3	12	Red Ch 12
86	O6-4	36	Yel Chan 12
87	O6-5	60	Grn Chan 12
88	O6-6	11	Red Ch 11
89	O6-7	35	Yel Chan 11
90	O6-8	59	Grn Chan 11
91	O7-1	17	Red Ch 17
92	Logic Grd		
93	O7-2	65	Grn Chan 17
94	O7-3	10	Red Ch 10
95	O7-4	34	Yel Chan 10
96	O7-5	58	Grn Chan 10
97	O7-6	9	Red Ch 9
98	O7-7	33	Yel Chan 9
99	O7-8	57	Grn Chan 9

I/O Outputs - 1.8.9.2.5

C-11 OUTPUTS

1	O8-1	115	Not Used
2	O8-2	115	Not Used
3	O8-3	115	Not Used
4	O8-4	115	Not Used

I/O Inputs - 1.8.9.1.5

C-11 INPUTS

15	I7-1	33	Veh Det 33
16	I7-2	34	Veh Det 34
17	I7-3	35	Veh Det 35
18	I7-4	36	Veh Det 36
19	I7-5	37	Veh Det 37
20	I7-6	38	Veh Det 38
21	I7-7	39	Veh Det 39
22	I7-8	40	Veh Det 40
23	I8-1	41	Veh Det 41
24	I8-2	42	Veh Det 42
25	I8-3	43	Veh Det 43
26	I8-4	44	Veh Det 44
27	I8-5	189	Unused
28	I8-6	189	Unused
29	I8-7	189	Unused
30	I8-8	189	Unused

City of FRESNO

ID: 283

NAME: Shepherd & Willow

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ID Number: 283

LOCATION: Shepherd & Willow

City of Fresno
332 Cabinet
44 Detector Plus Setup

	DETECTOR ASSIGNMENTS											ISOLATORS		
"I"	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**	**I9**	**I10**	**I11**	**I12**	**I13**	**I14**
UPPER	**Ph 1** Call&Ext **T2-1&2** **C1-56** **Det 1** **NBL1**	**Ph 2** Ext **T2-5&6** **C1-39** **Det 2** **SB Far**	**Ph 2** Call&TP3 **T2-9&10** **C1-63** **Det 4** **SB Mid**	**Ph 2** Call&TP3 **T4-1&2** **C1-47** **Det 6** **SBT1**	**Ph 3** Call&Ext **T4-5&6** **C1-58** **Det 7** **EBL1**	**Ph 4** Ext **T4-9&10** **C1-41** **Det 8** **WB Far**	**Ph 4** Call&TP3 **T6-1&2** **C1-65** **Det 10** **WB Mid**	**Ph 4** Call&TP3 **T6-5&6** **C1-49** **Det 12** **WBT1**	**Ph 1** Call&Ext **T6-9&10** **C1-60** **Det 13** **NBLt Bk**	**Ph 2/4** **Ext** **T10-5&6** **C11-23** **Det 41**	**Ph 2** Call&Ext T8-1 **C1-80** **Det 29** **BIKE**	**Ph 2** **PPB** T8-4 **C1-67**	**Ph 6** **PPB** T8-7 **C1-68**	**FLASH** **SENSE** T8-10 **C1-81**
LOWER	**Ph 1** Call&Ext **T2-3&4** **C11-15** **Det 33** **NBL2**	**Ph 2** Call&TP3 **T2-7&8** **C1-43** **Det 3** **SB Bk**	**Ph 2** Call&Ext **T2-11&12** **C1-76** **Det 5** **SBRt**	**Ph 2** Call&TP3 **T4-3&4** **C11-16** **Det 34** **SBT2**	**Ph 3** Call&Ext **T4-7&8** **C11-17** **Det 35** **EBL2**	**Ph 4** Call&TP3 **T4-11&12** **C1-45** **Det 9** **WB Bk**	**Ph 4** Call&Ext **T6-3&4** **C1-78** **Det 11** **WBRt**	**Ph 4** Call&TP3 **T6-7&8** **C11-18** **Det 36** **WBT2**	**Ph 3** Call&Ext **T6-11&12** **C1-62** **Det 14** **EBLt Bk**	**Ph 2/4** **Ext** **T10-7&8** **C11-24** **Det 42**	**Ph 4** Call&Ext T8-2 **C1-53** **Det 30** **BIKE**	**Ph 4** **PPB** T8-5 **C1-69**	**Ph 8** **PPB** T8-8 **C1-70**	**STOP** **TIMING** T8-11 **C1-82**
"J"	**J1**	**J2**	**J3**	**J4**	**J5**	**J6**	**J7**	**J8**	**J9**	**J10**	**J11**	**J12**	**J13**	**J14**
UPPER	**Ph 5** Call&Ext **T3-1&2** **C1-55** **Det 15** **SBL1**	**Ph 6** Ext **T3-5&6** **C1-40** **Det 16** **NB Far**	**Ph 6** Call&TP3 **T3-9&10** **C1-64** **Det 18** **NB Mid**	**Ph 6** Call&TP3 **T5-1&2** **C1-48** **Det 20** **NBT1**	**Ph 7** Call&Ext **T5-5&6** **C1-57** **Det 21** **WBL1**	**Ph 8** Ext **T5-9&10** **C1-42** **Det 22** **EB Far**	**Ph 8** Call&TP3 **T7-1&2** **C1-66** **Det 24** **EB Mid**	**Ph 8** Call&TP3 **T7-5&6** **C1-50** **Det 26** **EBT1**	**Ph 5** Call&Ext **T7-9&10** **C1-59** **Det 27** **SBLt Bk**	**Ph 6/8** **Ext** **T10-9&10** **C11-25** **Det 43**	**Ph 6** Call&Ext T9-1 **C1-54** **Det 31** **BIKE**	**EMER A** Ph 2 + 5 T9-4 **C1-71**	**EMER B** Ph 4 + 7 T9-5 **C1-72**	**RR1** **FLASH** T9-10 **C1-51**
LOWER	**Ph 5** Call&Ext **T3-3&4** **C11-19** **Det 37** **SBL2**	**Ph 6** Call&TP3 **T3-7&8** **C1-44** **Det 17** **NB Bk**	**Ph 6** Call&Ext **T3-11&12** **C1-77** **Det 19** **NBRt**	**Ph 6** Call&TP3 **T5-3&4** **C11-20** **Det 38** **NBT2**	**Ph 7** Call&Ext **T5-7&8** **C11-21** **Det 39** **WBL2**	**Ph 8** Call&TP3 **T5-11&12** **C1-46** **Det 23** **EB Bk**	**Ph 8** Call&Ext **T7-3&4** **C1-79** **Det 25** **EBRt**	**Ph 8** Call&TP3 **T7-7&8** **C11-22** **Det 40** **EBT2**	**Ph 7** Call&Ext **T7-11&12** **C1-61** **Det 28** **WBLt Bk**	**Ph 6/8** **EXT** **T10-11&12** **C11-26** **Det 44**	**Ph 8** Call&Ext T9-2 **C1-75** **Det 32** **BIKE**	**EMER C** Ph 1 + 6 T9-7 **C1-73**	**EMER D** Ph 3 + 8 T9-8 **C1-74**	**RR2** **LTD OP** T9-11 **C1-52**

COMMENTS:

TIMING UPDATES AND MODIFICATIONS

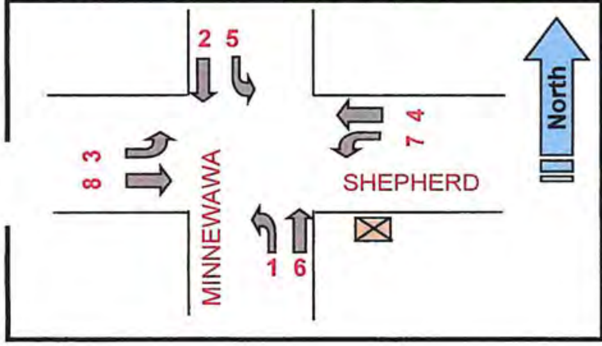
ID: 283 **NAME:** Shepherd & Willow

DATE	CHANGES MADE	ATMS or CABINET	BY
2/22/2020	Made minor changes to timing calculations and updated detector attributes. Set intersection back to 8 phase operation from Split		
	Phase operations due to construction.		

AGENDA ITEM NO. 6.

CITY of CLOVIS

Movement	NL	ST	EL	WT	SL	NT	WL	ET
Times [1.1.1]	1	2	3	4	5	6	7	8
Min Green	11	8	11	9	11	8	11	9
Gap, Ext	2	4	2	4.4	2	3.2	2	4.2
Max 1	25	40	25	40	25	40	25	40
Max 2	0		0					
Yel Clearance	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
Red Clearance	1	1	1	1	1	1	1	1
Walk	0	7	0	7		7		7
Ped Clearance	0	25	0	23		25		25
Red Revert	1	1	1	1	1	1	1	1
Add Initial	0		0					
Max Initial	0		0					
Time B4 Reduct	0	19	0	18		19		18
Cars B4 Reduct	0		0					
Time To Reduce	0	11	0	12		11		12
Reduce By	0		0					
Min Gap	2	2.5	2	2.8	2	2	2	2.6
DyMaxLim	31	46	31	46	31	46	31	46
Max Step	6	6	6	6	6	6	6	6
Options [1.1.2]	1	2	3	4	5	6	7	8
Enable	X	X	X	X	X	X	X	X
Min Recall								
Max Recall								
Ped Recall								
Soft Recall				X				X
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		X		X		X		X
Enable Simul Gap	X	X	X	X	X	X	X	X
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								



Phase Options+ [1.1.3]

Options+	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
SkipRed-NoCall								
Red Rest								
Max II								
*Max III								
Max Inhibit								
Ped Delay								
Red Rest on Gap								
Conflicting Phase								
Grn/Ped Delay								
Omit Yel, Yel P								
Ped Out/Olp Ped								
StartYel, Next P								
*StartupVehCall	1	2	3	4	5	6	7	8
*StartupPedCall								

Phase Concurrency [1.1.4]

Phase	Ring	StartUp	Concurrent Phases			
1	1	RED	5	6	0	0
2	1	RED	5	6	0	0
3	1	RED	7	8	0	0
4	1	GREEN	7	8	0	0
5	2	RED	1	2	0	0
6	2	RED	1	2	0	0
7	2	RED	3	4	0	0
8	2	GREEN	3	4	0	0
9	0	RED	0	0	0	0
10	0	RED	0	0	0	0
11	0	RED	0	0	0	0
12	0	RED	0	0	0	0

Comm Ports [6.6]

Channel	Port	Echo	Mode
Async 1	SP1	NONE	0
Async 2	SP2	NONE	0
Async 3	SP8	NONE	0
Async 4	OFF	NONE	0
Sync 1	SP5S		
Sync 2	OFF		
TS2CVM	NONE		
Opticom	NONE		
GPS	NONE		

Unit Params [1.2.1]

*Screen Size	8	Metric	OFF
Startup Flash	0	Red Revert	1
MCE Timeout	0	Auto Ped Clear	OFF
Loc Flsh Start	RSt	Display Time	30
Yellow < 3"	OFF	Tone Disable	ON
Allow Skip Yel	OFF	AudioPedTime	OFF
Start Red Tm	6	Phase Mode	STD8
*Startup Calls	OFF	CNA FreeTime	0
TOD Dimming	OFF	Diamond Mode	4Ph
ST over Prmpt	OFF	Free Ring Seq	1
Feature Profile	1	IO Mode	USER
Mx Seek TrkTm	0	Max Cyc Timer	0
Mx Seek Dwell	0	CycFlt Actn	ALARM
Prmpt/Ext Coor	EXT	Clmc Decide	OFF
Aux Switch	STOPTM	LPAlt Srs	OFF
*InhFYA Red St	Off	*SecurityDelay	0

* - 76.12B or newer

Times+ [1.1.7]

	1	2	3	4	5	6	7	8
Walk2	0	0	0	0	0	0	0	0
BikeClr	0	0	0	0	0	0	0	0
GrnFlash	0	0	0	0	0	0	0	0
SfClrMn	0	0	0	0	0	0	0	0
SfClrNoFlsh	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Comm [6.2]

Port	Baud Rate	FCM
1	9600	6
2	9600	6
3	1200	0
4	1200	0

Comm [6.5]

					Host IPs			
IP Address:	10	128	1	51	ATMS			
Mask:	255	255	255	0	172	26	17	230
Gateway:	10	128	1	254	SG			
Port #:	5051				0	0	0	0

Phase Seq. (2 ring) Chart [1.2.4]

Seq #	Ring	Phases					
1	1	1	2	3	4	0	0
	2	5	6	7	8	0	0
2	1	1	2	3	4	0	0
	2	6	5	7	8	0	0
3	1	2	1	3	4	0	0
	2	5	6	7	8	0	0
4	1	2	1	3	4	[illegible]	0
	2	6	5	7	8	[illegible]	0
5	1	1	2	3	4	0	0
	2	5	6	8	7	0	0
6	1	1	2	3	4	0	0
	2	6	5	8	7	0	0
7	1	2	1	3	4	0	0
	2	5	6	8	7	0	0
8	1	2	1	3	4	0	0
	2	6	5	8	7	0	0
9	1	1	2	4	3	0	0
	2	5	6	7	8	0	0
10	1	1	2	4	3	0	0
	2	6	5	7	8	0	0
11	1	2	1	4	3	0	0
	2	5	6	7	8	0	0
12	1	2	1	4	3	0	0
	2	6	5	7	8	0	0
13	1	1	2	4	3	[illegible]	0
	2	5	6	8	7	[illegible]	0
14	1	1	2	4	3	0	0
	2	6	5	8	7	0	0
15	1	2	1	4	3	0	0
	2	5	6	8	7	0	0
16	1	2	1	4	3	0	0
	2	6	5	8	7	0	0

Advance Warning [1.1.9]

	Ph	Tm
Aux Out #1	0	0
Aux Out #2	0	0

NAME:	MINNEWAWA @ SHEPHERD	**ID:** 299	**Configuration:** Standard File
Prepared by:	T. Barker	**Date Installed / By:**	1/10/2022
Checked by:	T. Barker	**Date Superseded:**	

V76.12
ATMS 1.5.45.263

Date Printed:
1/10/22
Page

AGENDA ITEM NO. 6.

[2.1] Coord Modes+

Test OpMode	0	
Correction	LONG	
Maximum	MAX INH	
Force Mode	FIXED	
Flash Mode	CHANNEL	

Coord Modes+ (Page 2)

FreeonSeqCh	ON	
Closed Loop	OFF	
External	OFF	
Latch Sec Frc	OFF	
Stop-in-Walk	OFF	
Ped Recycle	P1256_INH	
Expand Splt	OFF	
Easy Float	OFF	
Auto Reset	ON	
NTCIP Yield	+	0

Leave Walk

Before	TIMED
After	TIMED

Intersection Name: MINNEWAWA @ SHEPHERD

CITY OF CLOVIS

ID: 293

[2.4] Patterns

Pat#	Cyc	Off-Set	Split	Seq
1	0	0	1	1
2	0	0	2	1
3	0	0	3	1
4	0	0	4	1
5	0	0	5	1
6	0	0	6	1
7		0	7	1
8	0	0	8	1
9	0	0	9	1
10	0	0	10	1
30	0	0	0	1
31	0	0	0	1
32	0	0	0	1

[2.7.1-24] Splits

Split	[2.7]	1	2	3	4	5	6	7	8
1	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
2	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
3	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
4	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
5	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
6	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
7	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
8	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
9	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
10	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
30	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
31	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
32	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON

[2.5] Transition

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	Ret Hold	Flt	Veh	Ped	FRC MODE
1	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
2	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
3	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
4	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
5	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
6	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
7	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
8	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
9	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
10	10	25	0	0	0	0	0	0	EndGRN	-	-	-	-	
30		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
31		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
32		17	0	0	0	0	0	0	BegGRN	-	-	-	-	

Date Printed:
12/2/2019

AGENDA ITEM NO. 6.

Overlap 1-8 Program Parms & Parm+ [1.5.2.1] [1.5.2.8]

1	Included Ø		NORMAL	
	Modifier Ø		Grn	
	Conflict Ø		Yel	3
A	Conflict Olap		Red	1
	Conflict Ped		LG	OFF
2	Included Ø		NORMAL	
	Modifier Ø		Grn	
	Conflict Ø		Yel	3
B	Conflict Olap		Red	1
	Conflict Ped		LG	OFF
3	Included Ø		NORMAL	
	Modifier Ø		Grn	
	Conflict Ø		Yel	3
C	Conflict Olap		Red	1
	Conflict Ped		LG	OFF
4	Included Ø		NORMAL	
	Modifier Ø		Grn	
	Conflict Ø		Yel	3
D	Conflict Olap		Red	1
	Conflict Ped		LG	OFF
5	Included Ø		NORMAL	
	Modifier Ø		Grn	
	Conflict Ø		Yel	3
E	Conflict Olap		Red	1
	Conflict Ped		LG	OFF
6	Included Ø		NORMAL	
	Modifier Ø		Grn	
	Conflict Ø		Yel	3
F	Conflict Olap		Red	1
	Conflict Ped		LG	OFF
7	Included Ø		NORMAL	
	Modifier Ø		Grn	
	Conflict Ø		Yel	3
G	Conflict Olap		Red	1
	Conflict Ped		LG	OFF
8	Included Ø		NORMAL	
	Modifier Ø		Grn	
	Conflict Ø		Yel	3
H	Conflict Olap		Red	1
	Conflict Ped		LG	OFF

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	EXT
Max Seek Track Time	0
Max Seek Dwell Time	0

Channel Parameters [1.8.3]

Pre Invert Rail Input	OFF

Preemption Options+ [3.Pre #.6]

Pre #	Enable	Type	Output	Pattern	Skip	Co+Pre	Flash	Max/Min
1	ON	RAIL	TS2		OFF	OFF	OFF	MAX
2	OFF	EMERG	TS2		OFF	OFF	OFF	MAX
3	ON	EMERG	TS2		OFF	OFF	OFF	MAX
4	ON	EMERG	TS2		OFF	OFF	OFF	MAX
5	ON	EMERG	TS2		OFF	OFF	OFF	MAX
6	ON	EMERG	TS2		OFF	OFF	OFF	MAX

Preemption Times [3.#.1]

Pre #	Delay	MinDura	MaxPres	MinGrn	MinWlk	PedClr	Track Grn	Min Dwell
1								
2								
3					4	19		
4					4	18		
5					4	19		
6					4	20		

Preemption, Options [3.#.3]

Pre #	Lock Input	Over-ride Auto Flash	Over-ride Higher Preempt#	Flash Dwell	Link
1	ON	ON	OFF	ON	
2	OFF	ON	OFF	OFF	
3	OFF	OFF	OFF	OFF	
4	OFF	OFF	OFF	OFF	
5	OFF	OFF	OFF	OFF	
6	OFF	OFF	OFF	OFF	

Preemption, Times+ [3.#.4]

Pre No.	Extend Dwell	Return Max	Ped Clr	Yel	Red
1					
2					
3					
4					
5					
6					

Pre 1 = RR1
Pre 2 = RR2
Pre 3 = EVA
Pre 4 = EVB
Pre 5 = EVC
Pre 6 = EVD

Phases [3.#.2] - set the Dwell Phases

Pre #	Column	1	2	3	4	5					
1	Dwell Veh										
	Peds										
2	Dwell Veh										
	Peds										
3	Dwell Veh	2	5								
	Peds										
4	Dwell Veh	4	7								
	Peds										
5	Dwell Veh	1	6								
	Peds										
6	Dwell Veh	3	8								
	Peds										

Phases [3.#.2] - Trk Veh

Pre #	Phases
1	
2	
3	
4	
5	
6	

Exit Phases [3.#.2]

No.	Exit Phase			
1	4	8		
2				
3	2	6		
4	4	8		
5	2	6		
6	4	8		

Overlaps+ [3.#.5]

Pre #		Preempt Overlaps +
1	Track	
	Dwell	
2	Track	
	Dwell	
3	Track	
	Dwell	
4	Track	
	Dwell	
5	Track	
	Dwell	
6	Track	
	Dwell	

Low Priority Preempts [3.X; where X = 7 thru 10]

							Times						
Pre #	Enb	C+P	Lock	NoSkip	Qjump	Alt Tbl	Min	Max	Lock	Priorty Phases			
7	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
8	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
9	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
10	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0

Advance Times [3.x.8]

	1	2	3	4	5	6
YelChng	0	0	0	0	0	0
RedClr	0	0	0	0	0	0
TrkYelChng	0	0	0	0	0	0
TrkRedClr	0	0	0	0	0	0

OLP GENERAL PARAMETERS [1.5.1]

Lock Inhibit	OFF
Conflict Lock Enable	OFF
Parent P Clearance	OFF
Xtra Incl Phases	OFF
InhibitLockInterval	Always

PREEMPTION NOTE: Each preemption has it's own set of menus. To access each menu :
a. Press "3" for preemption
b. Then enter "Preempt number" (1 through 6 and shown as "#" in Schedules above)
c. Then enter "number of Menu item" you want to access (*1-Times, 2-Phases, 3-Options, 4-Times+, 5-Overlaps+ or 6-Options+*)
d. Once in an above menu push Escape once to go back to main preempton menu.

City of CLOVIS

Name: MINNEWAWA @ SHEF

ID: 293

Date Printed: 12/2/2019

P

CHANNEL SETTINGS [1.8] plus UNIT PARAMETERS [1.2.1]

CHANNEL SETTINGS [1.8.1] / Chan Settings [1.8.2]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8								
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz		X		X		X		X																
	Page 1								Page 2															

CHANNEL PARMETERS [1.8.3]

CH 17-24 Mapping:	DEFAULT
D-Conn Mapping:	NONE
Invert Rail Inputs:	OFF
C1-C11-ABC IO Mode:	USER

CHANNELS+ [1.8.4]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flash Red	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flash Yellow	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Inh Red Fl in Preempt	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Olap Ovrd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

IO PARAMETERS [1.8.6]

C1-C11-ABC IO Mode:	USER
D-Conn Mapping:	NONE
T & F BIU Mapping	DEFAULT
Invert Rail Inputs:	OFF
EVP Ped Confirm	OFF

City of CLOVIS

I/O LOGIC [1.8.7]

Row#	Result		Function			OP	Function			OP	Function			OP	Timer	
	I/O	Fcn	Inv	I/0	Fcn	Logic	Inv	I/0	Fcn	Logic	Inv	I/0	Fcn	Logic	Dly	Sec
1	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
2	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
3	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
4	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
5	I	0	-	I	----	0	-	I	---	0	-	I	----	0	DLY	0
6	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
7	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
8	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
9	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
10	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0

Ped Parms (MM>5>4)

Det#	Call	No Act	Max Pres	Err Cnt
1	0	0	0	0
2	2	0	5	0
3	0	0	0	0
4	4	0	5	0
5	0	0	0	0
6	6	0	5	0
7	0	0	0	0
8	8	0	5	0

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Veh Par 1-32 [5.1]

Det #	Input Slot	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	1I1U	1					0	0	0	255
2	2I2U	2	0	0.0	1.4	0	0	0	0	255
3	2I2L	2	0	0.0	0.0	0	0	0	0	255
4	2I3U	2	0	10.0	0.0	0	0	0	0	255
5	2I3L	2	0	0.0	2.0	0	0	0	0	255
6	2I4U	2	0	0.0	2.0	20	0	0	0	255
7	3I5U	3					0	0	0	255
8	4I6U	4	0	0.0	1.5	0	0	0	0	255
9	4I6L	4	0	0.0	0.0	0	0	0	0	255
10	4I7U	4	0	10.0	0.0	0	0	0	0	255
11	4I7L	4			2.0		0	0	0	255
12	4I8U	4			2.0	20	0	0	0	255
13	1I9U	1	0	0.0	0.0	0	0	0	0	255
14	3I9L	3	0	0.0	0.0	0	0	0	0	255
15	5J1U	5	0	0.0	0.0	0	0	0	0	255
16	6J2U	6			1.2		0	0	0	255
17	6J2L	6			0.7		0	0	0	255
18	6J3U	6		10.0			0	0	0	255
19	6J3L	6			2.0		0	0	0	255
20	6J4U	6			2.0	20	0	0	0	255
21	7J5U	7					0	0	0	255
22	8J6U	8	0	0.0	1.4	0	0	0	0	255
23	8J6L	8	0	0.0	0.1	0	0	0	0	255
24	8J7U	8	0	10.0	0.0	0	0	0	0	255
25	8J7L	8	0	0.0	2.0	20	0	0	0	255
26	8J8U	8	0	0.0	2.0	20	0	0	0	255
27	5J9U	5					0	0	0	255
28	7J9L	7					0	0	0	255
29	2I11U	2	0	0.0	0.0	0	0	0	0	255
30	4I11L	4	0	0.0	0.0	0	0	0	0	255
31	6J11U	6					0	0	0	255
32	8J11L	8					0	0	0	255
33	1I1L	1	0	0.0	0.0	0	0	0	0	255
34	2I4L	2			2.0	20	0	0	0	255
35	3I5L	3	0	0.0	0.0	0	0	0	0	255
36	4I8L	4			2.0	20	0	0	0	255
37	5J1L	5	0	0.0	0.0	0	0	0	0	255
38	6J4L	6			2.0	20	0	0	0	255
39	7J5L	7	0	0.0	0.0	0	0	0	0	255
40	8J8L	8			2.0	20	0	0	0	255
41	4I10U	4					0	0	0	255
42	4I10L	4					0	0	0	255
43	8J10U	8					0	0	0	255
44	8J10L	8					0	0	0	255

Vehicle Options 1-32 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	X	X	-	-	X	-	-	X
2	X	X	-	-	-	-	-	X
3	X	X	-	-	-	-	-	X
4	X	X	-	-	-	-	-	X
5	X	X	-	-	-	-	-	-
6	X	-	X	-	-	-	-	X
7	X	X	-	-	X	-	-	X
8	X	X	-	-	-	-	-	X
9	X	X	-	-	-	-	-	X
10	X	X	-	-	-	-	-	X
11	X	X	-	-	X	-	-	-
12	X	-	X	-	-	-	-	X
13	X	X	-	-	X	-	-	-
14	X	X	-	-	X	-	-	-
15	X	X	-	-	X	-	-	X
16	-	X	-	-	-	-	-	X
17	X	X	-	-	-	-	-	X
18	X	X	-	-	-	-	-	X
19	X	X	-	-	X	-	-	-
20	X	-	X	-	-	-	-	X
21	X	X	-	-	X	-	-	X
22	X	X	-	-	-	-	-	X
23	X	X	-	-	-	-	-	X
24	X	X	-	-	-	-	-	X
25	X	-	X	-	-	-	-	-
26	X	-	X	-	-	-	-	X
27	X	X	-	-	X	-	-	-
28	X	X	-	-	X	-	-	-
29	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-
33	X	X	-	-	X	-	-	X
34	X	-	X	-	-	-	-	-
35	X	X	-	-	X	-	-	X
36	X	-	X	-	-	-	-	-
37	X	X	-	-	X	-	-	X
38	X	-	X	-	-	-	-	X
39	X	X	-	-	X	-	-	X
40	X	-	X	-	-	-	-	X
41	-	X	-	-	-	-	-	-
42	-	X	-	-	-	-	-	-
43	-	X	-	-	-	-	-	-
44	-	X	-	-	-	-	-	-

Parameters+ 1-32 [5.3]

Det	Occupancy			Delay		Type	Sr	Dir	Type	#
#	G	Y	R	1	2					
1	-	-	-			NORM		NBLT Front		1
2	-	-	-	0	0	NORM	0	SB INT		2
3	-	-	-	0	0	NORM	0	SB FAR		3
4	-	-	-	0	0	NORM	0	SBRT		4
5	-	-	-	0	0	NORM	0	SB BIKE		5
6	-	-	-	0	0	NORM	0	SB Front		6
7	-	-	-			NORM		EBLT Front		7
8	-	-	-	0	0	NORM	0	WB INT		8
9	-	-	-	0	0	NORM	0	WB FAR		9
10	-	-	-	0	0	NORM	0	WBRT		10
11	-	-	-			NORM		WB BIKE		11
12	-	-	-			NORM		WB Front		[illegible]
13	-	-	-			NORM		NBLT Loops		[illegible]
14	-	-	-			NORM		EBLT Loops		14
15	-	-	-			NORM		SBLT Front		15
16	-	-	-			NORM		NB INT		16
17	-	-	-			NORM		NB FAR		17
18	-	-	-			NORM		NBRT		18
19	-	-	-			NORM		NB BIKE		19
20	-	-	-			NORM		NB Front		20
21	-	-	-			NORM		WBLT Front		21
22	-	-	-	0	0	NORM	0	EB INT		22
23	-	-	-	0	0	NORM	0	EB FAR		23
24	-	-	-	0	0	NORM	0	EBRT		24
25	-	-	-	0	0	NORM	0	EB Back		25
26	-	-	-	0	0	NORM	0	EB #1 Front		26
27	-	-	-			NORM		SBLT Loops		27
28	-	-	-			NORM		WBLT Loops		28
29	-	-	-	0	0	BIKE	0	Not in Use		29
30	-	-	-	0	0	BIKE	0	Not in Use		[illegible]
31	-	-	-			BIKE		Not in Use		31
32	-	-	-			BIKE		Not in Use		32
33	-	-	-			NORM		Not in Use		33
34	-	-	-			NORM		SB Back		34
35	-	-	-			NORM		Not in Use		35
36	-	-	-			NORM		WB Back		36
37	-	-	-			NORM		Not in Use		37
38	-	-	-			NORM		NB Back		38
39	-	-	-			NORM		Not in Use		39
40	-	-	-			NORM		EB #2 Front		40
41	-	-	-			NORM		Not in Use		41
42	-	-	-			NORM		Not in Use		42
43	-	-	-			NORM		Not in Use		43
44	-	-	-			NORM		Not in Use		44

ID:	299	**Name:**	MINNEWAWA @ SHEPHERD	**Vol/Occ Period**	0 **Seconds** 15 **Minutes**	1/10/2022

AGENDA ITEM NO. 6.

Alt# 1 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø	1	2	3	4	5	6	7	8
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Guar Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	X	X	X	X	X	X	X	X
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1								
Conflicting Ø2								

Alt# 2 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1								
Conflicting Ø2								

Alt# 3 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1								
Conflicting Ø2								

Alt# 4 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1								
Conflicting Ø2								

Alternate Tables [2.6]

Pat#	POpt	PTime	DetGrp	Call/Inh	Olp Off 1	2	3	4	5	6	7	8				
1													0	Off		DFT
2													0	Off		DFT
3													0	Off		DFT
4													0	Off		DFT
5													0	Off		DFT
6													0	Off		DFT
7													0	Off		DFT
8													0	Off		DFT
9													0	Off		DFT
10	1												0	Off		DFT
11													0	Off		DFT
12													0	Off		DFT
13													0	Off		DFT
14													0	Off		DFT
15													0	Off		DFT
16													0	Off		DFT
17													0	Off		DFT
18													0	Off		DFT
19													0	Off		DFT
20													0	Off		DFT
21													0	Off		DFT
22													0	Off		DFT
23													0	Off		DFT
24													0	Off		DFT

Time Base Parameters [4.6]

Daylight Savings Time	DISABLE	
Time Base Sync Ref	0	
GMT Offset	-	0
Daylight Savings	Mon	Week
Spring	3	2
Fall	11	1

City of CLOVIS

NAME: **MINNEWAWA @ SHEPHERD**

12/2/2019 **ID:** **293**

Annual Schedule [4.3]	Month												Day of Week							Date																																Link
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		To
1	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	0
2	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	0
3	X	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	0
4																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
5																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
6																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
7																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
8																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
9																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
10																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
11																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
12																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0

DAY PLANS [4.4]

Plan 1				Plan 2				Plan 3				Plan 4				Plan 5				Plan 6			
Evt	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hr	Min	Act	*Evt*	Hour	Min	Act
1		1	10	1		1	10	1		1	10	1				1				1	0	0	0
2	5	30	54	2	5	30	10	2	5	30	10	2				2				2	0	0	0
3	6	30	54	3	6	30	54	3	6	30	10	3				3				3	0	0	0
4	9		54	4	9		54	4	7		54	4				4				4	0	0	0
5	14	45	54	5	14	45	54	5	14	45	54	5				5				5	0	0	0
6	19		54	6	19		54	6	19		54	6				6				6	0	0	0
7	23		10	7	23		10	7	22		10	7				7				7	0	0	0
8				8				8				8				8				8	0	0	0

Plan 7				Plan 8				Plan 9				Plan 10				Plan 11				Plan 12			
Evt	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hr	Min	Act	*Evt*	Hour	Min	Act
1				1				1				1				1				1	0	0	0
2				2				2				2				2				2	0	0	0
3				3				3				3				3				3	0	0	0
4				4				4				4				4				4	0	0	0
5				5				5				5				5				5	0	0	0
6				6				6				6				6				6	0	0	0
7				7				7				7				7				7	0	0	0
8				8				8				8				8				8	0	0	0

Comments:

Minute Table [4.5]

Act	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8	P1	P2
1	1	-	-	-	-	-	-	-	-	-	-	-	0	0
2	2	-	-	-	-	-	-	-	-	-	-	-	0	0
3	3	-	-	-	-	-	-	-	-	-	-	-	0	0
4	4	-	-	-	-	-	-	-	-	-	-	-	0	0
5	5	-	-	-	-	-	-	-	-	-	-	-	0	0
6	6	-	-	-	-	-	-	-	-	-	-	-	0	0
7	7	-	-	-	-	-	-	-	-	-	-	-	0	0
8	8	-	-	-	-	-	-	-	-	-	-	-	0	0
9	9	-	-	-	-	-	-	-	-	-	-	-	0	0
10	10	-	-	-	-	-	-	-	-	-	-	-	0	0
11	0	-	-	-	-	-	-	-	-	-	-	-	0	0
12	0	-	-	-	-	-	-	-	-	-	-	-	0	0
13	0	-	-	-	-	-	-	-	-	-	-	-	0	0
14	0	-	-	-	-	-	-	-	-	-	-	-	0	0
15	0	-	-	-	-	-	-	-	-	-	-	-	0	0
16	0	-	-	-	-	-	-	-	-	-	-	-	0	0
54	254	-	-	-	-	-	-	-	-	-	-	-	0	0
55	255	-	-	-	-	-	-	-	-	-	-	-	0	0

City of CLOVIS

Name: MINNEWAWA @ SHEPHERD

ID: 293

Date Printed: 12/2/2019

AGENDA ITEM NO. 6.

#	Alarm	Ev	Air
1	Power Up Alarm.	X	X
2	Stop Timing	X	X
3	Cabinet Door Activation	-	-
4	Coordination Failure	X	X
5	External Alarm # 1	-	-
6	External Alarm # 2	-	-
7	External Alarm # 3	-	-
8	External Alarm # 4	-	-
9	Closed Loop Disabled	-	-
10	External Alarm # 5	-	-
11	External Alarm # 6	-	-
12	Manual Control Enable	X	X
13	Coord Free Input	-	-
14	Local Flash Input	X	X
15	CMU/MMU Flash Input	-	-
16	MMU Fault	-	-
17	Cycle Fault	X	X
18	Cycle Failure	X	X
19	Coordination Fault	X	X
20	Controller Fault	X	X
21	Detector SDLC Fault	-	-
22	MMU SDLC Fault	-	-
23	Critical SDLC Fault	-	-
24	SDLC Res. Frame Fault	-	-
25	EEPROM CRC Fault	X	X
26	Detector Diagnostic Fault	-	-
27	Detector Fault from SDLC	-	-
28	Queue detector alarm	-	-
29	Ped Fault	-	-
30	Coord Diagnostic Fault	X	X
37	Download Request	X	X
38	Pattern Change	-	-
49	Preempt 1 Input	X	X
50	Preempt 2 Input	-	-
51	Preempt 3 Input	X	X
52	Preempt 4 Input	X	X
53	Preempt 5 Input	X	X
54	Preempt 6 Input	X	X
55	Preempt 7 Input	-	-
56	Preempt 8 Input	-	-
57	Preempt 9 Input	-	-
58	Preempt 10 Input	-	-
59	EEPROM Compare Fault	-	-
60	Coordination Failure	X	X
73	Controller Access	X	X
81	FIO Changed Status	X	X

Call Phases[1.1.5]

Ø	Phases Called By Ø
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	[illegible]
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1	0					1								
2	0					2								
3	0					3								
4	0					4								
5	0					5								
6	0					6								
7	0					7								
8	0					8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1	0					1								
2	0					2								
3	0					3								
4	0					4								
5	0					5								
6	0					6								
7	0					7								
8	0					8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	[illegible]
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alarm Parameters [1.6.7.1]

Preempt Events Enable:	ON
Loc Pattern Event Enable:	ON
Reassign User Alarm #1 In (5):	0
Reassign User Alarm #2 In (6):	0
Local Txmt Alarms:	OFF
Mon/Flash Alarm Delay:	15

City of CLOVIS

Date Printed
12/2/2019

ID: 293 **Name:** MINNEWAWA @ SHEPHERD

Pa

AGENDA ITEM NO. 6.

I/O Inputs - 1.8.9.1.5

C-1 PIN	I/O Source	Function	Input Name
39	I1-1	2	Veh Det 2
40	I1-2	16	Veh Det 16
41	I1-3	8	Veh Det 8
42	I1-4	22	Veh Det 22
43	I1-5	3	Veh Det 3
44	I1-6	17	Veh Det 17
45	I1-7	9	Veh Det 9
46	I1-8	23	Veh Det 23
47	I2-1	6	Veh Det 6
48	I2-2	20	Veh Det 20
49	I2-3	12	Veh Det 12
50	I2-4	26	Veh Det 26
51	I2-5	198	Pre 1 In
52	I2-6	199	Pre 2 In
53	I2-7	189	Unused
54	I2-8	189	Unused
55	I3-1	15	Veh Det 15
56	I3-2	1	Veh Det 1
57	I3-3	21	Veh Det 21
58	I3-4	7	Veh Det 7
59	I3-5	27	Veh Det 27
60	I3-6	13	Veh Det 13
61	I3-7	28	Veh Det 28
62	I3-8	14	Veh Det 14
63	I4-5	4	Veh Det 4
64	I4-6	18	Veh Det 18
65	I4-7	10	Veh Det 10
66	I4-8	24	Veh Det 24
67	I5-1	130	Ped Call 2
68	I5-2	134	Ped Call 6
69	I5-3	132	Ped Call 4
70	I5-4	136	Ped Call 8
71	I5-5	200	Pre 3 In
72	I5-6	201	Pre 4 In
73	I5-7	202	Pre 5 In
74	I5-8	203	Pre 6 In
75	I6-1	189	Unused
76	I6-2	5	Veh Det 5
77	I6-3	19	Veh Det 19
78	I6-4	11	Veh Det 11
79	I6-5	25	Veh Det 25
80	I6-6	178	Int Advance
81	I6-7	208	Local Flash
82	I6-8	207	Comp StopTm

I/O OUTPU - 1.8.9.2.5

C-1 PIN	I/O Source	Function	Output Name
1	Logic Grd		
2	O1-1	14	Red Ch 14
3	O1-2	62	Grn Chan 14
4	O1-3	4	Red Ch 4
5	O1-4	28	Yel Chan 4
6	O1-5	52	Grn Chan 4
7	O1-6	3	Red Ch 3
8	O1-7	27	Yel Chan 3
9	O1-8	51	Grn Chan 3
10	O2-1	13	Red Ch 13
11	O2-2	61	Grn Chan 13
12	O2-3	2	Red Ch 2
13	O2-4	26	Yel Chan 2
14	Logic Grd		
15	O2-5	50	Grn Chan 2
16	O2-6	1	Red Ch 1
17	O2-7	25	Yel Chan 1
18	O2-8	49	Grn Chan 1
19	O3-1	16	Red Ch 16
20	O3-2	64	Grn Chan 16
21	O3-3	8	Red Ch 8
22	O3-4	32	Yel Chan 8
23	O3-5	56	Grn Chan 8
24	O3-6	7	Red Ch 7
25	O3-7	31	Yel Chan 7
26	O3-8	55	Grn Chan 7
27	O4-1	15	Red Ch 15
28	O4-2	63	Grn Chan 15
29	O4-3	6	Red Ch 6
30	O4-4	30	Yel Chan 6
31	O4-5	54	Grn Chan 6
32	O4-6	5	Red Ch 5
33	O4-7	29	Yel Chan 5
34	O4-8	53	Grn Chan 5
35	O5-1	37	Yel Chan 13
36	O5-2	39	Yel Chan 15
37	O5-3	38	Yel Chan 14
38	O5-4	40	Yel Chan 16
100	O5-5	42	Yel Chan 18
101	O5-6	41	Yel Chan 17
102	O5-7	115	Not Used
103	O5-8	114	Watchdog

C-1 PIN	I/O Source	Fu	
83	O6-1	18	Red Ch 18
84	O6-2	66	Grn Chan 18
85	O6-3	12	Red Ch 12
86	O6-4	36	Yel Chan 12
87	O6-5	60	Grn Chan 12
88	O6-6	11	Red Ch 11
89	O6-7	35	Yel Chan 11
90	O6-8	59	Grn Chan 11
91	O7-1	17	Red Ch 17
92	Logic Grd		
93	O7-2	65	Grn Chan 17
94	O7-3	10	Red Ch 10
95	O7-4	34	Yel Chan 10
96	O7-5	58	Grn Chan 10
97	O7-6	9	Red Ch 9
98	O7-7	33	Yel Chan 9
99	O7-8	57	Grn Chan 9
I/O Outputs - 1.8.9.2.5			
C-11 OUTPUTS			
1	O8-1	115	Not Used
2	O8-2	115	Not Used
3	O8-3	115	Not Used
4	O8-4	115	Not Used
I/O Inputs - 1.8.9.1.5			
C-11 INPUTS			
15	I7-1	33	Veh Det 33
16	I7-2	34	Veh Det 34
17	I7-3	35	Veh Det 35
18	I7-4	36	Veh Det 36
19	I7-5	37	Veh Det 37
20	I7-6	38	Veh Det 38
21	I7-7	39	Veh Det 39
22	I7-8	40	Veh Det 40
23	I8-1	41	Veh Det 41
24	I8-2	42	Veh Det 42
25	I8-3	43	Veh Det 43
26	I8-4	44	Veh Det 44
27	I8-5	189	Unused
28	I8-6	189	Unused
29	I8-7	189	Unused
30	I8-8	189	Unused

City of CLOVIS

ID: 293

NAME: MINNEWAWA @ SHEPHERD

Date Printed:
12/2/2019

Pag

ID NUMBER: C0293

LOCATION: MINNEWAWA and SHEPHERD

T. Barker
6/22/2020

CITY OF CLOVIS
332L CABINET
44 DETECTOR SETUP

	DETECTOR ASSIGNMENTS											ISOLATORS		
	NBLT	**SB INT**	**SBRT**	**SB NEAR**	**EBLT**	**WB INT**	**WBRT**	**WB NEAR**	**NBLT**			**West Leg**	**East Leg**	
I	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**	**I9**	**I10**	**I11**	**I12**	**I13**	**I14**
UPPER	**Ph 1** Call & Ext T2-1 & 2 C1-56 DET 1 RED LOCK FRONT	**Ph 2** Call & Ext T2-5 & 6 C1-39 DET 2 1.4	**Ph 2** Call & Ext T2-9 & 10 C1-63 DET 4 10.0 Sec	**Ph 2** Call & TP3 T4-1 & 2 C1-47 DET 6 Queue 20 2.0 FRONT	**Ph 3** Call & Ext T4-5 & 6 C1-58 DET 7 RED LOCK FRONT	**Ph 4** Call & Ext T4-9 & 10 C1-41 DET 8 1.5	**Ph 4** Call & Ext T6-1 & 2 C1-65 DET 10 10.0 Sec	**Ph 4** Call & TP3 T6-5 & 6 C1-49 DET 12 Queue 20 2.0 FRONT	**Ph 1** Call & Ext T6-9 & 10 C1-60 DET 13 RED LOCK 2nd & 3rd Loop	**Ph 2/4** Ext T10-5 & 6 C11-23 DET 41	**Ph 2** Call & Ext T8-1 C1-80 DET 29	**Ph 2** PED CALL T8-4 C1-67	**Ph 6** PED CALL T8-7 C1-68	**FLASH SENSE** T8-10 C1-81
LOWER	**Ph 1** Call & Ext T2-3 & 4 C11-15 DET 33 RED LOCK	**Ph 2** Call & Ext T2-7 & 8 C1-43 DET 3 0.0	**Ph 2** Call & Ext T2-11 & 12 C1-76 DET 5 RED LOCK 2.0	**Ph 2** Call & TP3 T4-3 & 4 C11-16 DET 34 Queue 20 2.0 BACK	**Ph 3** Call & Ext T4-7 & 8 C11-17 DET 35 RED LOCK	**Ph 4** Call & Ext T4-11 & 12 C1-45 DET 9 0.0	**Ph 4** Call & Ext T6-3 & 4 C1-78 DET 11 RED LOCK 2.0	**Ph 4** Call & TP3 T6-7 & 8 C11-18 DET 36 Queue 20 2.0 BACK	**Ph 3** Call & Ext T6- 11 & 12 C1-62 DET 14 RED LOCK 2nd & 3rd Loop	**Ph 2/4** Ext T10-7 & 8 C11-24 DET 42	**Ph 4** Call & Ext T8-2 C1-53 DET 30	**Ph 4** PED CALL T8-5 C1-69	**Ph 8** PED CALL T8-8 C1-70	**STOP TIME** T8-11 C1-82
		SB FAR	**SB BIKE**	**SB NEAR**		**WB FAR**	**WB BIKE**	**WB NEAR**	**EBLT**			**North Leg**	**South Leg**	

	SBLT	**NB INT**	**NBRT**	**NB NEAR**	**WBLT**	**EB INT**	**EBRT**	**EB NEAR**	**SBLT**			**SB**	**WB**	**UPS**
J	**J1**	**J2**	**J3**	**J4**	**J5**	**J6**	**J7**	**J8**	**J9**	**J10**	**J11**	**J12**	**J13**	**J14**
UPPER	**Ph 5** Call & Ext T3-1 & 2 C1-55 DET 15 RED LOCK FRONT	**Ph 6** Ext T3-5 & 6 C1-40 DET 16 1.2	**Ph 6** Call & Ext T3-9 & 10 C1-64 DET 18 10.0 Sec	**Ph 6** Call & TP3 T5-1 & 2 C1-48 DET 20 QUEUE 20 2.0 FRONT	**Ph 7** Call & Ext T5-5 & 6 C1-57 DET 21 RED LOCK FRONT	**Ph 8** Call & Ext T5- 9 & 10 C1-42 DET 22 1.4	**Ph 8** Call & Ext T7-1 & 2 C1-66 DET 24 10.0 Sec	**Ph 8** Call & TP3 T7- 5 & 6 C1-50 DET 26 QUEUE 20 2.0 #1 LANE	**Ph 5** Call & Ext T7- 9 & 10 C1-59 DET 27 RED LOCK 2nd & 3rd Loop	**Ph 6/8** Ext T10-9 & 10 C11-25 DET 43	**Ph 6** Call & Ext T9-1 C1-54 DET 31	**PH 2 & 5** **EVA** **Preempt** T9-4 C1 - 71	**PH 4 & 7** **EVB** **Preempt** T9-5 C1 - 72	**LOW BATT** **RAILROAD 1** T9-10 C1-51
LOWER	**Ph 5** Call & Ext T3-3 & 4 C11-19 DET 37 RED LOCK	**Ph 6** Call & Ext T3-7 & 8 C1-44 DET 17 0.7	**Ph 6** Call & Ext T3-11 & 12 C1-77 DET 19 RED LOCK 2.0	**Ph 6** Call & TP3 T5-3 & 4 C11-20 DET 38 QUEUE 20 2.0 BACK	**Ph 7** Call & Ext T5-7 & 8 C11-21 DET 39 RED LOCK	**Ph 8** Call & Ext T5-11 & 12 C1-46 DET 23 0.1	**Ph 8** Call & TP3 T7- 3 & 4 C1-79 DET 25 QUEUE 20 2.0 BACK	**Ph 8** Call & TP3 T7- 7 & 8 C11-22 DET 40 QUEUE 20 2.0 #2 LANE	**Ph 7** Call & Ext T7-11 & 12 C1-61 DET 28 RED LOCK 2nd & 3rd Loop	**Ph 6/8** Ext T10-11 & 12 C11-26 DET 44	**Ph 8** Call & Ext T9-2 C1-75 DET 32	**PH 6 & 1** **EVC** **Preempt** T9-7 C1 - 73	**PH 8** **EVD** **Preempt** T9-8 C1 - 74	**RAILROAD 2** T9-11 C1-52
		NB FAR	**BIKE LANE**	**NB NEAR**		**EB FAR**	**EB NEAR**	**EB NEAR**	**WBLT**			**NB**	**EB**	

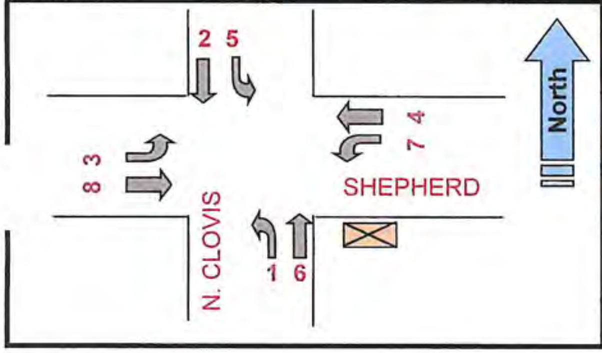
COMMENTS:

DET #16 (NB INT) - Extend only due to northbound traffic exiting Serena Avenue crossing over the detection zone. "CALL" removed.
DET #19 (NB BIKE LANE) - Just added by CIP 18-08 Minnewawa Street Improvement Project.

▨	222 Loop Amplifier
🟥	764 Discriminator
🟨	242 Isolator

AGENDA ITEM NO. 6.

Movement	NL	ST	EL	WT	SL	NT	WL	ET
Times [1.1.1]	1	2	3	4	5	6	7	8
Min Green	10	10	10	10	10	10	10	10
Gap, Ext	2	6.6	2	4.1	2	5.1	2	4.1
Max 1	30	40	30	40	30	40	30	40
Max 2								
Yel Clearance	3.6	4.7	3.6	5	3.6	4.7	3.6	5
Red Clearance	2	1	2	1	2	1	2	1
Walk		7		7		7		7
Ped Clearance		26		26		26		26
Red Revert	1	1	1	1	1	1	1	1
Add Initial								
Max Initial								
Time B4 Reduct		20		20		20		20
Cars B4 Reduct								
Time To Reduce		10		10		10		10
Reduce By								
Min Gap	2	4.6	2	2.6	2	3.5	2	2.6
DyMaxLim	36	46	36	46	36	46	36	46
Max Step	6	6	6	6	6	6	6	6
Options [1.1.2]	1	2	3	4	5	6	7	8
Enable	X	X	X	X	X	X	X	X
Min Recall								
Max Recall								
Ped Recall								
Soft Recall		X				X		
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		X		X		X		X
Enable Simul Gap	X	X	X	X	X	X	X	X
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								



Phase Options+ [1.1.3]

Options+	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
SkipRed-NoCall								
Red Rest								
Max II								
*Max III								
Max Inhibit								
Ped Delay								
Red Rest on Gap								
Conflicting Phase								
Grn/Ped Delay								
Omit Yel, Yel P								
Ped Out/Olp Ped								
StartYel, Next P								
*StartupVehCall	1	2	3	4	5	6	7	8
*StartupPedCall								

Phase Concurrency [1.1.4]

Phase	Ring	StartUp	Concurrent Phases			
1	1	RED	5	6	0	0
2	1	RED	5	6	0	0
3	1	RED	7	8	0	0
4	1	GREEN	7	8	0	0
5	2	RED	1	2	0	0
6	2	RED	1	2	0	0
7	2	RED	3	4	0	0
8	2	GREEN	3	4	0	0
9	0	RED	0	0	0	0
10	0	RED	0	0	0	0
11	0	RED	0	0	0	0
12	0	RED	0	0	0	0

Comm Ports [6.6]

Channel	Port	Echo	Mode
Async 1	SP1	NONE	0
Async 2	SP2	NONE	0
Async 3	SP8	NONE	0
Async 4	OFF	NONE	0
Sync 1	SP5S		
Sync 2	OFF		
TS2CVM	NONE		
Opticom	NONE		
GPS	NONE		

Unit Params [1.2.1]

Screen Size	8	**Metric**	OFF
Startup Flash	0	Red Revert	1
MCE Timeout	0	Auto Ped Clear	OFF
Loc Flsh Start	RSt	Display Time	30
Yellow < 3"	OFF	Tone Disable	ON
Allow Skip Yel	OFF	AudioPedTime	OFF
Start Red Tm	6	**Phase Mode**	STD8
*Startup Calls	UsePrg	CNA FreeTime	0
TOD Dimming	OFF	Diamond Mode	4Ph
ST over Prmpt	OFF	Free Ring Seq	1
Feature Profile	1	IO Mode	USER
Mx Seek TrkTm	0	Max Cyc Timer	0
Mx Seek Dwell	0	CycFlt Actn	ALARM
Prmpt/Ext Coor	EXT	Clrnc Decide	OFF
Aux Switch	STOPTM	LPAlt Srs	OFF
*InhFYA Red St	Off	*SecurityDelay	0

* - 76.12B or newer

Times+ [1.1.7]

	1	2	3	4	5	6	7	8
Walk2	0	0	0	0	0	0	0	0
BikeClr	0	0	0	0	0	0	0	0
GrnFlash	0	0	0	0	0	0	0	0
SfClrMn	0	0	0	0	0	0	0	0
SfClrNoFlsh	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Comm [6.2]

Port	Baud Rate	FCM
1	9600	6
2	9600	6
3	1200	0
4	1200	0

Comm [6.5]

					Host IPs			
IP Address:	10	128	1	57	ATMS			
Mask:	255	255	255	0	172	26	17	230
Gateway:	10	128	1	254	SG			
Port #:	5057				0	0	0	0

Phase Seq. (2 ring) Chart [1.2.4]

Seq #	Ring	Phases					
1	1	1	2	3	4	0	0
	2	5	6	7	8	0	0
2	1	1	2	3	4	0	0
	2	6	5	7	8	0	0
3	1	2	1	3	4	0	0
	2	5	6	7	8	0	0
4	1	2	1	3	4	0	0
	2	6	5	7	8	[illegible]	0
5	1	1	2	3	4	0	0
	2	5	6	8	7	0	0
6	1	1	2	3	4	0	0
	2	6	5	8	7	0	0
7	1	2	1	3	4	0	0
	2	5	6	8	7	0	0
8	1	2	1	3	4	0	0
	2	6	5	8	7	0	0
9	1	1	2	4	3	0	0
	2	5	6	7	8	0	0
10	1	1	2	4	3	0	0
	2	6	5	7	8	0	0
11	1	2	1	4	3	0	0
	2	5	6	7	8	0	0
12	1	2	1	4	3	0	0
	2	6	5	7	8	0	0
13	1	1	2	4	3	0	0
	2	5	6	8	7	[illegible]	0
14	1	1	2	4	3	[illegible]	0
	2	6	5	8	7	0	0
15	1	2	1	4	3	0	0
	2	5	6	8	7	0	0
16	1	2	1	4	3	0	0
	2	6	5	8	7	0	0

Advance Warning [1.1.9]

	Ph	Tm
Aux Out #1	0	0
Aux Out #2	0	0

NAME:	CLOVIS @ SHEPHERD	**ID:** C 0298	**Configuration:** Standard File
Prepared by:		**Date Installed / By:**	6/10/2021
Checked by:		**Date Superseded:**	

V76.15.9 (z)
ATMS 1.5.45.263

Date Printed:
6/11/21

Page

Intersection Name: **CLOVIS @ SHEPHERD**

ID: **C 0298**

[2.1] Coord Modes+

Test OpMode	0
Correction	LONG
Maximum	MAX INH
Force Mode	FIXED
Flash Mode	CHANNEL

Coord Modes+ (Page 2)

FreeonSeqCh	ON	
Closed Loop	OFF	
External	OFF	
Latch Sec Frc	OFF	
Stop-in-Walk	OFF	
Ped Recycle	P1256_INH	
Expand Splt	OFF	
Easy Float	OFF	
Auto Reset	ON	
NTCIP Yield	+	0
Leave Walk		
Before	TIMED	
After	TIMED	

[2.4] Patterns

Pat#	Cyc	Off	Split	Seq
1	0	0	1	1
2	0	0	2	1
3	0	0	3	1
4	0	0	4	1
5	0	0	5	1
6	0	0	6	1
7		0	7	1
8	0	0	8	1
9	0	0	9	1
10	0	0	10	1
30	0	0	0	1
31	0	0	0	1
32	0	0	0	1

[2.7.1-24] Splits

Split	[2.7]	1	2	3	4	5	6	7	8
1	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
2	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
3	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
4	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
5	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
6	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
7	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
8	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
9	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
10	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
30	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
31	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
32	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON

[2.5] Transition

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	Ret Hold	Flt	Veh	Ped	FRC MODE
1	10	17	0	0	0	0	0	0	EndGRN	-	-	-	-	
2	10	17	0	0	0	0	0	0	EndGRN	-	-	-	-	
3	10	17	0	0	0	0	0	0	EndGRN	-	-	-	-	
4	10	17	0	0	0	0	0	0	EndGRN	-	-	-	-	
5	10	17	0	0	0	0	0	0	EndGRN	-	-	-	-	
6	10	17	0	0	0	0	0	0	EndGRN	-	-	-	-	
7	10	17	0	0	0	0	0	0	EndGRN	-	-	-	-	
8	10	17	0	0	0	0	0	0	EndGRN	-	-	-	-	
9	10	17	0	0	0	0	0	0	BegGRN	-	-	-	-	
10	10	17	0	0	0	0	0	0	BegGRN	-	-	-	-	
30		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
31		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
32		17	0	0	0	0	0	0	BegGRN	-	-	-	-	

Date Printed:
6/8/2021

AGENDA ITEM NO. 6.

Overlap 1-8 Program Parms & Parm+ [1.5.2.1] [1.5.2.8]

	Included Ø									NORMAL	
1	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
A	Conflict Olap									Red	1.5
	Conflict Ped									LG	
	Included Ø									NORMAL	
2	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
B	Conflict Olap									Red	1.5
	Conflict Ped									LG	
	Included Ø									NORMAL	
3	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
C	Conflict Olap									Red	1.5
	Conflict Ped									LG	
	Included Ø									NORMAL	
4	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
D	Conflict Olap									Red	1.5
	Conflict Ped									LG	
	Included Ø									NORMAL	
5	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
E	Conflict Olap									Red	1.5
	Conflict Ped									LG	
	Included Ø									NORMAL	
6	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
F	Conflict Olap									Red	1.5
	Conflict Ped									LG	
	Included Ø									NORMAL	
7	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
G	Conflict Olap									Red	1.5
	Conflict Ped									LG	
	Included Ø									NORMAL	
8	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
H	Conflict Olap									Red	1.5
	Conflict Ped									LG	

Preemption Options+ [3.Pre #.6]

Pre #	Enable	Type	Output	Pattern	Skip	Co+Pre	Flash	Max/Min
1	ON	RAIL	TS2		OFF	OFF	OFF	MAX
2	OFF	EMERG	TS2		OFF	OFF	OFF	MAX
3	ON	EMERG	TS2		OFF	OFF	OFF	MAX
4	ON	EMERG	TS2		OFF	OFF	OFF	MAX
5	ON	EMERG	TS2		OFF	OFF	OFF	MAX
6	ON	EMERG	TS2		OFF	OFF	OFF	MAX

Preemption Times [3.#.1]

Pre #	Delay	MinDura	MaxPres	MinGrn	MinWlk	PedClr	Track Grn	Min Dwell
1								
2								
3			60		4	22		
4			60		4	22		
5			60		4	22		
6			60		4	22		

Preemption, Options [3.#.3]

Pre #	Lock Input	Over-ride Auto Flash	Over-ride Higher Preempt#	Flash Dwell	Link
1	ON	ON	OFF	ON	
2	OFF	ON	OFF	OFF	
3	OFF	OFF	OFF	OFF	
4	OFF	OFF	OFF	OFF	
5	OFF	OFF	OFF	OFF	
6	OFF	OFF	OFF	OFF	

Preemption, Times+ [3.#.4]

Pre No.	Extend Dwell	Return Max	Ped Clr	Yel	Red
1					
2					
3					
4					
5					
6					

Pre 1 = RR1
Pre 2 = RR2
Pre 3 = EVA
Pre 4 = EVB
Pre 5 = EVC
Pre 6 = EVD

Phases [3.#.2] - set the Dwell Phases

Pre #	Column	1	2	3	4	5	6	7	8	9	10
1	Dwell Veh										
	Peds										
2	Dwell Veh										
	Peds										
3	Dwell Veh	2	5								
	Peds										
4	Dwell Veh	4	7								
	Peds										
5	Dwell Veh	1	6								
	Peds										
6	Dwell Veh	3	8								
	Peds										

Phases [3.#.2] - Trk Veh

Pre #	Phases			
1				
2				
3				
4				
5				
6				

Exit Phases [3.#.2]

No.	Exit Phase			
1	4	8		
2				
3	2	6		
4	4	8		
5	2	6		
6	4	8		

Overlaps+ [3.#.5]

Pre #		Preempt Overlaps +									
1	Track										
	Dwell										
2	Track										
	Dwell										
3	Track										
	Dwell										
4	Track										
	Dwell										
5	Track										
	Dwell										
6	Track										
	Dwell										

Low Priority Preempts [3.X; where X = 7 thru 10]

						Times							
Pre #	Enb	C+P	Lock	NoSkip	Qjump	Alt Tbl	Min	Max	Lock	Priorty Phases			
7	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
8	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
9	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
10	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0

Advance Times [3.x.8]

	1	2	3	4	5	6
YelChng	0	0	0	0	0	0
RedClr	0	0	0	0	0	0
TrkYelChng	0	0	0	0	0	0
TrkRedClr	0	0	0	0	0	0

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	EXT
Max Seek Track Time	0
Max Seek Dwell Time	0

Channel Parameters [1.8.3]

Pre Invert Rail Input	OFF

OLP GENERAL PARAMETERS [1.5.1]

Lock Inhibit	OFF
Conflict Lock Enable	OFF
Parent P Clearance	OFF
Xtra Incl Phases	OFF
InhibitLockInterval	Always

PREEMPTION NOTE: Each preemption has it's own set of menus. To access each menu :

a. Press "3" for preemption

b. Then enter "Preempt number" (1 through 6 and shown as "#" in Schedules above)

c. Then enter "number of Menu item" you want to access (*1-Times, 2-Phases, 3-Options, 4-Times+, 5-Overlaps+ or 6-Options+*)

d. Once in an above menu push Escape once to go back to main preempton menu.

Name: CLOVIS @ SHEPHERI

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P

CHANNEL SETTINGS [1.8] plus UNIT PARAMETERS [1.2.1]

CHANNEL SETTINGS [1.8.1] / Chan Settings [1.8.2]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	1	3	5	7				
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	PED	PED	PED	PED	VEH	VEH	VEH	VEH
Channel Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz		X		X		X		X																
	Page 1								Page 2															

CHANNEL PARMETERS [1.8.3]

CH 17-24 Mapping:	DEFAULT
D-Conn Mapping:	NONE
Invert Rail Inputs:	OFF
C1-C11-ABC IO Mode:	USER

CHANNELS+ [1.8.4]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flash Red	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flash Yellow	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Inh Red Fl in Preempt	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Olap Ovrd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

IO PARAMETERS [1.8.6]

C1-C11-ABC IO Mode:	USER
D-Conn Mapping:	NONE
T & F BIU Mapping	DEFAULT
Invert Rail Inputs:	OFF
EVP Ped Confirm	OFF

CITY OF CLOVIS CALIFORNIA

I/O LOGIC [1.8.7]

Row#	Result		Function			OP	Function			OP	Function			OP	Timer	
	I/O	Fcn	Inv	I/0	Fcn	Logic	Inv	I/0	Fcn	Logic	Inv	I/0	Fcn	Logic	Dly	Sec
1	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
2	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
3	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
4	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
5	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
6	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
7	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
8	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
9	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
10	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0

Ped Parms (MM>5>4)

Det#	Call	No Act	Max Pres	Err Cnt
1	0	0	0	0
2	2	0	5	0
3	0	0	0	0
4	4	0	5	0
5	0	0	0	0
6	6	0	5	0
7	0	0	0	0
8	8	0	5	0

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Veh Par 1-32 [5.1]

Det #	Input Slot	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	1I1U	1					0	0	0	2
2	2I2U	2			3.6		0	0	0	2
3	2I2L	2			2		0	0	0	2
4	2I3U	2			2	21	0	0	0	2
5	2I3L	2		10			0	0	0	2
6	2I4U	2			2	21	0	0	0	2
7	3I5U	3					0	0	0	2
8	4I6U	4			1.4		0	0	0	2
9	4I6L	4			1.1		0	0	0	2
10	4I7U	4			2	21	0	0	0	2
11	4I7L	4			5.6		0	0	0	2
12	4I8U	4			2	21	0	0	0	2
13	1I9U	1					0	0	0	2
14	3I9L	3					0	0	0	2
15	5J1U	5					0	0	0	2
16	6J2U	6			1.6		0	0	0	2
17	6J2L	6					0	0	0	2
18	6J3U	6			2	21	0	0	0	2
19	6J3L	6		10			0	0	0	2
20	6J4U	6			2	21	0	0	0	2
21	7J5U	7					0	0	0	2
22	8J6U	8			1.4		0	0	0	2
23	8J6L	8			1.1		0	0	0	2
24	8J7U	8			2	21	0	0	0	2
25	8J7L	8		10			0	0	0	2
26	8J8U	8			2	21	0	0	0	2
27	5J9U	5					0	0	0	2
28	7J9L	7					0	0	0	2
29	2I11U						0	0	0	0
30	4I11L						0	0	0	0
31	6J11U						0	0	0	0
32	8J11L						0	0	0	0
33	1I1L						0	0	0	0
34	2I4L						0	0	0	0
35	3I5L						0	0	0	0
36	4I8L						0	0	0	0
37	5J1L						0	0	0	0
38	6J4L						0	0	0	0
39	7J5L						0	0	0	0
40	8J8L						0	0	0	0
41	4I10U						0	0	0	0
42	4I10L						0	0	0	0
43	8J10U						0	0	0	0
44	8J10L						0	0	0	0

Vehicle Options 1-32 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	X	X	-	-	X	-	-	X
2	X	X	-	-	X	-	-	X
3	X	X	-	-	-	-	X	-
4	X	-	X	-	-	-	-	-
5	X	X	-	-	-	-	-	X
6	X	-	X	-	-	-	-	X
7	X	X	-	-	X	-	-	X
8	X	X	-	-	-	-	-	-
9	X	X	-	-	-	-	X	-
10	X	-	X	-	-	-	-	-
11	X	X	-	-	X	-	-	X
12	X	-	X	-	-	-	-	X
13	X	X	-	-	X	-	-	-
14	X	X	-	-	X	-	-	-
15	X	X	-	-	X	-	-	X
16	X	X	-	-	-	-	-	-
17	X	X	-	-	-	-	X	-
18	X	-	X	-	-	-	-	-
19	X	X	-	-	-	-	-	X
20	X	-	X	-	-	-	-	X
21	X	X	-	-	X	-	-	X
22	X	X	-	-	-	-	-	-
23	X	X	-	-	-	-	X	-
24	X	-	X	-	-	-	-	-
25	X	X	-	-	-	-	-	X
26	X	-	X	-	-	-	-	X
27	X	X	-	-	X	-	-	-
28	X	X	-	-	X	-	-	-
29	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-

Parameters+ 1-32 [5.3]

Det	Occupancy			Delay		Type	Src			t
#	G	Y	R	1	2			Dir	Type	#
1	X	X	-			NORM		NBLT1&2	Loop	1
2	X	X	-			NORM		SB BIKE	Loop	2
3	X	X	-			NORM		SB FAR	Loop	3
4	X	X	-			NORM		SB NEAR	Loop	4
5	X	X	-			NORM		SBRT	Loop	5
6	X	X	-			NORM		SB CT1&2	Loop	6
7	X	X	-			NORM		EBLT1&2	Loop	7
8	X	X	-			NORM		WB INT	Loop	8
9	X	X	-			NORM		WB FAR	Loop	9
10	X	X	-			NORM		WB NEAR	Mag	10
11	X	X	-			NORM		WB BIKE	Mag	11
12	X	X	-			NORM		WB CT1&2	Loop	12
13	X	X	-			NORM		NBLT BACK	Loop	
14	X	X	-			NORM		EBLT BACK	Loop	14
15	X	X	-			NORM		SBLT1&2	Loop	15
16	X	X	-			NORM		NB INT	Loop	16
17	X	X	-			NORM		NB FAR	Loop	17
18	X	X	-			NORM		NB NEAR	Loop	18
19	X	X	-			NORM		NBRT	Loop	19
20	X	X	-			NORM		NB CT1&2	Loop	20
21	X	X	-			NORM		WBLT1&2	Loop	21
22	X	X	-			NORM		EB INT	Loop	22
23	X	X	-			NORM		EB FAR	Loop	23
24	X	X	-			NORM		EB NEAR	Loop	24
25	X	X	-			NORM		EBRT	Loop	25
26	X	X	-			NORM		EB CT1&2	Loop	26
27	X	X	-			NORM		SBLT BACK	Loop	27
28	X	X	-			NORM		WBLT BACK	Loop	28
29	-	-	-			NORM				29
30	-	-	-			NORM				30
31	-	-	-			NORM				
32	-	-	-			NORM				32
33	-	-	-			NORM				33
34	-	-	-			NORM				34
35	-	-	-			NORM				35
36	-	-	-			NORM				36
37	-	-	-			NORM				37
38	-	-	-			NORM				38
39	-	-	-			NORM				39
40	-	-	-			NORM				40
41	-	-	-			NORM				41
42	-	-	-			NORM				42
43	-	-	-			NORM				43
44	-	-	-			NORM				44

ID: C 0298 **Name:** CLOVIS @ SHEPHERD

Vol/Occ Period 0 Seconds 5 Minutes

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AGENDA ITEM NO. 6.

Alt# 1 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Min Grn		0		0		0		0
Gap, Ext		0		0		0		0
Max 1		0		0		0		0
Max 2		0		0		0		0
Yel Clr		0		0		0		0
Red Clr		0		0		0		0
Walk		0		0		0		0
Ped Clr		0		0		0		0

Alt# 2 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Min Grn		0		0		0		0
Gap, Ext		0		0		0		0
Max 1		0		0		0		0
Max 2		0		0		0		0
Yel Clr		0		0		0		0
Red Clr		0		0		0		0
Walk		0		0		0		0
Ped Clr		0		0		0		0

Alt# 3 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Min Grn		0		0		0		0
Gap, Ext		0		0		0		0
Max 1		0		0		0		0
Max 2		0		0		0		0
Yel Clr		0		0		0		0
Red Clr		0		0		0		0
Walk		0		0		0		0
Ped Clr		0		0		0		0

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø	1	2	3	4	5	6	7	8
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Guar Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0
Conflicting Ø2		0		0		0		0

Alt# 2 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø	1	2	3	4	5	6	7	8
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0
Conflicting Ø2		0		0		0		0

Alt# 3 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø	1	2	3	4	5	6	7	8
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0
Conflicting Ø2		0		0		0		0

Alt# 4 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø	1	2	3	4	5	6	7	8
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	X	X	X	X	X	X	X	X
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0
Conflicting Ø2		0		0		0		0

Alternate Tables [2.6]

Pat#	POpt	PTime	DetGrp	Call/Inh	Olp Off											
					1	2	3	4	5	6	7	8				
1	0		0	0									0	Off		DFT
2													0	Off		DFT
3	0	0	0	0									0	Off		DFT
4	4												0	Off		DFT
5	0	0	0	0									0	Off		DFT
6													0	Off		DFT
7	0	0	0	0									0	Off		DFT
8													0	Off		DFT
9	0	0	0	0									0	Off		DFT
10													0	Off		DFT
11	0	0	0	0									0	Off		DFT
12													0	Off		DFT
13	0	0	0	0									0	Off		DFT
14													0	Off		DFT
15	0	0	0	0									0	Off		DFT
16													0	Off		DFT
17	0	0	0	0									0	Off		DFT
18													0	Off		DFT
19	0	0	0	0									0	Off		DFT
20													0	Off		DFT
21	0	0	0	0									0	Off		DFT
22													0	Off		DFT
23	0	0	0	0									0	Off		DFT
24													0	Off		DFT

Time Base Parameters [4.6]

Daylight Savings Time	ENABLE	
Time Base Sync Ref	0	
GMT Offset	+	0
Daylight Savings	**Mon**	**Week**
Spring	3	2
Fall	11	1

NAME: **CLOVIS @ SHEPHERD**

6/8/2021

ID: **C 0298**

Annual Schedule [4.3]

	Month												Day of Week							Date																																				
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Plan	To
1	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	0
2	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	0
3	X	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	0
4																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0
5																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	0
6																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0
7																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	0
8																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	0
9																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	0
10																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	0
11																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	0
12																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	0

DAY PLANS [4.4]

Plan 1				Plan 2				Plan 3				Plan 4				Plan 5				Plan 6			
Evt	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hr	Min	Act	*Evt*	Hour	Min	Act
1			4	1			4	1			4	1				1				1	0	0	0
2	5	30	54	2	5	30	4	2	5	30	4	2				2				2	0	0	0
3	6	30	54	3	6	30	54	3	6	30	54	3				3				3	0	0	0
4	9		54	4	9		54	4	7		54	4				4				4	0	0	0
5	14	45	54	5	14	45	54	5	14	45	54	5				5				5	0	0	0
6	19	30	54	6	19	45	4	6	19	45	4	6				6				6	0	0	0
7	21	30	4	7	21	30	4	7	21	30	4	7				7				7	0	0	0
8				8				8				8				8				8	0	0	0

Plan 7				Plan 8				Plan 9				Plan 10				Plan 11				Plan 12			
Evt	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hr	Min	Act	*Evt*	Hour	Min	Act
1				1				1				1				1				1	0	0	0
2				2				2				2				2				2	0	0	0
3				3				3				3				3				3	0	0	0
4				4				4				4				4				4	0	0	0
5				5				5				5				5				5	0	0	0
6				6				6				6				6				6	0	0	0
7				7				7				7				7				7	0	0	0
8				8				8				8				8				8	0	0	0

Comments:

Minute Table [4.5]

Act	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8	P1	P2
1	1	-	-	-	-	-	-	-	-	-	-	-	0	0
2	2	-	-	-	-	-	-	-	-	-	-	-	0	0
3	3	-	-	-	-	-	-	-	-	-	-	-	0	0
4	4	-	-	-	-	-	-	-	-	-	-	-	0	0
5	5	-	-	-	-	-	-	-	-	-	-	-	0	0
6	6	-	-	-	-	-	-	-	-	-	-	-	0	0
7	7	-	-	-	-	-	-	-	-	-	-	-	0	0
8	8	-	-	-	-	-	-	-	-	-	-	-	0	0
9	9	-	-	-	-	-	-	-	-	-	-	-	0	0
10	10	-	-	-	-	-	-	-	-	-	-	-	0	0
11	0	-	-	-	-	-	-	-	-	-	-	-	0	0
12	0	-	-	-	-	-	-	-	-	-	-	-	0	0
13	0	-	-	-	-	-	-	-	-	-	-	-	0	0
14	0	-	-	-	-	-	-	-	-	-	-	-	0	0
15	0	-	-	-	-	-	-	-	-	-	-	-	0	0
16	0	-	-	-	-	-	-	-	-	-	-	-	0	0
54	254	-	-	-	-	-	-	-	-	-	-	-	0	0
55	255	-	-	-	-	-	-	-	-	-	-	-	0	0

Name: CLOVIS @ SHEPHERD

ID: C 0298

Date Printed:
6/11/2021

AGENDA ITEM NO. 6.

#	Alarm	Ev	Alr
1	Power Up Alarm.	X	X
2	Stop Timing	X	X
3	Cabinet Door Activation	-	-
4	Coordination Failure	X	X
5	External Alarm # 1	-	-
6	External Alarm # 2	-	-
7	External Alarm # 3	-	-
8	External Alarm # 4	-	-
9	Closed Loop Disabled	-	-
10	External Alarm # 5	-	-
11	External Alarm # 6	-	-
12	Manual Control Enable	X	X
13	Coord Free Input	-	-
14	Local Flash Input	X	X
15	CMU/MMU Flash Input	-	-
16	MMU Fault	-	-
17	Cycle Fault	X	X
18	Cycle Failure	X	X
19	Coordination Fault	X	X
20	Controller Fault	X	X
21	Detector SDLC Fault	-	-
22	MMU SDLC Fault	-	-
23	Critical SDLC Fault	-	-
24	SDLC Res. Frame Fault	-	-
25	EEPROM CRC Fault	X	X
26	Detector Diagnostic Fault	-	-
27	Detector Fault from SDLC	-	-
28	Queue detector alarm	-	-
29	Ped Fault	-	-
30	Coord Diagnostic Fault	X	X
37	Download Request	X	X
38	Pattern Change	-	-
49	Preempt 1 Input	X	X
50	Preempt 2 Input	-	-
51	Preempt 3 Input	X	X
52	Preempt 4 Input	X	X
53	Preempt 5 Input	X	X
54	Preempt 6 Input	X	X
55	Preempt 7 Input	-	-
56	Preempt 8 Input	-	-
57	Preempt 9 Input	-	-
58	Preempt 10 Input	-	-
59	EEPROM Compare Fault	-	-
60	Coordination Failure	X	X
73	Controller Access	X	X
81	FIO Changed Status	X	X

Call Phases[1.1.5]

Ø	Phases Called By Ø			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1	0					1								
2	0					2								
3	0					3								
4	0					4								
5	0					5								
6	0					6								
7	0					7								
8	0					8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø					From	To	From	To	From	To	From	To
1	0					1								
2	0					2								
3	0					3								
4	0					4								
5	0					5								
6	0					6								
7	0					7								
8	0					8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alarm Parameters [1.6.7.1]

Pattern Events:	ON
Local Txmt Alarms:	OFF
Reassign User Alarm #1 In (5):	0
Reassign User Alarm #2 In (6):	0
Preempt Events:	ON

Date Printed
6/8/2021

ID: C 0298 **Name:** CLOVIS @ SHEPHERD

I/O Inputs - 1.8.9.1.5

C-1 PIN	I/O Source	Function	Input Name
39	I1-1	2	Veh Det 2
40	I1-2	16	Veh Det 16
41	I1-3	8	Veh Det 8
42	I1-4	22	Veh Det 22
43	I1-5	3	Veh Det 3
44	I1-6	17	Veh Det 17
45	I1-7	9	Veh Det 9
46	I1-8	23	Veh Det 23
47	I2-1	6	Veh Det 6
48	I2-2	20	Veh Det 20
49	I2-3	12	Veh Det 12
50	I2-4	26	Veh Det 26
51	I2-5	198	Pre 1 In
52	I2-6	199	Pre 2 In
53	I2-7	189	Unused
54	I2-8	189	Unused
55	I3-1	15	Veh Det 15
56	I3-2	1	Veh Det 1
57	I3-3	21	Veh Det 21
58	I3-4	7	Veh Det 7
59	I3-5	27	Veh Det 27
60	I3-6	13	Veh Det 13
61	I3-7	28	Veh Det 28
62	I3-8	14	Veh Det 14
63	I4-5	4	Veh Det 4
64	I4-6	18	Veh Det 18
65	I4-7	10	Veh Det 10
66	I4-8	24	Veh Det 24
67	I5-1	130	Ped Call 2
68	I5-2	134	Ped Call 6
69	I5-3	132	Ped Call 4
70	I5-4	136	Ped Call 8
71	I5-5	200	Pre 3 In
72	I5-6	201	Pre 4 In
73	I5-7	202	Pre 5 In
74	I5-8	203	Pre 6 In
75	I6-1	189	Unused
76	I6-2	5	Veh Det 5
77	I6-3	19	Veh Det 19
78	I6-4	11	Veh Det 11
79	I6-5	25	Veh Det 25
80	I6-6	178	Int Advance
81	I6-7	208	Local Flash
82	I6-8	207	Comp StopTm

I/O OUTPU - 1.8.9.2.5

C-1 PIN	I/O Source	Function	Output Name
1	Logic Grd		
2	O1-1	14	Red Ch 14
3	O1-2	62	Grn Chan 14
4	O1-3	4	Red Ch 4
5	O1-4	28	Yel Chan 4
6	O1-5	52	Grn Chan 4
7	O1-6	3	Red Ch 3
8	O1-7	27	Yel Chan 3
9	O1-8	51	Grn Chan 3
10	O2-1	13	Red Ch 13
11	O2-2	61	Grn Chan 13
12	O2-3	2	Red Ch 2
13	O2-4	26	Yel Chan 2
14	Logic Grd		
15	O2-5	50	Grn Chan 2
16	O2-6	1	Red Ch 1
17	O2-7	25	Yel Chan 1
18	O2-8	49	Grn Chan 1
19	O3-1	16	Red Ch 16
20	O3-2	64	Grn Chan 16
21	O3-3	8	Red Ch 8
22	O3-4	32	Yel Chan 8
23	O3-5	56	Grn Chan 8
24	O3-6	7	Red Ch 7
25	O3-7	31	Yel Chan 7
26	O3-8	55	Grn Chan 7
27	O4-1	15	Red Ch 15
28	O4-2	63	Grn Chan 15
29	O4-3	6	Red Ch 6
30	O4-4	30	Yel Chan 6
31	O4-5	54	Grn Chan 6
32	O4-6	5	Red Ch 5
33	O4-7	29	Yel Chan 5
34	O4-8	53	Grn Chan 5
35	O5-1	37	Yel Chan 13
36	O5-2	39	Yel Chan 15
37	O5-3	38	Yel Chan 14
38	O5-4	40	Yel Chan 16
100	O5-5	42	Yel Chan 18
101	O5-6	41	Yel Chan 17
102	O5-7	115	Not Used
103	O5-8	114	Watchdog

C-1 PIN	I/O Source	Function	Output Name
83	O6-1	18	Red Ch 18
84	O6-2	66	Grn Chan 18
85	O6-3	12	Red Ch 12
86	O6-4	36	Yel Chan 12
87	O6-5	60	Grn Chan 12
88	O6-6	11	Red Ch 11
89	O6-7	35	Yel Chan 11
90	O6-8	59	Grn Chan 11
91	O7-1	17	Red Ch 17
92	Logic Grd		
93	O7-2	65	Grn Chan 17
94	O7-3	10	Red Ch 10
95	O7-4	34	Yel Chan 10
96	O7-5	58	Grn Chan 10
97	O7-6	9	Red Ch 9
98	O7-7	33	Yel Chan 9
99	O7-8	57	Grn Chan 9

I/O Outputs - 1.8.9.2.5

C-11 OUTPUTS

1	O8-1	115	Not Used
2	O8-2	115	Not Used
3	O8-3	115	Not Used
4	O8-4	115	Not Used

I/O Inputs - 1.8.9.1.5

C-11 INPUTS

15	I7-1	192	Alarm 1
16	I7-2	193	Alarm 2
17	I7-3	194	Alarm 3
18	I7-4	195	Alarm 4
19	I7-5	196	Alarm 5
20	I7-6	197	Alarm 6
21	I7-7	189	Unused
22	I7-8	189	Unused
23	I8-1	189	Unused
24	I8-2	189	Unused
25	I8-3	189	Unused
26	I8-4	189	Unused
27	I8-5	189	Unused
28	I8-6	189	Unused
29	I8-7	189	Unused
30	I8-8	189	Unused

ID: C 0298

NAME: CLOVIS @ SHEPHERD

Date Printed:
6/8/2021

Page

ID NUMBER: **C 0298**

LOCATION: CLOVIS and SHEPHERD

T.Barker
6/6/2021

CITY OF CLOVIS
332 CABINET
28 DETECTOR SETUP

	DETECTOR ASSIGNMENTS											ISOLATORS		
	NBLT-1-CT	SB BIKE	SB NEAR	SB-1-CT	EBLT-1-CT	WB INT	WB NEAR	WB-1-CT	NBLT			SOUTH LEG	NORTH LEG	
I	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	I14
UPPER	Ph 1 Call & Ext T2-1 & 2 C1-56 DET 1 TYPE "D" Front Loop	Ph 2 Call & Ext T2-5 & 6 C1-39 DET 2 3.6 MINI "E" Front Loop	Ph 2 Call & QUE T2-9 & 10 C1-63 DET 4 2.0 TYPE "E" Back Loops	Ph 2 Call & QUE T4-1 & 2 C1-47 DET 6 2.0 LANE #1 FRONT	Ph 3 Call & Ext T4-5 & 6 C1-58 DET 7 TYPE "D" Front Loop	Ph 4 Call & Ext T4-9 & 10 C1-41 DET 8 1.4 TYPE "E"	Ph 4 Call & QUE T6-1 & 2 C1-65 DET 10 2.0 TYPE "E" Back Loops	Ph 4 Call & QUE T6-5 & 6 C1-49 DET 12 2.0 LANE #1 FRONT	Ph 1 Call & Ext T6-9 & 10 C1-60 DET 13 TYPE "E" "B" & "C" Back Loops	NOT WIRED	NOT ASSIGNED C1-80	Ph 2 PED CALL C1-67	Ph 6 PED CALL C1-68	FLASH SENSE C1-81
LOWER	Ph 1 Call & Ext T2-3 & 4 C1-56 DET 1 TYPE "D" Front Loop	Ph 2 Call & Ext T2-7 & 8 C1-43 DET 3 2.0 TYPE "E"	Ph 2 Call & Ext T2-11 & 12 C1-76 DET 5 10 DEL TYPE "D" Front Loop	Ph 2 Call & QUE T4-3 & 4 C1-47 DET 6 2.0 LANE #2 FRONT	Ph 3 Call & Ext T4-7 & 8 C1-58 DET 7 TYPE "D" Front Loop	Ph 4 Call & Ext T4-11 & 12 C1-45 DET 9 1.1 TYPE "E"	Ph 4 Call & Ext T6-3 & 4 C1-78 DET 11 5.6 MINI "E" Front Loop	Ph 4 Call & QUE T6-7 & 8 C1-49 DET 12 2.0 LANE #2 FRONT	Ph 3 Call & Ext T6- 11 & 12 C1-62 DET 14 TYPE "E" "B" & "C" Back Loops	NOT WIRED	NOT ASSIGNED C1-53	Ph 4 PED CALL C1-69	Ph 8 PED CALL C1-70	STO TIME C1-82
	NBLT-2-CT	SB FAR	SBRT	SB-2-CT	EBLT-2-CT	WB FAR	WB BIKE	WB-2-CT	EBLT			WEST LEG	EAST LEG	
	SBLT-1-CT	NB INT	NB NEAR	NB-1-CT	WBLT-1-CT	EB INT	EB NEAR	EB-1-CT	SBLT			EB	SB	UPS
J	J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12	J13	J14
UPPER	Ph 5 Call & Ext T3-1 & 2 C1-55 DET 15 TYPE "D" Front Loop	Ph 6 Call & Ext T3-5 & 6 C1-40 DET 16 1.6 TYPE "E"	Ph 6 Call & QUE T3-9 & 10 C1-64 DET 18 2.0 TYPE "E" Back Loops	Ph 6 Call & QUE T5-1 & 2 C1-48 DET 20 2.0 LANE #1 FRONT	Ph 7 Call & Ext T5-5 & 6 C1-57 DET 21 TYPE "D" Front Loop	Ph 8 Call & Ext T5- 9 & 10 C1-42 DET 22 1.4 TYPE "E"	Ph 8 Call & QUE T7-1 & 2 C1-66 DET 24 2.0 TYPE "E" Back Loops	Ph 8 Call & QUE T7- 5 & 6 C1-50 DET 26 2.0 LANE #1 FRONT	Ph 5 Call & Ext T7- 9 & 10 C1-59 DET 27 TYPE "E" "B" & "C" Back Loops	NOT WIRED	NOT ASSIGNED C1-54	PH 2 & 5 EVA Preempt C1 - 71	PH 4 & 7 EVB Preempt C1 - 72	RAILROAD 1 C1-51
LOWER	Ph 5 Call & Ext T3-3 & 4 C1-55 DET 15 TYPE "D" Front Loop	Ph 6 Call & Ext T3-7 & 8 C1-44 DET 17 TYPE "E"	Ph 6 Call & Ext T3-11 & 12 C1-77 DET 19 10 DEL TYPE "E" BOTH Loops	Ph 6 Call & QUE T5-3 & 4 C1-48 DET 20 2.0 LANE #2 FRONT	Ph 7 Call & Ext T5-7 & 8 C1-57 DET 21 TYPE "D" Front Loop	Ph 8 Call & Ext T5-11 & 12 C1-46 DET 23 1.1 TYPE "E"	Ph 8 Call & Ext T7- 3 & 4 C1-79 DET 25 10 DEL TYPE "E" BOTH Loops	Ph 8 Call & QUE T7- 7 & 8 C1-50 DET 26 2.0 LANE #2 FRONT	Ph 7 Call & Ext T7-11 & 12 C1-61 DET 28 TYPE "E" "B" & "C" Back Loops	NOT WIRED	NOT ASSIGNED C1-75	PH 6 & 1 EVC Preempt C1 - 73	PH 8 & 3 EVD Preempt C1 - 74	RAILROAD 2 C1-5
	SBLT-2-CT	NB FAR	NBRT	NB-2-CT	WBLT-2-CT	EB FAR	EBRT	EB-2-CT	WBLT			WB	NB	

COMMENTS:

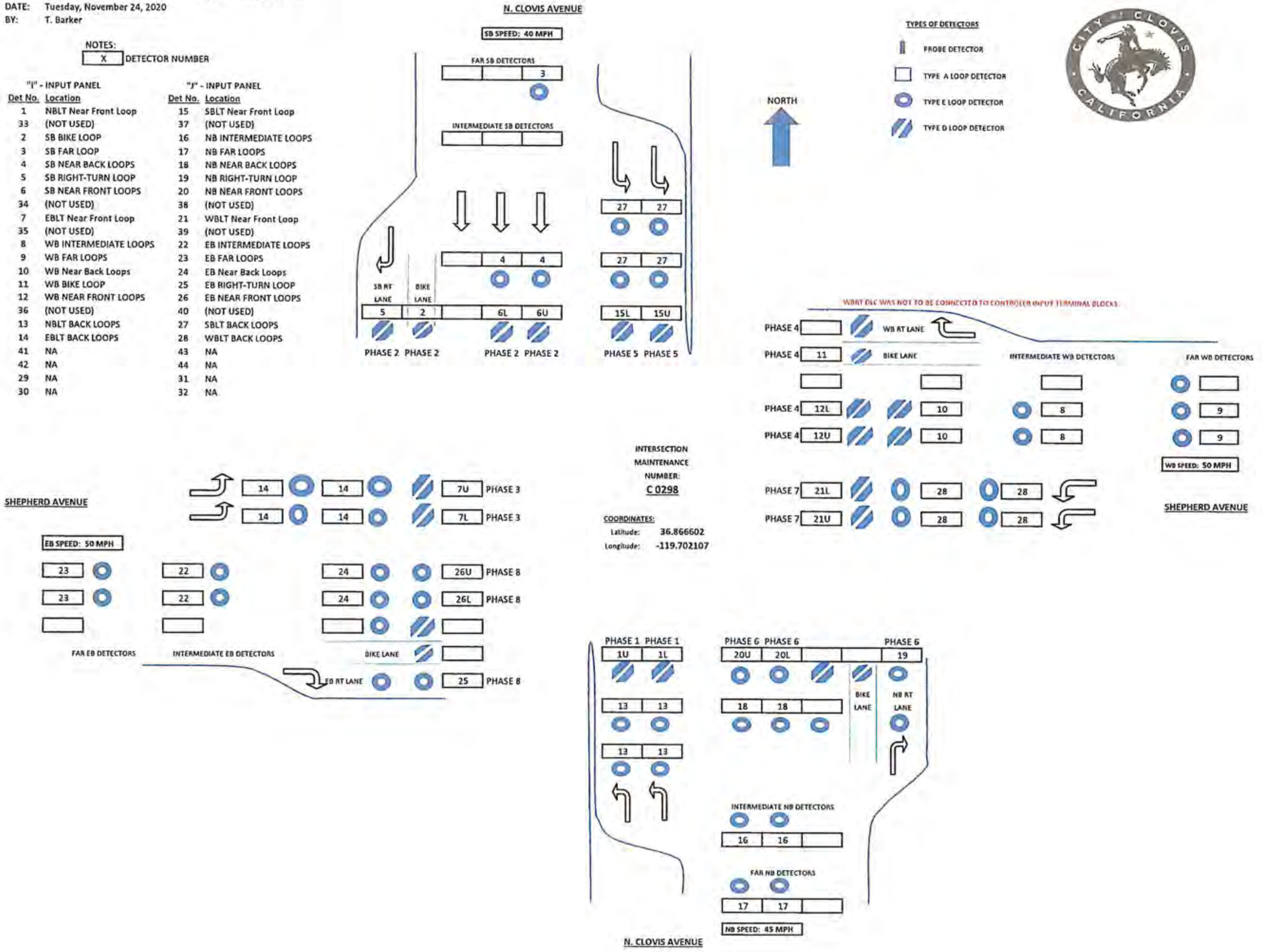
There is a DLC for WB Right-turn lane detection. However, there are no more slots to land this DLC in the 332A Cabinet. Label DLC and Place in bottom of Cabinet. Future use at 4I7L which is currently used for the Bike Lane Detection.

🟦	222 Loop Amplifier
🟥	752 Discriminators
🟨	242 Isolator
⬜	232 Mag Amplifier

Detector Layout for the Intersection of: CLOVIS and SHEPHERD
DATE: Tuesday, November 24, 2020
BY: T. Barker

NOTES:
X DETECTOR NUMBER

"I" - INPUT PANEL		"J" - INPUT PANEL	
Det No.	Location	Det No.	Location
1	NBLT Near Front Loop	15	SBLT Near Front Loop
33	(NOT USED)	37	(NOT USED)
2	SB BIKE LOOP	16	NB INTERMEDIATE LOOPS
3	SB FAR LOOP	17	NB FAR LOOPS
4	SB NEAR BACK LOOPS	18	NB NEAR BACK LOOPS
5	SB RIGHT-TURN LOOP	19	NB RIGHT-TURN LOOP
6	SB NEAR FRONT LOOPS	20	NB NEAR FRONT LOOPS
34	(NOT USED)	38	(NOT USED)
7	EBLT Near Front Loop	21	WBLT Near Front Loop
35	(NOT USED)	39	(NOT USED)
8	WB INTERMEDIATE LOOPS	22	EB INTERMEDIATE LOOPS
9	WB FAR LOOPS	23	EB FAR LOOPS
10	WB Near Back Loops	24	EB Near Back Loops
11	WB BIKE LOOP	25	EB RIGHT-TURN LOOP
12	WB NEAR FRONT LOOPS	26	EB NEAR FRONT LOOPS
36	(NOT USED)	40	(NOT USED)
13	NBLT BACK LOOPS	27	SBLT BACK LOOPS
14	EBLT BACK LOOPS	28	WBLT BACK LOOPS
41	NA	43	NA
42	NA	44	NA
29	NA	31	NA
30	NA	32	NA



INTERSECTION
MAINTENANCE
NUMBER:
C 0298

COORDINATES:
Latitude: 36.866602
Longitude: -119.702107

NAVIGATOR APS DEFAULT AND FIELD SETTINGS

CITY: Clovis
STATE: California

INTERSECTION: CLOVIS & SHEPHERD
INSTALL DATE: Friday, February 19, 2021

CODE: AAAB

DEFAULTS: (Effective with Configurator v1.12, Nav2 v1.17 and Nav4 v1.15)

		DEFAULTS								
	NAME OF STREET: CROSSING OCCURS		Shepherd	Shepherd	Clovis	Clovis	Shepherd	Shepherd	Clovis	Clovis
	CORNER:		SWC	NWC	NWC	NEC	NEC	SEC	SEC	SWC
	PPB HEIGHT:		39"	39"	39"	39"	39"	39"	39"	39"
	POLE TYPE:		1A Pole	29-5-129	1A Pole	29-5-129	1A Pole	29-5-129	1A Pole	29-5-129
	ID:		A1	A2	B1	B2	C1	C2	D1	D2
	PHASE:		2	2	4	4	6	6	8	8
LOCATOR TONE MINIMUM VOLUME	LOCATE VOL MIN	0%	30%	30%	30%	30%	30%	30%	30%	30%
LOCATOR TONE MAXIMUM VOLUME	LOCATE VOL MAX	50%	50%	50%	50%	50%	50%	50%	50%	50%
PUSH CONFIRM VOLUME MINIMUM		65%	65%	65%	65%	65%	65%	65%	65%	65%
PUSH CONFIRM VOLUME MAXIMUM		100%	100%	100%	100%	100%	100%	100%	100%	100%
INFORMATION MESSAGE VOLUME MINIMUM	INFO MSG VOL MIN	65%	60%	60%	60%	60%	60%	60%	60%	60%
INFORMATION MESSAGE VOLUME MAXIMUM	INFO MSG VOL MIN	100%	100%	100%	100%	100%	100%	100%	100%	100%
STANDARD PUSH WALK VOLUME MINIMUM	STD WALK VOL MIN	40%	40%	40%	40%	40%	40%	40%	40%	40%
STANDARD PUSH WALK VOLUME MAXIMUM	STD WALK VOL MAX	70%	75%	75%	75%	75%	75%	75%	75%	75%
EXTEND PUSH WALK VOLUME MINIMUM	EXT WALK VOL MIN	60%	60%	60%	60%	60%	60%	60%	60%	60%
EXTEND PUSH WALK VOLUME MAXIMUM	EXT WALK VOL MAX	80%	80%	80%	80%	80%	80%	80%	60%	80%
VOLUME OVER AMBIENT	VOL OVER AMBIENT	0 dB	+5 dB	+5 dB	+5 dB	+5 dB	+5 dB	+5 dB	+5 dB	+5 dB
LOCATION VOLUME OVER AMBIENT	VOL OVER AMBIENT	0%	+2.5 dB	+2.5 dB	+2.5 dB	+2.5 dB	+2.5 dB	+2.5 dB	+2.5 dB	+2.5 dB
WALK MODE SOUND	WALK MODE SOUND	STD MSG	CUST MSG	CUST MSG	CUST MSG	CUST MSG	CUST MSG	CUST MSG	CUST MSG	CUST MSG
WALK SOUND PAUSE	WALK SOUND PAUSE	0.5 Sec	0.5 Sec	0.5 Sec	0.5 Sec	0.5 Sec	0.5 Sec	0.5 Sec	0.5 Sec	0.5 Sec
WALK SOUND TRIGGER	WALK SOUND TRIG	ANY PUSH	Any Push	Any Push	Any Push	Any Push	Any Push	Any Push	Any Push	Any Push
MAXIMUM WALK TIME	MAX WALK TIME	55 sec	55 sec	55 sec	55 sec	55 sec	55 sec	55 sec	55 sec	55 sec
SOUND / VIBRATION TIMER	SOUND / VIB TIMER	20 sec	FULL WALK	FULL WALK	FULL WALK	FULL WALK	FULL WALK	FULL WALK	FULL WALK	FULL WALK
SOUND / VIBRATION RETRIGGER	SOUND / VIB RETRIG	NEW WALK	Button Push	Button Push	Button Push	Button Push	Button Push	Button Push	Button Push	Button Push
CANCEL ON CLEARANCE	CANCEL ON CLEARAN	YES	YES	YES	YES	YES	YES	YES	YES	YES
CLEAR MODE SOUND	CLEAR MODE SOUND	TONE 1	TONE 2	TONE 2	TONE 2	TONE 2	TONE 2	TONE 2	TONE 2	TONE 2
CLEAR TONE PAUSE	CLEAR TONE PAUSE	1.0 SEC	1 SEC	1 SEC	1 SEC	1 SEC	1 SEC	1 SEC	1 SEC	1 SEC
LOCATION SOUND	LOCATE SOUND	TONE 1	TONE 1	TONE 1	TONE 1	TONE 1	TONE 1	TONE 1	TONE 1	TONE 1
LOCATE TONE TIME	LOCATE TONE TIME	1.0 SEC	1 SEC	1 SEC	1 SEC	1 SEC	1 SEC	1 SEC	1 SEC	1 SEC
WAIT MESSAGE	WAIT MSG	OFF	Any Push 8	Any Push 8	Any Push 8	Any Push 8	Any Push 8	Any Push 8	Any Push 8	Any Push 8
DIRECTION MESSAGE	DIRECTION MSG	NORTH	WEST	WEST	WEST	WEST	WEST	WEST	WEST	WEST
INFORMATION MESSAGE	INFO MSG	TICK	CUST w/ PULSE	CUST w/ PULSE	CUST w/ PULSE	CUST w/ PULSE	CUST w/ PULSE	CUST w/ PULSE	CUST w/ PULSE	CUST w/ PULSE
PUSH CONFIRM MESSAGE	INFO MSG	WAIT	WAIT	WAIT	WAIT	WAIT	WAIT	WAIT	WAIT	WAIT
BUTTON PUSH FORCE	BUT PUSH FORCE	MEDIMUM	MEDIMUM	MEDIMUM	MEDIMUM	MEDIMUM	MEDIMUM	MEDIMUM	MEDIMUM	MEDIMUM
CANCEL ON WALK	CANCEL ON WALK	YES	YES	YES	YES	YES	YES	YES	YES	YES
EXTEND PUSH TIME	EXT PUSH TIME	1.0 SEC	1.0 SEC	1.0 SEC	1.0 SEC	1.0 SEC	1.0 SEC	1.0 SEC	1.0 SEC	1.0 SEC
SECOND LANGUAGE	SECOND LANGUAGE	NO	NO	NO	NO	NO	NO	NO	NO	NO
EXTENDED PUSH PRIORITY	EXT PUSH PRIORITY	NO	NO	NO	NO	NO	NO	NO	NO	NO
PING PONG	WALK ENABLE	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	CLEARANCE ENABLE	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	ON FOR EXTENDED PUSH	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
	PLAYS FIRST	FILLED IN	FILLED IN	FILLED IN	FILLED IN	FILLED IN	FILLED IN	FILLED IN	FILLED IN	FILLED IN
	PLAYS SECOND	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
DOUBLE WALK	DOUBLE WALK	NO	NO	NO	NO	NO	NO	NO	NO	NO
LIMIT PUSH RECALL	LIMIT PUSH RECALL	NO	NO	NO	NO	NO	NO	NO	NO	NO

SPECIAL NOTES: The Polara iN2 had rough settings programmed and activated on 2/17/2021. VOL settings were installed on 2/18/2021. Fine tune settings on 2/19/2021.

N. CLOVIS & TEAGUE
INTERSECTION

0303
INTERSECTION NO.

Bi Tran Systems
Version 2.7
Ck Sum 3ABF26
QUIKLOAD NO. 269 DATE: 08/25/05
REMOVED:

FILE COPY

AGENDA ITEM NO. 6.

	PHASE							
	NB LT	SB	—	WB	—	NB	—	EB
	1	2	3	4	5	6	7	8
0 WALK	—	5	—	5	—	—	—	5
1 DON'T WALK	—	17	—	20	—	—	—	20
2 MIN INITIAL	3	8	—	—	—	8	—	8
3 TYPE 3 LIMIT	—	18.	—	—	—	18	—	—
4 ADD PER VEH	—	—	—	—	—	—	—	—
5 VEH EXT	2	3.7	—	—	—	3.6	—	2
6 MAX GAP	2	4.6	—	—	—	4.5	—	2
7 MIN GAP	2	2.4	—	—	—	2.3	—	2
8 MAX LIMIT	22	32	—	—	—	32	—	27
9 MAXIMUM 2	—	—	—	—	—	—	—	—
A ADV/DLY WALK	—	—	—	—	—	—	—	—
B MIN PED CLEAR	—	14	—	15	—	—	—	15
C COND SRV MIN	—	—	—	—	—	—	—	—
D REDUCE EVERY	—	1.0	—	—	—	1.0	—	—
E YELLOW	3.0	4.3	—	3.9	—	4.3	—	3.9
F RED CLEAR	1.0	1.0	—	1.0	—	1.0	—	1.0

PHASE BANK # 1 < C + 0 + F = 1 >

	9	A	B	C	D
0					
1 PHASE 1					
2 PHASE 2					
3 PHASE 3					
4 PHASE 4					
5 PHASE 5					
6 PHASE 6					
7 PHASE 7					
8 PHASE 8					
	MAX INITIAL -	ALT WALK -	ALT FLH D/W -	ALT INITIAL -	ALT EXTEN -

FLASH START:
(F/1 + 0 + E) = 0
ALL RED START:
(F/1 + C + 0) = 0
RED REVERT:
(F/1 + 0 + F) = 1.0

	E
RR1 DLY	—
RR1 CLR	—
EVA DLY	—
EVA CLR	1.0
EVB DLY	—
EVB CLR	—
EVC DLY	—
EVC CLR	1.0
EVD DLY	—
EVD CLR	1.0
RR2 DLY	—
RR2 CLR	—
EV CLR	▨
EV DLY	▨
RR CLR	▨
RR DLY	▨

Column F

	PHASES 1	2	3	4	5	6	7	8
0 PERMIT	X	X		X		X		X
1 RED LOCK	X							
2 YELLOW LOCK		X				X		
3 VEH MIN CALL								
4 PED RECALL								
5 PEDESTRIANS		X		X				X
6 REST IN WALK								
7 RED REST	X	X		X		X		X
8 DOUBLE ENTRY								
9 VEH MAX CALL								
A SOFT RECALL								
B MAXIMUM 2								
C COND SERVICE								
D MAN CONT CALL								
E YELLOW START								X
F FIRST PHASES	X					X		

< C + 0 + F = 1 >

FLASH TO PE & PE NON-LOCK
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = BE 1
4 = EV D 8 = BE 2

EXTRA 1
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Daylight Savings
4 = EV Advance
5 = Expanded Status Reporting
6 = International Ped
7 = Clear Outputs During FLASH
8 = Split Ring

EXTRA 2
1 = AWB On During Phase Initial
2 = LMU Installed
3 = Disable Min Walk
4 = *QuicNet/4* System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
6 = Simplex Master
7 = 7 Wire Master
8 = Offset Interrupter

Column E

	PHASES / BITS 1	2	3	4	5	6	7	8
0 EXCLUSIVE								
1 RR 1 CLEAR								
2 RR 2 CLEAR								
3 RR 2 LTD SRV								
4 PROT / PERM								
5 FLASH TO PE								
6 FLASH ENTRY								
7 DSABL MIN YEL								
8 DSABL OVP YEL								
9 OVP FLH YEL								
A EM VEH A		X						
B EM VEH B								
C EM VEH C	X					X		
D EM VEH D								X
E EXTRA 1	X		X		X			
F IC SELECT		X						

	PHASES / BITS 1	2	3	4	5	6	7	8
0								
1 EXT PERMIT 1								
2 EXT PERMIT 2								
3 EXCLU PED								
4 PE NON-LOCK								
5 PED 2 P OUT		X						
6 PED 6 P OUT								
7 PED 4 P OUT				X				
8 PED 8 P OUT								X
9 FLH YELLOW								
A LOW PRI A								
B LOW PRI B								
C LOW PRI C								
D LOW PRI D								
E RESTRICTED								
F EXTRA 2								

< C + 0 + E = 125 >

	PLAN NUMBER 1	2	3	4	5	6	7	8	9
0 CYCLE LENGTH									
1 FORCE OFF 1									
2 FORCE OFF 2									
3 FORCE OFF 3									
4 FORCE OFF 4									
5 FORCE OFF 5									
6 FORCE OFF 6									
7 FORCE OFF 7									
8 FORCE OFF 8									
9 RING OFFSET									
A OFFSET A									
B OFFSET B									
C OFFSET C									
D END PERM 1									
E HOLD RELEASE									
F ZONE OFFSET									

COORDINATION < C + 0 + C = 1 >

Column E

	1	2	3	4	5	6	7	8
0								
1 SYNC 1								
2 SYNC 2								
3 SYNC 3								
4 SYNC 4								
5 SYNC 5								
6 SYNC 6								
7 SYNC 7								
8 SYNC 8								
9 SYNC 9								
A NEMA SYNC								
B NEMA HOLD								
C								
D								
E COOR XTRA								
F								

< C + 0 + C = 1 >

Column F

	1	2	3	4	5	6	7	8
0 LAG FREE		X		X		X		X
1 LAG PLAN 1								
2 LAG PLAN 2								
3 LAG PLAN 3								
4 LAG PLAN 4								
5 LAG PLAN 5								
6 LAG PLAN 6								
7 LAG PLAN 7								
8 LAG PLAN 8								
9 LAG PLAN 9								
A EXT. LAG								
B								
C								
D								

COOR XTRA
1 = Programmed Walk Time For Sync Phase Peds
2 = Always Terminate Sync Phase Peds

Column 2
COORD MINIMUM

1	
2	
3	
4	
5	
6	
7	
8	

< C + 0 + C = 5 >

TRANSITION TYPE
0.X = Shortway
1.X = Only Lengthen
X.1 thru X.4 = Number of cycles when Lengthing

MANUAL PLAN SELECT:
(C/0 + A + 1) = 14
AUTO = 0 FREE = 14 = E
PLAN = 1 thru 9 FLASH = 15 = F

COMM ADDRESS:
(C/0 + 0 + 0) = 1
ZONE NUMBER:
(C/0 + 0 + 1) = 1
AREA NUMBER:
(C/0 + 0 + 2) = 1
AREA ADDRESS:
(C/0 + 0 + 3) = 1

TRANSITION TYPE:
(C/5 + 1 + 9) = 0.3

LAG HOLD PHASES: 1 2 3 4 5 6 7 8
(C/5 + 1 + A) =

BI Tran Systems, Inc.
510 Bercut Dr., Sacramento, Calif. 95814
(916) 441-0260
Traffic Signal Program **233** *RV2*
Timing Sheet 1 (of 7)
(Revised 05/98)

AGENDA ITEM NO. 6.

	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		
0			NOT 3		MAX 2		PRE TIM		WK DAY		DIAL 2		SIM TRM		0
1			NOT 4		SY DET 1		PLAN 1		X PERM 1		DIAL 3		EV A	71	1
2	SP FUN 1		OR 4		SY DET 2		PLAN 2		X PERM 2		OFF 1		EV B	72	2
3	SP FUN 2		OR 4		SY DET 3		PLAN 3		DIM		OFF 2		EV C	73	3
4	NAND 3		OR 5		SY DET 4		PLAN 4		X CLOCK		OFF 3		EV D	74	4
5	NAND 3		OR 5		SY DET 5		PLAN 5		ST TIME	82	FREE		RR 1	51	5
6	NAND 4		OR 6		SY DET 6		PLAN 6		FL SENS	81	FLASH		RR 2	52	6
7	NAND 4		OR 6		SY DET 7		PLAN 7		ENABLE		XPD OMT		SP EV 1		7
8	OR 7		FIG 3		SY DET 8		PLAN 8		ADVANC		NOT 1		SP EV 2		8
9	OR 7		FIG 4		MX INIBT		PLAN 9		ALARM		NOT 2		X LAG		9
A	OR 7		AND 4		FORCE A		DELAY A		PH BNK 2	200	OR 1		AND 1		A
B	OR 7		AND 4		FORCE B		DELAY B		PH BNK 3		OR 1		AND 1		B
C	OR 8		NAND 1		CNA		DELAY C		OL SET 2		OR 2		AND 2		C
D	OR 8		NAND 1		HOLD		DELAY D		OL SET 3		OR 2		AND 2		D
E	OR 8		NAND 2		VE CALL		DELAY E		DET ST 2		OR 3		AND 3		E
F	OR 8		NAND 2		RECALL		DELAY F		DET ST 3		OR 3		AND 3		F

ASSIGNABLE INPUTS < C + 0 + E = 126 >

	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		
0	PH ON 1		PE FAIL		FLHR 0		FREE		NOT 1		TOD 1		DIAL 2		0
1	PH ON 2		SP EV 1		FLHR 1		PLAN 1		OR 1		TOD 2	200	DIAL 3		1
2	PH ON 3		SP EV 2		F FLHR		PLAN 2		OR 2		TOD 3		OFF 1		2
3	PH ON 4		SP EV 3		FIG 3		PLAN 3		OR 3		TOD 4		OFF 2		3
4	PH ON 5		SP EV 4		FIG 4		PLAN 4		AND 1		TOD 5		OFF 3		4
5	PH ON 6		SP EV 5				PLAN 5		AND 2		TOD 6		FREE		5
6	PH ON 7		SP EV 6				PLAN 6		AND 3		TOD 7		FLASH		6
7	PH ON 8		SP EV 7				PLAN 7		NOT 2		TOD 8		PREMPT		7
8	PH CK 1		SP EV 8		NOT 3		PLAN 8		EV A		WARN 1		LOW - A		
9	PH CK 2				NOT 4		PLAN 9		EV B		WARN 2		LOW - B		
A	PH CK 3		DET FAIL		OR 4				EV C		DELAY A		LOW - C		A
B	PH CK 4		SP FUN 1		OR 5				EV D		DELAY B		LOW - D		B
C	PH CK 5		SP FUN 2		OR 6		NAND 3		RR 1		DELAY C				C
D	PH CK 6		CNT CTL		AND 4		NAND 4		RR 2		DELAY D				D
E	PH CK 7		X DWALK		NAND 1		OR 7		SP EV 1		DELAY E		▨	▨	E
F	PH CK 8		X WALK		NAND 2		OR 8		SP EV 2		DELAY F		▨	▨	F

ASSIGNABLE OUTPUTS < C + 0 + E = 127 >

	PLAN # —>	1	2	3	4	5	6	7	8	9	
0	PED ADJ										0
1	ST PERM 2										1
2	EN PERM 2										2
3	ST PERM 3										3
4	EN PERM 3										4
5	RSRV TIME										5

		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	
6	RSERVE PH																																																																								6
7																																																																									7
8	PRETIMED																																																																								8
9	MAX RECALL																																																																								9
A	PERM 1 VEH																																																																								A
B	PERM 1 PED																																																																								B
C	PERM 2 VEH																																																																								C
D	PERM 2 PED																																																																								D
E	PERM 3 VEH																																																																								E
F	PERM 3 PED																																																																								F

COORDINATION PAGE 2 < C + 0 + C = 2 >

Logic DELAY Times

Column B

A	DELAY A	
B	DELAY B	
C	DELAY C	
D	DELAY D	
E	DELAY E	
F	DELAY F	

< C + 0 + D = 0 >

7 - Wire Master Sync Time

7-WIRE SYNC OUTPUT :
(C/5 + 1 + C) = 0

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(916) 441-0260
Traffic Signal Program 233 RV2
Timing Sheet 2 (of 7)
(Revised 10/97)

CLOVIS & TEAGUE

		PHASE							
		NB LT	SB	—	WB	—	NB	—	EB
		1	2	3	4	5	6	7	8
0	WALK	—	10	—	10	—	—	—	10
1	DON'T WALK	—	17	—	20	—	—	—	20
2	MIN INITIAL	3	8	—	—	—	8	—	8
3	TYPE 3 LIMIT	—	18	—	—	—	18	—	—
4	ADD PER VEH	—	—	—	—	—	—	—	—
5	VEH EXT	2	3.7	—	—	—	3.6	—	2
6	MAX GAP	2	4.6	—	—	—	4.5	—	2
7	MIN GAP	2	2.4	—	—	—	2.3	—	2
8	MAX LIMIT	22	32	—	—	—	32	—	27
9	MAXIMUM 2	—	—	—	—	—	—	—	—
A	ADV/DLY WALK	—	—	—	—	—	—	—	—
B	MIN PED CLEAR	—	14	—	15	—	—	—	15
C	COND SRV MIN	—	—	—	—	—	—	—	—
D	REDUCE EVERY	—	1.0	—	—	—	1.0	—	—
E	YELLOW	3.0	4.3	—	3.9	—	4.3	—	3.9
F	RED CLEAR	1.0	1.0	—	1.0	—	1.0	—	1.0

		9	A	B	C	D
0						
1	PHASE 1					
2	PHASE 2					
3	PHASE 3					
4	PHASE 4					
5	PHASE 5					
6	PHASE 6					
7	PHASE 7					
8	PHASE 8					
		MAX INITIAL -	ALT WALK -	ALT FLH D/W -	ALT INITIAL -	ALT EXTEN -

PHASE BANK # 2
< C + 0 + F = 2 >
(SCHOOL CROSSING)

		PHASE							
		1	2	3	4	5	6	7	8
0	WALK								
1	DON'T WALK								
2	MIN INITIAL								
3	TYPE 3 LIMIT								
4	ADD PER VEH								
5	VEH EXT								
6	MAX GAP								
7	MIN GAP								
8	MAX LIMIT								
9	MAXIMUM 2								
A	ADV/DLY WALK								
B	MIN PED CLEAR								
C	COND SRV MIN								
D	REDUCE EVERY								
E	YELLOW								
F	RED CLEAR								

		9	A	B	C	D
0						
1	PHASE 1					
2	PHASE 2					
3	PHASE 3					
4	PHASE 4					
5	PHASE 5					
6	PHASE 6					
7	PHASE 7					
8	PHASE 8					
		MAX INITIAL -	ALT WALK -	ALT FLH D/W -	ALT INITIAL -	XTEN -

PHASE BANK # 3
< C + 0 + F = 3 >

Column D

OUT BIT NO.-->		1	2	3	4	5	6	7	8
0									
1	OUT PORT 1								
2	OUT PORT 2								
3	OUT PORT 3								
4	OUT PORT 4								
5	OUT PORT 5								
6	OUT PORT 6								
7	OUT PORT 7								
8									
9									
A									
B									
C									
D									
E									
F									

DIMMING <C + 0 + E = 125 >

Column F

		1	2	3	4	5	6	7	8
0	FAST GRN FLH								
1	GREEN FLASH								
2	FLASH WALK								
3	GUAR PASS								
4	SIMUL GAP	—	—	—	—	—	—	—	—
5	SEQ TIMING	X	X				X		X
6	ADV WALK								
7	DELAY WALK								
8	EXT RECALL								
9	START OVP GRN								
A	MAX EXTEN	X	X				X		X
B	INH PED RSRV								
C	SEMI ACTUATED								
D	START OVP YEL								
E	START VEH CALL	X	X				X		X
F	START PED CALL		X		X				X

SPECIALS < C + 0 + F = 2 >

		PED / PHASE / OVERLAP							
		1	2	3	4	5	6	7	8
0	WALK								
1	DON'T WALK								
2	PHASE GREEN								
3	PHASE YELLOW								
4	PHASE RED								
5	OVERLAP GREEN								
6	OVERLAP YELLOW								
7	OVERLAP RED								
8									
9									
A									
B									
C									
D									
E									
F									

REDIRECT PHASE OUTPUTS < C + 0 + E = 127 >

Advance Warning Beacons

Sign # 1:
PHASE NUMBER:
(F/1 + C + F) = 0
TIME BEFORE YELLOW:
(F/1 + C + E) = 0

Sign # 2:
(F/1 + D + F) = 0
(F/1 + D + E) = 0

Output Pin Number is specified in Assignable Outputs at E/127+E

Exclusive Pedestrian se

WALK:
(F/1 + 0 + 0) = 0
DONT WALK:
(F/1 + 0 + 1) = 0
RED CLEAR:
(F/1 + 0 + 2) = 0

Enable / Disable
Phase Redirection

CABINET TYPE:
(E/125 + D + 0) = 0

CABINET TYPE
0 = Disable Redirection
30 = Enable Redirection
(For Type 303 & 330 Cabinets, or other "specials")

BI Tran Systems, Inc.
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Traffic Signal Program 233 RV2
Timing Sheet 3 (of 7)
(Revised 10/97)

AGENDA ITEM NO. 6.

	Column ->	DELAY 1	CARRY-OVER 3	Column 0 C1 PIN NUMBER	Column 1 ATTRIBUTES								Column 2 PHASE(S)								Column 3 ASSIGNMENTS							
Detector Position Numbers					1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
01	0	—	1.3	39				X	X		X			X							X	X	X					X
02	1	—	1.3	40				X	X		X							X			X	X	X					X
03	2			41				X	X		X					X					X	X	X					
04	3	—	9.0	42				X	X		X									X	X	X	X					X
05	4	—	—	43				X	X		X				X						X	X	X					X
06	5	—	—	44				X	X		X							X			X	X	X					X
07	6			45				X	X		X					X					X	X	X					
08	7	—	9.0	46				X	X		X									X	X	X	X					X
09	8	—	2.0	47						X	X				X						X	X	X					X
10	9	—	2.0	48						X	X							X			X	X	X					X
11	A			49						X	X					X					X	X	X					
12	B			50						X	X									X	X	X	X					
13	C			55				X	X		X						X				X	X	X					
14	D	—	—	56				X	X		X		X								X	X	X					X
15	E			57				X	X		X								X		X	X	X					
16	F	—	—	58				X	X		X									X	X	X	X					X

< C + 0 + D = 0 > DETECTOR ASSIGNMENTS < C + 0 + E = 126 >

	Column ->	DELAY 2	CARRY-OVER 4	Column 4 C1 PIN NUMBER	Column 5 ATTRIBUTES								Column 6 PHASE(S)								Column 7 ASSIGNMENTS							
Detector Position Numbers					1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
17	0			59				X	X		X						X				X	X	X					
18	1			60				X	X		X		X								X	X	X					
19	2			61				X	X		X								X		X	X	X					
20	3			62				X	X		X				X						X	X	X					
21	4	10	—	63				X	X		X			X							X	X	X					X
22	5			64				X	X		X							X			X	X	X					
23	6			65				X	X		X					X					X	X	X					
24	7	10	—	66				X	X		X									X	X	X	X					X
25	8	—	—	67		X								X							X	X	X					
26	9			68		X												X			X	X	X					
27	A	—	—	69		X										X					X	X	X					
28	B	—	—	70		X														X	X	X	X					
29	C			76				X	X		X			X							X	X	X					
30	D			77				X	X		X							X			X	X	X					
31	E			78				X	X		X					X					X	X	X					
32	F	10	—	79				X	X		X									X	X	X	X					X

< C + 0 + D = 0 > DETECTOR ASSIGNMENTS < C + 0 + E = 126 >

DETECTOR ATTRIBUTES

1 = Full Time Delay
2 = Pedestrian Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

DETECTOR ASSIGNMENTS

1 = Det. Set # 1
2 = Det. Set # 2
3 = Det. Set # 3
4 =
5 =
6 = MIN Recall On Failure
7 = MAX Recall On Failure
8 = Report On Failure

		1	2	3	4	5	6	7	8	
0	LOAD SW #									0
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
1	VEH SET #1									1
2	VEH SET #2									2
3	VEH SET #3									3
4	NEG VEH									4
5	NEG PED									5
6	GREEN OMIT									6
7	GRN CLR OMT									7
8										8
D	GRN CLEAR									D
E	YELLOW									E
F	RED CLEAR									F

OVERLAP ASSIGNMENTS < C + 0 + E = 29 >

Detector Monitor

MAX OFF :
(D/0 + 0 + 1) = 20
MAX ON :
(D/0 + 0 + 2) = 7
Minutes

Power Cycle Correction Factors

LONG FAILURE :
(F/1 + 0 + 6) = 0.7
SHORT FAILURE :
(F/1 + 0 + 7) = 0.7

NOTE : Do Not Set To Zero. Default Value = 0.7 sec.

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(916) 441-0260
Traffic Signal Program 233 RV2
Timing Sheet 4 (of 7)
(Revised 11/97)

CLOVIS & TEAGUE

AGENDA ITEM NO. 6.

COORD (9 Key)

	TIME HHMM	PLAN	OFFSET	DAY OF WEEK S 1	M 2	T 3	W 4	T 5	F 6	S 7
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

< C + 0 + 9 = 0.1 >

COORD (9 Key)

	TIME HHMM	PLAN	OFFSET	DAY OF WEEK S 1	M 2	T 3	W 4	T 5	F 6	S 7
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

< C + 0 + 9 = 0.2 >

TOD FUNCT. (7 Key)

	TIME HHMM	FUNCT	DAY OF WEEK S 1	M 2	T 3	W 4	T 5	F 6	S 7	Column 4 PHASES / BITS 1	2	3	4	5	6	7	8
0	0001	F	X	X	X	X	X	X	X								
1	0745	F		X	X	X	X	X			X						
2	1545	F		X	X	X	X	✓									
3																	
4																	
5																	
6																	
7																	
8																	
9																	
A																	
B																	
C																	
D																	
E																	
F	0001	E	X	X	X	X	X	X	X							X	X

< C + 0 + 7 = 1 > < C + 0 + E = 27 >

HOLIDAY TOD FUNCT. (7 Key)

	TIME HHMM	FUNCT	HOLIDAY TYPE 1	2	3	4	5	6	7	Column 4 PHASES / BITS 1	2	3	4	5	6	7	8
0																	
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
A																	
B																	
C																	
D																	
E																	
F																	

< C + 0 + 7 = 2 > < C + 0 + E = 28 >

T.O.D. FUNCTIONS

0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh. MIN Recall
4 = Ped. Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh. MAX Recall
A = Veh. SOFT Recall
B = Maximum 2
C = Conditional Servic
D = Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Det. OFF Monitor
Bit 7 - Det. Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 Thru 8

HOLIDAY EVENTS

	TIME HHMM	PLAN	OFFSET	HOLIDAY TYPE 1	2	3	4	5	6	7
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

< C + 0 + 9 = 1.1 >

HOLIDAY EVENTS

	TIME HHMM	PLAN	OFFSET	HOLIDAY TYPE 1	2	3	4	5	6	7
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

< C + 0 + 9 = 1.2 >

HOLIDAY DATES

	DAY	YEAR	MONTH	HOLIDAY TYPE 1	2	3	4	5	6	7
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

< C + 0 + 8 = 1.1 >

HOLIDAY DATES

	DAY	YEAR	MONTH	HOLIDAY TYPE 1	2	3	4	5	6	7
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

< C + 0 + 8 = 1.2 >

PLAN SELECT

1 = Coordination Plan 1
thru
9 = Coordination Plan 9
E = Free
F = Flash

OFFSET SELECT

A = Offset A
B = Offset B
C = Offset C

MONTH SELECT

1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

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Traffic Signal Program 233 RV2
Timing Sheet 5 (of 7)
(Revised 10/97)

	6	7	8	9	A	B	C	D	E	F	
	CLEAR	TIME	PED CALL	HOLD	ADVANCE	FORCEOFF	CALL	PERMIT	PED OMIT	OUTPUT	
	1 2 3 4 5 6 7 8		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
0	▨		▨	▨	▨	▨	▨	▨	▨	▨	0
1											1
2											2
3											3
4											4
5											5
6											6
7											7
8											8
9											9
A											A
B											B
C											C
D											D
E											E
F											F

SPECIAL EVENT SCHEDULE – TABLE # 1 < C + 0 + E = 27 >

INPUT C1 PIN ASSIGNMENT:
(E/126 + F + 7) = 0

LIMITED SERVICE INTERVAL:
(E/27 + 5 + F) = 0

	6	7	8	9	A	B	C	D	E	F	
	CLEAR	TIME	PED CALL	HOLD	ADVANCE	FORCEOFF	CALL	PERMIT	PED OMIT	OUTPUT	
	1 2 3 4 5 6 7 8		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
0	▨		▨	▨	▨	▨	▨	▨	▨	▨	0
1											1
2											2
3											3
4											4
5											5
6											6
7											7
8											8
9											9
A											A
B											B
C											C
D											D
E											E
F											F

SPECIAL EVENT SCHEDULE – TABLE # 2 < C + 0 + E = 28 >

INPUT C1 PIN ASSIGNMENT:
(E/126 + F + 8) = 0

LIMITED SERVICE INTERVAL:
(E/28 + 5 + F) = 0

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Traffic Signal Program 233 RV2
Timing Sheet 6 (of 7)
(Revised 10/97)

CLOVIS & TEAGUE

Controller Intervals

0 = Walk	8 = Red Rest
1 = FDW	9 = Preemption
2 = Min. Green	A = Stop Time
3 =	B = Red Revert
4 = Var. Initial	C = Yellow - Gap Termination
5 = Extension	D = Yellow - Max. Termination
6 =	E = Yellow - Forceoff Termination
7 = Reduce Gap	F = Red Clearance

Interval Timer Display

Ring A = F/0 + A + Interval Row
Ring B = F/0 + B + Interval Row
(Interval Row From PHASE BANK Data)

412/C Memory Module Lithium Battery Condition

To check the condition of the 3.6 volt Lithium Battery on the 412/C Memory Module :

If E/112 + 0 + A = 84 - the battery is BAD
If E/112 + 0 + A = 85 - the battery is O.K.

Monitor "Activate" Flags

(Also Requires T.O.D. Function "E" Flag)

Detector Count Recording :
E/2 + 0 + 9 = Not Zero
Real Time Split Monitor :
E/2 + 0 + E = Not Zero

Special Event Schedules

Special Event #1 : C + 0 + E = 27
Special Event #2 : C + 0 + E = 28

Current Interval = E + 5 + 0
Current Interval Timer = E + 5 + B
Current Interval Clearance Phases = E + 5 + C

Time of Day Function (7 Key)

Current T.O.D. "E Function" Control Bits = C/0 + E + E
Current T.O.D. "F Function" Output Bits = C/0 + E + F

Logic DELAY Gate Delay Timer Display

DELAY A Timer = C/0 + 9 + A
DELAY B Timer = C/0 + 9 + B
thru thru
DELAY F Timer = C/0 + 9 + F

Power & Flash Recording

Last Power Failure :
(HR-MIN-DOW) = 8 + 4
(DOM-YR-MONTH) = 8 + 5
Last Cabinet Flash :
(HR-MIN-DOW) = 8 + 6
(DOM-YR-MONTH) = 8 + 7
Power Fail Counts :
(Long Failures) = F/1 + 0 + C
(Short Failures) = F/1 + 0 + D
Current Time :
(HR-MIN-DOW) = 8 + 0
(DOM-YR-MONTH) = 8 + 1
(MIN-SEC-1/10 SEC) = 8 + F

Display Locations

	Plan Select	Offset Select
Manual	= C/0 + A + 1	C/0 + B
Master	= C/0 + A + 2	C/0 + B +
Current	= C/0 + A + 3	C/0 + B +
Next	= C/0 + A + 4	C/0 + B
TOD	= C/0 + A + 5	C/0 + B +

Master Cycle = C/0 + A + 0
Ring A Cycle = C/0 + B + 0
Ring B Cycle = C/0 + D + 0

MIN Cycle = C/0 + A + E
MAX Cycle = C/0 + B + E

Phase Hold = C/0 + F + D
Phase Next = C/0 + F + E
Force Off = C/0 + F + F
(With Ring A Cycle Timer)

Current Calculated Cycle Length = C/0 + B + F
Current Permitted Phases = E/0 + 7 + 8
Current Phase Bank = F/0 + C + E

View Locations

DIAL-OUT TELEPHONE NUMBER

		D
0	NO. OF DIGITS	
1	1 st DIGIT	
2	2 nd DIGIT	
3	3 rd DIGIT	
4	4 th DIGIT	
5	5 th DIGIT	
6	6 th DIGIT	
7	7 th DIGIT	
8	8 th DIGIT	
9	9 th DIGIT	
A	10 th DIGIT	
B	11 th DIGIT	
C	12 th DIGIT	
D	13 th DIGIT	
E	14 th DIGIT	
F	15 th DIGIT	

< C + 0 + C = 5 >

DIAL-UP ("stand alone") Modem Interface

Set C/5+D+0 (NUMBER OF DIGITS) to a "Non-Zero" value. This will disable parity for "Smart Modem" operation.

NOTE : DO NOT set to a "Non-Zero" value without also programming a number to dial.

REDIAL TIME

(C/5 + C + 0) = 10 Minutes

NOTE: The Redial Timer is at location E/2+D+6

DISABLE ALARM REPORTING

		Column F 1	2	3	4	5	6	7	8
0	OMIT ALARMS								

< C + 0 + C = 5 >

1 = Stop Time	5 = Police Control
2 = Flash Sense	6 = External Alarm
3 = Keyboard Entry	7 = Detector Failure
4 = Manual Plan	8 =

Default is: Report All Alarms (No Flags Set)

PROGRAMMABLE DAYLIGHT SAVINGS IMPLEMENTATION

		Column 2
A	Begin MONTH	4
B	Begin WEEK	1
C	End MONTH	10
D	End WEEK	5

< C + 0 + C = 5 >

If WEEK = 5, use last week of month. If WEEK and MONTH are set to Zero, use "default" data.

PREEMPT PRIORITY

		Column C
0	EV A	
1	EV B	
2	EV C	
3	EV D	
4	RR 1	▨
5	RR 2	▨
6	SE 1	
7	SE 2	

< C + 0 + E = 125 >

Highest value has highest priority. If all are set to Zero, use "default" priority.

DISABLE LOW PRIORITY :

	1	2	3	4	5	6	7	8
(E/125 + C + 8) =								

1 = Low Priority A	5 = Not Used
2 = Low Priority B	6 = Not Used
3 = Low Priority C	7 = Not Used
4 = Low Priority D	8 = Not Used

MINIMUM GREEN FOR PREEMPT FORCE-OFF :

(F/1 + 0 + 8) = 4 Seconds

MAXIMUM PREEMPT TIME :

(F/1 + 0 + 9) = 255 Minutes

For Emergency Vehicle and RR-2 Limited Service.
(Output at E/127+A+0)
Note: Set to 255 to Disable

SAME CHANNEL PREEMPT LOCKOUT TIME :

(F/1 + 0 + A) = 0 Seconds

Does not apply to Railroad Preempt

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Traffic Signal Program 233 RV2
Timing Sheet 7 (of 7)
(Revised 10/98)

AGENDA ITEM NO. 6.

🟦 222 LOOP AMP

🟩 232 MAG AMP

🟨 242 I

🟥 DISCRIMINATOR

Standard 332 Cabinet Location	Column 0		Column 1 ATTRIBUTES								Column 2 PHASE(S)								Column 3 ASSIGNMENTS							
	C1 PIN NUMBER		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
INT. I-2 U --->	0	39				X	X		X			X							X	X	X					X
INT. J-2 U --->	1	40				X	X		X							X			X	X	X					X
I-6 U --->	2	41				X	X		X					X					X	X	X					
FAR J-6 U --->	3	42				X	X		X									X	X	X	X					X
FAR I-2 L --->	4	43				X	X		X			X							X	X	X					X
FAR J-2 L --->	5	44				X	X		X							X			X	X	X					X
I-6 L --->	6	45				X	X		X					X					X	X	X					
FAR J-6 L --->	7	46				X	X		X									X	X	X	X					X
CALL I-4 --->	8	47						X	X			X							X	X	X					X
CALL J-4 --->	9	48						X	X							X			X	X	X					X
I-8 --->	A	49						X	X					X					X	X	X					
J-8 --->	B	50						X	X									X	X	X	X					
J-1 --->	C	55				X	X		X						X				X	X	X					
SB LT/T I-1 --->	D	56				X	X		X		X								X	X	X					X
J-5 --->	E	57				X	X		X								X		X	X	X					
EB/NEAR I-5 --->	F	58				X	X		X									X	X	X	X					X

"INITIALIZED" DETECTOR ASSIGNMENTS
< C + 0 + E = 126 >

Standard 332 Cabinet Location	Column 4		Column 5 ATTRIBUTES								Column 6 PHASE(S)								Column 7 ASSIGNMENTS							
	C1 PIN NUMBER		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
J-9 U --->	0	59				X	X		X						X				X	X	X					
I-9 U --->	1	60				X	X		X		X								X	X	X					
J-9 L --->	2	61				X	X		X								X		X	X	X					
I-9 L --->	3	62				X	X		X				X						X	X	X					
SB R/T I-3 U --->	4	63				X	X		X			X							X	X	X					X
J-3 U --->	5	64				X	X		X							X			X	X	X					
I-7 U --->	6	65				X	X		X					X					X	X	X					
EBRT J-7 U --->	7	66				X	X		X									X	X	X	X					X
PEDS I-12 U --->	8	67		X								X							X	X	X					
PEDS I-13 U --->	9	68		X												X			X	X	X					
PEDS I-12 L --->	A	69		X										X					X	X	X					
PEDS I-13 L --->	B	70		X														X	X	X	X					
I-3 L --->	C	76				X	X		X			X							X	X	X					
J-3 L --->	D	77				X	X		X							X			X	X	X					
I-7 L --->	E	78				X	X		X					X					X	X	X					
EBRT J-7 L --->	F	79				X	X		X									X	X	X	X					X

"INITIALIZED" DETECTOR ASSIGNMENTS
< C + 0 + E = 126 >

DETECTOR ATTRIBUTES

1 = Full Time Del
2 = Pedestrian Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

DETECTOR ASSIGNMENTS

1 = Det. Set # 1
2 = Det. Set # 2
3 = Det. Set # 3
4 =
5 =
6 = MIN Recall On Failure
7 = MAX Recall On Failure
8 = Report On Failure

Input File Slot No. -->	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	NB LT	SB INT	SB RT	SB NEAR	EB NEAR									
"I" FILE	1 Ext, Cnt, Call <C1-56>	2 1.3 Ext, Cnt, Call <C1-39>	DEL 2 10 Ext, Cnt, Call <C1-63>	2.0 2 Type 3, Call. <C1-47> 2.0	8 F <C1-58>	4 Ext, Cnt, Call <C1-41>	4 Ext, Cnt, Call <C1-65>	4 Type 3, Call <C1-49>	1 Ext, Cnt, Call <C1-60>	NOT WIRED	Not Assigned <C1-80>	2 Ped Call <C1-67>	6 Ped Call <C1-68>	Flash Sense <C1-81>
		2 Ext, Cnt, Call <C1-43>	2 Ext, Cnt, Call <C1-76>			4 Ext, Cnt, Call <C1-45>	4 Ext, Cnt, Call <C1-78>		3 Ext, Cnt, Call <C1-62>		Not Assigned <C1-53>	4 Ped Call <C1-69>	8 Ped Call <C1-70>	Stop Time <C1-82>
		SB FAR NB INT		SB NEAR NB NEAR		EB FAR	NEAR RT							
"J" FILE	5 Ext, Cnt, Call <C1-55>	6 1.3 Ext, Cnt, Call <C1-40>	6 Ext, Cnt, Call <C1-64>	2.0 6 Type 3, Call <C1-48>	7 Ext, Cnt, Call <C1-57>	8 Ext, Cnt, Call <C1-42>	8 DEL 10 Ext, Cnt, Call <C1-66>	8 Type 3, Call <C1-50>	5 Ext, Cnt, Call <C1-59>	NOT WIRED	Not Assigned <C1-54>	EV A Preempt <C1-71>	EV B Preempt <C1-72>	Railroad 1 <C1-51>
		6 Ext, Cnt, Call <C1-44>	6 Ext, Cnt, Call <C1-77>			8 Ext, Cnt, Call <C1-46>	8 DEL 10 Ext, Cnt, Call <C1-79>		7 Ext, Cnt, Call <C1-61>		Not Assigned <C1-75>	EV C Preempt <C1-73>	EV D Preempt <C1-74>	Railroad 2 <C1-52>
		NB FAR				EB FAR	EB NEAR RT							

UPS

"INITIALIZED" INPUT FILE ASSIGNMENTS --- STANDARD 332 CABINET
< "C-1" Harness Type # 1 >

DETECTOR TYPES

Ext = Extension Detector
Detector is only active during the Phase's GREEN intervals (ie, will NOT Call the Phase)

Cnt = Count Detector
Used in computing "Added Initial"

Call = Calling Detector
Detector is only active during the Phase's NON-GREEN interval (ie, will NOT Extend the Phase)

Type 3 = Type 3 Disconnect
Will allow a Calling Detector to Extend its Phase until the C first drops or the "Type 3 Limit" is reached

BI Tran Systems, Inc.
510 Bercut Dr., Sacramento, Calif.
916 / 441-0260
Traffic Signal Program 233
Initialized Detector Assignments
(Revised 8/92) 332 Cab

City of Clovis Timing Sheet 9/18/2014 8:55:13 AM

Station : 304 - CLOVIS @ NEES (Standard File)

Phase Timings 1-16 [1.1.1] NBLT SB EBLT WB SBLT NB WBLT EB

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		22		23		21		22								
Min Green	9	8	9	8	9	8	9	8								
Passage	2	4.2	2	4.1	2	4.2	2	4.2								
Max1	35	40	35	40	30	40	30	40								
Max2																
Yellow	3	4.3	3	4.3	3	4.3	3	4.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red	1	1	1	1	1	1	1	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert	1	1	1	1	1	1	1	1								
Added Initial																
Max Initial																
Time Before Reduce		17		17		17		17								
Cars Before Reduce																
Time To Reduce		13		13		13		13								
Reduce By																
Min Gap	2	2.9	2	2.8	2	2.9	2	2.9								
Dynamic Max Limit																
Dynamic Max Step																
Auto Exit																
Rest In Walk																

Phase Option [1.1.2]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Entry																
Non Act1																
Non Act2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall																
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Cond Service																
Add Init Calc																

Phase Option+ [1.1.3]/[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Reservice																
Ped Clr Thru Yellow																
Skip Red																
Red Rest																
Max 2																
Max Inhibit																
Ped Delay																
Red Rest On Gap																
Conf Phs1																
Green Ped Delay Time																
Omit Yel																
Ped Out																
Start Yel				1				5								
Inhibit P1																
Inhibit P2																
Inhibit P3																
Inhibit P4																
Inhibit P5																
Inhibit P6																
Inhibit P7																
Inhibit P8																
Call Phs1																
Call Phs2																
Call Phs3																
Call Phs4																
From Phs1																
To Phs1																
From Phs2																
To Phs2																
From Phs3																
To Phs3																
From Phs4																
To Phs4																

Prepared By	Date Implemented	Reviewed By	Traffic Engineer
	9/19/2014		

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord Phase																

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Station : 304 - CLOVIS @ NEES (Standard File)

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	LONG	MAX I	FIXED

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active	
TIMED	TIMED	NO_RECYCLE	OFF	OFF	OFF	OFF	OFF	0	+	OFF	OFF	OFF

Coordination, Pattern 1-16 [2.4]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time																
Offset Time																
Split Number																
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Coordination, Pattern+ 1-16 [2.5][2.6]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Short																
Long	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Dwell																
No Short P 1																
No Short P 2																
No Short P 3																
No Short P 4																
Early Yield																
Offset	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn
CNA	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Max 2	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Float	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Min Veh Perm	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Min Ped Perm	on	on	on	off	off	off	off	off	off	off	off	off	off	off	off	off
Percentage	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
MI	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Ret Hold	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
CIC Plan																
Ph Opt Table	1	2	3													
Ph Time Table																
Det Grp																
Call Inh																
Inh Perm Phs 1	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Inh Perm Phs 2	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Inh Perm Phs 3	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Inh Perm Phs 4	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Inh Perm Phs 5	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Inh Perm Phs 6	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Inh Perm Phs 7	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Inh Perm Phs 8	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off	off
Dia Mode	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft
Force Mode	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft	dft

Channels/SDLC, Assign to Phases [1.3.1](v61) or [1.8.1](v65, v76)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	1	3	5	7				
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	PED	PED	PED	PED	VEH	VEH	VEH	VEH
Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Alt Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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Station : 304 - CLOVIS @ NEES (Standard File)

Detector, Vehicle Parameters & Options [5.1][5.2]

1-16

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Volume	ON			ON		ON			ON			ON		ON		
Occupancy																
Yellow Lock			ON						ON							
Red Lock	ON						ON					ON			ON	
Extend	ON	ON	ON	ON			ON	ON	ON	ON			ON	ON	ON	ON
Added Initial																
Queue					ON	ON					ON	ON				
Call	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Call Phase	1	2	2	2	2	2	3	4	4	4	4	4	1	3	5	6
Switch Phase																
Delay Time				10												
Extend Time					2	2					2	2				
Queue Limit					20	20					20	20				
No Activity																
Max Presence																
Erratic Counts																
Fail Time	2	2	2	2	2	2	2	2	2		2	2	2	2	2	2

17-32

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Volume		ON		ON				ON		ON	ON	ON				
Occupancy																
Yellow Lock	ON						ON									
Red Lock				ON	ON					ON						
Extend	ON	ON			ON	ON	ON	ON			ON	ON				
Added Initial																
Queue			ON	ON					ON	ON						
Call	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON				
Call Phase	6	6	6	6	7	8	8	8	8	8	5	7				
Switch Phase																
Delay Time		10						10								
Extend Time			2	2					2	2						
Queue Limit			20	20					20	20						
No Activity																
Max Presence																
Erratic Counts																
Fail Time	2	2	2	2	2	2	2	2	2	2	2	2				

33-48

	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Volume																
Occupancy																
Yellow Lock																
Red Lock																
Extend																
Added Initial																
Queue																
Call																
Call Phase																
Switch Phase																
Delay Time																
Extend Time																
Queue Limit																
No Activity																
Max Presence																
Erratic Counts																
Fail Time																

49-64

	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Volume																
Occupancy																
Yellow Lock																
Red Lock																
Extend																
Added Initial																
Queue																
Call																
Call Phase																
Switch Phase																
Delay Time																
Extend Time																
Queue Limit																
No Activity																
Max Presence																
Erratic Counts																
Fail Time																

Detector, Vehicle Parameters+ [5.3]

1-16

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green Occupancy																
Yellow Occupancy																
Red Occupancy																
External Mode	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
Delay Phase 1																
Delay Phase 2																
Source																

17-32

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Green Occupancy																
Yellow Occupancy																
Red Occupancy																
External Mode	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
Delay Phase 1																
Delay Phase 2																
Source																

33-48

	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Green Occupancy																
Yellow Occupancy																
Red Occupancy																
External Mode	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
Delay Phase 1																
Delay Phase 2																
Source																

49-64

	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Green Occupancy																
Yellow Occupancy																
Red Occupancy																
External Mode	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
Delay Phase 1																
Delay Phase 2																
Source																

Detector, Ped Detectors 1-16 [5.4]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase		2		4		6		8								
No Activity																
Max Presence																
Erratic Cnt																

AGENDA ITEM NO. 6.

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ALWAYS	

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases	Modifer Phases	Type	Green	Yellow	Red
Overlap 1			NORMAL		3.5	1.5
Overlap 2			NORMAL		3.5	1.5
Overlap 3			NORMAL		3.5	1.5
Overlap 4			NORMAL		3.5	1.5
Overlap 5			NORMAL		3.5	1.5
Overlap 6			NORMAL		3.5	1.5
Overlap 7			NORMAL		3.5	1.5
Overlap 8			NORMAL		3.5	1.5
Overlap 9			NORMAL		3.5	1.5
Overlap 10			NORMAL		3.5	1.5
Overlap 11			NORMAL		3.5	1.5
Overlap 12			NORMAL		3.5	1.5
Overlap 13			NORMAL		3.5	1.5
Overlap 14			NORMAL		3.5	1.5
Overlap 15			NORMAL		3.5	1.5
Overlap 16			NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases	Conflicting Overlaps	Conflicting Peds
Overlap 1			
Overlap 2			
Overlap 3			
Overlap 4			
Overlap 5			
Overlap 6			
Overlap 7			
Overlap 8			
Overlap 9			
Overlap 10			
Overlap 11			
Overlap 12			
Overlap 13			
Overlap 14			
Overlap 15			
Overlap 16			

Flash Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
35	15		

Flash, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

Station : 304 - CLOVIS @ NEES (Standard File)

Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Red Revert	Local Flash Start	Yellow 3 Second Disable	Unit Yellow Enable	MCE Timeout	Enable Run	Start Red Time	Phase Mode	Disable Init Ped	Diamond Mode	Stop Time Over Preempt	Free Ring Sequence	Clearance Decide	Min Ped Clear Time						
	OFF	1	RST	OFF	OFF		ON		STD8	OFF	4PH	OFF	1	OFF	OFF						

Ring Sequence 1 [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2	3	4				
Ring 2	5	6	7	8				
Ring 3								
Ring 4								

Phase Startup, Concur [1.1.4]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Startup	RED	RED	RED	YELLOW	RED	RED	RED	YELLOW	RED	RED	RED	RED	RED	RED	RED	RED
Ring	1	1	1	1	2	2	2	2								
Concur 1	5	5	7	7	1	1	3	3								
Concur 2	6	6	8	8	2	2	4	4								
Concur 3																
Concur 4																
Concur 5																
Concur 6																
Concur 7																
Concur 8																

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
304								

Station : 304 - CLOVIS @ NEES (Standard File)

Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	
4	ON
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	ON
15	
16	
17	ON
18	ON
19	ON
20	ON
21	
22	
23	
24	
25	
26	
27	
28	
29	ON
30	ON
31	ON
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	ON
50	
51	ON
52	ON
53	ON
54	ON
55	
56	
57	
58	
59	
60	ON
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	
4	ON
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	ON
15	
16	
17	ON
18	ON
19	ON
20	ON
21	
22	
23	
24	
25	
26	
27	
28	
29	ON
30	ON
31	ON
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	ON
50	
51	ON
52	ON
53	ON
54	ON
55	
56	
57	
58	
59	
60	ON
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
OFF	OFF

76	
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127	
128	

Station : 304 - CLOVIS @ NEES (Standard File)

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash	ON	ON		ON	ON	ON
Override Higher	ON	ON	ON	ON	ON	ON
Flash Dwell	ON					
Link						
Delay						
Min Duration						
Min Green						
Min Walk			4	4	4	4
Ped Clear			18	18	17	19
Track Green						
Min Dwell						
Max Presence			60	60	60	60
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1			2	4	1	3
Dwell P2			5	7	6	8
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1						
Exit R2						
Exit R3						
Exit R4						

Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable	ON		ON	ON	ON	ON
Type	RAIL	EMERG	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Max2						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
Dwell Over 1						
Dwell Over 2						
Dwell Over 3						
Dwell Over 4						
Dwell Over 5						
Dwell Over 6						
Dwell Over 7						
Dwell Over 8						
Dwell Over 9						
Dwell Over 10						
Dwell Over 11						
Dwell Over 12						
Ped Clear						
Yellow						
Red						
Max Green						

Low Priority Preempt [3]

Preempt	7	8	9	10
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock in Mins				
Headway in Mins				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Station : 304 - CLOVIS @ NEES (Standard File)

TB Coor, Advanced Scheduler [4.3]

	Month												Day of Week							Day of Month									1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2																																																			1
3																																																			1
4																																																			1
5																																																			1
6																																																			1
7																																																			1
8																																																			1
9																																																			1
10																																																			1
11																																																			1
12																																																			1
13																																																			1
14																																																			1
15																																																			1
16																																																			1
17																																																			1
18																																																			1
19																																																			1
20																																																			1
21																																																			1
22																																																			1
23																																																			1
24																																																			1
25																																																			1
26																																																			1
27																																																			1
28																																																			1
29																																																			1
30																																																			1
31																																																			1
32																																																			1

TB Coor, Day Plan [4.4]

Day Plan Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		6	14	19	21											
Minute	1	20														
Action	3	1	2	3	3											

Day Plan Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Station : 304 - CLOVIS @ NEES (Standard File)

Day Plan Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day plan Link 1-16 [4.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Link																

Station : 304 - CLOVIS @ NEES (Standard File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1				0	0						
2	2				0	0						
3	3				0	0						
4	4				0	0						
5	5				0	0						
6	6				0	0						
7	7				0	0						
8	8				0	0						
9	9				0	0						
10	10				0	0						
11					0	0						
12					0	0						
13					0	0						
14					0	0						
15					0	0						
16					0	0						
17					0	0						
18					0	0						
19					0	0						
20					0	0						
21					0	0						
22					0	0						
23					0	0						
24					0	0						
25					0	0						
26					0	0						
27					0	0						
28					0	0						
29					0	0						
30					0	0						
31					0	0						
32					0	0						
33					0	0						
34					0	0						
35					0	0						
36					0	0						
37					0	0						
38					0	0						
39					0	0						
40					0	0						
41					0	0						
42					0	0						
43					0	0						
44					0	0						
45					0	0						
46					0	0						
47					0	0						
48					0	0						
49					0	0						
50					0	0						
51					0	0						
52					0	0						
53					0	0						
54	254				0	0						
55	255				0	0						
56					0	0						
57					0	0						
58					0	0						
59					0	0						
60					0	0						
61					0	0						
62					0	0						
63					0	0						
64					0	0						
65					0	0						
66					0	0						
67					0	0						
68					0	0						
69					0	0						
70					0	0						
71					0	0						
72					0	0						
73					0	0						
74					0	0						
75					0	0						
76					0	0						

77					0	0						
78					0	0						
79					0	0						
80					0	0						
81					0	0						
82					0	0						
83					0	0						
84					0	0						
85					0	0						
86					0	0						
87					0	0						
88					0	0						
89					0	0						
90					0	0						
91					0	0						
92					0	0						
93					0	0						
94					0	0						
95					0	0						
96					0	0						
97					0	0						
98					0	0						
99					0	0						
100					0	0						

Channels/SDLC+, IO Logic [1.8.7]

	1	2	3	4	5	6	7	8	9	10
Result										
Operand 1										
Operand 2										
Operand 3										
Operator 1 Function	----	----	----	----	----	----	----	----	----	----
Operand 1 Result	I	I	I	I	I	I	I	I	I	I
Operand 1 IO	I	I	I	I	I	I	I	I	I	I
Operand 1 Invert	-	-	-	-	-	-	-	-	-	-
Operator 2 Function	----	----	----	----	----	----	----	----	----	----
Operand 2 IO	I	I	I	I	I	I	I	I	I	I
Operand 2 Invert	-	-	-	-	-	-	-	-	-	-
Operator 3 Function	----	----	----	----	----	----	----	----	----	----
Operand 3 IO	I	I	I	I	I	I	I	I	I	I
Operand 3 Invert	-	-	-	-	-	-	-	-	-	-
Time Operator	DLY	DLY	DLY	DLY	DLY	DLY	DLY	DLY	DLY	DLY
Time										

User Input map [1.8.9.1]

	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8

User Output map [1.8.9.2]

	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8

AGENDA ITEM NO. 6.

Station : 304 - CLOVIS @ NEES (Standard File)

Miscellaneous Data

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1										
2										
3										
4										
5										
6										
7										
8										

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1										
2										
3										
4										
5										
6										
7										
8										

Alternate Phase Program 3, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1										
2										
3										
4										
5										
6										
7										
8										

Alternate Phase Program 1, Phase Options [1.1.6.2]

Column	Non Act1	Lock Call	Soft Recall	Dual Entry	Sim Gap Enb	Guar Pass	RIW	Cond Service	Reservice	Red Rest	Max 2	Ped Delay	Conf Phs1	Conf Phs1	Assign Phase
1	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
2	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
3	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
4	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
5	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
6	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
7	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
8	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		

Alternate Phase Program 2, Phase Options [1.1.6.2]

Column	Non Act1	Lock Call	Soft Recall	Dual Entry	Sim Gap Enb	Guar Pass	RIW	Cond Service	Reservice	Red Rest	Max 2	Ped Delay	Conf Phs1	Conf Phs1	Assign Phase
1	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
2	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
3	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
4	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
5	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
6	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
7	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		
8	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		

Alternate Phase Program 3, Phase Options [1.1.6.2]

Column	Non Act1	Lock Call	Soft Recall	Dual Entry	Sim Gap Enb	Guar Pass	RIW	Cond Service	Reservice	Red Rest	Max 2	Ped Delay	Conf Phs1	Conf Phs1	Assign Phase
1	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF		
2	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF		
3	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF		
4	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF		
5	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF		
6	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF		
7	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF		
8	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF		

Station : 304 - CLOVIS @ NEES (Standard File)

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1													
2													
3													
4													
5													
6													
7													
8													

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1													
2													
3													
4													
5													
6													
7													
8													

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Queue																
Call Phase																
Switch Phase																
Delay Time																
No Activity																
Max Presence																
Erratic Cnt																
Fail Time																

Detector Alternate Program 1, Vehicle Options [5.5.2]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Volume																
Occupancy																
Yellow Lock																
Red Lock																
Added Initial																
Call																
Extend Time																
Queue Limit																

Detector Alternate Program 1, Ped Parameters [5.5.4]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase																
No Activity																
Max Presence																
Erratic Cnt																

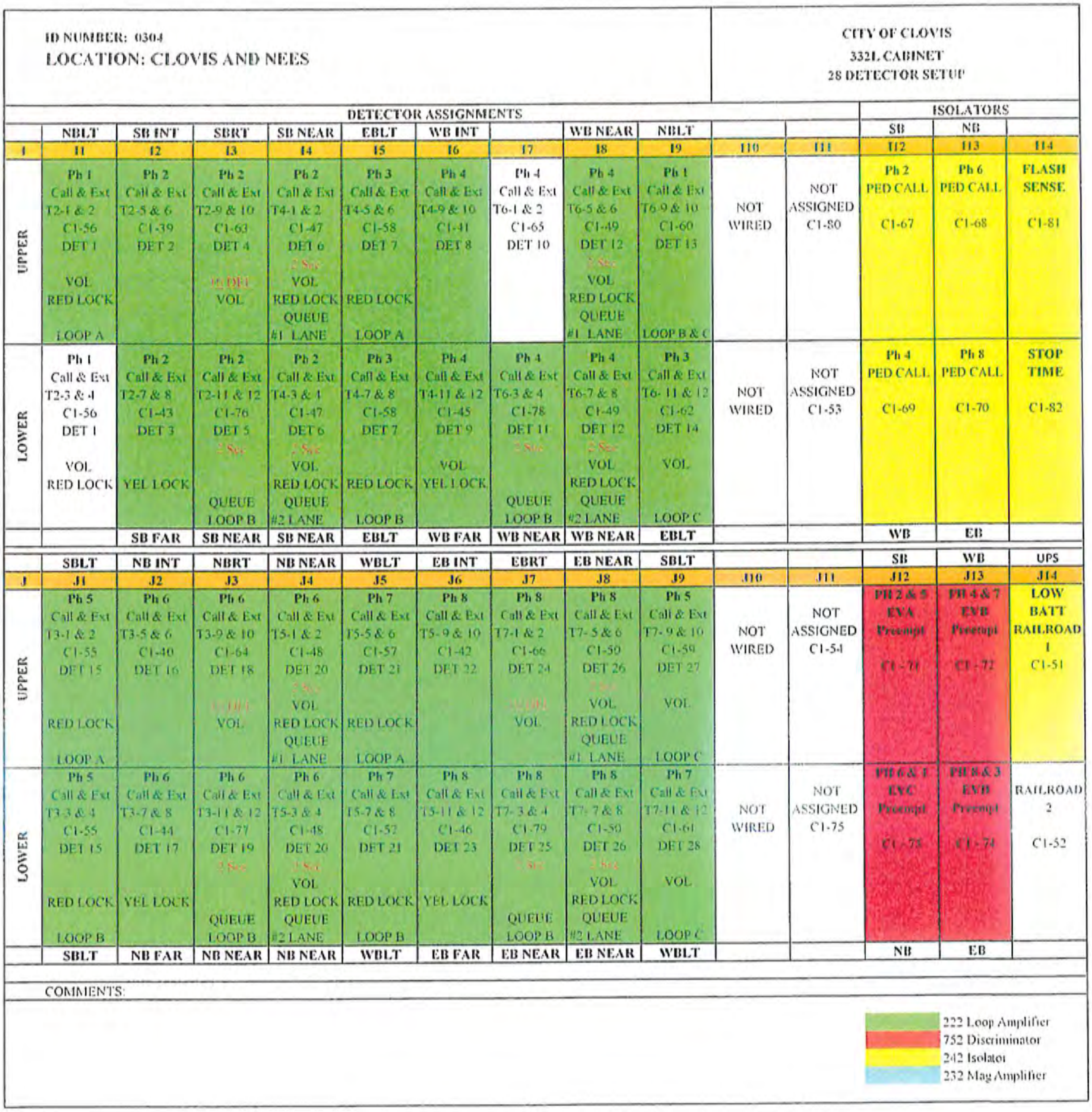
Channel/SDLC +, Assign to Phases [1.8.4]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	10	21	22	23	24
PH/OLP #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	1	3	5	7				
Flash Red																								
Flash Yellow																								
Flash Green																								
Inh Red Flash in Preempt																								
Color Flash Rate																								
Override Type																								
Override Source																								

Station : 304 - CLOVIS @ NEES (Standard File)

Communication, IP Parameters [6.5]

	Octet 1	Octet 2	Octet 3	Octet 4



ID NUMBER: 0304

LOCATION: CLOVIS AND NEES

CITY OF CLOVIS
332L CABINET
28 DETECTOR SETUP

	DETECTOR ASSIGNMENTS											ISOLATORS		
	NBLT	SB INT	SBRT	SB NEAR	EBLT	WB INT		WB NEAR	NBLT			SB	NB	
I	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	I14
UPPER	Ph 1 Call & Ext T2-1 & 2 C1-56 DET 1 VOL RED LOCK LOOP A	Ph 2 Call & Ext T2-5 & 6 C1-39 DET 2	Ph 2 Call & Ext T2-9 & 10 C1-63 DET 4 ½ DET VOL	Ph 2 Call & Ext T4-1 & 2 C1-47 DET 6 2 Sec VOL RED LOCK QUEUE #1 LANE	Ph 3 Call & Ext T4-5 & 6 C1-58 DET 7 RED LOCK LOOP A	Ph 4 Call & Ext T4-9 & 10 C1-41 DET 8	Ph 4 Call & Ext T6-1 & 2 C1-65 DET 10	Ph 4 Call & Ext T6-5 & 6 C1-49 DET 12 2 Sec VOL RED LOCK QUEUE #1 LANE	Ph 1 Call & Ext T6-9 & 10 C1-60 DET 13 LOOP B & C	NOT WIRED	NOT ASSIGNED C1-80	Ph 2 PED CALL C1-67	Ph 6 PED CALL C1-68	FLASH SENSE C1-81
LOWER	Ph 1 Call & Ext T2-3 & 4 C1-56 DET 1 VOL RED LOCK	Ph 2 Call & Ext T2-7 & 8 C1-43 DET 3 YEL LOCK	Ph 2 Call & Ext T2-11 & 12 C1-76 DET 5 2 Sec QUEUE LOOP B	Ph 2 Call & Ext T4-3 & 4 C1-47 DET 6 2 Sec VOL RED LOCK QUEUE #2 LANE	Ph 3 Call & Ext T4-7 & 8 C1-58 DET 7 RED LOCK LOOP B	Ph 4 Call & Ext T4-11 & 12 C1-45 DET 9 VOL YEL LOCK	Ph 4 Call & Ext T6-3 & 4 C1-78 DET 11 2 Sec QUEUE LOOP B	Ph 4 Call & Ext T6-7 & 8 C1-49 DET 12 2 Sec VOL RED LOCK QUEUE #2 LANE	Ph 3 Call & Ext T6- 11 & 12 C1-62 DET 14 VOL LOOP C	NOT WIRED	NOT ASSIGNED C1-53	Ph 4 PED CALL C1-69	Ph 8 PED CALL C1-70	STOP TIME C1-82
		SB FAR	SB NEAR	SB NEAR	EBLT	WB FAR	WB NEAR	WB NEAR	EBLT			WB	EB	

	SBLT	NB INT	NBRT	NB NEAR	WBLT	EB INT	EBRT	EB NEAR	SBLT			SB	WB	UPS
J	J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12	J13	J14
UPPER	Ph 5 Call & Ext T3-1 & 2 C1-55 DET 15 RED LOCK LOOP A	Ph 6 Call & Ext T3-5 & 6 C1-40 DET 16	Ph 6 Call & Ext T3-9 & 10 C1-64 DET 18 ½ DET VOL	Ph 6 Call & Ext T5-1 & 2 C1-48 DET 20 2 Sec VOL RED LOCK QUEUE #1 LANE	Ph 7 Call & Ext T5-5 & 6 C1-57 DET 21 RED LOCK LOOP A	Ph 8 Call & Ext T5- 9 & 10 C1-42 DET 22	Ph 8 Call & Ext T7-1 & 2 C1-66 DET 24 ½ DET VOL	Ph 8 Call & Ext T7- 5 & 6 C1-50 DET 26 2 Sec VOL RED LOCK QUEUE #1 LANE	Ph 5 Call & Ext T7- 9 & 10 C1-59 DET 27 VOL LOOP C	NOT WIRED	NOT ASSIGNED C1-54	PH 2 & 5 EVA Preempt C1 - 71	PH 4 & 7 EVB Preempt C1 - 72	LOW BATT RAILROAD 1 C1-51
LOWER	Ph 5 Call & Ext T3-3 & 4 C1-55 DET 15 RED LOCK LOOP B	Ph 6 Call & Ext T3-7 & 8 C1-44 DET 17 YEL LOCK	Ph 6 Call & Ext T3-11 & 12 C1-77 DET 19 2 Sec QUEUE LOOP B	Ph 6 Call & Ext T5-3 & 4 C1-48 DET 20 2 Sec VOL RED LOCK QUEUE #2 LANE	Ph 7 Call & Ext T5-7 & 8 C1-57 DET 21 RED LOCK LOOP B	Ph 8 Call & Ext T5-11 & 12 C1-46 DET 23 YEL LOCK	Ph 8 Call & Ext T7- 3 & 4 C1-79 DET 25 2 Sec QUEUE LOOP B	Ph 8 Call & Ext T7- 7 & 8 C1-50 DET 26 2 Sec VOL RED LOCK QUEUE #2 LANE	Ph 7 Call & Ext T7-11 & 12 C1-61 DET 28 VOL LOOP C	NOT WIRED	NOT ASSIGNED C1-75	PH 6 & 1 EVC Preempt C1 - 73	PH 8 & 3 EVD Preempt C1 - 74	RAILROAD 2 C1-52
	SBLT	NB FAR	NB NEAR	NB NEAR	WBLT	EB FAR	EB NEAR	EB NEAR	WBLT			NB	EB	

COMMENTS:

🟩	222 Loop Amplifier
🟥	752 Discriminator
🟨	242 Isolator
🟦	232 Mag Amplifier

INTERSECTION: ALLUVIAL & CLOVIS

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **5**

N/S Street Name: **N. Clovis Avenue**
E/W Street Name: **Alluvial Avenue**

Last Database Change: **1/25/2019 10:37**

Change Record					
Change	By	Date	Change	By	Date

Notes: ***ALLUVIALand CLOVIS INT No. C0256***

INSTALLED BY T. Barker - January 25, 2019

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	204	<C/0+0+3>
QuicNet Channel	COM14:	(QuicNet)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	1.0	<F/1+0+F>
All Red Start	6.0	<F/1+C+0>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable
Outputs at E/127+A+E & F)

		Phase							
	Column Numbers --->	1	2	3	4	5	6	7	8
Row	*Phase Names --->*	NBL	SB	EBL	WB	SBL	NB	WBL	EB
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	24	0	27	0	24	0	29
2	Min Green	12	9	10	9	12	9	10	9
3	Type 3 Disconnect	0	22	0	22	0	22	0	22
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	2.0	3.0	2.0	3.2	2.0	3.3	2.0	2.4
6	Max Gap	2.0	4.1	2.0	4.1	2.0	4.3	2.0	2.7
7	Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8	Max Limit	23	31	15	31	13	31	15	31
9	Max Limit 2	3	22	5	25	3	22	5	27
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	18	0	21	0	18	0	23
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	0.0	3.0
E	Yellow Change	3.0	4.7	3.0	4.7	3.0	4.7	3.0	4.7
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	1
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

	F	Row
Permit	12345678	0
Red Lock	________	1
Yellow Lock	_2_4_6_8	2
Min Recall	________	3
Ped Recall	________	4
View Set Peds	- - - - -	5
Rest In Walk	________	6
Red Rest	12345678	7
Dual Entry	________	8
Max Recall	________	9
Soft Recall	________	A
Max 2	________	B
Cond. Service	________	C
Man Cntrl Calls	________	D
Yellow Start	________	E
First Phases	_2___6__	F

Phase Functions <C+0+F=1>

Row	Column Numbers —>	1	2	3	4	5	6	7	8
	Overlap Name —>								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The column numbers 1–8 are printed under the header "Overlap".

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	- - -	4
RR-2 *	- - -	5
SE-1	0	6
SE-2	0	7
		8
		9
		A
		B
		C
		D
		E
		F

Preempt Priority
<C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers —>	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	
Sequential Timing	12345678
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	12345678
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	2 4 6 8

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D

Coordination Transition Minimums
<C+0+C=5>

AGENDA ITEM NO. 6.

Row	Column Numbers --->	1	2	3	4	5	6	7	8	9	Row
	Plan Name --->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	55	55	55	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	20	20	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	55	55	55	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	20	20	20	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

		E	Row
			0
	Plan 1 - Sync	2 6	1
	Plan 2 - Sync	2 6	2
	Plan 3 - Sync	2 6	3
	Plan 4 - Sync	2 6	4
	Plan 5 - Sync	2 6	5
	Plan 6 - Sync	2 6	6
	Plan 7 - Sync	2 6	7
	Plan 8 - Sync	2 6	8
	Plan 9 - Sync	2 6	9
	NEMA Sync		A
	NEMA Hold		B
			C
			D
	Coord Extra		E
			F

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C+0+C=2>

	F	Row
Free Lag	2 4 6 8	0
Plan 1 - Lag	2 4 6 8	1
Plan 2 - Lag	2 4 6 8	2
Plan 3 - Lag	2 4 6 8	3
Plan 4 - Lag	2 4 6 8	4
Plan 5 - Lag	2 4 6 8	5
Plan 6 - Lag	2 4 6 8	6
Plan 7 - Lag	2 4 6 8	7
Plan 8 - Lag	2 4 6 8	8
Plan 9 - Lag	2 4 6 8	9
External Lag		A
		B
		C
		D
		E
		F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	61	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

		Phase							
	Column Numbers --->	1	2	3	4	5	6	7	8
Row	Phase Names --->	NBL	SB	EBL	WB	SBL	NB	WBL	EB
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	______	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
Column Numbers --->		0	1	2	3	1	3
0	2I2U	39	45_7	2	123	0.0	0.0
1	6J2U	40	45_7	6	123_8	0.0	1.2
2	4I6U	41	45_7	4	123_8	0.0	1.2
3	8J6U	42	45_7	8	123_8	10.0	0.0
4	2I2L	43	45_7	2	123	0.0	0.0
5	6J2L	44	45_7	6	123_8	0.0	0.2
6	4I6L	45	45_7	4	123_8	0.0	0.6
7	8J6L	46	45_7	8	123_8	0.0	0.0
8	2I4U & L	47	67	2	123_8	0.0	2.0
9	6J4U & L	48	67	6	123_8	0.0	2.0
A	4I8U & L	49	67	4	123_8	0.0	2.0
B	8J8U & L	50	67	8	123_8	0.0	2.0
C	5J1U & L	55	45_7	5	123_8	0.0	0.0
D	1I1U & L	56	45_7	1	123_8	0.0	0.0
E	7J5U & L	57	45_7	7	123_8	0.0	0.0
F	3I5U & L	58	45_7	3	123_8	0.0	0.0

Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
		4	5	6	7	2	4
0	5J9U	59	45_7	5	123	0.0	0.0
1	1I9U	60	45_7	1	123_8	0.0	0.0
2	7J9L	61	45_7		123	0.0	0.0
3	3I9L	62	45_7	3	123	0.0	0.0
4	2I3U	63	45_7	2	123_8	0.0	1.0
5	6J3U	64	67	6	123_8	0.0	2.0
6	4I7U	65	45_7	4	123_8	0.0	0.0
7	8J7U	66	45_7	8	123_8	0.0	0.0
8	2 I 12 U	67	2	2	123	0.0	0.0
9	6 I 13 U	68	2	6	123	0.0	0.0
A	4 I 12 L	69	2	4	123	0.0	0.0
B	8 I 13 L	70	2	8	123	0.0	0.0
C	2I3L	76	45_7	2	123_8	0.0	0.5
D	6J3L	77	45_7	6	123_8	10.0	0.0
E	4I7L	78	45_7	4	123_8	10.0	0.0
F	8J7L	79	45_7	8	123_8	0.0	0.5

Detector Assignments <C+0+E=126>

<C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type 0 <E/125+D+0>

Enable Redirection

(Enable Redirection = 30)

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times

<C+0+D=0> (seconds)

Omit Alarm ______ <C/5+F+0>

Disable Alarm Reporting

Time 10 <C/5+C+0>

Redial Time (minutes)

(View Redial Timer at E/2+D+6)

AGENDA ITEM NO. 6.

INTERSECTION: ALLUVIAL & CLOVIS

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Row	Time	Funct.	Day of Week	Column 4 Phases/Bits
0	18 : 00	3	1234567	3 8
1	20 : 00	3	1234567	
2	00 : 00	0		
3	00 : 00	0		
4	00 : 00	0		
5	00 : 00	0		
6	00 : 00	0		
7	00 : 00	0		
8	00 : 00	0		
9	00 : 00	0		
A	00 : 00	0		
B	00 : 00	0		
C	00 : 00	0		
D	00 : 00	0		
E	00 : 00	0		
F	16 : 30	E	1234567	78

TOD Function <C+0+7=0.1> <C+0+E=27>

Row	Day	Year	Month	Holiday Type
0	00	00	0	
1	00	00	0	
2	00	00	0	
3	00	00	0	
4	00	00	0	
5	00	00	0	
6	00	00	0	
7	00	00	0	
8	00	00	0	
9	00	00	0	
A	00	00	0	
B	00	00	0	
C	00	00	0	
D	00	00	0	
E	00	00	0	
F	00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Row	Time	Plan	Offset	Holiday Type
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Row	Time	Funct.	Holiday Type	Column 4 Phases/Bits
0	00 : 00	0		
1	00 : 00	0		
2	00 : 00	0		
3	00 : 00	0		
4	00 : 00	0		
5	00 : 00	0		
6	00 : 00	0		
7	00 : 00	0		
8	00 : 00	0		
9	00 : 00	0		
A	00 : 00	0		
B	00 : 00	0		
C	00 : 00	0		
D	00 : 00	0		
E	00 : 00	0		
F	00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Row	Day	Year	Month	Holiday Type
0	00	00	0	
1	00	00	0	
2	00	00	0	
3	00	00	0	
4	00	00	0	
5	00	00	0	
6	00	00	0	
7	00	00	0	
8	00	00	0	
9	00	00	0	
A	00	00	0	
B	00	00	0	
C	00	00	0	
D	00	00	0	
E	00	00	0	
F	00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Row	Time	Plan	Offset	Holiday Type
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

	6	7	8	9	A	B	C	D	E	F
Row	Clear	Time	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit Phases	Ped Omit	Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1

<C+0+E=27>

Notes:

0 <E/27+5+F>

Limited Service Interval

	6	7	8	9	A	B	C	D	E	F
Row	Clear	Time	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit Phases	Ped Omit	Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2

<C+0+E=28>

Notes:

0 <E/28+5+F>

Limited Service Interval

AGENDA ITEM NO. 6.

Min Time (seconds) | 4 | <F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes) | 1 | <F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds) | 0 | <F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel | ______ | <E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds) | 0 | <F/1+A+D>

Bus Delay

Max Time (seconds) | 0 | <F/1+A+E>

Max Early Green

Max Time (seconds) | 0 | <F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

AGENDA ITEM NO. 6.

ID NUMBER: 0256

LOCATION: ALLUVIAL AVENUE and N. CLOVIS AVENUE

T. Barker
1/24/2018

CITY OF CLOVIS
332 CABINET
28 DETECTOR SETUP

	DETECTOR ASSIGNMENTS											ISOLATORS		
	NBLT		**SB INT**	**SB NEAR**	**EBLT**	**WB INT**	**WB BIKE**	**WB NEAR**	**NBLT**			**SB**	**NB**	
I	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**	**I9**	**I10**	**I11**	**I12**	**I13**	**I14**
UPPER	**Ph 1** Call & Ext T2-1 & 2 C1-56 DET 1 Loop 1	**Ph 2** Call & Ext T2-5 & 6 C1-39 DET 2	**Ph 2** Call & Ext T2-9 & 10 C1-63 DET 4 1.0	**Ph 2** Call & Ext T4-1 & 2 C1-47 DET 6 2.0 LANE 1 & 2	**Ph 3** Call & Ext T4-5 & 6 C1-58 DET 7	**Ph 4** Call & Ext T4-9 & 10 C1-41 DET 8 1.2	**Ph 4** Call & Ext T6-1 & 2 C1-65 DET 10	**Ph 4** Call & Ext T6-5 & 6 C1-49 DET 12 2.0 Loop 1	**Ph 1** Call & Ext T6-9 & 10 C1-60 DET 13 Loop 3	NOT WIRED	NOT ASSIGNED C1-80	**Ph 2** **PED CALL** C1-67	**Ph 6** **PED CALL** C1-68	**FLASH** **SENSE** C1-81
LOWER	**Ph 1** Call & Ext T2-3 & 4 C1-56 DET 1 Loop 2	**Ph 2** Call & Ext T2-7 & 8 C1-43 DET 3	**Ph 2** Call & Ext T2-11 & 12 C1-76 DET 5 0.5	**Ph 2** Call & Ext T4-3 & 4 C1-47 DET 6	**Ph 3** Call & Ext T4-7 & 8 C1-58 DET 7	**Ph 4** Call & Ext T4-11 & 12 C1-45 DET 9 0.6	**Ph 4** Call & Ext T6-3 & 4 C1-78 DET 11 10 Delay	**Ph 4** Call & Ext T6-7 & 8 C1-49 DET 12 2.0 Loop 2	**Ph 3** Call & Ext T6- 11 & 12 C1-62 DET 14	NOT WIRED	NOT ASSIGNED C1-53	**Ph 4** **PED CALL** C1-69	**Ph 8** **PED CALL** C1-70	**STOP** **TIME** C1-82
	NBLT		**SB FAR**			**WB FAR**	**WBRT**	**WB NEAR**				**WB**	**EB**	
	SBLT	**NB INT**	**NB NEAR**	**NB NEAR**	**WBLT**	**EBRT**	**EB INT**	**EB NEAR**				**SB**	**WB**	**UPS**
J	**J1**	**J2**	**J3**	**J4**	**J5**	**J6**	**J7**	**J8**	**J9**	**J10**	**J11**	**J12**	**J13**	**J14**
UPPER	**Ph 5** Call & Ext T3-1 & 2 C1-55 DET 15	**Ph 6** Call & Ext T3-5 & 6 C1-40 DET 16 1.2	**Ph 6** Call & Ext T3-9 & 10 C1-64 DET 18 2.0 Back loops	**Ph 6** Call & Ext T5-1 & 2 C1-48 DET 20 2.0 Front Lane 1	**Ph 7** Call & Ext T5-5 & 6 C1-57 DET 21 Loop 1	**Ph 8** Call & Ext T5- 9 & 10 C1-42 DET 22 10 Delay	**Ph 8** Call & Ext T7-1 & 2 C1-66 DET 24	**Ph 8** Call & Ext T7- 5 & 6 C1-50 DET 26 2.0 LANE #1	**Ph 5** Call & Ext T7- 9 & 10 C1-59 DET 27	NOT WIRED	NOT ASSIGNED C1-54	**PH 2 & 5** **EVA** **Preempt** C1 - 71	**PH 4 & 7** **EVB** **Preempt** C1 - 72	**LOW** **BATT** **RAILROAD** **1** C1-51
LOWER	**Ph 5** Call & Ext T3-3 & 4 C1-55 DET 15	**Ph 6** Call & Ext T3-7 & 8 C1-44 DET 17 0.2	**Ph 6** Call & Ext T3-11 & 12 C1-77 DET 19 10 Delay	**Ph 6** Call & Ext T5-3 & 4 C1-48 DET 20 2.0 Front Lane 2	**Ph 7** Call & Ext T5-7 & 8 C1-57 DET 21 Loops 2 & 3	**Ph 8** Call & Ext T5-11 & 12 C1-46 DET 23	**Ph 8** Call & Ext T7- 3 & 4 C1-79 DET 25 0.5	**Ph 8** Call & Ext T7- 7 & 8 C1-50 DET 26	**Ph 7** Call & Ext T7-11 & 12 C1-61 DET 28	NOT WIRED	NOT ASSIGNED C1-75	**PH 6 & 1** **EVC** **Preempt** C1 - 73	**PH 8 & 3** **EVD** **Preempt** C1 - 74	**RAILROAD** **2** C1-52
		NB FAR	**NBRT**	**NB NEAR**	**WBLT**	**EB BIKE**	**EB FAR**		**FOG**			**NB**	**EB**	

COMMENTS:

🟩	222 Loop Amplifier
🟧	752 Discriminator
🟨	242 Isolator
🟦	232 Mag Amplifier

2070 Controller Timing Chart

Caltrans TSCP Ver 3.10

Location:
System:
Master At:
District:
I/C:
Designed By:
Intalled By:
Service Info:

Timing Change: **By:** **Date Start:** **Date End:** **Designed:** **Installed:**

FLASH

		FLASH
	1)	[ ]
P	2)	[ ]
H	3)	[ ]
A	4)	[ ]
S	5)	[ ]
E	6)	[ ]
	7)	[ ]
	8)	[ ]
O	A)	[ ]
V	B)	[ ]
E	C)	[ ]
R	D)	[ ]
L	E)	[ ]
A	F)	[ ]
P		

Intersection Layout

Comments and Notes:

RAM Checksum

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Page 4:	81AB	Page 10:	66EE
Page 5:	191A	Page 11:	CFD4
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Location: 168WB @ Herndon W.

TSCP 3.10

CONFIGURATION PHASE FLAGS

Cabinet (9-3)	
Type	332
Configuration	CALTRANS

Phases (2-1-1-1)	
Permitted	- 2 - 4 - 6 - -
Restricted	- - - - - - - -

Phase Features (2-1-1-4)	
Double Entry	- - - - - - - -
Rest In Walk	- - - - - - - -
Rest In Red	- - - - - - - -
Walk2	- - - - - - - -
Max Green 2	- - - 4 - - - -
Max Green 3	- - - - - - - -

Startup (2-1-1-5)	
First Green Phases	- 2 - - - 6 - -
Yellow Start Phases	- - - - - - - -
Vehicle Calls	- 2 - 4 - 6 - -
Pedestrian Calls	- 2 - - - - - -
Yellow Start Overlaps	- - - - - -
Startup All-Red	6.0

Phase Recalls (2-1-1-2)	
Vehicle Min	- 2 - - - 6 - -
vehicle Max	- - - - - - - -
Pedestrian	- - - - - - - -
Bicyle	- - - - - - - -

Phase Locks (2-1-1-3)	
Red	- - - - - - - -
Yellow	- - - - - - - -
Force/Max	- - - - - - - -

Call To Phase (2-1-2-1)		Omit On Green	
1	- - - - - - - -	1	- - - - - - - -
2	- - - - - - - -	2	- - - - - - - -
3	- - - - - - - -	3	- - - - - - - -
4	- - - - - - - -	4	- - - - - - - -
5	- - - - - - - -	5	- - - - - - - -
6	- - - - - - - -	6	- - - - - - - -
7	- - - - - - - -	7	- - - - - - - -
8	- - - - - - - -	8	- - - - - - - -

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	- - - - - - - -
Yellow Flash Overlap	- - - - - - - -
Flash In Red Phases	- - - - - - - -
Flash In Red Overlap	- - - - - - - -

Special Operation (2-1-2-3)	
Single Exit Phase	- - - - - - - -
Driveway Signal Phases	- - - - - - - -
Driveway Signal Overlaps	- - - - - - - -
Leading Ped Phases	- - - - - - - -

Protected Permissive (2-1-2-4)	
Protected Permissive	- - - - - - - -

Pedestrian (2-1-3)	
P1	- - - - - - - -
P2	- 2 - - - - - -
P3	- - - - - - - -
P4	- - - - - - - -
P5	- - - - - - - -
P6	- - - - - - - -
P7	- - - - - - - -
P8	- - - - - - - -

Overlap (2-1-4)

Overlap	Parent	Omit	No Start	Not
A [Arrow A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
B [Arrow B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
C [OL A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
D [OL B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
E [OL C]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
F [OL D]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

[-] 332 Cabinet Overlap Assignment - For Reference Only

PAGE 2 CHECKSUM: D5B0

Location: 168WB @ Herndon W.

TSCP 3.10

PHASE TIMING

PHASE (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	0	0	0
Flash Don't Walk	0	18	0	0	0	0	0	0
Minimum Green	0	10	0	8	0	10	0	0
Det Limit	0	20	0	20	0	20	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	0	25	0	20	0	25	0	0
Max Green 2	0	35	0	30	0	35	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	6.7	0.0	5.3	0.0	6.7	0.0	0.0
Maximum Gap	0.0	9.3	0.0	7.3	0.0	9.3	0.0	0.0
Minimum Gap	0.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0
Reduce Every	0.0	0.4	0.0	0.4	0.0	0.4	0.0	0.0
Yellow	3.0	4.8	3.0	4.4	3.0	4.8	3.0	3.0
All-Red	0.0	2.0	0.0	2.9	0.0	2.0	0.0	0.0
Ped/Bike (2-3)	**-1-**	**-2-**	**-3-**	**-4-**	**-5-**	**-6-**	**-7-**	**-8-**
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A [Arrow A]	B [Arrow B]	C [OL A]	D [OL B]	E [OL C]	F [OL D]
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert (2-5)	
Time	5.0

Red To Se (2-6)	
Red To Sec	OFF

Max/Gap Out (2-7)	
Max Cnt	2
Gap Cnt	3

PAGE 3 **CHECKSUM:** B6CE

Location: 168WB @ Herndon W.

TSCP 3.10

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

		Cycle	Multi	Lag Gap	[Offsets] A	B	C	Green Factors or Press [F] to Select -1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	130	0.0	- - - - - - - -	70				80		35		80		
Plan 2	Green Factor	132	0.0	- - - - - - - -	103				68		49		68		
Plan 3	Green Factor	120	0.0	- - - - - - - -	5				52		53		52		
Plan 4	Green Factor		0.0	- - - - - - - -											
Plan 5	Green Factor		0.0	- - - - - - - -											
Plan 6	Green Factor		0.0	- - - - - - - -											
Plan 7	Green Factor		0.0	- - - - - - - -											
Plan 8	Green Factor		0.0	- - - - - - - -											
Plan 9	Green Factor		0.0	- - - - - - - -											

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	- - - 4 - - - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 2	- - - 4 - - - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 3	- - - 4 - - - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 4	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 5	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 6	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 7	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 9	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

Master Timer Sync (7-A)	
Enable in Plans	
1-9	- - - - - - - - -
11-19	- - - - - - - - -
21-29	- - - - - - - - -

Master Sub Master	
Input	0.0
Output	0

(7-E) Free

Lag	Omit
- 2 - 4 - 6 - 8	- - - - - - - -
Veh Min	**Veh Max**
- 2 - - - 6 - -	- - - - - - - -
Ped	**Bike**
- - - - - - - -	- - - - - - - -
Cond	**Cond Grn**
- - - - - - - -	10

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	Offset
0	A

Plan: 1-29
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)

#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

PAGE 4 **CHECKSUM:** 81AB

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 11	Green Factor		0.0	- - - - - - - -											
Plan 12	Green Factor		0.0	- - - - - - - -											
Plan 13	Green Factor		0.0	- - - - - - - -											
Plan 14	Green Factor		0.0	- - - - - - - -											
Plan 15	Green Factor		0.0	- - - - - - - -											
Plan 16	Green Factor		0.0	- - - - - - - -											
Plan 17	Green Factor		0.0	- - - - - - - -											
Plan 18	Green Factor		0.0	- - - - - - - -											
Plan 19	Green Factor		0.0	- - - - - - - -											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 12	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 13	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 14	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan15	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 16	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 17	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 18	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 19	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

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Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 21	Green Factor		0.0	- - - - - - - -											
Plan 22	Green Factor		0.0	- - - - - - - -											
Plan 23	Green Factor		0.0	- - - - - - - -											
Plan 24	Green Factor		0.0	- - - - - - - -											
Plan 25	Green Factor		0.0	- - - - - - - -											
Plan 26	Green Factor		0.0	- - - - - - - -											
Plan 27	Green Factor		0.0	- - - - - - - -											
Plan 28	Green Factor		0.0	- - - - - - - -											
Plan 29	Green Factor		0.0	- - - - - - - -											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 22	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 23	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 24	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 25	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 26	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 27	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 28	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 29	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

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Location: 168WB @ Herndon W.

TSCP 3.10

DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	Count+Extend	- 2 - - - - - -	NO	I1U	1	0	2.6	10	3.2
2	Count+Extend	- 2 - - - - - -	NO	I1L	2	0	2.6	10	7.2
3	Count+Extend	- 2 - - - - - -	NO	I2U	3	0	2.6	10	1.1
4	Count+Extend	- 2 - - - - - -	NO	I2L	4	0	2.6	10	1.5
5	Count+Call+Extend	- 2 - - - - - -	NO	I3U	5	0	2.0	10	4.5
6	Count+Call+Extend	- 2 - - - - - -	NO	I3L	6	15	0.0	10	6.2
7	Count+Call+Extend	- 2 - - - - - -	NO	I4U	7	0	2.0	10	2.1
8	Count+Call+Extend	- 2 - - - - - -	NO	I4L	8	0	2.0	10	7.4
9	Count+Call+Extend	- 2 - - - - - -	NO	I5U	9	0	1.7	10	3.4
10	Count+Call+Extend	- 2 - - - - - -	NO	I5L	10	0	1.7	10	7.6
11	Count+Call+Extend	- - - 4 - - - -	NO	I6U	11	15	0.0	10	1.3
12	Count+Call+Extend	- - - 4 - - - -	NO	I6L	12	15	0.0	10	1.7
13	Count+Call+Extend	- - - 4 - - - -	NO	I7U	13	0	2.0	10	4.7
14	Count+Call+Extend	- - - 4 - - - -	NO	I7L	14	0	2.0	10	6.4
15	Count+Call+Extend	- - - 4 - - - -	NO	I8U	15	0	0.0	10	2.3
16	Count+Call+Extend	- - - 4 - - - -	NO	I8L	16	0	0.0	10	7.8
17	Count+Call+Extend	- - - 4 - - - -	NO	I9U	17	0	0.0	10	3.6
18	Count+Call+Extend	- - - 4 - - - -	NO	I9L	18	15	0.0	10	3.8
19	Count+Call+Extend	- 2 - - - - - -	NO	I10U	19	0	0.0	10	4.1
20	Count+Call+Extend	- 2 - - - - - -	NO	I10L	20	0	0.0	10	4.2
21	Count+Call+Extend	- - - - - 6 - -	NO	J1U	21	0	2.8	10	3.1
22	Count+Call+Extend	- - - - - 6 - -	NO	J1L	22	0	2.8	10	7.1
23	Count+Call+Extend	- - - - - 6 - -	NO	J2U	23	0	2.8	10	1.2
24	Count+Call+Extend	- - - - - 6 - -	NO	J2L	24	0	2.8	10	1.6
25	Count+Call+Extend	- - - - - 6 - -	NO	J3U	25	0	0.0	10	4.6
26	Count+Call+Extend	- - - - - 6 - -	NO	J3L	26	0	0.0	10	6.3
27	Count+Call+Extend	- - - - - 6 - -	NO	J4U	27	0	2.0	10	2.2
28	Count+Call+Extend	- - - - - 6 - -	NO	J4L	28	0	2.0	10	7.3
29	Count+Call+Extend	- - - - - 6 - -	NO	J5U	29	0	0.0	10	3.3
30	Count+Call+Extend	- - - - - 6 - -	NO	J5L	30	0	0.0	10	7.5
31	Count+Call+Extend	- - - - - - - 8	NO	J6U	31	0	0.0	10	1.4
32	Count+Call+Extend	- - - - - - - 8	NO	J6L	32	0	0.0	10	1.8
33	Count+Call+Extend	- - - - - - - 8	NO	J7U	33	0	0.0	10	4.8
34	Count+Call+Extend	- - - - - - - 8	NO	J7L	34	0	0.0	10	6.5
35	Count+Call+Extend	- - - - - - - 8	NO	J8U	35	0	0.0	10	2.4
36	Count+Call+Extend	- - - - - - - 8	NO	J8L	36	0	0.0	10	7.7
37	Count+Call+Extend	- - - - 5 - - -	NO	J9U	37	0	0.0	10	3.5
38	Count+Call+Extend	- 2 - - - - - -	NO	J9L	38	0	0.0	10	3.7
39	Count+Call+Extend	- 2 - - - - - -	NO	J10U	39	0	0.0	10	4.3
40	Count+Call+Extend	- 2 - - - - - -	NO	J10L	40	0	0.0	10	4.4
41	Pedestrian	- 2 - - - - - -	NO	I12U	41	0	0.0	10	5.1
42	Pedestrian	- - - 4 - - - -	NO	I12L	42	0	0.0	10	5.3
43	Pedestrian	- - - - - 6 - -	NO	I13U	43	0	0.0	10	5.2
44	Pedestrian	- - - - - - - 8	NO	I13L	44	0	0.0	10	5.4

Failure Times (5-3)	Minutes
Maximum On Time	0
Fail Reset Time	0

Failure Override (5-4)	
Detectors 1-8	- - - - - - - -
Detectors 9-16	- - - - - - - -
Detectors 17-24	- - - - - - - -
Detectors 25-32	- - - - - - - -
Detectors 33-40	- - - - - - - -
Detectors 41-44	- - - - - - - -

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Num	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Det Num	0	0	0	0	0	0	0	0

CIC Operation (5-6-1)	
Enable in Plans	- - - - - - - - -

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.0	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Phase	0	0	0	0	0	0	0	0

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

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Location: 168WB @ Herndon W.

TSCP 3.10

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0600	1	A
1100	2	A
1930	255	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 2 (8-2-2)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 3 (8-2-3)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 4 (8-2-4)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 5 (8-2-5)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 6 (8-2-6)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

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HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1	0	0	- - - - - - -	0
2	0	0	- - - - - - -	0
3	0	0	- - - - - - -	0
4	0	0	- - - - - - -	0
5	0	0	- - - - - - -	0
6	0	0	- - - - - - -	0
7	0	0	- - - - - - -	0
8	0	0	- - - - - - -	0
9	0	0	- - - - - - -	0
10	0	0	- - - - - - -	0
11	0	0	- - - - - - -	0
12	0	0	- - - - - - -	0
13	0	0	- - - - - - -	0
14	0	0	- - - - - - -	0
15	0	0	- - - - - - -	0
16	0	0	- - - - - - -	0

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1	0	0	- - - - - - -	0
2	0	0	- - - - - - -	0
3	0	0	- - - - - - -	0
4	0	0	- - - - - - -	0
5	0	0	- - - - - - -	0
6	0	0	- - - - - - -	0
7	0	0	- - - - - - -	0
8	0	0	- - - - - - -	0
9	0	0	- - - - - - -	0
10	0	0	- - - - - - -	0
11	0	0	- - - - - - -	0
12	0	0	- - - - - - -	0
13	0	0	- - - - - - -	0
14	0	0	- - - - - - -	0
15	0	0	- - - - - - -	0
16	0	0	- - - - - - -	0

Daylight Saving (8-6)

Enable	YES

	Month	Sunday
Start	March	2nd
End	November	1st

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	- - - - - - - -
Holiday	- - - - - - - -

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1	0530	2230	1 2 3 4 5 6 7	27	- 2 - 4 - 6 - -
2	0000	0000	- - - - - - -	0	- - - - - - - -
3	0000	0000	- - - - - - -	0	- - - - - - - -
4	0000	0000	- - - - - - -	0	- - - - - - - -
5	0000	0000	- - - - - - -	0	- - - - - - - -
6	0000	0000	- - - - - - -	0	- - - - - - - -
7	0000	0000	- - - - - - -	0	- - - - - - - -
8	0000	0000	- - - - - - -	0	- - - - - - - -
9	0000	0000	- - - - - - -	0	- - - - - - - -
10	0000	0000	- - - - - - -	0	- - - - - - - -
11	0000	0000	- - - - - - -	0	- - - - - - - -
12	0000	0000	- - - - - - -	0	- - - - - - - -
13	0000	0000	- - - - - - -	0	- - - - - - - -
14	0000	0000	- - - - - - -	0	- - - - - - - -
15	0000	0000	- - - - - - -	0	- - - - - - - -
16	0000	0000	- - - - - - -	0	- - - - - - - -

Action Codes:
0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11.Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped

41. Protected Permissive
42. Protected Permissive
Action Code = Phases added to normal setting

100+Action Code = Phases removed
200+Action Code = Phases replaced

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COMMUNICATIONS

	C2 (6-1-1)	C20 (6-1-2)	C21 (6-1-3)
Address	0	0	0
Protocol	AB3418	AB3418	AB3418
Baud	1200	1200	1200
Parity	None	None	None
Data Bits	8 data bits	8 data bits	8 data bits
Stop Bits	1 stop bit	1 stop bit	1 stop bit
RTS On Time	20	20	20
RTS Off Time	20	20	20
Handshaking	Normal	Normal	Normal
Access Level	None	None	None

CALLBACK NUMBERS

Callback Numbers (6-3...3)			
Line Out	0	0	0
Local Toll	0	0	0
Long Distance	0	0	0
Delay	10	10	10
Area Code	0	0	0
Phone Number	0 - 0	0 - 0	0 - 0

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27000
IP Mode	Static IP
Central Access	0
Field Access	0
ATSPM	Enabled

IP Address	10	53	50	34
Netmask	255	255	255	0
Broadcast	10	53	50	255
Gateway	10	53	50	254

SPAT Network (6-5)				
SPAT	1		2	
Protocol	None		None	
Port	0		0	
Address	0	0	0	0

Access Levels

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1	00.0	00	00.0	00	00.0	00	00.0
2	00.0	00	00.0	00	00.0	00	00.0
3	00.0	00	00.0	00	00.0	00	00.0
4	00.0	00	00.0	00	00.0	00	00.0
5	00.0	00	00.0	00	00.0	00	00.0
6	00.0	00	00.0	00	00.0	00	00.0
7	00.0	00	00.0	00	00.0	00	00.0
8	00.0	00	00.0	00	00.0	00	00.0
9	00.0	00	00.0	00	00.0	00	00.0
10	00.0	00	00.0	00	00.0	00	00.0
11	00.0	00	00.0	00	00.0	00	00.0
12	00.0	00	00.0	00	00.0	00	00.0
13	00.0	00	00.0	00	00.0	00	00.0
14	00.0	00	00.0	00	00.0	00	00.0
15	00.0	00	00.0	00	00.0	00	00.0
16	00.0	00	00.0	00	00.0	00	00.0

***Refer to User's Manual for Data and OP Codes**

Location: 168WB @ Herndon W.

RAILROAD PREEMPTION

RR 1

Timing (3-1-1)	
Clear 1	15
Clear 2	5
Clear 3	0
Hold	0
Min Grn	0
Delay	0
Exit	0
Ped Clr	0

Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
- 2 - - 5 - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- 2 - - 5 - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
1 - - 4 - - 7 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - 4 - - - 8	- 2 - - - 6 - -	- - - - - -	- - - - - -	- - - - - -

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Veh Permit/Call	Ped Permit/Call
- 2 - - - 6 -	- - - - - -	1 2 3 4 5 6 7	- 2 - 4 - 6 -

	Configuration (3-1-6)								
	PR	XR	Gate	Isld	APP	Sign 1	Sign 2	Max On	Latching
1	0.0	0.0	0.0	0.0	0.0	00.0	00.0	5	No
2	0.0	0.0							

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x,12.x,13.x,14.x,15.x,16.x,17.x,18.x x=1 to 8

RR 2

Timing (3-2-1)	
Clear 1	15
Clear 2	5
Clear 3	0
Hold	0
Min Grn	0
Delay	0
Exit	0
Ped Clr	0

Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
- - - 4 - - 7 -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- - - 4 - - 7 -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
1 2 3 - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - - - 6 - -	- - - 4 - - - 8	- - - - - -	- - - - - -	- - - - - -

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Veh Permit/Call	Ped Permit/Call
- 2 - - - 6 -	- - - - - -	1 2 3 4 5 6 7	- 2 - 4 - 6 -

	Configuration (3-2-6)								
	PR	XR	Gate	Isld	APP	Sign 1	Sign 2	Max On	Latching
1	0.0	0.0	0.0	0.0	0.0	00.0	00.0	5	No
2	0.0	0.0							

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x,12.x,13.x,14.x,15.x,16.x,17.x,18.x x=1 to 8

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- 2 - - 5 - - -	- - - - - -

Port	Latching	Phase Termination
5.5	No	Advance

EVB (3-B)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - - 4 - - 7 -	- - - - - -

Port	Latching	Phase Termination
5.6	No	Advance

EVC (3-C)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	1 - - - - 6 - -	- - - - - -

Port	Latching	Phase Termination
5.7	No	Advance

EVD (3-D)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - 3 - - - - 8	- - - - - -

Port	Latching	Phase Termination
5.8	No	Advance

CHECKSUM: CFD4

Location: 168WB @ Herndon W.

TSCP 3.10

INPUTS

Enable	No
Max ON	0
Max OFF	0

7 Wire I/C(2-1-5-1)			
Input	Port	Input	Port
R1	0.0	Free	0.0
R2	0.0	D2	0.0
R3	0.0	D3	0.0

Manual Control(2-1-5-2)	
Input	Port
Manual Adv	0.0
Adv Enable	0.0

Cabinet Staus (2-1-5-3)	
Input	Port
Flash Bus	0.0
Door Ajar	0.0
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	0.0
2	0.0
3	0.0
4	0.0

Battery Backup (2-1-5-5)	
Port	Operation
2.7	Flashing

Y-Coordination (2-1-5-6)	
Port C	Port D
0.0	0.0

OUTPUTS

Loadswitch Assignments (2-1-6)							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:
- 0 Unused (no output)
- 1- 8 Vehicle 1-8
- 9-14 Overlap A-F
- 21-28 Ped 1-8
- 41-47 Special Functions

- 41 Protected Permissive Flashing Phase 1
- 43 Protected Permissive Flashing Phase 3
- 45 Protected Permissive Flashing Phase 5
- 47 Protected Permissive Flashing Phase 7
- 51-57 Special Functions
- 71-72 Seven Wire I/C

+ middle output of
loadswitches 3 and 6
Channel 9 and 10

INTERVAL CONTROL

Interval Control	
(3-3-1)	Time
Step 1	0
Step 2	0
Step 3	0
Step 4	0
Step 5	0
Step 6	0
Step 7	0
Step 8	0

Phase Control (3-3-2)		
Hold	Force	Advance
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -

Phase Recalls (3-3-3)		
Veh Call	Ped Call	Int Call
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -

Phase Permissions (3-3-4)		
Phs Permit	Ped Permit	Overlap
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -

Configuration (3-3-5)		
Input	Port	Delay
1	0.0	0
2	0.0	0

CHECKSUM: 6828

Location: 168WB @ Herndon W.

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 2	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 3	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 4	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 5	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 6	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 7	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 8	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 9	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 11	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 12	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 13	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 14	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 15	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 16	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 17	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 18	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 19	Green Factor	0	0	0	0	0	0	0	0	0	0	0

Enable in Local Plans (3-E-3)	
Plan 1-9	- - - - - - - -
Plan 11-19	- - - - - - - -

Queue Jump (3-E-4)	
Grn Hold	Hold Phase
0	- - - - - - - -
0	- - - - - - - -

Input		Output	
Type	Port	Stop	Go
OPT	0.0	0	0
OPT	0.0	0	0

Free Plans (3-E-E)	
Max Green	Hold Phase
0	- - - - - - - -

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	1	2	3	4	5	6	7	8	Coord	Lag	Min Recall	Restricted
Plan C	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -
Plan D	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
	0.0	0.0	0	0	- - - - - - - -	0.0	0.0	0.0	0	0.0	0

PAGE 13 **CHECKSUM:** 86F7

CONTROLLER ID

Manufacturer ID	Caltrans TSCP Ver 3.10
Model ID	Model 2070
Protocol Revision ID	AB3418

2070 Controller Timing Chart

Caltrans TSCP Ver 3.10

Location:
System:
Master At:
District:
I/C:
Designed By:
Intalled By:
Service Info:

Timing Change: **By:** **Date Start:** **Date End:** **Designed:** **Installed:**

FLASH

PHASE
1) [ ]
2) [ ]
3) [ ]
4) [ ]
5) [ ]
6) [ ]
7) [ ]
8) [ ]

OVERLAP
A) [ ]
B) [ ]
C) [ ]
D) [ ]
E) [ ]
F) [ ]

Intersection Layout

Comments and Notes:

RAM Checksum

Page 2:	3CE4	Page 8:	9EB2
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Page 4:	43A4	Page 10:	9FDF
Page 5:	191A	Page 11:	CFD4
Page 6:	191A	Page 12:	6828
Page 7:	AA8B	Page 13:	86F7

Location: 168EB @ Herndon E.

TSCP 3.10

CONFIGURATION PHASE FLAGS

Cabinet (9-3)	
Type	332
Configuration	CALTRANS

Phases (2-1-1-1)	
Permitted	- 2 - - - 6 - 8
Restricted	- - - - - - - -

Phase Features (2-1-1-4)	
Double Entry	- - - - - - - -
Rest In Walk	- - - - - - - -
Rest In Red	- - - - - - - -
Walk2	- - - - - - - -
Max Green 2	- - - - - - - 8
Max Green 3	- - - - - - - -

Startup (2-1-1-5)	
First Green Phases	- 2 - - - 6 - -
Yellow Start Phases	- - - - - - - -
Vehicle Calls	- 2 - - - 6 - 8
Pedestrian Calls	- 2 - - - - - -
Yellow Start Overlaps	- - - - - -
Startup All-Red	6.0

Phase Recalls (2-1-1-2)	
Vehicle Min	- 2 - - - 6 - -
vehicle Max	- - - - - - - -
Pedestrian	- - - - - - - -
Bicyle	- - - - - - - -

Phase Locks (2-1-1-3)	
Red	- - - - - - - -
Yellow	- - - - - - - -
Force/Max	- - - - - - - -

Call To Phase (2-1-2-1)		Omit On Green	
1	- - - - - - - -	1	- - - - - - - -
2	- - - - - - - -	2	- - - - - - - -
3	- - - - - - - -	3	- - - - - - - -
4	- - - - - - - -	4	- - - - - - - -
5	- - - - - - - -	5	- - - - - - - -
6	- - - - - - - -	6	- - - - - - - -
7	- - - - - - - -	7	- - - - - - - -
8	- - - - - - - -	8	- - - - - - - -

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	- - - - - - - -
Yellow Flash Overlap	- - - - - - - -
Flash In Red Phases	- - - - - - - -
Flash In Red Overlap	- - - - - - - -

Special Operation (2-1-2-3)	
Single Exit Phase	- - - - - - - -
Driveway Signal Phases	- - - - - - - -
Driveway Signal Overlaps	- - - - - - - -
Leading Ped Phases	- - - - - - - -

Protected Permissive (2-1-2-4)	
Protected Permissive	- - - - - - - -

Pedestrian (2-1-3)	
P1	- - - - - - - -
P2	- 2 - - - - - -
P3	- - - - - - - -
P4	- - - - - - - -
P5	- - - - - - - -
P6	- - - - - - - -
P7	- - - - - - - -
P8	- - - - - - - -

Overlap (2-1-4)

Overlap	Parent	Omit	No Start	Not
A [Arrow A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
B [Arrow B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
C [OL A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
D [OL B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
E [OL C]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
F [OL D]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

[-] 332 Cabinet Overlap Assignment - For Reference Only

PAGE 2 **CHECKSUM:** 3CE4

Location: 168EB @ Herndon E.

TSCP 3.10

PHASE

TIMING

PHASE (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	0	0	0
Flash Don't Walk	0	25	0	0	0	0	0	0
Minimum Green	0	10	0	0	0	10	0	8
Det Limit	0	20	0	0	0	20	0	20
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	0	25	0	0	0	25	0	20
Max Green 2	0	35	0	0	0	35	0	30
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	6.7	0.0	0.0	0.0	6.7	0.0	5.3
Maximum Gap	0.0	9.3	0.0	0.0	0.0	9.3	0.0	7.3
Minimum Gap	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
Reduce Every	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.4
Yellow	3.0	4.8	3.0	3.0	3.0	4.8	3.0	4.8
All-Red	0.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A [Arrow A]	B [Arrow B]	C [OL A]	D [OL B]	E [OL C]	F [OL D]
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert (2-5)	
Time	5.0

Red To Se (2-6)	
Red To Sec	OFF

Max/Gap Out (2-7)	
Max Cnt	2
Gap Cnt	3

PAGE 3 **CHECKSUM:** AED6

Location: 168EB @ Herndon E.

TSCP 3.10

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

		Cycle	Multi	Lag Gap	[Offsets] A	B	C	Green Factors or Press [F] to Select -1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	130	0.0	- - - - - - - -	35				76				76		40
Plan 2	Green Factor	130	0.0	- - - - - - - -	70				74				74		42
Plan 3	Green Factor	130	0.0	- - - - - - - -	60				68				68		48
Plan 4	Green Factor		0.0	- - - - - - - -											
Plan 5	Green Factor		0.0	- - - - - - - -											
Plan 6	Green Factor		0.0	- - - - - - - -											
Plan 7	Green Factor		0.0	- - - - - - - -											
Plan 8	Green Factor		0.0	- - - - - - - -											
Plan 9	Green Factor		0.0	- - - - - - - -											

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	- - - - - - - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 2	- - - - - - - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 3	- - - - - - - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 4	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 5	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 6	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 7	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 9	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

Master Timer Sync (7-A)	
Enable in Plans	
1-9	- - - - - - - - -
11-19	- - - - - - - - -
21-29	- - - - - - - - -

Master Sub Master	
Input	0.0
Output	0

(7-E) Free	
Lag	Omit
- 2 - 4 - 6 - 8	- - - - - - - -
Veh Min	Veh Max
- 2 - - - 6 - -	- - - - - - - -
Ped	Bike
- - - - - - - -	- - - - - - - -
Cond	Cond Grn
- - - - - - - -	10

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	Offset
0	A

Plan: 1-29
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

PAGE 4 **CHECKSUM:** 43A4

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 11	Green Factor		0.0	- - - - - - - -											
Plan 12	Green Factor		0.0	- - - - - - - -											
Plan 13	Green Factor		0.0	- - - - - - - -											
Plan 14	Green Factor		0.0	- - - - - - - -											
Plan 15	Green Factor		0.0	- - - - - - - -											
Plan 16	Green Factor		0.0	- - - - - - - -											
Plan 17	Green Factor		0.0	- - - - - - - -											
Plan 18	Green Factor		0.0	- - - - - - - -											
Plan 19	Green Factor		0.0	- - - - - - - -											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 12	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 13	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 14	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan15	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 16	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 17	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 18	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 19	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

PAGE 5 **CHECKSUM:** 191A

Location: 168EB @ Herndon E.

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 21	Green Factor		0.0	- - - - - - - -											
Plan 22	Green Factor		0.0	- - - - - - - -											
Plan 23	Green Factor		0.0	- - - - - - - -											
Plan 24	Green Factor		0.0	- - - - - - - -											
Plan 25	Green Factor		0.0	- - - - - - - -											
Plan 26	Green Factor		0.0	- - - - - - - -											
Plan 27	Green Factor		0.0	- - - - - - - -											
Plan 28	Green Factor		0.0	- - - - - - - -											
Plan 29	Green Factor		0.0	- - - - - - - -											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 22	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 23	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 24	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 25	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 26	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 27	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 28	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 29	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

CHECKSUM: 191A

Location: 168EB @ Herndon E.

TSCP 3.10

DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	Count+Call+Extend	- 2 - - - - - -	NO	I1U	1	0	2.6	10	3.2
2	Count+Call+Extend	- 2 - - - - - -	NO	I1L	2	0	0.0	10	7.2
3	Count+Call+Extend	- 2 - - - - - -	NO	I2U	3	0	2.6	10	1.1
4	Count+Call+Extend	- 2 - - - - - -	NO	I2L	4	0	2.6	10	1.5
5	Limited	- 2 - - - - - -	NO	I3U	5	0	2.0	10	4.5
6	Count+Call+Extend	- 2 - - - - - -	NO	I3L	6	0	0.0	10	6.2
7	Limited	- 2 - - - - - -	NO	I4U	7	0	2.0	10	2.1
8	Limited	- 2 - - - - - -	NO	I4L	8	0	2.0	10	7.4
9	Limited	- - - - - - - 8	NO	I5U	9	0	1.7	10	3.4
10	Limited	- - - - - - - 8	NO	I5L	10	0	0.0	10	7.6
11	Count+Call+Extend	- - - - - - - 8	NO	I6U	11	0	1.7	10	1.3
12	Count+Call+Extend	- - - - - - - 8	NO	I6L	12	0	1.7	10	1.7
13	Count+Call+Extend	- - - - - - - 8	NO	I7U	13	0	0.0	10	4.7
14	Count+Call+Extend	- - - - - - - 8	NO	I7L	14	15	0.0	10	6.4
15	Limited	- - - - - - - 8	NO	I8U	15	15	0.0	10	2.3
16	Count+Call+Extend	- - - 4 - - - -	NO	I8L	16	0	0.0	10	7.8
17	Count+Call+Extend	1 - - - - - - -	NO	I9U	17	0	0.0	10	3.6
18	Count+Call+Extend	- - - - - 6 - -	NO	I9L	18	0	2.6	10	3.8
19	Count+Call+Extend	- 2 - - - - - -	NO	I10U	19	0	0.0	10	4.1
20	Count+Call+Extend	- - - 4 - - - -	NO	I10L	20	0	0.0	10	4.2
21	Count+Call+Extend	- - - - - 6 - -	NO	J1U	21	0	2.6	10	3.1
22	Count+Call+Extend	- - - - - 6 - -	NO	J1L	22	0	2.6	10	7.1
23	Count+Call+Extend	- - - - - 6 - -	NO	J2U	23	0	2.6	10	1.2
24	Count+Call+Extend	- - - - - 6 - -	NO	J2L	24	0	2.6	10	1.6
25	Limited	- - - - - 6 - -	NO	J3U	25	0	2.0	10	4.6
26	Limited	- - - - - 6 - -	NO	J3L	26	0	2.0	10	6.3
27	Limited	- - - - - 6 - -	NO	J4U	27	0	2.0	10	2.2
28	Limited	- - - - - 6 - -	NO	J4L	28	0	2.0	10	7.3
29	Limited	- - - - - 6 - -	NO	J5U	29	0	2.0	10	3.3
30	Limited	- - - - - 6 - -	NO	J5L	30	0	2.0	10	7.5
31	Count+Extend	- - - - - - - 8	NO	J6U	31	0	1.7	10	1.4
32	Count+Call+Extend	- - - - - - - 8	NO	J6L	32	0	1.7	10	1.8
33	Count+Call+Extend	- - - - - - - 8	NO	J7U	33	0	2.0	10	4.8
34	Count+Call+Extend	- - - - - - - 8	NO	J7L	34	0	2.0	10	6.5
35	Count+Call+Extend	- - - - - - - 8	NO	J8U	35	0	2.0	10	2.4
36	Count+Call+Extend	- - - - - - - 8	NO	J8L	36	0	2.0	10	7.7
37	Count+Call+Extend	- - - - - 6 - -	NO	J9U	37	0	0.0	10	3.5
38	Count+Call+Extend	- - - - - 6 - -	NO	J9L	38	0	0.0	10	3.7
39	Count+Call+Extend	- - - - - 6 - -	NO	J10U	39	0	0.0	10	4.3
40	Count+Call+Extend	- - - - - - - 8	NO	J10L	40	0	0.0	10	4.4
41	Pedestrian	- 2 - - - - - -	NO	I12U	41	0	0.0	10	5.1
42	Pedestrian	- - - 4 - - - -	NO	I12L	42	0	0.0	10	5.3
43	Pedestrian	- - - - - 6 - -	NO	I13U	43	0	0.0	10	5.2
44	Pedestrian	- - - - - - - 8	NO	I13L	44	0	0.0	10	5.4

Failure Times (5-3)	Minutes
Maximum On Time	0
Fail Reset Time	0

Failure Override (5-4)	
Detectors 1-8	- - - - - - - -
Detectors 9-16	- - - - - - - -
Detectors 17-24	- - - - - - - -
Detectors 25-32	- - - - - - - -
Detectors 33-40	- - - - - - - -
Detectors 41-44	- - - - - - - -

System Detector Assignment (5-5)								
Sys Det	1	2	3	4	5	6	7	8
Det Num	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Det Num	0	0	0	0	0	0	0	0

CIC Operation (5-6-1)	
Enable in Plans	- - - - - - - - -

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.0	

Detector-to-Phase Assignment (5-6-3)								
Sys Det	1	2	3	4	5	6	7	8
Phase	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Phase	0	0	0	0	0	0	0	0

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

CHECKSUM: AA8B

Location: 168EB @ Herndon E.

TSCP 3.10

TOD SCHEDULE

Table 1 (8-2-1)		
Time	**Plan**	**OS**
0600	1	A
1100	2	A
1930	255	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 2 (8-2-2)		
Hour	**Plan**	**OS**
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 3 (8-2-3)		
Hour	**Plan**	**OS**
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 4 (8-2-4)		
Hour	**Plan**	**OS**
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 5 (8-2-5)		
Hour	**Plan**	**OS**
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 6 (8-2-6)		
Hour	**Plan**	**OS**
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**	**Sun**
1	1	1	1	1	2	2

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HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1	0	0	- - - - - - -	0
2	0	0	- - - - - - -	0
3	0	0	- - - - - - -	0
4	0	0	- - - - - - -	0
5	0	0	- - - - - - -	0
6	0	0	- - - - - - -	0
7	0	0	- - - - - - -	0
8	0	0	- - - - - - -	0
9	0	0	- - - - - - -	0
10	0	0	- - - - - - -	0
11	0	0	- - - - - - -	0
12	0	0	- - - - - - -	0
13	0	0	- - - - - - -	0
14	0	0	- - - - - - -	0
15	0	0	- - - - - - -	0
16	0	0	- - - - - - -	0

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1	0	0	- - - - - - -	0
2	0	0	- - - - - - -	0
3	0	0	- - - - - - -	0
4	0	0	- - - - - - -	0
5	0	0	- - - - - - -	0
6	0	0	- - - - - - -	0
7	0	0	- - - - - - -	0
8	0	0	- - - - - - -	0
9	0	0	- - - - - - -	0
10	0	0	- - - - - - -	0
11	0	0	- - - - - - -	0
12	0	0	- - - - - - -	0
13	0	0	- - - - - - -	0
14	0	0	- - - - - - -	0
15	0	0	- - - - - - -	0
16	0	0	- - - - - - -	0

Daylight Saving (8-6)

Enable	YES

	Month	Sunday
Start	None	None
End	None	None

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	- - - - - - - -
Holiday	- - - - - - - -

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1	0530	2230	1 2 3 4 5 6 7	27	- 2 - - - 6 - 8
2	0000	0000	- - - - - - -	0	- - - - - - - -
3	0000	0000	- - - - - - -	0	- - - - - - - -
4	0000	0000	- - - - - - -	0	- - - - - - - -
5	0000	0000	- - - - - - -	0	- - - - - - - -
6	0000	0000	- - - - - - -	0	- - - - - - - -
7	0000	0000	- - - - - - -	0	- - - - - - - -
8	0000	0000	- - - - - - -	0	- - - - - - - -
9	0000	0000	- - - - - - -	0	- - - - - - - -
10	0000	0000	- - - - - - -	0	- - - - - - - -
11	0000	0000	- - - - - - -	0	- - - - - - - -
12	0000	0000	- - - - - - -	0	- - - - - - - -
13	0000	0000	- - - - - - -	0	- - - - - - - -
14	0000	0000	- - - - - - -	0	- - - - - - - -
15	0000	0000	- - - - - - -	0	- - - - - - - -
16	0000	0000	- - - - - - -	0	- - - - - - - -

Action Codes:
0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11.Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped

41. Protected Permissive
42. Protected Permissive
Action Code = Phases added to normal setting

100+Action Code = Phases removed
200+Action Code = Phases replaced

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COMMUNICATIONS

	C2 (6-1-1)	C20 (6-1-2)	C21 (6-1-3)
Address	0	0	0
Protocol	AB3418	AB3418	AB3418
Baud	1200	1200	1200
Parity	None	None	None
Data Bits	8 data bits	8 data bits	8 data bits
Stop Bits	1 stop bit	1 stop bit	1 stop bit
RTS On Time	20	20	20
RTS Off Time	20	20	20
Handshaking	Normal	Normal	Normal
Access Level	None	None	None

CALLBACK NUMBERS

Callback Numbers (6-3...3)			
Line Out	0	0	0
Local Toll	0	0	0
Long Distance	0	0	0
Delay	10	10	10
Area Code	0	0	0
Phone Number	0 - 0	0 - 0	0 - 0

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27000
IP Mode	Static IP
Central Access	0
Field Access	0
ATSPM	Enabled

IP Address	10	53	50	35
Netmask	255	255	255	0
Broadcast	10	53	50	255
Gateway	10	53	50	254

SPAT Network (6-5)				
SPAT	1		2	
Protocol	None		None	
Port	0		0	
Address	0	0	0	0

Access Levels

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)							
#	**Data**	**OP**	**Data**	**OP**	**Data**	**OP**	**Data**
1	00.0	00	00.0	00	00.0	00	00.0
2	00.0	00	00.0	00	00.0	00	00.0
3	00.0	00	00.0	00	00.0	00	00.0
4	00.0	00	00.0	00	00.0	00	00.0
5	00.0	00	00.0	00	00.0	00	00.0
6	00.0	00	00.0	00	00.0	00	00.0
7	00.0	00	00.0	00	00.0	00	00.0
8	00.0	00	00.0	00	00.0	00	00.0
9	00.0	00	00.0	00	00.0	00	00.0
10	00.0	00	00.0	00	00.0	00	00.0
11	00.0	00	00.0	00	00.0	00	00.0
12	00.0	00	00.0	00	00.0	00	00.0
13	00.0	00	00.0	00	00.0	00	00.0
14	00.0	00	00.0	00	00.0	00	00.0
15	00.0	00	00.0	00	00.0	00	00.0
16	00.0	00	00.0	00	00.0	00	00.0

***Refer to User's Manual for Data and OP Codes**

Location: 168EB @ Herndon E.

TSCP 3.10

RAILROAD PREEMPTION

RR 1	Timing (3-1-1)
Clear 1	15
Clear 2	5
Clear 3	0
Hold	0
Min Grn	0
Delay	0
Exit	0
Ped Clr	0

Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
- 2 - - 5 - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- 2 - - 5 - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
1 - - 4 - - 7 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - 4 - - - 8	- 2 - - - 6 - -	- - - - - -	- - - - - -	- - - - - -

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Veh Permit/Call	Ped Permit/Call
- 2 - - - 6 -	- - - - - -	1 2 3 4 5 6 7	- 2 - 4 - 6 -

Configuration (3-1-6)									
	PR	XR	Gate	IsId	APP	Sign 1	Sign 2	Max On	Latching
1	0.0	0.0	0.0	0.0	0.0	00.0	00.0	5	No
2	0.0	0.0							

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x,12.x,13.x,14.x,15.x,16.x,17.x,18.x x=1 to 8

RR 2	Timing (3-2-1)
Clear 1	15
Clear 2	5
Clear 3	0
Hold	0
Min Grn	0
Delay	0
Exit	0
Ped Clr	0

Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
- - - 4 - - 7 -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- - - 4 - - 7 -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
1 2 3 - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - - - 6 - -	- - - 4 - - - 8	- - - - - -	- - - - - -	- - - - - -

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Veh Permit/Call	Ped Permit/Call
- 2 - - - 6 -	- - - - - -	1 2 3 4 5 6 7	- 2 - 4 - 6 -

Configuration (3-2-6)									
	PR	XR	Gate	IsId	APP	Sign 1	Sign 2	Max On	Latching
1	0.0	0.0	0.0	0.0	0.0	00.0	00.0	5	No
2	0.0	0.0							

Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8
Valid Outputs: 11.x,12.x,13.x,14.x,15.x,16.x,17.x,18.x x=1 to 8

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- 2 - - 5 - - -	- - - - - -

Port	Latching	Phase Termination
5.5	No	Advance

EVB (3-B)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - - 4 - - 7 -	- - - - - -

Port	Latching	Phase Termination
5.6	No	Advance

EVC (3-C)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	1 - - - - 6 - -	- - - - - -

Port	Latching	Phase Termination
5.7	No	Advance

EVD (3-D)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - 3 - - - - 8	- - - - - -

Port	Latching	Phase Termination
5.8	No	Advance

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INPUTS

Enable	No
Max ON	0
Max OFF	0

7 Wire I/C(2-1-5-1)

Input	Port	Input	Port
R1	0.0	Free	0.0
R2	0.0	D2	0.0
R3	0.0	D3	0.0

Manual Control(2-1-5-2)

Input	Port
Manual Adv	0.0
Adv Enable	0.0

Cabinet Staus (2-1-5-3)

Input	Port
Flash Bus	0.0
Door Ajar	0.0
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)

Input	Port
1	0.0
2	0.0
3	0.0
4	0.0

Battery Backup (2-1-5-5)

Port	Operation
2.7	Flashing

Y-Coordination (2-1-5-6)

Port C	Port D
0.0	0.0

OUTPUTS

Loadswitch Assignments (2-1-6)

A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:
0 Unused (no output)
1- 8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions

41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

+ middle output of
loadswitches 3 and 6
Channel 9 and 10

INTERVAL CONTROL

Interval Control

(3-3-1)	Time
Step 1	0
Step 2	0
Step 3	0
Step 4	0
Step 5	0
Step 6	0
Step 7	0
Step 8	0

Phase Control (3-3-2)

Hold	Force	Advance
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -

Phase Recalls (3-3-3)

Veh Call	Ped Call	Int Call
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -
- - - - - - - -	- - - - - - - -	- - - - - - - -

Phase Permissions (3-3-4)

Phs Permit	Ped Permit	Overlap
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -
- - - - - - - -	- - - - - - - -	- - - - - -

Configuration (3-3-5)

Input	Port	Delay
1	0.0	0
2	0.0	0

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TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 2	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 3	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 4	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 5	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 6	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 7	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 8	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 9	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 11	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 12	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 13	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 14	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 15	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 16	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 17	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 18	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 19	Green Factor	0	0	0	0	0	0	0	0	0	0	0

Enable in Local Plans (3-E-3)	
Plan 1-9	- - - - - - - -
Plan 11-19	- - - - - - - -

Queue Jump (3-E-4)	
Grn Hold	Hold Phase
0	- - - - - - - -
0	- - - - - - - -

Input	
Type	Port
OPT	0.0
OPT	0.0

Output	
Stop	Go
0	0
0	0

Free Plans (3-E-E)	
Max Green	Hold Phase
0	- - - - - - - -

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	1	2	3	4	5	6	7	8	Coord	Lag	Min Recall	Restricted
Plan C	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -
Plan D	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -

TRUCK PRIORITY

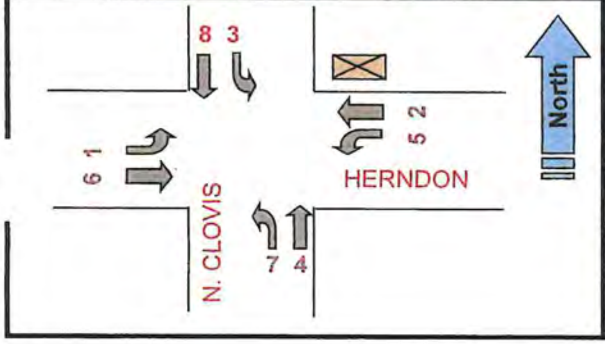
Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
	0.0	0.0	0	0	- - - - - - - -	0.0	0.0	0.0	0	0.0	0

AGENDA ITEM NO. 6.

CONTROLLER ID

Manufacturer ID	Caltrans TSCP Ver 3.10
Model ID	Model 2070
Protocol Revision ID	AB3418

Movement	EL	WT	SL	NT	WL	ET	NL	ST
Times [1.1.1]	1	2	3	4	5	6	7	8
Min Green	13	10	14	12	13	10	14	12
Gap, Ext	2	2.6	2	1.9	2	3	2	3.3
Max 1	30	40	35	40	30	40	35	40
Max 2	0		0					
Yel Clearance	3	5	3	4.7	3	5	3	4.7
Red Clearance	2	1	2	1	2	1	2	1
Walk	0	7	0	7		7		
Ped Clearance	0	31	0	31		25		
Red Revert	1	1	1	1	1	1	1	1
Add Initial	0		0					
Max Initial	0		0					
Time B4 Reduct	0	20	0	24		20		24
Cars B4 Reduct	0		0					
Time To Reduce	0	10	0	8		10		8
Reduce By	0		0					
Min Gap	2	1.4	2	1.1	2	1.8	2	2.1
DyMaxLim	36	46	0	46	36	46	36	46
Max Step	6	6	0	6	6	6	6	6
Options [1.1.2]	1	2	3	4	5	6	7	8
Enable	X	X	X	X	X	X	X	X
Min Recall								
Max Recall								
Ped Recall								
Soft Recall		X				X		
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		X		X		X		X
Enable Simul Gap	X	X	X	X	X	X	X	X
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								



Phase Options+ [1.1.3]

Options+	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
SkipRed-NoCall								
Red Rest								
Max II								
*Max III								
Max Inhibit								
Ped Delay								
Red Rest on Gap								
Conflicting Phase	0	0	0	0	0	0	0	0
Grn/Ped Delay								
Omit Yel, Yel P	0	0	0	0	0	0	0	0
Ped Out/Olp Ped								
StartYel, Next P	0	0	0	0	0	0	0	0
*StartupVehCall	1	2	3	4	5	6	7	8
*StartupPedCall								

Phase Concurrency [1.1.4]

Phase	Ring	StartUp	Concurrent Phases				
1	1	RED	5	6	0	0	
2	1	GREEN	5	6	0	0	
3	1	RED	7	8	0	0	
4	1	RED	7	8	0	0	
5	2	RED	1	2	0	0	
6	2	GREEN	1	2	0	0	
7	2	RED	3	4	0	0	
8	2	RED	3	4	0	0	
9	0	RED	0	0	0	0	
10	0	RED	0	0	0	0	
11	0	RED	0	0	0	0	
12	0	RED	0	0	0	0	

Comm Ports [6.6]

Channel	Port	Echo	Mode
Async 1	SP1	NONE	0
Async 2	SP2	NONE	0
Async 3	SP8	NONE	0
Async 4	OFF	NONE	0
Sync 1	SP5S		
Sync 2	OFF		
TS2CVM	NONE		
Opticom	NONE		
GPS	NONE		

Unit Params [1.2.1]

Screen Size	8	**Metric**	OFF
Startup Flash	0	Red Revert	1
MCE Timeout	0	Auto Ped Clear	OFF
Loc Flsh Start	RSt	Display Time	30
Yellow < 3"	OFF	Tone Disable	OFF
Allow Skip Yel	OFF	AudioPedTime	OFF
Start Red Tm	6	**Phase Mode**	STD8
*Startup Calls	UsePrg	CNA FreeTime	0
TOD Dimming	OFF	Diamond Mode	4Ph
ST over Prmpt	OFF	Free Ring Seq	1
Feature Profile	1	IO Mode	USER
Mx Seek TrkTm	0	Max Cyc Timer	0
Mx Seek Dwell	0	CycFlt Actn	ALARM
Prmpt/Ext Coor	EXT	Clrnc Decide	OFF
Aux Switch	STOPTM	LPAlt Srs	OFF
*InhFYA Red St	Off	*SecurityDelay	0

* - 76.12B or newer

Times+ [1.1.7]

	1	2	3	4	5	6	7	8
Walk2	0	0	0	0	0	0	0	0
BikeClr	0	0	0	0	0	0	0	0
GrnFlash	0	0	0	0	0	0	0	0
SfClrMn	0	0	0	0	0	0	0	0
SfClrNoFlsh	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Comm [6.2]

Port	Baud Rate	FCM
1	9600	6
2	9600	6
3	1200	0
4	1200	0

Comm [6.5]

					Host IPs			
IP Address:	10	128	1	39	ATMS			
Mask:	255	255	255	0	172	26	17	230
Gateway:	10	128	1	254	SG			
Port #:	5039				0	0	0	0

Phase Seq. (2 ring) Chart [1.2.4]

Seq #	Ring	Phases					
1	1	1	2	3	4	0	0
	2	5	6	7	8	0	0
2	1	1	2	3	4	0	0
	2	6	5	7	8	0	0
3	1	2	1	3	4	0	0
	2	5	6	7	8	0	0
4	1	2	1	3	4	0	0
	2	6	5	7	8	[illegible]	0
5	1	1	2	3	4	0	0
	2	5	6	8	7	0	0
6	1	1	2	3	4	0	0
	2	6	5	8	7	0	0
7	1	2	1	3	4	0	0
	2	5	6	8	7	0	0
8	1	2	1	3	4	0	0
	2	6	5	8	7	0	0
9	1	1	2	4	3	0	0
	2	5	6	7	8	0	0
10	1	1	2	4	3	0	0
	2	6	5	7	8	0	0
11	1	2	1	4	3	0	0
	2	5	6	7	8	0	0
12	1	2	1	4	3	0	0
	2	6	5	7	8	0	0
13	1	1	2	4	3	0	0
	2	5	6	8	7	0	0
14	1	1	2	4	3	0	0
	2	6	5	8	7	0	0
15	1	2	1	4	3	0	0
	2	5	6	8	7	0	0
16	1	2	1	4	3	0	0
	2	6	5	8	7	0	0

Advance Warning [1.1.9]

	Ph	Tm
Aux Out #1	0	0
Aux Out #2	0	0

NAME:	CLOVIS @ HERNDON	**ID:** C 0255	**Configuration:** Standard File
Prepared by:		**Date Installed / By:**	6-4-2021
Checked by:		**Date Superseded:**	

V76.07d
ATMS 1.5.45.263

Date Printed:
6/4/21
Page 1

[2.1] Coord Modes+

Test OpMode	0
Correction	LONG
Maximum	MAX INH
Force Mode	FIXED
Flash Mode	CHANNEL

Coord Modes+ (Page 2)

FreeonSeqCh	ON
Closed Loop	OFF
External	OFF
Latch Sec Frc	OFF
Stop-in-Walk	OFF
Ped Recycle	P3478_INH
Expand Splt	OFF
Easy Float	OFF
Auto Reset	ON
NTCIP Yield	+ 0
Leave Walk	
Before	TIMED
After	TIMED

Intersection Name: CLOVIS @ HERNDON

ID: C 0255

Date Printed:
6/4/2021

[2.4] Patterns

Pat#	Cyc	Off	Split	Seq
1	130	0	1	3
2	0	0	0	1
3	132	80	3	3
4	0	0	4	1
5	0	0	0	1
6	0	0	0	1
7		0	0	1
8	0	0	0	1
9	0	0	0	1
10	0	0	0	1
30	0	0	0	1
31	0	0	0	1
32	0	0	0	1

[2.7.1-24] Splits

Split	[2.7]	1	2	3	4	5	6	7	8
1	Split	19	47	19	45	18	48	20	44
	Crd-P						X		
	Mode	NON	MAX	NON	NON	NON	MAX	NON	NON
2	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
3	Split	24	44	19	45	24	44	28	36
	Crd-P						X		
	Mode	NON	MAX	NON	NON	NON	MAX	NON	NON
4	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
5	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
6	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
7	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
8	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
9	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
10	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
30	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
31	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON
32	Split	0	0	0	0	0	0	0	0
	Crd-P								
	Mode	NON	NON	NON	NON	NON	NON	NON	NON

[2.5] Transition

Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	Ret Hold	Flt	Veh	Ped	FRC MODE
1	10	17	0	4	3	5	7	10	EndGRN	-	-	.	.	
2	0	17	0	0	0	0	0	0	EndGRN	-	-	.	.	
3	10	17	0	2	3	5	7	10	EndGRN	-	-	.	.	
4	5	17	0	1	3	5	7	10	EndGRN	-	-	.	.	
5		17	0	0	0	0	0	0	EndGRN	-	-	.	.	
6	0	17	0	0	0	0	0	0	EndGRN	-	-	.	.	
7		17	0	0	0	0	0	0	EndGRN	-	-	.	.	
8	0	17	0	0	0	0	0	0	EndGRN	-	-	.	.	
9		17	0	0	0	0	0	0	BegGRN	-	-	.	.	
10	0	17	0	0	0	0	0	0	BegGRN	-	-	.	.	
30		17	0	0	0	0	0	0	BegGRN	-	-	.	.	
31	0	17	0	0	0	0	0	0	BegGRN	-	-	.	.	
32		17	0	0	0	0	0	0	BegGRN	-	-	.	.	

Overlap 1-8 Program Parms & Parm+ [1.5.2.1] [1.5.2.8]

	Included Ø	NORMAL	
1	Modifier Ø	Grn	
	Conflict Ø	Yel	3.5
A	Conflict Olap	Red	1.5
	Conflict Ped	LG	
	Included Ø	NORMAL	
2	Modifier Ø	Grn	
	Conflict Ø	Yel	3.5
B	Conflict Olap	Red	1.5
	Conflict Ped	LG	
	Included Ø	NORMAL	
3	Modifier Ø	Grn	
	Conflict Ø	Yel	3.5
C	Conflict Olap	Red	1.5
	Conflict Ped	LG	
	Included Ø	NORMAL	
4	Modifier Ø	Grn	
	Conflict Ø	Yel	3.5
D	Conflict Olap	Red	1.5
	Conflict Ped	LG	
	Included Ø	NORMAL	
5	Modifier Ø	Grn	
	Conflict Ø	Yel	3.5
E	Conflict Olap	Red	1.5
	Conflict Ped	LG	
	Included Ø	NORMAL	
6	Modifier Ø	Grn	
	Conflict Ø	Yel	3.5
F	Conflict Olap	Red	1.5
	Conflict Ped	LG	
	Included Ø	NORMAL	
7	Modifier Ø	Grn	
	Conflict Ø	Yel	3.5
G	Conflict Olap	Red	1.5
	Conflict Ped	LG	
	Included Ø	NORMAL	
8	Modifier Ø	Grn	
	Conflict Ø	Yel	3.5
H	Conflict Olap	Red	1.5
	Conflict Ped	LG	

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	EXT
Max Seek Track Time	0
Max Seek Dwell Time	0

Channel Parameters [1.8.3]

Pre Invert Rail Input	OFF

Preemption Options+ [3.Pre #.6]

Pre #	Enable	Type	Output	Pattern	Skip	Co+Pre	Flash	Max/Min
1	ON	RAIL	TS2		OFF	OFF	OFF	MAX
2	OFF	EMERG	TS2		OFF	OFF	OFF	MAX
3	ON	EMERG	TS2		OFF	OFF	OFF	MAX
4	ON	EMERG	TS2		OFF	OFF	OFF	MAX
5	ON	EMERG	TS2		OFF	OFF	OFF	MAX
6	ON	EMERG	TS2		OFF	OFF	OFF	MAX

Preemption Times [3.#.1]

Pre #	Delay	MinDura	MaxPres	MinGrn	MinWlk	PedClr	Track Grn	Min Dwell
1								
2								
3			60		4	26		
4			60		4	24		
5			60		4	20		
6			60					

Preemption, Options [3.#.3]

Pre #	Lock Input	Over-ride Auto Flash		Over-ride Higher Preempt#		Flash Dwell		Link
1	ON		ON		OFF		ON	
2	OFF		ON		OFF		OFF	
3	OFF		OFF		OFF		OFF	
4	OFF		OFF		OFF		OFF	
5	OFF		OFF		OFF		OFF	
6	OFF		OFF		OFF		OFF	

Preemption, Times+ [3.#.4]

Pre No.	Extend Dwell	Return Max	Ped Clr	Yel	Red
1					
2					
3					
4					
5					
6					

Pre 1 = RR1
Pre 2 = RR2
Pre 3 = EVA
Pre 4 = EVB
Pre 5 = EVC
Pre 6 = EVD

Phases [3.#.2] - set the Dwell Phases

Pre #	Column	1	2	3	4	5	6	7	8	9	10
1	Dwell Veh										
	Peds										
2	Dwell Veh										
	Peds										
3	Dwell Veh	2	5								
	Peds										
4	Dwell Veh	4	7								
	Peds										
5	Dwell Veh	1	6								
	Peds										
6	Dwell Veh	3	8								
	Peds										

Phases [3.#.2] - Trk Veh

Pre #	Phases			
1				
2				
3				
4				
5				
6				

Exit Phases [3.#.2]

No.	Exit Phase			
1				
2				
3				
4				
5				
6				

Overlaps+ [3.#.5]

Pre #		Preempt Overlaps +
1	Track	
	Dwell	
2	Track	
	Dwell	
3	Track	
	Dwell	
4	Track	
	Dwell	
5	Track	
	Dwell	
6	Track	
	Dwell	

Low Priority Preempts [3.X; where X = 7 thru 10]

						Times							
Pre #	Enb	C+P	Lock	NoSkip	Qjump	Alt Tbl	Min	Max	Lock	Priorty Phases			
7	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
8	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
9	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
10	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0

Advance Times [3.x.8]

	1	2	3	4	5	6
YelChng	0	0	0	0	0	0
RedClr	0	0	0	0	0	0
TrkYelChng	0	0	0	0	0	0
TrkRedClr	0	0	0	0	0	0

OLP GENERAL PARAMETERS [1.5.1]

Lock Inhibit	OFF
Conflict Lock Enable	OFF
Parent P Clearance	OFF
Xtra Incl Phases	OFF
InhibitLockInterval	Always

PREEMPTION NOTE: Each preemption has it's own set of menus. To access each menu :

a. Press "3" for preemption

b. Then enter "Preempt number" (1 through 6 and shown as "#" in Schedules above)

c. Then enter "number of Menu item" you want to access (*1-Times, 2-Phases, 3-Options, 4-Times+, 5-Overlaps+ or 6-Options+*)

d. Once in an above menu push Escape once to go back to main preempton menu.

Name: CLOVIS @ HERNDON

ID: C 0255

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P

CHANNEL SETTINGS [1.8] plus UNIT PARAMETERS [1.2.1]

CHANNEL SETTINGS [1.8.1] / Chan Settings [1.8.2]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	1	3	5	7				
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	PED	PED	PED	PED	VEH	VEH	VEH	VEH
Channel Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz		X		X		X		X																
	Page 1								Page 2															

CHANNEL PARMETERS [1.8.3]

CH 17-24 Mapping:	DEFAULT
D-Conn Mapping:	NONE
Invert Rail Inputs:	OFF
C1-C11-ABC IO Mode:	USER

IO PARAMETERS [1.8.6]

C1-C11-ABC IO Mode:	USER
D-Conn Mapping:	NONE
T & F BIU Mapping	DEFAULT
Invert Rail Inputs:	OFF
EVP Ped Confirm	OFF

CHANNELS+ [1.8.4]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flash Red	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flash Yellow	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Inh Red Fl in Preempt	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Olap Ovrd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CITY OF CLOVIS CALIFORNIA

I/O LOGIC [1.8.7]

Row#	Result		Function			OP	Function			OP	Function			OP	Timer	
	I/O	Fcn	Inv	I/0	Fcn	Logic	Inv	I/0	Fcn	Logic	Inv	I/0	Fcn	Logic	Dly	Sec
1	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
2	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
3	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
4	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
5	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
6	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
7	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
8	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
9	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
10	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0

Ped Parms (MM>5>4)

Det#	Call	No Act	Max Pres	Err Cnt
1	0	0	0	0
2	2	0	5	0
3	0	0	0	0
4	4	0	5	0
5	0	0	0	0
6	6	0	5	0
7	0	0	0	0
8	0	0	0	0

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Veh Par 1-32 [5.1]

Det #	Input Slot	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	1I1U	1					0	0	0	2
2	2I2U	2	0	10	0	0	0	0	0	2
3	2I2L	2	0	0	0	0	0	0	0	2
4	2I3U	2	0	0	0.9		0	0	0	2
5	2I3L	2	0	0	2.6		0	0	0	2
6	2I4U	2	0	0	2	0	0	0	0	2
7	3I5U	3					0	0	0	2
8	4I6U	4	0	0	0	0	0	0	0	2
9	4I6L	4	0	0	0		0	0	0	2
10	4I7U	4	0	0	0.5		0	0	0	2
11	4I7L	4			3.2		0	0	0	2
12	4I8U	4			2		0	0	0	2
13	1I9U	1					0	0	0	2
14	3I9L	3					0	0	0	2
15	5J1U	5					0	0	0	2
16	6J2U	6		10			0	0	0	2
17	6J2L	6					0	0	0	2
18	6J3U	6			1.1		0	0	0	2
19	6J3L	6			0.9		0	0	0	2
20	6J4U	6			2		0	0	0	2
21	7J5U	7					0	0	0	2
22	8J6U	8	0	10	0	0	0	0	0	2
23	8J6L	8	0	10	0		0	0	0	2
24	8J7U	8	0	0	1.2		0	0	0	2
25	8J7L	8	0	0	1		0	0	0	2
26	8J8U	8	0	0	2		0	0	0	2
27	5J9U	5					0	0	0	2
28	7J9L	7					0	0	0	2
29	2I11U	0	0	0	0	0	0	0	0	0
30	4I11L	0	0	0	0	0	0	0	0	0
31	6J11U						0	0	0	0
32	8J11L						0	0	0	0
33	1I1L						0	0	0	0
34	2I4L						0	0	0	0
35	3I5L						0	0	0	0
36	4I8L						0	0	0	0
37	5J1L						0	0	0	0
38	6J4L						0	0	0	0
39	7J5L						0	0	0	0
40	8J8L						0	0	0	0
41	4I10U						0	0	0	0
42	4I10L						0	0	0	0
43	8J10U						0	0	0	0
44	8J10L						0	0	0	0

Vehicle Options 1-32 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	X	X	-	-	-	-	-	X
2	X	X	-	-	-	-	-	X
3	X	X	-	-	-	-	-	X
4	X	X	-	-	-	-	-	X
5	X	X	-	-	-	-	-	X
6	X	-	X	-	-	-	-	X
7	X	X	-	-	-	-	-	X
8	X	X	-	-	-	-	-	X
9	X	X	-	-	-	-	-	X
10	-	X	-	-	-	-	-	X
11	-	X	-	-	-	-	-	X
12	X	-	X	-	-	-	-	X
13	X	X	-	-	-	-	-	X
14	X	X	-	-	-	-	-	X
15	X	X	-	-	-	-	-	X
16	X	X	-	-	-	-	-	X
17	X	X	-	-	-	-	-	X
18	X	X	-	-	-	-	-	X
19	X	X	-	-	-	-	-	X
20	X	-	X	-	-	-	-	X
21	X	X	-	-	-	-	-	X
22	X	X	-	-	-	-	-	X
23	X	X	-	-	-	-	-	X
24	-	X	-	-	-	-	-	X
25	-	X	-	-	-	-	-	X
26	X	-	X	-	-	-	-	X
27	X	X	-	-	-	-	-	X
28	X	X	-	-	-	-	-	X
29	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-

Parameters+ 1-32 [5.3]

Det	Occupancy			Delay		Type	Sl			
#	G	Y	R	1	2			Dir	Type	#
1	-	-	-			NORM		EBLT1&2	Loop	1
2	-	-	-	0	0	NORM	0	WBRT	Loop	2
3	-	-	-	0	0	NORM	0	Not Used		3
4	-	-	-	0	0	NORM	0	WB INT	Loop	4
5	-	-	-	0	0	NORM	0	WB FAR	Loop	5
6	-	-	-	0	0	NORM	0	WB NEAR	Loop	6
7	-	-	-			NORM		SBLT1&2	Loop	7
8	-	-	-	0	0	NORM	0	Not Used		8
9	-	-	-	0	0	NORM	0	Not Used		9
10	-	-	-	0	0	NORM	0	NB INT	Mag	10
11	-	-	-			NORM		NB FAR	Mag	11
12	-	-	-			NORM		NB NEAR	Loop	12
13	-	-	-			NORM		Not Used		
14	-	-	-			NORM		SBLT BACK	Loop	
15	-	-	-			NORM		WBLT1&2	Loop	15
16	-	-	-			NORM		EBRT	Loop	16
17	-	-	-			NORM		Not Used		17
18	-	-	-			NORM		EB INT	Mag	18
19	-	-	-			NORM		EB FAR	Mag	19
20	-	-	-			NORM		EB NEAR	Loop	20
21	-	-	-			NORM		NBLT1&2	Loop	21
22	-	-	-	0	0	NORM	0	SBRT #1	Loop	22
23	-	-	-	0	0	NORM	0	SBRT #2	Loop	23
24	-	-	-	0	0	NORM	0	SB INT	Mag	24
25	-	-	-	0	0	NORM	0	SB FAR	Mag	25
26	-	-	-	0	0	NORM	0	SB NEAR	Loop	26
27	-	-	-			NORM		Not Used		27
28	-	-	-			NORM		Not Used		28
29	-	-	-	0	0	NORM	0			29
30	-	-	-	0	0	NORM	0			
31	-	-	-			NORM				
32	-	-	-			NORM				32
33	-	-	-			NORM				33
34	-	-	-			NORM				34
35	-	-	-			NORM				35
36	-	-	-			NORM				36
37	-	-	-			NORM				37
38	-	-	-			NORM				38
39	-	-	-			NORM				39
40	-	-	-			NORM				40
41	-	-	-			NORM				41
42	-	-	-			NORM				42
43	-	-	-			NORM				43
44	-	-	-			NORM				44

ID: C 0255 **Name:** CLOVIS @ HERNDON

Vol/Occ Period	0	Seconds
	5	Minutes

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AGENDA ITEM NO. 6.

Alt# 1 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Min Grn		0		0		0		0
Gap, Ext		0		0		0		0
Max 1		0		0		0		0
Max 2		0		0		0		0
Yel Clr		0		0		0		0
Red Clr		0		0		0		0
Walk		0		0		0		0
Ped Clr		0		0		0		0

Alt# 2 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Min Grn		0		0		0		0
Gap, Ext		0		0		0		0
Max 1		0		0		0		0
Max 2		0		0		0		0
Yel Clr		0		0		0		0
Red Clr		0		0		0		0
Walk		0		0		0		0
Ped Clr		0		0		0		0

Alt# 3 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Min Grn		0		0		0		0
Gap, Ext		0		0		0		0
Max 1		0		0		0		0
Max 2		0		0		0		0
Yel Clr		0		0		0		0
Red Clr		0		0		0		0
Walk		0		0		0		0
Ped Clr		0		0		0		0

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Guar Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0
Conflicting Ø2		0		0		0		0

Alt# 2 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0
Conflicting Ø2		0		0		0		0

Alt# 3 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø		0		0		0		0
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0
Conflicting Ø2		0		0		0		0

Alt# 4 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø	1	2	3	4	5	6	7	8
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	X	X	X	X	X	X	X	X
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1		0		0		0		0
Conflicting Ø2		0		0		0		0

Alternate Tables [2.6]

Pat#	POpt	PTime	DetGrp	Call/Inh	Olp Off								A			
					1	2	3	4	5	6	7	8				
1	0		0	0									0	Off		DFT
2													0	Off		DFT
3	0	0	0	0									0	Off		DFT
4	4												0	Off		DFT
5	0	0	0	0									0	Off		DFT
6													0	Off		DFT
7	0	0	0	0									0	Off		DFT
8													0	Off		DFT
9	0	0	0	0									0	Off		DFT
10													0	Off		DFT
11	0	0	0	0									0	Off		DFT
12													0	Off		DFT
13	0	0	0	0									0	Off		DFT
14													0	Off		DFT
15	0	0	0	0									0	Off		DFT
16													0	Off		DFT
17	0	0	0	0									0	Off		DFT
18													0	Off		DFT
19	0	0	0	0									0	Off		DFT
20													0	Off		DFT
21	0	0	0	0									0	Off		DFT
22													0	Off		DFT
23	0	0	0	0									0	Off		DFT
24													0	Off		DFT

Time Base Parameters [4.6]

Daylight Savings Time	DISABLE	
Time Base Sync Ref	0	
GMT Offset	+	0
Daylight Savings	Mon	Week
Spring	3	2
Fall	11	1

NAME: **CLOVIS @ HERNDON**

6/4/2021 **ID:** **C 0255**

Annual Schedule [4.3]	Month												Day of Week							Date																																
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Plan	To
1	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	0
2	X	X	X	X	X	X	X	X	X	X	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	0
3	X	X	X	X	X	X	X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	0
4																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0
5																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	0
6																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0
7																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	0
8																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	0
9																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	0
10																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	0
11																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	0
12																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	0

DAY PLANS [4.4]

Plan 1				Plan 2				Plan 3				Plan 4				Plan 5				Plan 6			
Evt	Hour	Min	Act	Evt	Hour	Min	Act	Evt	Hour	Min	Act	Evt	Hour	Min	Act	Evt	Hr	Min	Act	Evt	Hour	Min	Act
1		1	4	1		1	4	1				1				1				1	0	0	0
2	6		1	2	7		54	2				2		0	0	2				2	0	0	0
3	11		3	3	19	30	4	3				3				3				3	0	0	0
4	19	30	54	4				4				4		0	0	4				4	0	0	0
5	22		4	5				5				5				5				5	0	0	0
6				6				6				6		0	0	6				6	0	0	0
7				7				7				7				7				7	0	0	0
8				8				8				8		0	0	8				8	0	0	0

Plan 7				Plan 8				Plan 9				Plan 10				Plan 11				Plan 12			
Evt	Hour	Min	Act	Evt	Hour	Min	Act	Evt	Hour	Min	Act	Evt	Hour	Min	Act	Evt	Hr	Min	Act	Evt	Hour	Min	Act
1	0	0	0	1				1				1				1				1	0	0	0
2				2	0	0	0	2				2		0	0	2				2	0	0	0
3	0	0	0	3				3				3				3				3	0	0	0
4				4	0	0	0	4				4		0	0	4				4	0	0	0
5	0	0	0	5				5				5				5				5	0	0	0
6				6	0	0	0	6				6		0	0	6				6	0	0	0
7	0	0	0	7				7				7				7				7	0	0	0
8				8	0	0	0	8				8		0	0	8				8	0	0	0

Comments:

Minute Table [4.5]

Act	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8	P1	P2
1	1	-	-	-	-	-	-	-	-	-	-	-	0	0
2	2	-	-	-	-	-	-	-	-	-	-	-	0	0
3	3	-	-	-	-	-	-	-	-	-	-	-	0	0
4	4	-	-	-	-	-	-	-	-	-	-	-	0	0
5	5	-	-	-	-	-	-	-	-	-	-	-	0	0
6	6	-	-	-	-	-	-	-	-	-	-	-	0	0
7	7	-	-	-	-	-	-	-	-	-	-	-	0	0
8	8	-	-	-	-	-	-	-	-	-	-	-	0	0
9	9	-	-	-	-	-	-	-	-	-	-	-	0	0
10	10	-	-	-	-	-	-	-	-	-	-	-	0	0
11	0	-	-	-	-	-	-	-	-	-	-	-	0	0
12	0	-	-	-	-	-	-	-	-	-	-	-	0	0
13	0	-	-	-	-	-	-	-	-	-	-	-	0	0
14	0	-	-	-	-	-	-	-	-	-	-	-	0	0
15	0	-	-	-	-	-	-	-	-	-	-	-	0	0
16	0	-	-	-	-	-	-	-	-	-	-	-	0	0
54	254	-	-	-	-	-	-	-	-	-	-	-	0	0
55	255	-	-	-	-	-	-	-	-	-	-	-	0	0

Name: CLOVIS @ HERNDON

ID: C 0255

Date Printed: 6/4/2021

#	Alarm	Ev	Alr
1	Power Up Alarm.	X	X
2	Stop Timing	X	X
3	Cabinet Door Activation	-	-
4	Coordination Failure	X	X
5	External Alarm # 1	-	-
6	External Alarm # 2	-	-
7	External Alarm # 3	-	-
8	External Alarm # 4	-	-
9	Closed Loop Disabled	-	-
10	External Alarm # 5	-	-
11	External Alarm # 6	-	-
12	Manual Control Enable	-	-
13	Coord Free Input	-	-
14	Local Flash Input	X	X
15	CMU/MMU Flash Input	-	-
16	MMU Fault	-	-
17	Cycle Fault	X	X
18	Cycle Failure	X	X
19	Coordination Fault	X	X
20	Controller Fault	X	X
21	Detector SDLC Fault	-	-
22	MMU SDLC Fault	-	-
23	Critical SDLC Fault	-	-
24	SDLC Res. Frame Fault	-	-
25	EEPROM CRC Fault	X	X
26	Detector Diagnostic Fault	-	-
27	Detector Fault from SDLC	-	-
28	Queue detector alarm	-	-
29	Ped Fault	-	-
30	Coord Diagnostic Fault	X	X
37	Download Request	X	X
38	Pattern Change	-	-
49	Preempt 1 Input	X	X
50	Preempt 2 Input	-	-
51	Preempt 3 Input	X	X
52	Preempt 4 Input	X	X
53	Preempt 5 Input	X	X
54	Preempt 6 Input	X	X
55	Preempt 7 Input	-	-
56	Preempt 8 Input	-	-
57	Preempt 9 Input	-	-
58	Preempt 10 Input	-	-
59	EEPROM Compare Fault	-	-
60	Coordination Failure	X	X
73	Controller Access	X	X
81	FIO Changed Status	X	X

Call Phases[1.1.5]

Ø	Phases Called By Ø
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø		From	To	From	To	From	To	From	To
1			1								
2			2								
3			3								
4			4								
5			5								
6			6								
7			7								
8			8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø		From	To	From	To	From	To	From	To
1			1								
2			2								
3			3								
4			4								
5			5								
6			6								
7			7								
8			8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alarm Parameters [1.6.7.1]

Pattern Events:	ON
Local Txmt Alarms:	OFF
Reassign User Alarm #1 In (5):	0
Reassign User Alarm #2 In (6):	0
Preempt Events:	ON

Date Printed
6/4/2021

ID: C 0255 **Name:** CLOVIS @ HERNDON

I/O Inputs - 1.8.9.1.5

C-1 PIN	I/O Source	Function	Input Name
39	I1-1	2	Veh Det 2
40	I1-2	16	Veh Det 16
41	I1-3	8	Veh Det 8
42	I1-4	22	Veh Det 22
43	I1-5	3	Veh Det 3
44	I1-6	17	Veh Det 17
45	I1-7	9	Veh Det 9
46	I1-8	23	Veh Det 23
47	I2-1	6	Veh Det 6
48	I2-2	20	Veh Det 20
49	I2-3	12	Veh Det 12
50	I2-4	26	Veh Det 26
51	I2-5	198	Pre 1 In
52	I2-6	199	Pre 2 In
53	I2-7	181	ManCntrlEnbl
54	I2-8	189	Unused
55	I3-1	15	Veh Det 15
56	I3-2	1	Veh Det 1
57	I3-3	21	Veh Det 21
58	I3-4	7	Veh Det 7
59	I3-5	27	Veh Det 27
60	I3-6	13	Veh Det 13
61	I3-7	28	Veh Det 28
62	I3-8	14	Veh Det 14
63	I4-5	4	Veh Det 4
64	I4-6	18	Veh Det 18
65	I4-7	10	Veh Det 10
66	I4-8	24	Veh Det 24
67	I5-1	130	Ped Call 2
68	I5-2	134	Ped Call 6
69	I5-3	132	Ped Call 4
70	I5-4	136	Ped Call 8
71	I5-5	200	Pre 3 In
72	I5-6	201	Pre 4 In
73	I5-7	202	Pre 5 In
74	I5-8	203	Pre 6 In
75	I6-1	189	Unused
76	I6-2	5	Veh Det 5
77	I6-3	19	Veh Det 19
78	I6-4	11	Veh Det 11
79	I6-5	25	Veh Det 25
80	I6-6	178	Int Advance
81	I6-7	208	Local Flash
82	I6-8	207	Comp StopTm

I/O OUTPU 1.8.9.2.5

C-1 PIN	I/O Source	Function	Output Name
1	Logic Grd		
2	O1-1	14	Red Ch 14
3	O1-2	62	Grn Chan 14
4	O1-3	4	Red Ch 4
5	O1-4	28	Yel Chan 4
6	O1-5	52	Grn Chan 4
7	O1-6	3	Red Ch 3
8	O1-7	27	Yel Chan 3
9	O1-8	51	Grn Chan 3
10	O2-1	13	Red Ch 13
11	O2-2	61	Grn Chan 13
12	O2-3	2	Red Ch 2
13	O2-4	26	Yel Chan 2
14	Logic Grd		
15	O2-5	50	Grn Chan 2
16	O2-6	1	Red Ch 1
17	O2-7	25	Yel Chan 1
18	O2-8	49	Grn Chan 1
19	O3-1	16	Red Ch 16
20	O3-2	64	Grn Chan 16
21	O3-3	8	Red Ch 8
22	O3-4	32	Yel Chan 8
23	O3-5	56	Grn Chan 8
24	O3-6	7	Red Ch 7
25	O3-7	31	Yel Chan 7
26	O3-8	55	Grn Chan 7
27	O4-1	15	Red Ch 15
28	O4-2	63	Grn Chan 15
29	O4-3	6	Red Ch 6
30	O4-4	30	Yel Chan 6
31	O4-5	54	Grn Chan 6
32	O4-6	5	Red Ch 5
33	O4-7	29	Yel Chan 5
34	O4-8	53	Grn Chan 5
35	O5-1	37	Yel Chan 13
36	O5-2	39	Yel Chan 15
37	O5-3	38	Yel Chan 14
38	O5-4	40	Yel Chan 16
100	O5-5	42	Yel Chan 18
101	O5-6	41	Yel Chan 17
102	O5-7	115	Not Used
103	O5-8	114	Watchdog

C-1 PIN	I/O Source	Function	Output Name
83	O6-1	18	Red Ch 18
84	O6-2	66	Grn Chan 18
85	O6-3	12	Red Ch 12
86	O6-4	36	Yel Chan 12
87	O6-5	60	Grn Chan 12
88	O6-6	11	Red Ch 11
89	O6-7	35	Yel Chan 11
90	O6-8	59	Grn Chan 11
91	O7-1	17	Red Ch 17
92	Logic Grd		
93	O7-2	65	Grn Chan 17
94	O7-3	10	Red Ch 10
95	O7-4	34	Yel Chan 10
96	O7-5	58	Grn Chan 10
97	O7-6	9	Red Ch 9
98	O7-7	33	Yel Chan 9
99	O7-8	57	Grn Chan 9
I/O Outputs - 1.8.9.2.5			
C-11 OUTPUTS			
1	O8-1	115	Not Used
2	O8-2	115	Not Used
3	O8-3	115	Not Used
4	O8-4	115	Not Used
I/O Inputs - 1.8.9.1.5			
C-11 INPUTS			
15	I7-1	192	Alarm 1
16	I7-2	193	Alarm 2
17	I7-3	194	Alarm 3
18	I7-4	195	Alarm 4
19	I7-5	196	Alarm 5
20	I7-6	197	Alarm 6
21	I7-7	189	Unused
22	I7-8	189	Unused
23	I8-1	189	Unused
24	I8-2	189	Unused
25	I8-3	189	Unused
26	I8-4	189	Unused
27	I8-5	189	Unused
28	I8-6	189	Unused
29	I8-7	189	Unused
30	I8-8	189	Unused

ID: C 0255

NAME: CLOVIS @ HERNDON

Date Printed:
6/4/2021

ID NUMBER: **C 0255**

LOCATION: CLOVIS and HERNDON

T. Barker
6/1/2021

CITY OF CLOVIS

332 CABINET

28 DETECTOR SETUP

	DETECTOR ASSIGNMENTS											**ISOLATORS**		
	EBLT	**WBRT**	**WB INT**	**WB NEAR**	**SBLT**		**NB INT**	**NB NEAR**				**NORTH LEG**	**SOUTH LEG**	
I	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**	**I9**	**I10**	**I11**	**I12**	**I13**	**I14**
UPPER	**Ph 1** Call & Ext T2-1 & 2 C1-56 DET 1 #1 Lane	**Ph 2** Call & Ext T2-5 & 6 C1-39 DET 2 10 DEL	**Ph 2** Call & Ext T2-9 & 10 C1-63 DET 4 0.9	**Ph 2** Call & Que T4-1 & 2 C1-47 DET 6 2.0 #1 & #2	**Ph 3** Call & Ext T4-5 & 6 C1-58 DET 7 #1 Lane	**Ph 4** Call & Ext T4-9 & 10 C1-41 DET 8	**Ph 4** Ext T6-1 & 2 C1-65 DET 10 0.5 #1 Lane	**Ph 4** Call & Que T6-5 & 6 C1-49 DET 12 2.0 #1 & #2	**Ph 1** Call & Ext T6-9 & 10 C1-60 DET 13	NOT WIRED	NOT ASSIGNED C1-80	**Ph 2** PED CALL C1-67	**Ph 6** PED CALL C1-68	**FLASH SENSE** C1-81
LOWER	**Ph 1** Call & Ext T2-3 & 4 C1-56 DET 1 #2 Lane	**Ph 2** Call & Ext T2-7 & 8 C1-43 DET 3	**Ph 2** Call & Ext T2-11 & 12 C1-76 DET 5 2.6	**Ph 2** Call & Que T4-3 & 4 C1-47 DET 6 2.0 #3 Lane	**Ph 3** Call & Ext T4-7 & 8 C1-58 DET 7 #2 Lane	**Ph 4** Call & Ext T4-11 & 12 C1-45 DET 9	**Ph 4** Ext T6-3 & 4 C1-78 DET 11 3.2 #2 Lane	**Ph 4** Call & Que T6-7 & 8 C1-49 DET 12 2.0 #3 Lane	**Ph 3** Call & Ext T6- 11 & 12 C1-62 DET 14 "B" & "C" BACK LOOPS	NOT WIRED	NOT ASSIGNED C1-53	**Ph 4** PED CALL C1-69	**Ph 8** PED CALL C1-70	**STOP TIME** C1-82
	EBLT		**WB FAR**	**WB NEAR**	**SBLT**		**NB FAR**	**NB NEAR**	**SBLT**			**EAST LEG**		

	WBLT	**EBRT**	**EB INT**	**EB NEAR**	**NBLT**	**SBRT**	**SB INT**	**SB NEAR**				**WB**	**NB**	
J	**J1**	**J2**	**J3**	**J4**	**J5**	**J6**	**J7**	**J8**	**J9**	**J10**	**J11**	**J12**	**J13**	**J14**
UPPER	**Ph 5** Call & Ext T3-1 & 2 C1-55 DET 15 #1 Lane	**Ph 6** Call & Ext T3-5 & 6 C1-40 DET 16 10 DEL	**Ph 6** Call & Ext T3-9 & 10 C1-64 DET 18 1.1	**Ph 6** Call & Que T5-1 & 2 C1-48 DET 20 2.0 #1 & #2	**Ph 7** Call & Ext T5-5 & 6 C1-57 DET 21 #1 Lane	**Ph 8** Call & Ext T5- 9 & 10 C1-42 DET 22 10 DEL #1 Lane	**Ph 8** Ext T7-1 & 2 C1-66 DET 24 1.2	**Ph 8** Call & Que T7- 5 & 6 C1-50 DET 26 2.0 #1 & #2	**Ph 5** Call & Ext T7- 9 & 10 C1-59 DET 27	NOT WIRED	NOT ASSIGNED C1-54	**PH 2 & 5** **EVA** **Preempt** C1 - 71 PRE 3	**PH 4 & 7** **EVB** **Preempt** C1 - 72 PRE 4	**LOW BATT** **RAILROAD 1** C1-51
LOWER	**Ph 5** Call & Ext T3-3 & 4 C1-55 DET 15 #2 Lane	**Ph 6** Call & Ext T3-7 & 8 C1-44 DET 17	**Ph 6** Call & Ext T3-11 & 12 C1-77 DET 19 0.9	**Ph 6** Call & Que T5-3 & 4 C1-48 DET 20 2.0 #3 Lane	**Ph 7** Call & Ext T5-7 & 8 C1-57 DET 21 #2 Lane	**Ph 8** Call & Ext T5-11 & 12 C1-46 DET 23 10 DEL #2 Lane	**Ph 8** Ext T7- 3 & 4 C1-79 DET 25 1.0	**Ph 8** Call & Que T7- 7 & 8 C1-50 DET 26 2.0 #3 Lane	**Ph 7** Call & Ext T7-11 & 12 C1-61 DET 28	NOT WIRED	NOT ASSIGNED C1-75	**PH 6 & 1** **EVC** **Preempt** C1 - 73 PRE 5	**PH 8 & 3** **EVD** **Preempt** C1 - 74 PRE 6	**RAILROAD 2** C1-52
	WBLT		**EB FAR**	**EB NEAR**	**NBLT**	**SBRT**	**SB FAR**	**SB NEAR**				**EB**	**SB**	

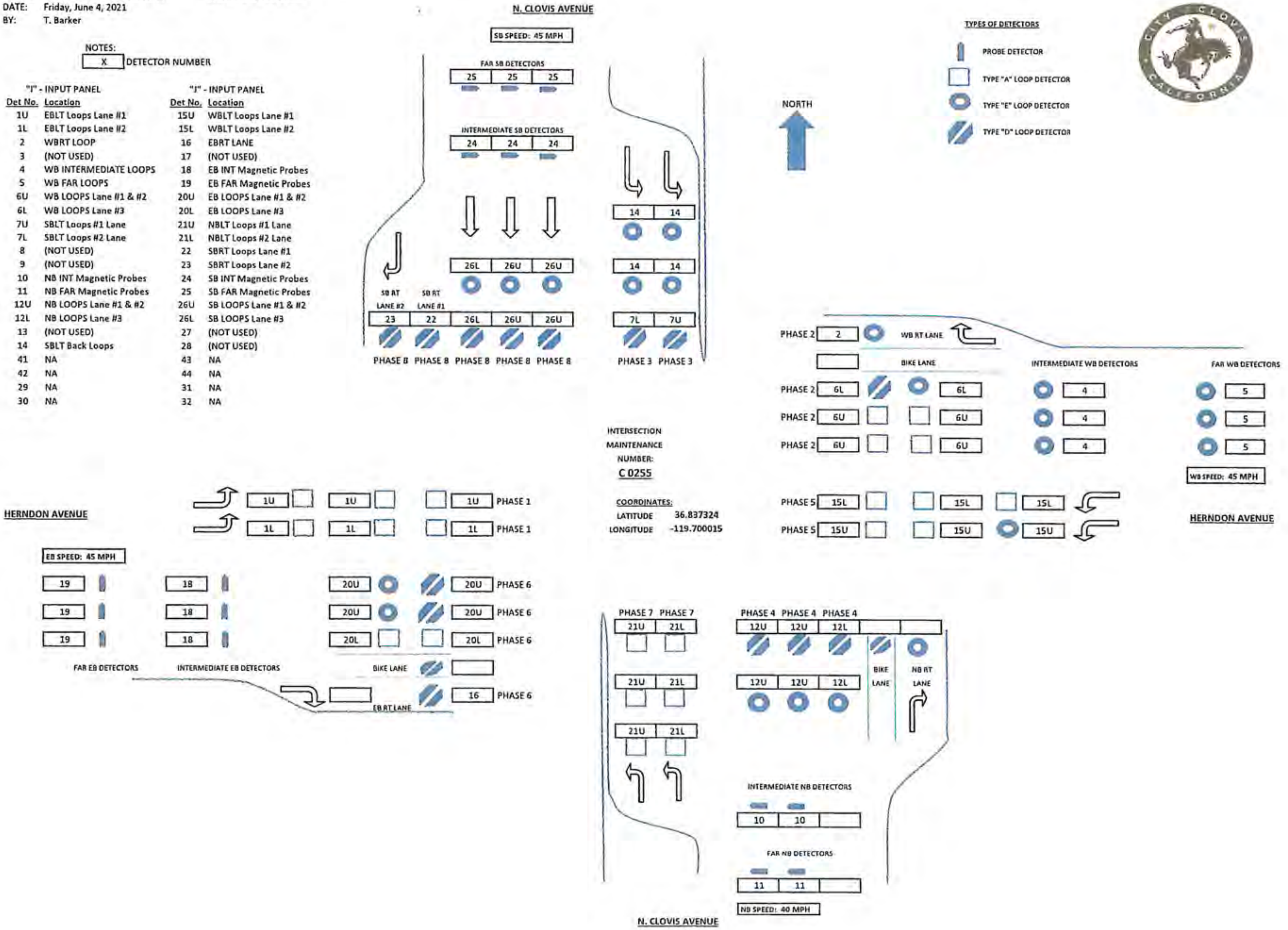
COMMENTS:

🟫	222 Loop Amplifier
🟧	752 Discriminator
🟨	242 Isolator
⬜	232 Mag Amplifier

Detector Layout for the Intersection of: CLOVIS and HERNDON
DATE: Friday, June 4, 2021
BY: T. Barker

NOTES:
X DETECTOR NUMBER

"I" - INPUT PANEL		"J" - INPUT PANEL	
Det No.	Location	Det No.	Location
1U	EBLT Loops Lane #1	15U	WBLT Loops Lane #1
1L	EBLT Loops Lane #2	15L	WBLT Loops Lane #2
2	WBRT LOOP	16	EBRT LANE
3	(NOT USED)	17	(NOT USED)
4	WB INTERMEDIATE LOOPS	18	EB INT Magnetic Probes
5	WB FAR LOOPS	19	EB FAR Magnetic Probes
6U	WB LOOPS Lane #1 & #2	20U	EB LOOPS Lane #1 & #2
6L	WB LOOPS Lane #3	20L	EB LOOPS Lane #3
7U	SBLT Loops #1 Lane	21U	NBLT Loops #1 Lane
7L	SBLT Loops #2 Lane	21L	NBLT Loops #2 Lane
8	(NOT USED)	22	SBRT Loops Lane #1
9	(NOT USED)	23	SBRT Loops Lane #2
10	NB INT Magnetic Probes	24	SB INT Magnetic Probes
11	NB FAR Magnetic Probes	25	SB FAR Magnetic Probes
12U	NB LOOPS Lane #1 & #2	26U	SB LOOPS Lane #1 & #2
12L	NB LOOPS Lane #3	26L	SB LOOPS Lane #3
13	(NOT USED)	27	(NOT USED)
14	SBLT Back Loops	28	(NOT USED)
41	NA	43	NA
42	NA	44	NA
29	NA	31	NA
30	NA	32	NA



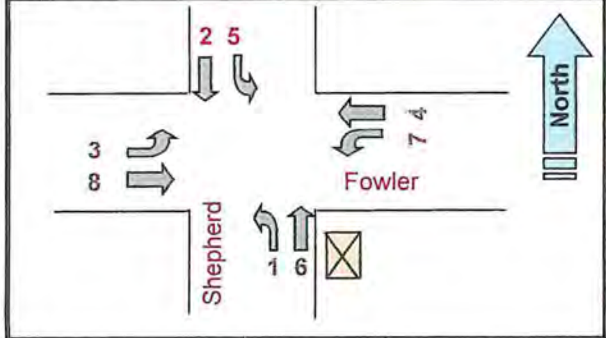
INTERSECTION MAINTENANCE NUMBER:
C 0255

COORDINATES:
LATITUDE 36.837324
LONGITUDE -119.700015

AGENDA ITEM NO. 6.

CLOVIS

Movement	NBL	SB	EBL	WB	SBL	NB	WBL	EB
Times [1.1.1]	1	2	3	4	5	6	7	8
Min Green	9	8	8	8	9	8	8	8
Gap, Ext	2	3	2	4.7	2	3	2	4.7
Max 1	35	40	35	40	35	40	35	40
Max 2								
Yel Clearance	3	4.7	3	5	3	4.7	3	5
Red Clearance	1	1	1	1	1	1	1	1
Walk								7
Ped Clearance								23
Red Revert	1	1	1	1	1	1	1	1
Add Initial								
Max Initial								
Time B4 Reduct		18		19		18		19
Cars B4 Reduct								
Time To Reduce		12		11		12		11
Reduce By								
Min Gap	2	1.8	2	3.1	2	1.8	2	3.1
DyMaxLim	45							
Max Step	5							
Options [1.1.2]	1	2	3	4	5	6	7	8
Enable	X	X	X	X	X	X	X	X
Min Recall								
Max Recall								
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		X		X		X		X
Enable Simul Gap	X	X	X	X	X	X		X
Gaurantee Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								



Phase Options+ [1.1.3]

Options+	1	2	3	4	5	6	7	8
Reservice								
PedClr Thru Yel								
SkipRed-NoCall								
Red Rest								
Max II								
Max Inhibit								
Ped Delay								
Red Rest on Gap								
Conflicting Phase								
Grn/Ped Delay								
Omit Yel, Yel P								
Ped Out/Olp Ped								
StartYel, Next P		3				7		

Phase Concurrency [1.1.4]

Phase	Ring	StartUp	Concurrent Phases			
1	1	RED	5	6	0	0
2	1	YELLOW	5	6	0	0
3	1	RED	7	8	0	0
4	1	RED	7	8	0	0
5	2	RED	1	2	0	0
6	2	YELLOW	1	2	0	0
7	2	RED	3	4	0	0
8	2	RED	3	4	0	0
9		RED	0	0	0	0
10		RED	0	0	0	0
11		RED	0	0	0	0
12		RED	0	0	0	0

Comm Ports [6.6]

Channel	Port	Echo	Mode
Async 1	SP1	NONE	0
Async 2	SP2	NONE	0
Async 3	SP8	NONE	0
Async 4	OFF	NONE	0
Sync 1	SP5S		
Sync 2	SP3S		
TS2CVM	ASYNC3		
Opticom	NONE		
GPS	NONE		

Unit Params [1.2.1]

Startup Flash	0	Red Revert	1
MCE Timeout	0	Auto Ped Clear	OFF
Loc Flsh Start	OFF	Display Time	10
Yellow < 3"	OFF	Tone Disable	OFF
Allow Skip Yel	OFF	AudioPedTime	OFF
Start Red Tm	0	**Phase Mode**	STD8
Disable Init Ped	OFF	CNA FreeTime	0
TOD Dimming	OFF	Diamond Mode	4Ph
ST over Prmpt	OFF	Free Ring Seq	1
Feature Profile	1	IO Mode	AUTO
Mx Seek TrkTm	0	Max Cyc Timer	0
Mx Seek Dwell	0	CycFlt Actn	ALARM
Prmpt/Ext Coor	EXT	Clrnc Decide	OFF
Aux Switch	STOPTM	LPAlt Srs	OFF

Times+ [1.1.7]

	1	2	3	4	5	6	7	8
Walk2	0	0	0	0	0	0	0	0
BikeClr	0	0	0	0	0	0	0	0
GrnFlash	0	0	0	0	0	0	0	0
SfClrMn	0	0	0	0	0	0	0	0
SfClrNoFlsh	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

SDLC Parameters [1.3.2]

		Manual Check
		0
TS2 Detector Faults	OFF	OFF

SPECIAL INSTRUCTIONS:

Comm [6.2]

Port	Baud Rate	FCM
1	9600	6
2	9600	6
3	1200	0
4	1200	0

Comm [6.5]

IP Address:	10	128	0	96
Mask:	255	255	255	0
Gateway:	10	128	0	254
Port #:	5096			

Host IP *			
10	50	11	15

*Host IP must be entered manually.

Phase Seq. (2 ring) Chart [1.2.4]

Seq #	Ring	Phases					
1	1	1	2	3	4	0	0
	2	5	6	7	8	0	0
2	1	1	2	3	4	0	0
	2	6	5	7	8	0	0
3	1	2	1	3	4	0	0
	2	5	6	7	8	0	0
4	1	2	1	3	4	0	0
	2	6	5	7	8	[illegible]	0
5	1	1	2	3	4	[illegible]	0
	2	5	6	8	7	0	0
6	1	1	2	3	4	0	0
	2	6	5	8	7	0	0
7	1	2	1	3	4	0	0
	2	5	6	8	7	0	0
8	1	2	1	3	4	0	0
	2	6	5	8	7	0	0
9	1	1	2	4	3	0	0
	2	5	6	7	8	0	0
10	1	1	2	4	3	0	0
	2	6	5	7	8	0	0
11	1	2	1	4	3	0	0
	2	5	6	7	8	0	0
12	1	2	1	4	3	0	0
	2	6	5	7	8	0	0
13	1	1	2	4	3	0	0
	2	5	6	8	7	0	0
14	1	1	2	4	3	[illegible]	0
	2	6	5	8	7	0	0
15	1	2	1	4	3	0	0
	2	5	6	8	7	0	0
16	1	2	1	4	3	0	0
	2	6	5	8	7	0	0

Advance Warning [1.1.9]

	Ph	Tm
Aux Out #1	0	0
Aux Out #2	0	0

NAME:	Fowler at Shepherd	**ID:** 186	**Configuration:** Standard File
Prepared by:		**Date Installed:**	12/31/2017
Installed by:		**Date Superceded:**	

V76.7D
ATMS 1.5.45.263

Date Printed:
1/5/18
Page 1

AGENDA ITEM NO. 6.

[2.1] Coord Modes+

Test OpMode	0
Correction	LONG
Maximum	MAX 1
Force Mode	FIXED
Flash Mode	CHANNEL

Coord Modes+ (Page 2)

FreeonSeqCh	OFF
Closed Loop	OFF
External	OFF
Latch Sec Frc	OFF
Stop-in-Walk	OFF
Ped Recycle	NO_RECYCLE
Expand Splt	OFF
Easy Float	OFF
Auto Reset	OFF
NTCIP Yield	+ 0

Leave Walk

Before	TIMED
After	TIMED

Intersection Name: Fowler at Shepherd

ID: 186

CITY OF CLOVIS

Date Printed: 1/5/2018

[2.4] Patterns					[2.7.1-24] Splits										[2.5] Transition														
Pat#	Cyc	Off	Split	Seq	Split	[2.7]	1	2	3	4	5	6	7	8	Pat#	Short	Long	Dwell	No Shortway Ø				E-Yld	Offset	Ret Hold	Flt	Veh	Ped	FRC MODE
1	0	0	0	1	1	Split	0	0	0	0	0	0	0	0	1		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
2	0	0	0	1	2	Split	0	0	0	0	0	0	0	0	2		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
3	0	0	0	1	3	Split	0	0	0	0	0	0	0	0	3		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
4	0	0	0	1	4	Split	0	0	0	0	0	0	0	0	4		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
5	0	0	0	1	5	Split	0	0	0	0	0	0	0	0	5		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
6	0	0	0	1	6	Split	0	0	0	0	0	0	0	0	6		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
7	0	0	0	1	7	Split	0	0	0	0	0	0	0	0	7		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
8	0	0	0	1	8	Split	0	0	0	0	0	0	0	0	8		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
9	0	0	0	1	9	Split	0	0	0	0	0	0	0	0	9		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
10	0	0	0	1	10	Split	0	0	0	0	0	0	0	0	10		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
30	0	0	0	1	30	Split	0	0	0	0	0	0	0	0	30		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
31	0	0	0	1	31	Split	0	0	0	0	0	0	0	0	31		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															
32	0	0	0	1	32	Split	0	0	0	0	0	0	0	0	32		17	0	0	0	0	0	0	BegGRN	-	-	-	-	
						Crd-P																							
						Mode	NON	NON	NON	NON	NON	NON	NON	NON															

AGENDA ITEM NO. 6.

Overlap 1-8 Program Parms & Parm+ [1.5.2.1] [1.5.2.8]

		Included Ø	NORMAL	
1		Modifier Ø	Grn	
		Conflict Ø	Yel	3.5
	A	Conflict Olap	Red	1.5
		Conflict Ped	LG	
		Included Ø	NORMAL	
2		Modifier Ø	Grn	
		Conflict Ø	Yel	3.5
	B	Conflict Olap	Red	1.5
		Conflict Ped	LG	
		Included Ø	NORMAL	
3		Modifier Ø	Grn	
		Conflict Ø	Yel	3.5
	C	Conflict Olap	Red	1.5
		Conflict Ped	LG	
		Included Ø	NORMAL	
4		Modifier Ø	Grn	
		Conflict Ø	Yel	3.5
	D	Conflict Olap	Red	1.5
		Conflict Ped	LG	
		Included Ø	NORMAL	
5		Modifier Ø	Grn	
		Conflict Ø	Yel	3.5
	E	Conflict Olap	Red	1.5
		Conflict Ped	LG	
		Included Ø	NORMAL	
6		Modifier Ø	Grn	
		Conflict Ø	Yel	3.5
	F	Conflict Olap	Red	1.5
		Conflict Ped	LG	
		Included Ø	NORMAL	
7		Modifier Ø	Grn	
		Conflict Ø	Yel	3.5
	G	Conflict Olap	Red	1.5
		Conflict Ped	LG	
		Included Ø	NORMAL	
8		Modifier Ø	Grn	
		Conflict Ø	Yel	3.5
	H	Conflict Olap	Red	1.5
		Conflict Ped	LG	

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	EXT
Max Seek Track Time	0
Max Seek Dwell Time	0

Channel Parameters [1.8.3]

Pre Invert Rail Input	OFF

Preemption Options+ [3.6]

Pre #	Enable	Type	Output	Pattern	Skip	Co+Pre	Flash	Max/Min
1	ON	RAIL	TS2		OFF	OFF	OFF	MAX
2	OFF	EMERG	TS2		OFF	OFF	OFF	MAX
3	ON	EMERG	TS2		OFF	OFF	OFF	MAX
4	ON	EMERG	TS2		OFF	OFF	OFF	MAX
5	ON	EMERG	TS2		OFF	OFF	OFF	MAX
6	ON	EMERG	TS2		OFF	OFF	OFF	MAX

Preemption Times+ [3.1]

Pre #	Delay	MinDura	MaxPres	MinGrn	MinWlk	PedClr	Track Grn	Min Dwell
1								
2								
3		9	60		4	23		9
4		9	60		4	18		9
5		9	60		4	22		9
6		9	60		4	18		9

Preemption, Options+ [3.3]

Pre #	Lock Input	Over-ride Auto Flash	Over-ride Higher Preempt#	Flash Dwell	Link
1	ON	ON	ON	ON	
2	ON	ON	ON	OFF	
3	ON	ON	ON	OFF	
4	ON	ON	ON	OFF	
5	ON	ON	ON	OFF	
6	ON	ON	ON	OFF	

Preemption, Times+ [3.4]

Pre No.	Extend Dwell	Return Max	Ped Clr	Yel	Red
1					
2					
3					
4					
5					
6					

Dwell Phases [3.2]

Pre #	Column	1	2	3	4	5
1	Phases					
	Peds					
2	Phases					
	Peds					
3	Phases	2	5			
	Peds					
4	Phases	4	7			
	Peds					
5	Phases	1	6			
	Peds					
6	Phases	3	8			
	Peds					

Track Clear Phases [3.2]

Pre #	Phases
1	
2	
3	
4	
5	
6	

Exit Phases [3.2]

No.	Exit Phase
1	
2	
3	
4	
5	
6	

Overlaps+ [3.5]

Pre #		Preempt Overlaps +
1	Track	
	Dwell	
2	Track	
	Dwell	
3	Track	
	Dwell	
4	Track	
	Dwell	
5	Track	
	Dwell	
6	Track	
	Dwell	

Low Priority Preempts [3.X; where X = 7 thru 10]

							Times						
Pre #	Enb	C+P	Lock	NoSkip	Qjump	Alt Tbl	Min	Max	Lock	Priorty Phases			
7	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
8	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
9	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0
10	OFF	OFF	MAX	OFF	OFF		0	0	0	0	0	0	0

Advance Times [3.x.8]

	1	2	3	4	5	6
YelChng						
RedClr						
TrkYelChng						
TrkRedClr						

OLP GENERAL PARAMETERS [1.5.1]

Lock Inhibit	OFF
Conflict Lock Enable	OFF
Parent P Clearance	OFF
Xtra Incl Phases	OFF
InhibitLockInterval	Always

CITY OF
CLOVIS

Name: Fowler at Shepherd

ID: 186

Date Printed:
1/5/2018

CHANNEL SETTINGS [1.8] plus UNIT PARAMETERS [1.2.1]

CHANNEL SETTINGS [1.8.1] / Chan Settings [1.8.2]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	1	3	5	7				
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	PED	PED	PED	PED	VEH	VEH	VEH	VEH
Channel Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
	Page 1								Page 2															

CHANNEL PARMETERS [1.8.3]

CH 17-24 Mapping:	DEFAULT
D-Conn Mapping:	NONE
Invert Rail Inputs:	OFF
C1-C11-ABC IO Mode:	AUTO

CHANNELS+ [1.8.4]

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flash Red	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Flash Yellow	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Inh Red Fl in Preempt	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Olap Ovrd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

IO PARAMETERS [1.8.6]

C1-C11-ABC IO Mode:	AUTO
D-Conn Mapping:	NONE
T & F BIU Mapping	DEFAULT
Invert Rail Inputs:	OFF
EVP Ped Confirm	OFF

CITY OF
CLOVIS

I/O LOGIC [1.8.7]

Row#	Result		Function			OP	Function			OP	Function			OP	Timer	
	I/O	Fcn	Inv	I/O	Fcn	Logic	Inv	I/O	Fcn	Logic	Inv	I/O	Fcn	Logic	Dly	Sec
1	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
2	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
3	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
4	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
5	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
6	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
7	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
8	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
9	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0
10	I	0	-	I	----	0	-	I	----	0	-	I	----	0	DLY	0

Ped Parms (MM>5>4)

Det#	Call	No Act	Max Pres	Err Cnt
1	0	0	0	0
2	2	0	0	0
3	0	0	0	0
4	4	0	0	0
5	0	0	0	0
6	6	0	0	0
7	0	0	0	0
8	8	0	0	0

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Date Printed:
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AGENDA ITEM NO. 6.

Veh Par 1-32 [5.1]											Vehicle Options 1-32 [5.2]									Parameters+ 1-32 [5.3]								Info Only	
Det #	Input Slot	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time	Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol	Det #	Occupancy G	Y	R	Delay 1	2	Type	S		t
1	1I1U	1					0	0	0	2	1	X	X	-	-	X	-	X	X	1	X	X	-			NORM		NBL1	1
2	2I2U	2			1.1		0	0	0	2	2	-	X	-	-	-	-	-	-	2	-	-	-			NORM			2
3	2I2L	2			3.7		0	0	0	2	3	-	X	-	-	-	-	-	-	3	-	-	-			NORM			3
4	2I3U	2					0	0	0	2	4	X	X	-	-	-	-	-	-	4	-	-	-			NORM			4
5	2I3L	2			2	20	0	0	0	2	5	X	-	X	-	-	-	-	-	5	-	-	-			NORM			5
6	2I4U	2			2	20	0	0	0	2	6	X	-	X	-	-	-	X	X	6	X	X	-			NORM		SBT1	6
7	3I5U	3					0	0	0	2	7	X	X	-	-	X	-	X	X	7	X	X	-			NORM		EBL1	7
8	4I6U	4			1.6		0	0	0	2	8	X	X	-	-	-	-	-	-	8	-	-	-			NORM			8
9	4I6L	4			0.1		0	0	0	2	9	X	X	-	-	-	-	-	-	9	-	-	-			NORM			9
10	4I7U	4		10			0	0	0	2	10	X	-	-	-	-	-	X	X	10	X	X	X			NORM		WBR1	10
11	4I7L	4			2	20	0	0	0	2	11	X	-	X	-	-	-	-	-	11	-	-	-			NORM			11
12	4I8U	4			2	20	0	0	0	2	12	X	-	X	-	-	-	X	X	12	X	X	-			NORM		WBT1	12
13	1I9U	1					0	0	0	2	13	X	X	-	-	-	X	-	-	13	-	-	-			NORM			13
14	3I9L	3					0	0	0	2	14	X	X	-	-	-	X	-	-	14	-	-	-			NORM			
15	5J1U	5					0	0	0	2	15	X	X	-	-	X	-	X	X	15	X	X	-			NORM		SBL1	15
16	6J2U	6			1		0	0	0	2	16	-	X	-	-	-	-	-	-	16	-	-	-			NORM			16
17	6J2L	6			0.8		0	0	0	2	17	-	X	-	-	-	-	-	-	17	-	-	-			NORM			17
18	6J3U	6		10			0	0	0	2	18	X	-	-	-	-	-	X	X	18	X	X	X			NORM		WBT2	18
19	6J3L	6			2	20	0	0	0	2	19	X	-	X	-	-	-	-	-	19	-	-	-			NORM			19
20	6J4U	6			2	20	0	0	0	2	20	X	-	X	-	-	-	X	X	20	X	X	-			NORM		NBT1	20
21	7J5U	7					0	0	0	2	21	X	X	-	-	X	-	X	X	21	X	X	-			NORM		WBL1	21
22	8J6U	8			1.5		0	0	0	2	22	X	X	-	-	-	-	-	-	22	-	-	-			NORM			22
23	8J6L	8			0.1		0	0	0	2	23	X	X	-	-	-	-	-	-	23	-	-	-			NORM			23
24	8J7U	8					0	0	0	2	24	X	-	-	-	-	-	X	X	24	X	X	X			NORM		EBR1	24
25	8J7L	8			2	20	0	0	0	2	25	X	-	X	-	-	-	-	-	25	-	-	-			NORM			25
26	8J8U	8			2	20	0	0	0	2	26	X	-	X	-	-	-	X	X	26	X	X	-			NORM		EBT1	26
27	5J9U	5					0	0	0	2	27	X	X	-	-	-	X	-	-	27	-	-	-			NORM			27
28	7J9L	7					0	0	0	2	28	X	X	-	-	-	X	-	-	28	-	-	-			NORM			28
29	2I11U	2					0	0	0	2	29	-	-	-	-	-	-	-	-	29	-	-	-			NORM			29
30	4I11L	4					0	0	0	2	30	-	-	-	-	-	-	-	-	30	-	-	-			NORM			30
31	6J11U	6					0	0	0	2	31	-	-	-	-	-	-	-	-	31	-	-	-			NORM			
32	8J11L	8					0	0	0	2	32	-	-	-	-	-	-	-	-	32	-	-	-			NORM			32
33	1I1L	1					0	0	0	2	33	-	-	-	-	-	-	-	-	33	-	-	-			NORM			33
34	2I4L	2			2	20	0	0	0	2	34	X	-	X	-	-	-	X	X	34	X	X	-			NORM		SBT2	34
35	3I5L	3					0	0	0	2	35	-	-	-	-	-	-	-	-	35	-	-	-			NORM			35
36	4I8L	4			2	20	0	0	0	2	36	X	-	X	-	-	-	X	X	36	X	X	-			NORM			36
37	5J1L	5					0	0	0	2	37	-	-	-	-	-	-	-	-	37	-	-	-			NORM			37
38	6J4L	6			2	20	0	0	0	2	38	X	-	X	-	-	-	X	X	38	X	X	-			NORM		NBT2	38
39	7J5L	7					0	0	0	2	39	-	-	-	-	-	-	-	-	39	-	-	-			NORM			39
40	8J8L	8			2	20	0	0	0	2	40	X	-	X	-	-	-	X	X	40	X	X	-			NORM		EBT2	40
41	4I10U						0	0	0	0	41	-	-	-	-	-	-	-	-	41	-	-	-			NORM			41
42	4I10L						0	0	0	0	42	-	-	-	-	-	-	-	-	42	-	-	-			NORM			42
43	8J10U						0	0	0	0	43	-	-	-	-	-	-	-	-	43	-	-	-			NORM			43
44	8J10L						0	0	0	0	44	-	-	-	-	-	-	-	-	44	-	-	-			NORM			44

ID:	186	**Name:**	Fowler at Shepherd	**Vol/Occ Period**	0 Seconds 15 Minutes	1/5/2018

Alt# 1 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1]

Column#... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø	1	2	3	4	5	6	7	8
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	X	-	-	-	X
Dual Entry	-	X	-	X	-	X	-	X
Enabl SimGap	X	X	X	X	X	X	X	X
Guar Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1								
Conflicting Ø2								

Alt# 2 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø	1	2	3	4	5	6	7	8
Lock Calls	-	-	-	-	-	-	-	-
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	X	-	-	-	X	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	X	X	X	X	X	X	X	X
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1								
Conflicting Ø2								

Alt# 3 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Enrty	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1								
Conflicting Ø2								

Alt# 4 Options Table [1.1.6.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	X	X	X	X	X	X	X	X
Soft Recall	-	-	-	-	-	-	-	-
Dual Entry	-	-	-	-	-	-	-	-
Enabl SimGap	X	X	X	X	X	X	X	X
Gaur Passage	-	-	-	-	-	-	-	-
Rest In Walk	-	-	-	-	-	-	-	-
Cond Service	-	-	-	-	-	-	-	-
Reservice	-	-	-	-	-	-	-	-
Non-Act 1	-	-	-	-	-	-	-	-
Red Rest	-	-	-	-	-	-	-	-
Max2	-	-	-	-	-	-	-	-
Ped Delay	-	-	-	-	-	-	-	-
Conflicting Ø1								
Conflicting Ø2								

Alternate Tables [2.6]

Pat#	POpt	PTime	DetGrp	Call/Inh	Olp Off 1	2	3	4	5	6	7	8	A			
1	1												0	Off		DFT
2	2												0	Off		DFT
3													0	Off		DFT
4													0	Off		DFT
5													0	Off		DFT
6													0	Off		DFT
7													0	Off		DFT
8													0	Off		DFT
9													0	Off		DFT
10													0	Off		DFT
11													0	Off		DFT
12													0	Off		DFT
13													0	Off		DFT
14													0	Off		DFT
15													0	Off		DFT
16													0	Off		DFT
17													0	Off		DFT
18													0	Off		DFT
19													0	Off		DFT
20													0	Off		DFT
21													0	Off		DFT
22													0	Off		DFT
23													0	Off		DFT
24													0	Off		DFT

Time Base Parameters [4.6]

Daylight Savings Time	ENABLE	
Time Base Sync Ref	0	
GMT Offset	+	0
Daylight Savings	Mon	Week
Spring	0	1
Fall	0	1

CITY OF CLOVIS

NAME: **Fowler at Shepherd**

1/5/2018 **ID:** **186**

Annual Schedule [4.3]	Month												Day of Week							Date																																nk
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		o
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	0
2																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
3																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
4																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
5																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
6																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
7																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
8																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
9																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
10																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
11																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
12																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0

DAY PLANS [4.4]

Plan 1				Plan 2				Plan 3				Plan 4				Plan 5				Plan 6			
Evt	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hr	Min	Act	*Evt*	Hour	Min	Act
1		1	2	1				1				1				1				1	0	0	0
2	6		1	2				2				2				2				2	0	0	0
3	22		2	3				3				3				3				3	0	0	0
4				4				4				4				4				4	0	0	0
5				5				5				5				5				5	0	0	0
6				6				6				6				6				6	0	0	0
7				7				7				7				7				7	0	0	0
8				8				8				8				8				8	0	0	0

Plan 7				Plan 8				Plan 9				Plan 10				Plan 11				Plan 12			
Evt	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hour	Min	Act	*Evt*	Hr	Min	Act	*Evt*	Hour	Min	Act
1				1				1				1				1				1	0	0	0
2				2				2				2				2				2	0	0	0
3				3				3				3				3				3	0	0	0
4				4				4				4				4				4	0	0	0
5				5				5				5				5				5	0	0	0
6				6				6				6				6				6	0	0	0
7				7				7				7				7				7	0	0	0
8				8				8				8				8				8	0	0	0

Comments:

Minute Table [4.5]

Act	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8	P1	P2
1	1	-	-	-	-	-	-	-	-	-	-	-	0	0
2	2	-	-	-	-	-	-	-	-	-	-	-	0	0
3	3	-	-	-	-	-	-	-	-	-	-	-	0	0
4	4	-	-	-	-	-	-	-	-	-	-	-	0	0
5	5	-	-	-	-	-	-	-	-	-	-	-	0	0
6	6	-	-	-	-	-	-	-	-	-	-	-	0	0
7	7	-	-	-	-	-	-	-	-	-	-	-	0	0
8	8	-	-	-	-	-	-	-	-	-	-	-	0	0
9	9	-	-	-	-	-	-	-	-	-	-	-	0	0
10	10	-	-	-	-	-	-	-	-	-	-	-	0	0
11	0	-	-	-	-	-	-	-	-	-	-	-	0	0
12	0	-	-	-	-	-	-	-	-	-	-	-	0	0
13	0	-	-	-	-	-	-	-	-	-	-	-	0	0
14	0	-	-	-	-	-	-	-	-	-	-	-	0	0
15	0	-	-	-	-	-	-	-	-	-	-	-	0	0
16	0	-	-	-	-	-	-	-	-	-	-	-	0	0
54	254	-	-	-	-	-	-	-	-	-	-	-	0	0
55	255	-	-	-	-	-	-	-	-	-	-	-	0	0

Name: **Fowler at Shepherd**

ID: **186**

Date Printed: 1/5/2018

AGENDA ITEM NO. 6.

#	Alarm	Ev	Alr
1	Power Up Alarm.	X	X
2	Stop Timing	X	X
3	Cabinet Door Activation	-	-
4	Coordination Failure	X	X
5	External Alarm # 1	-	-
6	External Alarm # 2	-	-
7	External Alarm # 3	-	-
8	External Alarm # 4	-	-
9	Closed Loop Disabled	-	-
10	External Alarm # 5	-	-
11	External Alarm # 6	-	-
12	Manual Control Enable	-	-
13	Coord Free Input	-	-
14	Local Flash Input	X	X
15	CMU/MMU Flash Input	-	-
16	MMU Fault	-	-
17	Cycle Fault	X	X
18	Cycle Failure	X	X
19	Coordination Fault	X	X
20	Controller Fault	X	X
21	Detector SDLC Fault	-	-
22	MMU SDLC Fault	-	-
23	Critical SDLC Fault	-	-
24	SDLC Res. Frame Fault	-	-
25	EEPROM CRC Fault	-	-
26	Detector Diagnostic Fault	-	-
27	Detector Fault from SDLC	-	-
28	Queue detector alarm	-	-
29	Ped Fault	X	X
30	Coord Diagnostic Fault	X	X
37	Download Request	-	-
38	Pattern Change	-	-
49	Preempt 1 Input	X	X
50	Preempt 2 Input	-	-
51	Preempt 3 Input	X	X
52	Preempt 4 Input	X	X
53	Preempt 5 Input	X	X
54	Preempt 6 Input	X	X
55	Preempt 7 Input	-	-
56	Preempt 8 Input	-	-
57	Preempt 9 Input	-	-
58	Preempt 10 Input	-	-
59	EEPROM Compare Fault	-	-
60	Coordination Failure	X	X
73	Controller Access	-	-
81	FIO Changed Status	-	-

Call Phases[1.1.5]

Ø	Phases Called By Ø
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11					
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø		From	To	From	To	From	To	From	To
1			1								
2			2								
3			3								
4			4								
5			5								
6			6								
7			7								
8			8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø		From	To	From	To	From	To	From	To
1			1								
2			2								
3			3								
4			4								
5			5								
6			6								
7			7								
8			8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Alarm Parameters [1.6.7.1]

Pattern Events:	OFF
Local Txmt Alarms:	OFF
Reassign User Alarm #1 In (5):	0
Reassign User Alarm #2 In (6):	0
Preempt Events:	OFF

CITY OF
CLOVIS

Date Printed
1/5/2018

ID: 186 **Name:** Fowler at Shepherd

I/O Inputs - 1.8.9.1.5

C-1 PIN	I/O Source	Function	Input Name
39	I1-1	2	Veh Det 2
40	I1-2	16	Veh Det 16
41	I1-3	8	Veh Det 8
42	I1-4	22	Veh Det 22
43	I1-5	3	Veh Det 3
44	I1-6	17	Veh Det 17
45	I1-7	9	Veh Det 9
46	I1-8	23	Veh Det 23
47	I2-1	6	Veh Det 6
48	I2-2	20	Veh Det 20
49	I2-3	12	Veh Det 12
50	I2-4	26	Veh Det 26
51	I2-5	198	Pre 1 In
52	I2-6	199	Pre 2 In
53	I2-7	30	Veh Det 30
54	I2-8	31	Veh Det 31
55	I3-1	15	Veh Det 15
56	I3-2	1	Veh Det 1
57	I3-3	21	Veh Det 21
58	I3-4	7	Veh Det 7
59	I3-5	27	Veh Det 27
60	I3-6	13	Veh Det 13
61	I3-7	28	Veh Det 28
62	I3-8	14	Veh Det 14
63	I4-5	4	Veh Det 4
64	I4-6	18	Veh Det 18
65	I4-7	10	Veh Det 10
66	I4-8	24	Veh Det 24
67	I5-1	130	Ped Call 2
68	I5-2	134	Ped Call 6
69	I5-3	132	Ped Call 4
70	I5-4	136	Ped Call 8
71	I5-5	200	Pre 3 In
72	I5-6	201	Pre 4 In
73	I5-7	202	Pre 5 In
74	I5-8	203	Pre 6 In
75	I6-1	32	Veh Det 32
76	I6-2	5	Veh Det 5
77	I6-3	19	Veh Det 19
78	I6-4	11	Veh Det 11
79	I6-5	25	Veh Det 25
80	I6-6	29	Veh Det 29
81	I6-7	208	Local Flash
82	I6-8	207	Comp StopTm

I/O OUTPUTS .8.9.2.5

C-1 PIN	I/O Source	Function	Output Name
1	Logic Grd		
2	O1-1	14	Red Ch 14
3	O1-2	62	Grn Chan 14
4	O1-3	4	Red Ch 4
5	O1-4	28	Yel Chan 4
6	O1-5	52	Grn Chan 4
7	O1-6	3	Red Ch 3
8	O1-7	27	Yel Chan 3
9	O1-8	51	Grn Chan 3
10	O2-1	13	Red Ch 13
11	O2-2	61	Grn Chan 13
12	O2-3	2	Red Ch 2
13	O2-4	26	Yel Chan 2
14	Logic Grd		
15	O2-5	50	Grn Chan 2
16	O2-6	1	Red Ch 1
17	O2-7	25	Yel Chan 1
18	O2-8	49	Grn Chan 1
19	O3-1	16	Red Ch 16
20	O3-2	64	Grn Chan 16
21	O3-3	8	Red Ch 8
22	O3-4	32	Yel Chan 8
23	O3-5	56	Grn Chan 8
24	O3-6	7	Red Ch 7
25	O3-7	31	Yel Chan 7
26	O3-8	55	Grn Chan 7
27	O4-1	15	Red Ch 15
28	O4-2	63	Grn Chan 15
29	O4-3	6	Red Ch 6
30	O4-4	30	Yel Chan 6
31	O4-5	54	Grn Chan 6
32	O4-6	5	Red Ch 5
33	O4-7	29	Yel Chan 5
34	O4-8	53	Grn Chan 5
35	O5-1	37	Yel Chan 13
36	O5-2	39	Yel Chan 15
37	O5-3	38	Yel Chan 14
38	O5-4	40	Yel Chan 16
100	O5-5	42	Yel Chan 18
101	O5-6	41	Yel Chan 17
102	O5-7	115	Not Used
103	O5-8	114	Watchdog

C-1 PIN	I/O Source	Function	Output Name
83	O6-1	18	Red Ch 18
84	O6-2	66	Grn Chan 18
85	O6-3	12	Red Ch 12
86	O6-4	36	Yel Chan 12
87	O6-5	60	Grn Chan 12
88	O6-6	11	Red Ch 11
89	O6-7	35	Yel Chan 11
90	O6-8	59	Grn Chan 11
91	O7-1	17	Red Ch 17
92	Logic Grd		
93	O7-2	65	Grn Chan 17
94	O7-3	10	Red Ch 10
95	O7-4	34	Yel Chan 10
96	O7-5	58	Grn Chan 10
97	O7-6	9	Red Ch 9
98	O7-7	33	Yel Chan 9
99	O7-8	57	Grn Chan 9

I/O Outputs - 1.8.9.2.5

C-11 OUTPUTS

1	O8-1	17	Red Ch 17
2	O8-2	65	Grn Chan 17
3	O8-3	10	Red Ch 10
4	O8-4	34	Yel Chan 10

I/O Outputs - 1.8.9.2.5

C-11 INPUTS

15	I7-1	33	Veh Det 33
16	I7-2	34	Veh Det 34
17	I7-3	35	Veh Det 35
18	I7-4	36	Veh Det 36
19	I7-5	37	Veh Det 37
20	I7-6	38	Veh Det 38
21	I7-7	39	Veh Det 39
22	I7-8	40	Veh Det 40
23	I8-1	41	Veh Det 41
24	I8-2	42	Veh Det 42
25	I8-3	43	Veh Det 43
26	I8-4	44	Veh Det 44
27	I8-5	189	Unused
28	I8-6	189	Unused
29	I8-7	189	Unused
30	I8-8	189	Unused

CITY OF
CLOVIS

ID: 186

NAME: Fowler at Shepherd

Date Printed:
1/5/2018

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AGENDA ITEM NO. 6.

ID NUMBER: C0184

LOCATION: FOWLER AND SHEPHERD

CITY OF CLOVIS
332L CABINET
44 DETECTOR SETUP

	DETECTOR ASSIGNMENTS											ISOLATORS		
	NBLT	**SB INT**		**SB NEAR**	**EBLT**	**WB INT**	**WBRT**	**WB NEAR**	**NBLT**					
I	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**	**I9**	**I10**	**I11**	**I12**	**I13**	**I14**
UPPER	**Ph 1** Call & Ext T2-1 & 2 C1-56 DET 1 "A" LOOP	**Ph 2** Ext T2-5 & 6 C1-39 DET 2 1.1	**Ph 2** Call & TP3 T2-9 & 10 C1-63 DET 4	**Ph 2** Call & TP3 T4-1 & 2 C1-47 DET 6 2 Sec #1 A Loop	**Ph 3** Call & Ext T4-5 & 6 C1-58 DET 7 "A" LOOP	**Ph 4** Ext T4-9 & 10 C1-41 DET 8 1.6	**Ph 4** Call & TP3 T6-1 & 2 C1-65 DET 10 10 DEL	**Ph 4** Call & TP3 T6-5 & 6 C1-49 DET 12 2 Sec #1 A Loop	**Ph 1** Call & Ext T6-9 & 10 C1-60 DET 13 B & C Loop	**Ph 2/4** Ext T10-5 & 6 C11-23 DET 41	**Ph 2** Call & Ext T8-1 C1-80 DET 29	**Ph 2** PED CALL T8-4 C1-67	**Ph 6** PED CALL T8-7 C1-68	**FLASH SENSE** T8-10 C1-81
LOWER	**Ph 1** Call & Ext T2-3 & 4 C11-15 DET 33	**Ph 2** Call & TP3 T2-7 & 8 C1-43 DET 3 3.7 Sec	**Ph 2** Call & Ext T2-11 & 12 C1-76 DET 5 2 Sec #1 B Loop	**Ph 2** Call & TP3 T4-3 & 4 C11-16 DET 34 2 Sec #2 A Loop	**Ph 3** Call & Ext T4-7 & 8 C11-17 DET 35	**Ph 4** Call & TP3 T4-11 & 12 C1-45 DET 9 0.1	**Ph 4** Call & Ext T6-3 & 4 C1-78 DET 11 2 Sec #1 B Loop	**Ph 4** Call & TP3 T6-7 & 8 C11-18 DET 36 2 Sec #2 A Loop	**Ph 3** Call & Ext T6- 11 & 12 C1-62 DET 14 B & C Loop	**Ph 2/4** Ext T10-7 & 8 C11-24 DET 42	**Ph 4** Call & Ext T8-2 C1-53 DET 30	**Ph 4** PED CALL T8-5 C1-69	**Ph 8** PED CALL T8-8 C1-70	**STOP TIME** T8-11 C1-82
		SB FAR	**SB NEAR**	**SB NEAR**		**WB FAR**	**WB NEAR**	**WB NEAR**	**EBLT**				**SOUTH LEG**	
	SBLT	**NB INT**	**NB RT**	**NB NEAR**	**WBLT**	**EB INT**	**EBRT**	**EB NEAR**	**SBLT**			**SB**	**WB**	**FUT UPS**
J	**J1**	**J2**	**J3**	**J4**	**J5**	**J6**	**J7**	**J8**	**J9**	**J10**	**J11**	**J12**	**J13**	**J14**
UPPER	**Ph 5** Call & Ext T3-1 & 2 C1-55 DET 15 "A" LOOP	**Ph 6** Ext T3-5 & 6 C1-40 DET 16 1.0	**Ph 6** Call & TP3 T3-9 & 10 C1-64 DET 18 10 DEL	**Ph 6** Call & TP3 T5-1 & 2 C1-48 DET 20 2 Sec #1 A Loop	**Ph 7** Call & Ext T5-5 & 6 C1-57 DET 21 "A" LOOP	**Ph 8** Ext T5- 9 & 10 C1-42 DET 22 1.5	**Ph 8** Call & Ext T7-1 & 2 C1-66 DET 24	**Ph 8** Call & TP3 T7- 5 & 6 C1-50 DET 26 2 Sec #1 A Loop	**Ph 5** Call & Ext T7- 9 & 10 C1-59 DET 27 B & C Loop	**Ph 6/8** Ext T10-9 & 10 C11-25 DET 43	**Ph 6** Call & Ext T9-1 C1-54 DET 31	**PH 2 & 5** **EVA** **Preempt** **T9-4** **C1 - 71**	**PH 4 & 7** **EVB** **Preempt** **T9-5** **C1 - 72**	**RAILROAD 1** T9-10 C1-51
LOWER	**Ph 5** Call & Ext T3-3 & 4 C11-19 DET 37	**Ph 6** Call & TP3 T3-7 & 8 C1-44 DET 17 0.8	**Ph 6** Call & Ext T3-11 & 12 C1-77 DET 19 2 Sec B Loops	**Ph 6** Call & TP3 T5-3 & 4 C11-20 DET 38 2 Sec #2 A Loop	**Ph 7** Call & Ext T5-7 & 8 C11-21 DET 39	**Ph 8** Call & TP3 T5-11 & 12 C1-46 DET 23 0.1	**Ph 8** Call & Ext T7- 3 & 4 C1-79 DET 25 2 Sec B Loops	**Ph 8** Call & TP3 T7- 7 & 8 C11-22 DET 40 2 Sec #2 A Loop	**Ph 7** Call & Ext T7-11 & 12 C1-61 DET 28 B & C Loop	**Ph 6/8** Ext T10-11 & 12 C11-26 DET 44	**Ph 8** Call & Ext T9-2 C1-75 DET 32	**PH 6 & 1** **EVC** **Preempt** **T9-7** **C1 - 73**	**PH 8 & 3** **EVD** **Preempt** **T9-8** **C1 - 74**	**RAILROAD 2** T9-11 C1-52
		NB FAR	**NB NEAR**	**NB NEAR**		**EB FAR**	**EB NEAR**	**EB NEAR**	**WBLT**			**NB**	**EB**	

COMMENTS:

Timing card - Update January 5, 2017

🟩	222 Loop Amplifier
🟥	764 Discriminator
🟨	242 Isolator
🟦	232 Mag Amplifier

AGENDA ITEM NO. 6.

INTERSECTION: FOWLER & NEES Page 1 (of 8)

Group Assignment **NONE**
Field Master Assignment: **NONE**
System Reference Number: **25**

N/S Street Name: **N. Fowler Avenue**
E/W Street Name: **Nees Avenue**

Last Database Change: **7/16/2008 17:29**

Change Record					
Change	By	Date	Change	By	Date
ACTIVATED					
BY [illegible] 11 [illegible]	7-17	B			

Notes: FOWLER AND NEES
INTERSECTION MAINTENANCE NO. 0183
BITRANS NO. 295

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	2	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	73	<C/0+0+3>
QuicNet Channel	COM2:	(QuicNet)

Communication Addresses

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	1.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

		PHASE							
	Column Numbers —>	1	2	3	4	5	6	7	8
Row	*Phase Names —>*	NBL	SB	EBL	WB	SBL	NB	WBL	EB
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	20	0	23	0	20	0	21
2	Min Green	3	8	3	8	3	8	3	8
3	Type 3 Disconnect	0	20	0	24	0	20	0	20
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	2.0	3.4	2.0	2.7	2.0	3.4	2.0	4.3
6	Max Gap	2.0	4.5	2.0	4.1	2.0	4.5	2.0	5.5
7	Min Gap	2.0	2.3	2.0	1.9	2.0	2.3	2.0	3.3
8	Max Limit	22	32	22	32	22	32	22	32
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	8	0	23	0	8	0	10
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
E	Yellow Change	3.0	4.3	3.0	4.3	3.0	4.3	3.0	4.3
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

	F	Row
Permit	12345678	0
Red Lock	1_3___7_	1
Yellow Lock	_2_4_6_8	2
Min Recall	________	3
Ped Recall	________	4
View Set Peds	- - - - -	5
Rest In Walk	________	6
Red Rest	12345678	7
Dual Entry	________	8
Max Recall	________	9
Soft Recall	________	A
Max 2	________	B
Cond. Service	________	C
Man Cntrl Calls	________	D
Yellow Start	___4___8	E
First Phases	1___5___	F

Phase Functions <C+0+F=1>

Printed on 7/17/2008 4:02 PM Timing Sheet Version: 233 RV2 Revision: 1071

INTERSECTION: FOWLER & NEES

		Overlap							
	Column Numbers —>	1	2	3	4	5	6	7	8
Row	*Overlap Name —>*								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

	C	Row
		0
EV-A	0	1
EV-B	0	2
EV-C	0	3
EV-D	0	4
RR-1 *	- - -	5
RR-2 *	- - -	6
SE-1	0	7
SE-2	0	8
		9
		A
		B
		C
		D
		E
		F

Preempt Priority
<C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	*Column Numbers —>*	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	_2__5___
B	EV-B Phases	___4__7_
C	EV-C Phases	1____6__
D	EV-D Phases	__3____8
E	Extra 1 Config. Bits	1_3_5___
F	IC Select (Interconnect)	_2______

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	_2______
Ped for 6P Output	_____6__
Ped for 4P Output	___4____
Ped for 8P Output	_______8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	
Sequential Timing	12345678
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	12345678
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	_2_4_6_8

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2	Row
		0
Phase 1	0	1
Phase 2	0	2
Phase 3	0	3
Phase 4	0	4
Phase 5	0	5
Phase 6	0	6
Phase 7	0	7
Phase 8	0	8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums
<C+0+C=5>

INTERSECTION: FOWLER & NEES

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers --->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name --->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	55	55	55	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	20	20	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	55	55	55	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	20	20	20	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

	E	Row
		0
Plan 1 - Sync	_2___6__	1
Plan 2 - Sync	_2___6__	2
Plan 3 - Sync	_2___6__	3
Plan 4 - Sync	_2___6__	4
Plan 5 - Sync	_2___6__	5
Plan 6 - Sync	_2___6__	6
Plan 7 - Sync	_2___6__	7
Plan 8 - Sync	_2___6__	8
Plan 9 - Sync	_2___6__	9
NEMA Sync	________	A
NEMA Hold	________	B
		C
		D
Coord Extra	________	E
		F

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	________	________	________	________	________	________	________	________	________	6
7											7
8	Pretimed Phases	________	________	________	________	________	________	________	________	________	8
9	Max Recall	________	________	________	________	________	________	________	________	________	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	________	________	________	________	________	________	________	________	________	C
D	Perm 2 Ped Phase	________	________	________	________	________	________	________	________	________	D
E	Perm 3 Veh Phase	________	________	________	________	________	________	________	________	________	E
F	Perm 3 Ped Phase	________	________	________	________	________	________	________	________	________	F

Coordination - Bank 2 <C+0+C=2>

	F	Row
Free Lag	_2_4_6_8	0
Plan 1 - Lag	_2_4_6_8	1
Plan 2 - Lag	_2_4_6_8	2
Plan 3 - Lag	_2_4_6_8	3
Plan 4 - Lag	_2_4_6_8	4
Plan 5 - Lag	_2_4_6_8	5
Plan 6 - Lag	_2_4_6_8	6
Plan 7 - Lag	_2_4_6_8	7
Plan 8 - Lag	_2_4_6_8	8
Plan 9 - Lag	_2_4_6_8	9
External Lag	________	A
		B
		C
		D
		E
		F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Dimming	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row		Phase							
	Column Numbers --->	1	2	3	4	5	6	7	8
	Phase Names --->	NBL	SB	EBL	WB	SBL	NB	WBL	EB
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 =
Number of
cycles when
lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	________	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros,
standard dates
will be used.

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Min Time (seconds)	4	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	255	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Low Pri. Channel	________	<E/125+C+8>

Disable Low Priority Channel

INTERSECTION: FOWLER & NEES

	Column Numbers —>	0	1	2	3	1	3
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	SB INT	39	___45_7_	_2______	123____8	0.0	1.1
1	NB INT	40	___45_7_	______6__	123____8	0.0	1.1
2	WB INT	41	___45_7_	___4____	123____8	0.0	0.8
3	EB INT	42	___45_7_	_______8	123____8	0.0	0.0
4	SB FAR	43	___45_7_	_2______	123____8	0.0	0.0
5	NB FAR	44	___45_7_	______6__	123____8	0.0	0.0
6	WB FAR	45	___45_7_	___4____	123____8	0.0	0.0
7	EB FAR	46	___45_7_	_______8	123____8	0.0	0.0
8	SB NEAR	47	_____67_	_2______	123____8	0.0	2.0
9	NB NEAR	48	_____67_	______6__	123____8	0.0	2.0
A	WB NEAR	49	_____67_	___4____	123____8	0.0	2.0
B	EB NEAR	50	_____67_	_______8	123____8	0.0	2.0
C	SBLT	55	___45_7_	_____5___	123____8	0.0	0.0
D	NBLT	56	___45_7_	1_______	123____8	0.0	0.0
E	WBLT	57	___45_7_	______7_	123____8	0.0	0.0
F	EBLT	58	___45_7_	__3_____	123____8	0.0	0.0

		4	5	6	7	2	4
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	___45_7_	_____5___	123_____	0.0	0.0
1		60	___45_7_	1_______	123_____	0.0	0.0
2		61	___45_7_	______7_	123_____	0.0	0.0
3		62	___45_7_	__3_____	123_____	0.0	0.0
4		63	___45_7_	_2______	123_____	0.0	0.0
5	NBRT NEAR	64	___45_7_	______6__	123____8	10.0	0.0
6	WBRT NEAR	65	___45_7_	___4____	123____8	10.0	0.0
7		66	___45_7_	_______8	123_____	0.0	0.0
8	SB PED	67	_2______	_2______	123_____	0.0	0.0
9	NB PED	68	_2______	______6__	123_____	0.0	0.0
A	WB PED	69	_2______	___4____	123_____	0.0	0.0
B	EB PED	70	_2______	_______8	123_____	0.0	0.0
C		76	___45_7_	_2______	123_____	0.0	0.0
D	NBRT NEAR	77	___45_7_	______6__	123____8	10.0	0.0
E	WBRT NEAR	78	___45_7_	___4____	123____8	10.0	0.0
F		79	___45_7_	_______8	123_____	0.0	0.0

Detector Assignments <C+0+E=126>

<C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers —>	1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1	________	1
Output Port 2	________	2
Output Port 3	________	3
Output Port 4	________	4
Output Port 5	________	5
Output Port 6	________	6
Output Port 7	________	7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm	________	<C/5+F+0>

Disable Alarm Reporting

Time	10	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct	Day of Week	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 01	E	1234567	78

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

	6	7	8	9	A	B	C	D	E	F
Row	Clear	Time	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit Phases	Ped Omit	Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>

Limited Service Interval

	6	7	8	9	A	B	C	D	E	F
Row	Clear	Time	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit Phases	Ped Omit	Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>

Limited Service Interval

Controller Intervals

0 = Walk
1 = FDW
2 = Min. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap

8 = Red Rest
9 = Preemption
A = Stop Time
B = Red Revert
C = Yellow - Gap Termination
D = Yellow - Max. Termination
E = Yellow - Forceoff Termination
F = Red Clearance

Interval Timer Display

Ring A = F/0 + A + Interval Row
Ring B = F/0 + B + Interval Row
(Interval Row From PHASE BANK Data)

412/C Memory Module Lithium Battery Condition

To check the condition of the 3.6 volt Lithium Battery on the 412/C Memory Module :

If E/112 + 0 + A = 84 - the battery is BAD
If E/112 + 0 + A = 85 - the battery is O.K.

Monitor "Activate" Flags

(Also Requires T.O.D. Function "E" Flag)

Detector Count Recording :
E/2 + 0 + 9 = Not Zero
Real Time Split Monitor :
E/2 + 0 + E = Not Zero

Special Event Schedules

Special Event #1 : C + 0 + E = 27
Special Event #2 : C + 0 + E = 28

Current Interval = E + 5 + 0
Current Interval Timer = E + 5 + B
Current Interval Clearance Phases = E + 5 + C

Time of Day Function (7 Key)

Current T.O.D. "E Function" Control Bits = C/0 + E + E
Current T.O.D. "F Function" Output Bits = C/0 + E + F

Logic DELAY Gate Delay Timer Display

DELAY A Timer = C/0 + 9 + A
DELAY B Timer = C/0 + 9 + B
thru thru
DELAY F Timer = C/0 + 9 + F

Power & Flash Recording

Last Power Failure :
(HR-MIN-DOW) = 8 + 4
(DOM-YR-MONTH) = 8 + 5
Last Cabinet Flash :
(HR-MIN-DOW) = 8 + 6
(DOM-YR-MONTH) = 8 + 7
Power Fail Counts :
(Long Failures) = F/1 + 0 + C
(Short Failures) = F/1 + 0 + D
Current Time :
(HR-MIN-DOW) = 8 + 0
(DOM-YR-MONTH) = 8 + 1
(MIN-SEC-1/10 SEC) = 8 + F

Display Locations

	Plan Select	Offset Select
Manual	= C/0 + A + 1	C/0 + B + 1
Master	= C/0 + A + 2	C/0 + B + 2
Current	= C/0 + A + 3	C/0 + B + 3
Next	= C/0 + A + 4	C/0 + B + 4
TOD	= C/0 + A + 5	C/0 + B + 5

Master Cycle = C/0 + A + 0
Ring A Cycle = C/0 + B + 0
Ring B Cycle = C/0 + D + 0

MIN Cycle = C/0 + A + E
MAX Cycle = C/0 + B + E

Phase Hold = C/0 + F + D
Phase Next = C/0 + F + E
Force Off = C/0 + F + F
(With Ring A Cycle Timer)

Current Calculated Cycle Length = C/0 + B + F
Current Permitted Phases = E/0 + 7 + 8
Current Phase Bank = F/0 + C + E

Input File Slot No. -->	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	NBLT	SB INT		SB NEAR	EB LT	WB INT	WB RT	WB NEAR						
"I" FILE	1 Ext, Cnt, Call <C1-56>	2 (1.1) Ext, Cnt, Call <C1-39>	2 Ext, Cnt, Call <C1-63>	(2.0) 2 Type 3, Call <C1-47>	3 Ext, Cnt, Call <C1-58>	4 Ext, Cnt, Call <C1-41>	(10) 4 (DEL) Ext, Cnt, Call <C1-65>	(2.0) 4 Type 3, Call <C1-49>	1 Ext, Cnt, Call <C1-60>	NOT WIRED	Not Assigned <C1-80>	2 Ped Call <C1-67>	6 Ped Call <C1-68>	Flash Sense <C1-81>
		2 Ext, Cnt, Call <C1-43>	2 Ext, Cnt, Call <C1-76>			4 Ext, Cnt, Call <C1-45>	(10) 4 (DEL) Ext, Cnt, Call <C1-78>		3 Ext, Cnt, Call <C1-62>		Not Assigned <C1-53>	4 Ped Call <C1-69>	8 Ped Call <C1-70>	Stop Time <C1-82>
	NBLT	SB FAR		SBNEAR	EBLT	WB FAR	WBRT	WB NEAR						
	SB LT	NB INT	NBRT	NB NEAR	WBLT	EB INT		EB NEAR						
"J" FILE	5 Ext, Cnt, Call <C1-55>	6 (1.1) Ext, Cnt, Call <C1-40>	(10) 6 (DEL) Ext, Cnt, Call <C1-64>	(2.0) 6 Type 3, Call <C1-48>	7 Ext, Cnt, Call <C1-57>	8 Ext, Cnt, Call <C1-42>	8 Ext, Cnt, Call <C1-66>	(2.0) 8 Type 3, Call <C1-50>	5 Ext, Cnt, Call <C1-59>	NOT WIRED	Not Assigned <C1-54>	EV A Preempt <C1-71>	EV B Preempt <C1-72>	Railroad 1 <C1-51>
		6 Ext, Cnt, Call <C1-44>	(10) 6 (DEL) Ext, Cnt, Call <C1-77>			8 Ext, Cnt, Call <C1-46>	8 Ext, Cnt, Call <C1-79>		7 Ext, Cnt, Call <C1-61>		Not Assigned <C1-75>	EV C Preempt <C1-73>	EV D Preempt <C1-74>	Railroad 2 <C1-52>
	SBLT	NB FAR	NBRT	NB NEAR	WBLT	EB FAR		EB NEAR						

PUT LOW BATT

"INITIALIZED" INPUT FILE ASSIGNMENTS --- STANDARD 332 CABINET
< "C-1" Harness Type # 1 >

DETECTOR TYPES

Ext - Extension Detector
Detector is only active during the Phase's GREEN intervals
(ie, will NOT Call the Phase)
Cnt - Count Detector
Used in computing "Added Initial"
Call - Calling Detector
Detector is only active during the Phase's NON-GREEN intervals
(ie, will NOT Extend the Phase)
Type 3 - Type 3 Disconnect
Will allow a Calling Detector to Extend its Phase until the Call first drops or the "Type 3 Limit" is reached

BI Tran Systems, Inc.
510 Bercut Dr., Sacramento, Calif. 95814
916 / 441-0260
Traffic Signal Program 233
Initialized Detector Assignments
(Revised 8/92) 332 Cabinet

FOWLER & NEES

🟩 222 LOOP AMP.
🟦 232 MAG. AMP
🟥 752 DISCRIMINATOR
🟨 2[illegible]

State of California
DEPARTMENT OF TRANSPORTATION

2070 Controller Timing Chart

Caltrans TSCP Ver 2.21

Location:
System:
Master At:
District:
I/C:
Designed By:
Intalled By:
Service Info:

Timing Change: **By:** **Date Start:** **Date End:** **Designed:** **Installed:**

FLASH

PHASE

1) [ ]
2) [ ]
3) [ ]
4) [ ]
5) [ ]
6) [ ]
7) [ ]
8) [ ]

OVERLAP

A) [ ]
B) [ ]
C) [ ]
D) [ ]
E) [ ]
F) [ ]

Intersection Layout

Comments and Notes:

RAM Checksum

Page 2:	**D13B**	**Page 8:**	**F2B7**
Page 3:	**B991**	**Page 9:**	**2FCE**
Page 4:	**33D6**	**Page 10:**	**EAF1**
Page 5:	**191A**	**Page 11:**	**C3CB**
Page 6:	**191A**	**Page 12:**	**9553**
Page 7:	**33BA**	**Page 13:**	**86F7**

AGENDA ITEM NO. 6.

State of California
DEPARTMENT OF TRANSPORTATION **Location: 168WB @ Fowler N** **Caltrans TSCP Ver 2.21**

CONFIGURATION PHASE FLAGS

Phases (2-1-1-1)	
Permitted	- 2 - - 5 6 - 8
Restricted	- - - - - - - -

Phase Locks (2-1-1-3)	
Red	- - - - - - - -
Yellow	- - - - - - - -
Force/Max	- - - - - - - -

Phase Features (2-1-1-4)	
Double Entry	- 2 - - - 6 - -
Rest In Walk	- - - - - - - -
Rest In Red	- - - - - - - -
Walk2	- - - - - - - -
Max Green 2	- 2 - - 5 6 - 8
Max Green 3	- - - - - - - -

Startup (2-1-1-5)	
First Green Phases	- 2 - - - 6 - -
Yellow Start Phases	- - - - - - - -
Vehicle Calls	- 2 - - 5 6 - 8
Pedestrian Calls	- 2 - - - 6 - -
Yellow Start Overlaps	- - - - - -
Startup All-Red	6.0

Phase Recalls (2-1-1-2)	
Vehicle Min	- 2 - - - 6 - -
vehicle Max	- - - - - - - -
Pedestrian	- - - - - - - -
Bicyle	- - - - - - - -

Call To Phase (2-1-2-1)		Omit On Green	
1	- - - - - - - -	1	- - - - - - - -
2	- - - - - - - -	2	- - - - - - - -
3	- - - - - - - -	3	- - - - - - - -
4	- - - - - - - -	4	- - - - - - - -
5	- - - - - - - -	5	- - - - - - - -
6	- - - - - - - -	6	- - - - - - - -
7	- - - - - - - -	7	- - - - - - - -
8	- - - - - - - -	8	- - - - - - - -

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	- - - - - - - -
Yellow Flash Overlap	- - - - - - - -
Flash In Red Phases	- - - - - - - -
Flash In Red Overlap	- - - - - - - -

Special Operation (2-1-2-3)	
Single Exit Phase	- - - - - - - -
Driveway Signal Phases	- - - - - - - -
Driveway Signal Overlaps	- - - - - - - -
Leading Ped Phases	- - - - - - - -

Protected Permissive (2-1-2-4)	
Protected Permissive	- - - - - - - -

Pedestrian (2-1-3)	
P1	- - - - - - - -
P2	- 2 - - - - - -
P3	- - - - - - - -
P4	- - - 4 - - - -
P5	- - - - - - - -
P6	- - - - - 6 - -
P7	- - - - - - - -
P8	- - - - - - - 8

Overlap (2-1-4)

Overlap	Parent	Omit	No Start	Not
A [Arrow A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
B [Arrow B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
C [OL A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
D [OL B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
E [OL C]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
F [OL D]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

[-] 332 Cabinet Overlap Assignment - For Reference Only

PAGE 2 **CHECKSUM:** D13B

State of California
DEPARTMENT OF TRANSPORTATION Location: 168WB @ Fowler N
Caltrans TSCP Ver 2.21

PHASE TIMING

PHASE (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	7	0	0
Flash Don't Walk	0	13	0	0	0	13	0	0
Minimum Green	0	10	0	0	6	10	0	8
Det Limit	0	20	0	0	0	20	0	20
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	0	25	0	0	15	25	0	20
Max Green 2	0	35	0	0	25	35	0	30
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	4.6	0.0	0.0	2.0	5.2	0.0	5.0
Maximum Gap	0.0	6.4	0.0	0.0	2.0	7.2	0.0	7.0
Minimum Gap	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
Reduce Every	0.0	0.6	0.0	0.0	0.0	0.5	0.0	0.4
Yellow	3.0	4.8	3.0	3.0	3.7	4.8	3.0	4.1
All-Red	1.0	2.0	1.0	1.0	2.0	2.0	1.0	2.2
Ped/Bike (2-3)	**-1-**	**-2-**	**-3-**	**-4-**	**-5-**	**-6-**	**-7-**	**-8-**
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A [Arrow A]	B [Arrow B]	C [OL A]	D [OL B]	E [OL C]	F [OL D]
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert (2-5)	
Time	5.0

Red To Se (2-6)	
Red To Sec	OFF

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

PAGE 3 CHECKSUM: B991

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
					[Offsets]			Green Factors or Press [F] to Select							
Plan 1	Green Factor	100	0.0	- - - - - - - -					63			23	33		23
Plan 2	Green Factor		0.0	- - - - - - - -											
Plan 3	Green Factor		0.0	- - - - - - - -											
Plan 4	Green Factor		0.0	- - - - - - - -											
Plan 5	Green Factor		0.0	- - - - - - - -											
Plan 6	Green Factor		0.0	- - - - - - - -											
Plan 7	Green Factor		0.0	- - - - - - - -											
Plan 8	Green Factor		0.0	- - - - - - - -											
Plan 9	Green Factor	88	0.0	- - - - - - - -					50			20	22		24

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	- 2 - 4 5 - - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 2	- 2 - 4 - 6 - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 3	- 2 - 4 - 6 - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 4	- 2 - 4 - 6 - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 5	- 2 - 4 - 6 - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 6	- 2 - 4 - 6 - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 7	- 2 - 4 - 6 - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 8	- 2 - 4 - 6 - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 9	- 2 - 4 5 - - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

Master Timer Sync (7-A)	
Enable in Plans	
1-9	1 2 3 4 5 6 7 8 9
11-19	- - - - - - - - -
21-29	- - - - - - - - -

Master Sub Master	
Input	0.0
Output	0

(7-E) Free	
Lag	Omit
- 2 - 4 - 6 - 8	- - - - - - - -
Veh Min	Veh Max
- 2 - - - 6 - -	- - - - - - - -
Ped	Bike
- - - - - - - -	- - - - - - - -
Cond	Cond Grn
- - - - - - - -	10

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	Offset
0	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

PAGE 4 **CHECKSUM:** 33D6

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

					[Offsets]			Green Factors or Press [F] to Select Force-Off							
		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 11	Green Factor		0.0	- - - - - - - -											
Plan 12	Green Factor		0.0	- - - - - - - -											
Plan 13	Green Factor		0.0	- - - - - - - -											
Plan 14	Green Factor		0.0	- - - - - - - -											
Plan 15	Green Factor		0.0	- - - - - - - -											
Plan 16	Green Factor		0.0	- - - - - - - -											
Plan 17	Green Factor		0.0	- - - - - - - -											
Plan 18	Green Factor		0.0	- - - - - - - -											
Plan 19	Green Factor		0.0	- - - - - - - -											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 12	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 13	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 14	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan15	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 16	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 17	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 18	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 19	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

PAGE 5 **CHECKSUM:** 191A

Local Plan 21...29 (7-3) TIMING DATA COORDINATION

		Cycle	Multi	Lag Gap	[Offsets] A	B	C	Green Factors or Press [F] to Select Force-Off 1	2	3	4	5	6	7	8
Plan 21	Green Factor		0.0	- - - - - - - -											
Plan 22	Green Factor		0.0	- - - - - - - -											
Plan 23	Green Factor		0.0	- - - - - - - -											
Plan 24	Green Factor		0.0	- - - - - - - -											
Plan 25	Green Factor		0.0	- - - - - - - -											
Plan 26	Green Factor		0.0	- - - - - - - -											
Plan 27	Green Factor		0.0	- - - - - - - -											
Plan 28	Green Factor		0.0	- - - - - - - -											
Plan 29	Green Factor		0.0	- - - - - - - -											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 22	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 23	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 24	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 25	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 26	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 27	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 28	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 29	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

PAGE 6 CHECKSUM: 191A

DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	Count+Call+Extend	1 - - - - - - -	NO	I1U	1	0	0.0	10	3.2
2	Count+Call+Extend	1 - - - - - - -	NO	I1L	2	0	0.0	10	7.2
3	Count+Extend	- 2 - - - - - -	NO	I2U	3	0	0.5	10	1.1
4	Count+Extend	- 2 - - - - - -	NO	I2L	4	0	0.5	10	1.5
5	Limited	- 2 - - - - - -	NO	I3U	5	0	0.0	10	4.5
6	Limited	- 2 - - - - - -	NO	I3L	6	0	0.0	10	6.2
7	Limited	- 2 - - - - - -	NO	I4U	7	0	2.0	10	2.1
8	Limited	- 2 - - - - - -	NO	I4L	8	0	2.0	10	7.4
9	Count+Call+Extend	- - 3 - - - - -	NO	I5U	9	0	0.0	10	3.4
10	Count+Call+Extend	- - 3 - - - - -	NO	I5L	10	0	0.0	10	7.6
11	Count+Extend	- - - 4 - - - -	NO	I6U	11	0	0.0	10	1.3
12	Count+Extend	- - - 4 - - - -	NO	I6L	12	0	0.0	10	1.7
13	Count+Call+Extend	- - - 4 - - - -	NO	I7U	13	0	0.0	10	4.7
14	Count+Call+Extend	- - - 4 - - - -	NO	I7L	14	0	0.0	10	6.4
15	Count+Call+Extend	- - - 4 - - - -	NO	I8U	15	0	0.0	10	2.3
16	Count+Call+Extend	- - - 4 - - - -	NO	I8L	16	0	0.0	10	7.8
17	Count+Call+Extend	1 - - - - - - -	NO	I9U	17	0	0.0	10	3.6
18	Count+Call+Extend	- - 3 - - - - -	NO	I9L	18	0	0.0	10	3.8
19	None	- - - - - - - -	NO	I10U	19	0	0.0	10	4.1
20	None	- - - - - - - -	NO	I10L	20	0	0.0	10	4.2
21	Count+Call+Extend	- - - - 5 - - -	NO	J1U	21	0	1.0	10	3.1
22	Count+Call+Extend	- - - - 5 - - -	NO	J1L	22	0	1.0	10	7.1
23	Count+Extend	- - - - - 6 - -	NO	J2U	23	0	0.0	10	1.2
24	Count+Extend	- - - - - 6 - -	NO	J2L	24	0	0.5	10	1.6
25	Limited	- - - - - 6 - -	NO	J3U	25	0	0.0	10	4.6
26	Limited	- - - - - 6 - -	NO	J3L	26	0	0.0	10	6.3
27	Limited	- - - - - 6 - -	NO	J4U	27	0	2.0	10	2.2
28	Limited	- - - - - 6 - -	NO	J4L	28	0	2.0	10	7.3
29	Count+Call+Extend	- - - - - - 7 -	NO	J5U	29	0	0.0	10	3.3
30	Count+Call+Extend	- - - - - - 7 -	NO	J5L	30	0	0.0	10	7.5
31	Count+Extend	- - - - - - - 8	NO	J6U	31	2	0.0	10	1.4
32	Count+Extend	- - - - - - - 8	NO	J6L	32	2	0.0	10	1.8
33	Count+Call+Extend	- - - - - - - 8	NO	J7U	33	0	0.0	10	4.8
34	Count+Call+Extend	- - - - - - - 8	NO	J7L	34	15	0.0	10	6.5
35	Count+Call+Extend	- - - - - - - 8	NO	J8U	35	0	2.0	10	2.4
36	Count+Call+Extend	- - - - - - - 8	NO	J8L	36	0	0.0	10	7.7
37	Count+Call+Extend	- - - - 5 - - -	NO	J9U	37	0	0.0	10	3.5
38	Count+Call+Extend	- - - - - - 7 -	NO	J9L	38	0	0.0	10	3.7
39	None	- - - - - - - -	NO	J10U	39	0	0.0	10	4.3
40	None	- - - - - - - -	NO	J10L	40	0	0.0	10	4.4
41	Pedestrian	- 2 - - - - - -	NO	I12U	41	0	0.0	10	5.1
42	Pedestrian	- - - 4 - - - -	NO	I12L	42	0	0.0	10	5.3
43	Pedestrian	- - - - - 6 - -	NO	I13U	43	0	0.0	10	5.2
44	Pedestrian	- - - - - - - 8	NO	I13L	44	0	0.0	10	5.4

Failure Times (5-3)	Minutes
Maximum On Time	0
Fail Reset Time	0

Failure Override (5-4)	
Detectors 1-8	- - - - - - - -
Detectors 9-16	- - - - - - - -
Detectors 17-24	- - - - - - - -
Detectors 25-32	- - - - - - - -
Detectors 33-40	- - - - - - - -
Detectors 41-44	- - - - - - - -

System Detector Assignment (5-5)								
Sys Det	1	2	3	4	5	6	7	8
Det Num	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Det Num	0	0	0	0	0	0	0	0

CIC Operation (5-6-1)	
Enable in Plans	- - - - - - - - -

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.0	

Detector-to-Phase Assignment (5-6-3)								
Sys Det	1	2	3	4	5	6	7	8
Phase	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Phase	0	0	0	0	0	0	0	0

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

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TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0700	1	A
1800	255	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 2 (8-2-2)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 3 (8-2-3)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 4 (8-2-4)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 5 (8-2-5)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 6 (8-2-6)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

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HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1	0	0	- - - - - - -	0
2	0	0	- - - - - - -	0
3	0	0	- - - - - - -	0
4	0	0	- - - - - - -	0
5	0	0	- - - - - - -	0
6	0	0	- - - - - - -	0
7	0	0	- - - - - - -	0
8	0	0	- - - - - - -	0
9	0	0	- - - - - - -	0
10	0	0	- - - - - - -	0
11	0	0	- - - - - - -	0
12	0	0	- - - - - - -	0
13	0	0	- - - - - - -	0
14	0	0	- - - - - - -	0
15	0	0	- - - - - - -	0
16	0	0	- - - - - - -	0

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1	0	0	- - - - - - -	0
2	0	0	- - - - - - -	0
3	0	0	- - - - - - -	0
4	0	0	- - - - - - -	0
5	0	0	- - - - - - -	0
6	0	0	- - - - - - -	0
7	0	0	- - - - - - -	0
8	0	0	- - - - - - -	0
9	0	0	- - - - - - -	0
10	0	0	- - - - - - -	0
11	0	0	- - - - - - -	0
12	0	0	- - - - - - -	0
13	0	0	- - - - - - -	0
14	0	0	- - - - - - -	0
15	0	0	- - - - - - -	0
16	0	0	- - - - - - -	0

Solar Clock Data (8-4)

North Latitude	36
West Longitude	119
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	- - - - - - - -
Holiday	- - - - - - - -

Daylight Saving (8-6)

Daylight Saving	YES

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1	0530	2230	1 2 3 4 5 6 7	17	1 2 3 4 5 6 7 8
2	0000	0000	- - - - - - -	0	- - - - - - - -
3	0000	0000	- - - - - - -	0	- - - - - - - -
4	0000	0000	- - - - - - -	0	- - - - - - - -
5	0000	0000	- - - - - - -	0	- - - - - - - -
6	0000	0000	- - - - - - -	0	- - - - - - - -
7	0000	0000	- - - - - - -	0	- - - - - - - -
8	0000	0000	- - - - - - -	0	- - - - - - - -
9	0000	0000	- - - - - - -	0	- - - - - - - -
10	0000	0000	- - - - - - -	0	- - - - - - - -
11	0000	0000	- - - - - - -	0	- - - - - - - -
12	0000	0000	- - - - - - -	0	- - - - - - - -
13	0000	0000	- - - - - - -	0	- - - - - - - -
14	0000	0000	- - - - - - -	0	- - - - - - - -
15	0000	0000	- - - - - - -	0	- - - - - - - -
16	0000	0000	- - - - - - -	0	- - - - - - - -

Action Codes:
0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11.Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped

41. Protected Permissive
42. Protected Permissive
Action Code = Phases added to normal setting

100+Action Code = Phases removed
200+Action Code = Phases replaced

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COMMUNICATIONS

C2 (6-1-1)	
Address	0
Protocol	AB3418
Limit Access	None
Baud	1200
Parity	None
Data Bits	8 data bits
Stop Bits	1 stop bit
RTS On Time	20
RTS Off Time	20
Handshaking	Normal

C20 (6-1-2)	
Address	0
Protocol	AB3418
Limit Access	None
Baud	1200
Parity	None
Data Bits	8 data bits
Stop Bits	1 stop bit
RTS On Time	20
RTS Off Time	20
Handshaking	Normal

C21 (6-1-3)	
Address	0
Protocol	AB3418
Limit Access	None
Baud	1200
Parity	None
Data Bits	8 data bits
Stop Bits	1 stop bit
RTS On Time	20
RTS Off Time	20
Handshaking	Normal

SOFT LOGIC

Soft Logic (6-2)

#	Data	OP	Data	OP	Data	OP	Data
1	00.0	00	00.0	00	00.0	00	00.0
2	00.0	00	00.0	00	00.0	00	00.0
3	00.0	00	00.0	00	00.0	00	00.0
4	00.0	00	00.0	00	00.0	00	00.0
5	00.0	00	00.0	00	00.0	00	00.0
6	00.0	00	00.0	00	00.0	00	00.0
7	00.0	00	00.0	00	00.0	00	00.0
8	00.0	00	00.0	00	00.0	00	00.0
9	00.0	00	00.0	00	00.0	00	00.0
10	00.0	00	00.0	00	00.0	00	00.0
11	00.0	00	00.0	00	00.0	00	00.0
12	00.0	00	00.0	00	00.0	00	00.0
13	00.0	00	00.0	00	00.0	00	00.0
14	00.0	00	00.0	00	00.0	00	00.0
15	00.0	00	00.0	00	00.0	00	00.0
16	00.0	00	00.0	00	00.0	00	00.0

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	0
Local Toll	0
Long Distance	0
Delay	10
Area Code	0
Phone Number	0 - 0

Line Out	0
Local Toll	0
Long Distance	0
Delay	10
Area Code	0
Phone Number	0 - 0

Line Out	0
Local Toll	0
Long Distance	0
Delay	10
Area Code	0
Phone Number	0 - 0

NETWORK

Network (6-4)				
Address	1			
Protocol	AB3418			
Port	27000			
IP Mode	Static IP			
IP Address	192	168	13	4
Netmask	255	255	255	0
Broadcast	192	168	13	255
Gateway	192	168	13	254

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RAILROAD PREEMPTION

RR 1	(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
	Delay	0	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
	Clear 1	10	- 2 - - 5 - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
	Clear 2	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Clear 3	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Hold	0	- - - - - - - -	- - - - - - - -	1 2 3 4 5 6 7 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	A B C D E F
	Exit	5									
	Min Grn	0									
	Ped Clr	0									

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Recall	Ped Call
- - - - - - - -	- - - - - -	1 2 3 4 5 6 7 8	- 2 - 4 - 6 - 8

Configuration (3-1-6)			
Port	Gate Port	Latching	Power-Up
2.5	0.0	Yes	Flashing

RR 2	(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
	Delay	0	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
	Clear 1	10	- - - 4 - - 7 -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
	Clear 2	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Clear 3	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Hold	0	1 2 3 - - 6 - -	- - - - - - - -	- - - - - - - -	- 2 - - - 6 - -	- - - - - - - -	- - - 4 - - - 8	- - - - - -	- - - - - -	- - - - - -
	Exit	0									
	Min Grn	0									
	Ped Clr	0									

Exit Parameters (3-2-5)			
Exit Ph Grn	Exit Ovl Grn	Exit Veh Recall	Exit Ped Call
- - - - - - - -	- - - - - -	- - - 4 - - 7 -	- - - - - - - -

Configuration (3-2-6)			
Port	Gate Port	Latching	Power-Up
2.6	0.0	Yes	Dark

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- 2 - - 5 - - -	- - - - - -

Port	Latching	Phase Termination
5.5	No	Advance

EVC (3-C)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	1 - - - - 6 - -	- - - - - -

Port	Latching	Phase Termination
5.7	No	Advance

EVB (3-B)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - - 4 - - 7 -	- - - - - -

Port	Latching	Phase	Phase Termination
5.6		No	Advance

EVD (3-D)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - 3 - - - - 8	- - - - - -

Port	Latching	Phase	Phase Termination
5.8		No	Advance

INPUTS

		7 Wire I/C(2-1-5-1)			
		Input	Port	Input	Port
Enable	No	R1	3.8	Free	3.6
Max ON	0	R2	3.5	D2	2.8
Max OFF	0	R3	3.7	D3	6.1

Manual Control(2-1-5-2)	
Input	Port
Manual Adv	6.6
Adv Enable	6.6

Battery Backup (2-1-5-5)	
Port	Operation
2.7	Flashing

Cabinet Staus (2-1-5-3)	
Input	Port
Flash Bus	0.0
Door Ajar	0.0
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	0.0
2	0.0
3	0.0
4	0.0

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	41	42

Loadswitch Codes:
0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7

51-57 Special Functions
71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6

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YELLOW YIELD COORDINATION

Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	Force-Offs 1	2	3	4	5	6	7	8	Coord	Lag	Min Recall	Restricted
Plan C	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -
Plan D	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -

TRANSIT PRIORITY

Local Plans (3-E) 1...9 1...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 2	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 3	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 4	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 5	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 6	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 7	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 8	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 9	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 11	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 12	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 13	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 14	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 15	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 16	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 17	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 18	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 19	Green Factor	0	0	0	0	0	0	0	0	0	0	0

Enable Priority in Plan (3-E-A)					
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	- - - - - - - -	0.0	OPT	0	0
Plan 11-19	- - - - - - - -	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
0	- - - - - - - -
0	- - - - - - - -

Free Plans (3-E-E)	
Max Green	Hold Phase
0	- - - - - - - -

Access Utilities (9-5)	
Password	***
Timeout	30

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
	0.0	0.0	0	0	- - - - - - - -	0.0	0.0	0.0	0	0.0	0

PAGE 13 **CHECKSUM:** 86F7

CONTROLLER ID

Manufacturer ID	Caltrans TSCP Ver 2.21
Model ID	Model 2070
Protocol Revision ID	AB3418

AGENDA ITEM NO. 6.

State of California
DEPARTMENT OF TRANSPORTATION

2070 Controller Timing Chart

Caltrans TSCP Ver 2.21

Location:
System:
Master At:
District:
I/C:
Designed By:
Intalled By:
Service Info:

Timing Change: **By:** **Date Start:** **Date End:** **Designed:** **Installed:**

FLASH

		FLASH
	1)	[ ]
P	2)	[ ]
H	3)	[ ]
A	4)	[ ]
S	5)	[ ]
E	6)	[ ]
	7)	[ ]
	8)	[ ]
OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:

RAM Checksum

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CONFIGURATION PHASE FLAGS

Phases (2-1-1-1)	
Permitted	1 2 - 4 - 6 - -
Restricted	- - - - - - - -

Phase Recalls (2-1-1-2)	
Vehicle Min	- 2 - - - 6 - -
vehicle Max	- - - - - - - -
Pedestrian	- - - - - - - -
Bicyle	- - - - - - - -

Phase Locks (2-1-1-3)	
Red	- - - - - - - -
Yellow	- - - - - - - -
Force/Max	- - - - - - - -

Phase Features (2-1-1-4)	
Double Entry	- - - - - - - -
Rest In Walk	- - - - - - - -
Rest In Red	- - - - - - - -
Walk2	- - - - - - - -
Max Green 2	1 2 - 4 - 6 - -
Max Green 3	- - - - - - - -

Startup (2-1-1-5)	
First Green Phases	- 2 - - - 6 - -
Yellow Start Phases	- - - - - - - -
Vehicle Calls	1 2 - 4 - 6 - -
Pedestrian Calls	- 2 - - - 6 - -
Yellow Start Overlaps	- - - - - -
Startup All-Red	6.0

Call To Phase (2-1-2-1)		Omit On Green	
1	- - - - - - - -	1	- - - - - - - -
2	- - - - - - - -	2	- - - - - - - -
3	- - - - - - - -	3	- - - - - - - -
4	- - - - - - - -	4	- - - - - - - -
5	- - - - - - - -	5	- - - - - - - -
6	- - - - - - - -	6	- - - - - - - -
7	- - - - - - - -	7	- - - - - - - -
8	- - - - - - - -	8	- - - - - - - -

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	- - - - - - - -
Yellow Flash Overlap	- - - - - - - -
Flash In Red Phases	- - - - - - - -
Flash In Red Overlap	- - - - - - - -

Protected Permissive (2-1-2-4)	
Protected Permissive	- - - - - - - -

Special Operation (2-1-2-3)	
Single Exit Phase	- - - - - - - -
Driveway Signal Phases	- - - - - - - -
Driveway Signal Overlaps	- - - - - - - -
Leading Ped Phases	- - - - - - - -

Pedestrian (2-1-3)	
P1	- - - - - - - -
P2	- 2 - - - - - -
P3	- - - - - - - -
P4	- - - - - - - -
P5	- - - - - - - -
P6	- - - - - 6 - -
P7	- - - - - - - -
P8	- - - - - - - -

Overlap (2-1-4)

Overlap	Parent	Omit	No Start	Not
A [Arrow A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
B [Arrow B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
C [OL A]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
D [OL B]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
E [OL C]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
F [OL D]	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

[-] 332 Cabinet Overlap Assignment - For Reference Only

PAGE 2 **CHECKSUM:** 9E95

State of California
DEPARTMENT OF TRANSPORTATION Location: 168EB @ Fowler S.

Caltrans TSCP Ver 2.21

PHASE TIMING

PHASE (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	7	0	0
Flash Don't Walk	0	14	0	0	0	16	0	0
Minimum Green	6	10	0	8	0	10	0	0
Det Limit	0	20	0	20	0	20	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	15	25	0	20	0	25	0	0
Max Green 2	25	35	0	30	0	35	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	2.0	5.6	0.0	5.0	0.0	4.6	0.0	0.0
Maximum Gap	2.0	7.7	0.0	7.0	0.0	6.4	0.0	0.0
Minimum Gap	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0
Reduce Every	0.0	0.5	0.0	0.4	0.0	0.6	0.0	0.0
Yellow	3.7	4.8	3.0	4.1	3.0	4.8	3.0	3.0
All-Red	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A [Arrow A]	B [Arrow B]	C [OL A]	D [OL B]	E [OL C]	F [OL D]
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert (2-5)	
Time	5.0

Red To Se (2-6)	
Red To Sec	OFF

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

PAGE 3 CHECKSUM: 1FA0

State of California
DEPARTMENT OF TRANSPORTATION **Location: 168EB @ Fowler S.** **Caltrans TSCP Ver 2.21**

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

		Cycle	Multi	Lag Gap	[Offsets] A	B	C	Green Factors or Press [F] to Select -1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	100	0.0	- - - - - - - -	15			16	36		29		58		
Plan 2	Green Factor		0.0	- - - - - - - -											
Plan 3	Green Factor		0.0	- - - - - - - -											
Plan 4	Green Factor		0.0	- - - - - - - -											
Plan 5	Green Factor		0.0	- - - - - - - -											
Plan 6	Green Factor		0.0	- - - - - - - -											
Plan 7	Green Factor		0.0	- - - - - - - -											
Plan 8	Green Factor		0.0	- - - - - - - -											
Plan 9	Green Factor	88	0.0	- - - - - - - -	74			16	23		29		23		

Master Timer Sync (7-A)	
Enable in Plans	
1-9	- - - - - - - - -
11-19	- - - - - - - - -
21-29	- - - - - - - - -

Master Sub Master	
Input	0.0
Output	0

(7-E) Free	
Lag	Omit
- 2 - 4 - 6 - 8	- - - - - - - -
Veh Min	Veh Max
- 2 - - - 6 - -	- - - - - - - -
Ped	Bike
- - - - - - - -	- - - - - - - -
Cond	Cond Grn
- - - - - - - -	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	- 2 - - - 6 - -	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 2	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 3	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 4	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 5	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 6	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 7	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 9	1 - - 4 5 - - 8	- 2 - - - 6 - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	Offset
0	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

PAGE 4 **CHECKSUM:** 3D56

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

		Cycle	Multi	Lag Gap	[Offsets] A	B	C	Green Factors or Press [F] to Select Force-Off 1	2	3	4	5	6	7	8
Plan 11	Green Factor		0.0	- - - - - - - -											
Plan 12	Green Factor		0.0	- - - - - - - -											
Plan 13	Green Factor		0.0	- - - - - - - -											
Plan 14	Green Factor		0.0	- - - - - - - -											
Plan 15	Green Factor		0.0	- - - - - - - -											
Plan 16	Green Factor		0.0	- - - - - - - -											
Plan 17	Green Factor		0.0	- - - - - - - -											
Plan 18	Green Factor		0.0	- - - - - - - -											
Plan 19	Green Factor		0.0	- - - - - - - -											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 12	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 13	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 14	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan15	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 16	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 17	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 18	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 19	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

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Local Plan 21...29 (7-3) TIMING DATA COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	1	2	3	4	5	6	7	8
Plan 21	Green Factor		0.0	- - - - - - - -											
Plan 22	Green Factor		0.0	- - - - - - - -											
Plan 23	Green Factor		0.0	- - - - - - - -											
Plan 24	Green Factor		0.0	- - - - - - - -											
Plan 25	Green Factor		0.0	- - - - - - - -											
Plan 26	Green Factor		0.0	- - - - - - - -											
Plan 27	Green Factor		0.0	- - - - - - - -											
Plan 28	Green Factor		0.0	- - - - - - - -											
Plan 29	Green Factor		0.0	- - - - - - - -											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 22	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 23	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 24	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 25	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 26	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 27	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 28	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -
Plan 29	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -

PAGE 6 **CHECKSUM:** 191A

DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	Count+Call+Extend	1 - - - - - - -	NO	I1U	1	0	2.0	10	3.2
2	Count+Call+Extend	1 - - - - - - -	NO	I1L	2	0	2.0	10	7.2
3	Count+Extend	- 2 - - - - - -	NO	I2U	3	0	0.0	10	1.1
4	Count+Extend	- 2 - - - - - -	NO	I2L	4	0	0.0	10	1.5
5	Limited	- 2 - - - - - -	NO	I3U	5	0	0.0	10	4.5
6	Limited	- 2 - - - - - -	NO	I3L	6	0	0.0	10	6.2
7	Limited	- 2 - - - - - -	NO	I4U	7	0	2.0	10	2.1
8	Limited	- 2 - - - - - -	NO	I4L	8	0	2.0	10	7.4
9	Count+Call+Extend	- - 3 - - - - -	NO	I5U	9	0	0.0	10	3.4
10	Count+Call+Extend	- - 3 - - - - -	NO	I5L	10	0	0.0	10	7.6
11	Count+Extend	- - - 4 - - - -	NO	I6U	11	2	0.0	10	1.3
12	Count+Extend	- - - 4 - - - -	NO	I6L	12	2	0.0	10	1.7
13	Count+Call+Extend	- - - 4 - - - -	NO	I7U	13	10	0.0	10	4.7
14	Count+Call+Extend	- - - 4 - - - -	NO	I7L	14	10	0.0	10	6.4
15	Count+Call+Extend	- - - 4 - - - -	NO	I8U	15	0	2.0	10	2.3
16	Count+Call+Extend	- - - 4 - - - -	NO	I8L	16	0	2.0	10	7.8
17	Count+Call+Extend	1 - - - - - - -	Red	I9U	17	0	0.0	10	3.6
18	Count+Call+Extend	- - 3 - - - - -	NO	I9L	18	0	0.0	10	3.8
19	None	- - - - - - - -	NO	I10U	19	0	0.0	10	4.1
20	None	- - - - - - - -	NO	I10L	20	0	0.0	10	4.2
21	Count+Call+Extend	- - - - 5 - - -	NO	J1U	21	0	0.0	10	3.1
22	Count+Call+Extend	- - - - 5 - - -	NO	J1L	22	0	0.0	10	7.1
23	Count+Extend	- - - - - 6 - -	NO	J2U	23	0	0.0	10	1.2
24	Count+Extend	- - - - - 6 - -	NO	J2L	24	0	0.0	10	1.6
25	Limited	- - - - - 6 - -	NO	J3U	25	0	0.0	10	4.6
26	Limited	- - - - - 6 - -	NO	J3L	26	0	0.0	10	6.3
27	Limited	- - - - - 6 - -	NO	J4U	27	0	2.0	10	2.2
28	Limited	- - - - - 6 - -	NO	J4L	28	0	2.0	10	7.3
29	Count+Call+Extend	- - - - - - 7 -	NO	J5U	29	0	0.0	10	3.3
30	Count+Call+Extend	- - - - - - 7 -	NO	J5L	30	0	0.0	10	7.5
31	Count+Extend	- - - - - - - 8	NO	J6U	31	0	0.0	10	1.4
32	Count+Extend	- - - - - - - 8	NO	J6L	32	0	0.0	10	1.8
33	Count+Call+Extend	- - - - - - - 8	NO	J7U	33	0	0.0	10	4.8
34	Count+Call+Extend	- - - - - - - 8	NO	J7L	34	0	0.0	10	6.5
35	Count+Call+Extend	- - - - - - - 8	NO	J8U	35	0	0.0	10	2.4
36	Count+Call+Extend	- - - - - - - 8	NO	J8L	36	0	0.0	10	7.7
37	Count+Call+Extend	- - - - 5 - - -	NO	J9U	37	0	0.0	10	3.5
38	Count+Call+Extend	- - - - - - 7 -	NO	J9L	38	0	0.0	10	3.7
39	None	- - - - - - - -	NO	J10U	39	0	0.0	10	4.3
40	None	- - - - - - - -	NO	J10L	40	0	0.0	10	4.4
41	Pedestrian	- 2 - - - - - -	NO	I12U	41	0	0.0	10	5.1
42	Pedestrian	- - - 4 - - - -	NO	I12L	42	0	0.0	10	5.3
43	Pedestrian	- - - - - 6 - -	NO	I13U	43	0	0.0	10	5.2
44	Pedestrian	- - - - - - - 8	NO	I13L	44	0	0.0	10	5.4

Failure Times (5-3)	Minutes
Maximum On Time	0
Fail Reset Time	0

Failure Override (5-4)	
Detectors 1-8	- - - - - - - -
Detectors 9-16	- - - - - - - -
Detectors 17-24	- - - - - - - -
Detectors 25-32	- - - - - - - -
Detectors 33-40	- - - - - - - -
Detectors 41-44	- - - - - - - -

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Num	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Det Num	0	0	0	0	0	0	0	0

CIC Operation (5-6-1)	
Enable in Plans	- - - - - - - - -

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.0	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase	0	0	0	0	0	0	0	0
Sys Det	9	10	11	12	13	14	15	16
Phase	0	0	0	0	0	0	0	0

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

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TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0700	1	A
1800	255	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 2 (8-2-2)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 3 (8-2-3)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 4 (8-2-4)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 5 (8-2-5)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

Table 6 (8-2-6)		
Hour	Plan	OS
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A
0000	0	A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

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HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1	0	0	- - - - - - -	0
2	0	0	- - - - - - -	0
3	0	0	- - - - - - -	0
4	0	0	- - - - - - -	0
5	0	0	- - - - - - -	0
6	0	0	- - - - - - -	0
7	0	0	- - - - - - -	0
8	0	0	- - - - - - -	0
9	0	0	- - - - - - -	0
10	0	0	- - - - - - -	0
11	0	0	- - - - - - -	0
12	0	0	- - - - - - -	0
13	0	0	- - - - - - -	0
14	0	0	- - - - - - -	0
15	0	0	- - - - - - -	0
16	0	0	- - - - - - -	0

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1	0	0	- - - - - - -	0
2	0	0	- - - - - - -	0
3	0	0	- - - - - - -	0
4	0	0	- - - - - - -	0
5	0	0	- - - - - - -	0
6	0	0	- - - - - - -	0
7	0	0	- - - - - - -	0
8	0	0	- - - - - - -	0
9	0	0	- - - - - - -	0
10	0	0	- - - - - - -	0
11	0	0	- - - - - - -	0
12	0	0	- - - - - - -	0
13	0	0	- - - - - - -	0
14	0	0	- - - - - - -	0
15	0	0	- - - - - - -	0
16	0	0	- - - - - - -	0

Solar Clock Data (8-4)

North Latidude	36
West Longitude	119
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	- - - - - - - -
Holiday	- - - - - - - -

Daylight Saving (8-6)

Daylight Saving	YES

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1	0630	2030	1 2 3 4 5 6 7	17	1 2 - 4 - 6 - -
2	0000	0000	- - - - - - -	0	- - - - - - - -
3	0000	0000	- - - - - - -	0	- - - - - - - -
4	0000	0000	- - - - - - -	0	- - - - - - - -
5	0000	0000	- - - - - - -	0	- - - - - - - -
6	0000	0000	- - - - - - -	0	- - - - - - - -
7	0000	0000	- - - - - - -	0	- - - - - - - -
8	0000	0000	- - - - - - -	0	- - - - - - - -
9	0000	0000	- - - - - - -	0	- - - - - - - -
10	0000	0000	- - - - - - -	0	- - - - - - - -
11	0000	0000	- - - - - - -	0	- - - - - - - -
12	0000	0000	- - - - - - -	0	- - - - - - - -
13	0000	0000	- - - - - - -	0	- - - - - - - -
14	0000	0000	- - - - - - -	0	- - - - - - - -
15	0000	0000	- - - - - - -	0	- - - - - - - -
16	0000	0000	- - - - - - -	0	- - - - - - - -

Action Codes:
0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11.Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped

41. Protected Permissive
42. Protected Permissive
Action Code = Phases added to normal setting

100+Action Code = Phases removed
200+Action Code = Phases replaced

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COMMUNICATIONS

C2 (6-1-1)	
Address	0
Protocol	AB3418
Limit Access	None
Baud	1200
Parity	None
Data Bits	8 data bits
Stop Bits	1 stop bit
RTS On Time	20
RTS Off Time	20
Handshaking	Normal

C20 (6-1-2)	
Address	0
Protocol	AB3418
Limit Access	None
Baud	1200
Parity	None
Data Bits	8 data bits
Stop Bits	1 stop bit
RTS On Time	20
RTS Off Time	20
Handshaking	Normal

C21 (6-1-3)	
Address	0
Protocol	AB3418
Limit Access	None
Baud	1200
Parity	None
Data Bits	8 data bits
Stop Bits	1 stop bit
RTS On Time	20
RTS Off Time	20
Handshaking	Normal

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1	00.0	00	00.0	00	00.0	00	00.0
2	00.0	00	00.0	00	00.0	00	00.0
3	00.0	00	00.0	00	00.0	00	00.0
4	00.0	00	00.0	00	00.0	00	00.0
5	00.0	00	00.0	00	00.0	00	00.0
6	00.0	00	00.0	00	00.0	00	00.0
7	00.0	00	00.0	00	00.0	00	00.0
8	00.0	00	00.0	00	00.0	00	00.0
9	00.0	00	00.0	00	00.0	00	00.0
10	00.0	00	00.0	00	00.0	00	00.0
11	00.0	00	00.0	00	00.0	00	00.0
12	00.0	00	00.0	00	00.0	00	00.0
13	00.0	00	00.0	00	00.0	00	00.0
14	00.0	00	00.0	00	00.0	00	00.0
15	00.0	00	00.0	00	00.0	00	00.0
16	00.0	00	00.0	00	00.0	00	00.0

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	0
Local Toll	0
Long Distance	0
Delay	10
Area Code	0
Phone Number	0 - 0

Line Out	0
Local Toll	0
Long Distance	0
Delay	10
Area Code	0
Phone Number	0 - 0

Line Out	0
Local Toll	0
Long Distance	0
Delay	10
Area Code	0
Phone Number	0 - 0

NETWORK

Network (6-4)				
Address	1			
Protocol	AB3418			
Port	27000			
IP Mode	Static IP			
IP Address	192	168	13	1
Netmask	255	255	255	0
Broadcast	192	168	13	255
Gateway	192	168	13	254

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RAILROAD PREEMPTION

RR 1	(3-1-1)	Timing	Phase Flags (3-1-2) Grn Hold	Phase Flags (3-1-2) Yel Flash	Phase Flags (3-1-2) Red Flash	Pedestrian Flags (3-1-3) Walk	Pedestrian Flags (3-1-3) Flash DW	Pedestrian Flags (3-1-3) Solid DW	Overlap Flags (3-1-4) Grn Hold	Overlap Flags (3-1-4) Yel Flash	Overlap Flags (3-1-4) Red Flash
	Delay	0									
	Clear 1	10	- 2 - - 5 - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
	Clear 2	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Clear 3	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Hold	0	- - - - - - - -	- - - - - - - -	1 2 3 4 5 6 7 8	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	A B C D E F
	Exit	5									
	Min Grn	0									
	Ped Clr	0									

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Recall	Ped Call
- - - - - - - -	- - - - - -	1 2 3 4 5 6 7 8	- 2 - 4 - 6 - 8

Configuration (3-1-6)			
Port	Gate Port	Latching	Power-Up
2.5	0.0	Yes	Flashing

RR 2	(3-2-1)	Timing	Phase Flags (3-2-2) Grn Hold	Phase Flags (3-2-2) Yel Flash	Phase Flags (3-2-2) Red Flash	Pedestrian Flags (3-2-3) Walk	Pedestrian Flags (3-2-3) Flash DW	Pedestrian Flags (3-2-3) Solid DW	Overlap Flags (3-2-4) Grn Hold	Overlap Flags (3-2-4) Yel Flash	Overlap Flags (3-2-4) Red Flash
	Delay	0									
	Clear 1	10	- - - 4 - - 7 -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- 2 - 4 - 6 - 8	- - - - - -	- - - - - -	- - - - - -
	Clear 2	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Clear 3	0	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - - - -	- - - - - -	- - - - - -	- - - - - -
	Hold	0	1 2 3 - - 6 - -	- - - - - - - -	- - - - - - - -	- 2 - - - 6 - -	- - - - - - - -	- - - 4 - - - 8	- - - - - -	- - - - - -	- - - - - -
	Exit	0									
	Min Grn	0									
	Ped Clr	0									

Exit Parameters (3-2-5)			
Exit Ph Grn	Exit Ovl Grn	Exit Veh Recall	Exit Ped Call
- - - - - - - -	- - - - - -	- - - 4 - - 7 -	- - - - - - - -

Configuration (3-2-6)			
Port	Gate Port	Latching	Power-Up
2.6	0.0	Yes	Flashing

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- 2 - - 5 - - -	- - - - - -

Port	Latching	Phase Termination
5.5	No	Advance

EVC (3-C)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	1 - - - - 6 - -	- - - - - -

Port	Latching	Phase Termination
5.7	No	Advance

EVB (3-B)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - - 4 - - 7 -	- - - - - -

Port	Latching	Phase	Phase Termination
5.6	No		Advance

EVD (3-D)	Preempt Timers			Phase Green	Overlap Grn
	Delay	Clear	Max		
	0	30	30	- - 3 - - - - 8	- - - - - -

Port	Latching	Phase	Phase Termination
5.8	No		Advance

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INPUTS

		7 Wire I/C(2-1-5-1)			
		Input	**Port**	**Input**	**Port**
Enable	No	R1	3.8	Free	3.6
Max ON	0	R2	3.5	D2	2.8
Max OFF	0	R3	3.7	D3	6.1

Manual Control(2-1-5-2)	
Input	**Port**
Manual Adv	6.6
Adv Enable	6.6

Battery Backup (2-1-5-5)	
Port	**Operation**
2.7	Flashing

Cabinet Staus (2-1-5-3)	
Input	**Port**
Flash Bus	0.0
Door Ajar	0.0
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	**Port**
1	0.0
2	0.0
3	0.0
4	0.0

Y-Coordination (2-1-5-6)	
Port C	**Port D**
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:
0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C
+ middle output of loadswitches 3 and 6

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YELLOW YIELD COORDINATION

Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	Force-Offs 1	2	3	4	5	6	7	8	Coord	Lag	Min Recall	Restricted
Plan C	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -
Plan D	0	0	0	0	0	0	0	0	0	0	0	0	- 2 - - - 6 - -	- 2 - 4 - 6 - 8	- - - - - - - -	- - - - - - - -

TRANSIT PRIORITY

Local Plans (3-E) 1...9 1...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 2	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 3	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 4	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 5	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 6	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 7	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 8	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 9	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 11	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 12	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 13	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 14	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 15	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 16	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 17	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 18	Green Factor	0	0	0	0	0	0	0	0	0	0	0
Plan 19	Green Factor	0	0	0	0	0	0	0	0	0	0	0

Enable Priority in Plan (3-E-A)					
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	- - - - - - - -	0.0	OPT	0	0
Plan 11-19	- - - - - - - -	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
0	- - - - - - - -
0	- - - - - - - -

Free Plans (3-E-E)	
Max Green	Hold Phase
0	- - - - - - - -

Access Utilities (9-5)	
Password	***
Timeout	30

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
	0.0	0.0	0	0	- - - - - - - -	0.0	0.0	0.0	0	0.0	0

CONTROLLER ID

Manufacturer ID	Caltrans TSCP Ver 2.21
Model ID	Model 2070
Protocol Revision ID	AB3418

APPENDIX D

VOLUME DEVELOPMENT WORKSHEETS

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	**Project Trips**	**Existing Plus Project**	**Existing Volumes**	**Project Trips**	**Existing Plus Project**
1 Willow Avenue/Behymer Avenue						
NBL	84	0	84	120	0	120
NBT	552	32	584	451	21	472
NBR	16	0	16	24	0	24
SBL	44	1	45	37	4	41
SBT	576	11	587	354	36	390
SBR	74	0	74	10	0	10
EBL	67	0	67	11	0	11
EBT	125	0	125	45	0	45
EBR	203	0	203	81	0	81
WBL	16	0	16	31	0	31
WBT	128	0	128	89	0	89
WBR	43	3	46	18	2	20
North Leg						
Approach	694	12	706	401	40	441
Departure	662	35	697	480	23	503
Total	1,356	47	1,403	881	63	944
South Leg						
Approach	652	32	684	595	21	616
Departure	795	11	806	466	36	502
Total	1,447	43	1,490	1,061	57	1,118
East Leg						
Approach	187	3	190	138	2	140
Departure	185	1	186	106	4	110
Total	372	4	376	244	6	250
West Leg						
Approach	395	0	395	137	0	137
Departure	286	0	286	219	0	219
Total	681	0	681	356	0	356
Total Approaches						
Approach	1,928	47	1,975	1,271	63	1,334
Departure	1,928	47	1,975	1,271	63	1,334
Total	3,856	94	3,950	2,542	126	2,668

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
2 Willow Avenue/Shepherd Avenue						
NBL	160	0	160	243	0	243
NBT	587	0	587	657	0	657
NBR	49	2	51	89	7	96
SBL	161	11	172	127	36	163
SBT	740	0	740	464	0	464
SBR	50	0	50	31	0	31
EBL	29	0	29	36	0	36
EBT	243	13	256	323	43	366
EBR	145	0	145	113	0	113
WBL	44	6	50	34	4	38
WBT	298	38	336	315	25	340
WBR	98	32	130	145	21	166
North Leg						
Approach	951	11	962	622	36	658
Departure	714	32	746	838	21	859
Total	1,665	43	1,708	1,460	57	1,517
South Leg						
Approach	796	2	798	989	7	996
Departure	929	6	935	611	4	615
Total	1,725	8	1,733	1,600	11	1,611
East Leg						
Approach	440	76	516	494	50	544
Departure	453	26	479	539	86	625
Total	893	102	995	1,033	136	1,169
West Leg						
Approach	417	13	430	472	43	515
Departure	508	38	546	589	25	614
Total	925	51	976	1,061	68	1,129
Total Approaches						
Approach	2,604	102	2,706	2,577	136	2,713
Departure	2,604	102	2,706	2,577	136	2,713
Total	5,208	204	5,412	5,154	272	5,426

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
3 Minnewawa Avenue/Behymer Avenue						
NBL	41	0	41	46	0	46
NBT	212	0	212	205	0	205
NBR	8	0	8	6	0	6
SBL	123	0	123	95	0	95
SBT	225	0	225	190	0	190
SBR	3	0	3	2	0	2
EBL	3	0	3	3	0	3
EBT	114	1	115	69	4	73
EBR	44	0	44	30	0	30
WBL	12	0	12	6	0	6
WBT	145	3	148	86	2	88
WBR	297	0	297	99	0	99
North Leg						
Approach	351	0	351	287	0	287
Departure	512	0	512	307	0	307
Total	863	0	863	594	0	594
South Leg						
Approach	261	0	261	257	0	257
Departure	281	0	281	226	0	226
Total	542	0	542	483	0	483
East Leg						
Approach	454	3	457	191	2	193
Departure	245	1	246	170	4	174
Total	699	4	703	361	6	367
West Leg						
Approach	161	1	162	102	4	106
Departure	189	3	192	134	2	136
Total	350	4	354	236	6	242
Total Approaches						
Approach	1,227	4	1,231	837	6	843
Departure	1,227	4	1,231	837	6	843
Total	2,454	8	2,462	1,674	12	1,686

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
4 Minnewawa Avenue/Shepherd Avenue						
NBL	127	0	127	104	0	104
NBT	150	0	150	152	0	152
NBR	41	14	55	26	46	72
SBL	103	0	103	76	0	76
SBT	159	0	159	142	0	142
SBR	29	0	29	13	0	13
EBL	33	0	33	20	0	20
EBT	339	27	366	390	89	479
EBR	152	0	152	81	0	81
WBL	44	41	85	19	28	47
WBT	291	79	370	342	53	395
WBR	91	0	91	85	0	85
North Leg						
Approach	291	0	291	231	0	231
Departure	274	0	274	257	0	257
Total	565	0	565	488	0	488
South Leg						
Approach	318	14	332	282	46	328
Departure	355	41	396	242	28	270
Total	673	55	728	524	74	598
East Leg						
Approach	426	120	546	446	81	527
Departure	483	41	524	492	135	627
Total	909	161	1,070	938	216	1,154
West Leg						
Approach	524	27	551	491	89	580
Departure	447	79	526	459	53	512
Total	971	106	1,077	950	142	1,092
Total Approaches						
Approach	1,559	161	1,720	1,450	216	1,666
Departure	1,559	161	1,720	1,450	216	1,666
Total	3,118	322	3,440	2,900	432	3,332

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
5 Clovis Avenue/Shepherd Avenue						
NBL	80	0	80	140	0	140
NBT	59	0	59	44	0	44
NBR	86	27	113	70	89	159
SBL	19	0	19	10	0	10
SBT	71	0	71	24	0	24
SBR	67	0	67	26	0	26
EBL	32	0	32	32	0	32
EBT	337	41	378	343	136	479
EBR	118	0	118	103	0	103
WBL	109	78	187	77	53	130
WBT	294	120	414	304	81	385
WBR	48	0	48	7	0	7
North Leg						
Approach	157	0	157	60	0	60
Departure	139	0	139	83	0	83
Total	296	0	296	143	0	143
South Leg						
Approach	225	27	252	254	89	343
Departure	298	78	376	204	53	257
Total	523	105	628	458	142	600
East Leg						
Approach	451	198	649	388	134	522
Departure	442	68	510	423	225	648
Total	893	266	1,159	811	359	1,170
West Leg						
Approach	487	41	528	478	136	614
Departure	441	120	561	470	81	551
Total	928	161	1,089	948	217	1,165
Total Approaches						
Approach	1,320	266	1,586	1,180	359	1,539
Departure	1,320	266	1,586	1,180	359	1,539
Total	2,640	532	3,172	2,360	718	3,078

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	**Project Trips**	**Existing Plus Project**	**Existing Volumes**	**Project Trips**	**Existing Plus Project**
6 Clovis Avenue/Teague Avenue						
NBL	263	0	263	156	0	156
NBT	209	25	234	290	82	372
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	273	72	345	223	49	272
SBR	183	6	189	60	4	64
EBL	73	2	75	67	7	74
EBT	0	0	0	0	0	0
EBR	222	0	222	87	0	87
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	456	78	534	283	53	336
Departure	282	27	309	357	89	446
Total	738	105	843	640	142	782
South Leg						
Approach	472	25	497	446	82	528
Departure	495	72	567	310	49	359
Total	967	97	1,064	756	131	887
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	295	2	297	154	7	161
Departure	446	6	452	216	4	220
Total	741	8	749	370	11	381
Total Approaches						
Approach	1,223	105	1,328	883	142	1,025
Departure	1,223	105	1,328	883	142	1,025
Total	2,446	210	2,656	1,766	284	2,050

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
7 Clovis Avenue/Nees Avenue						
NBL	70	0	70	124	0	124
NBT	294	25	319	400	82	482
NBR	20	0	20	46	0	46
SBL	70	0	70	43	0	43
SBT	416	72	488	253	49	302
SBR	42	0	42	27	0	27
EBL	30	0	30	22	0	22
EBT	306	1	307	415	4	419
EBR	194	0	194	249	0	249
WBL	35	32	67	22	21	43
WBT	363	3	366	385	2	387
WBR	180	0	180	74	0	74
North Leg						
Approach	528	72	600	323	49	372
Departure	504	25	529	496	82	578
Total	1,032	97	1,129	819	131	950
South Leg						
Approach	384	25	409	570	82	652
Departure	645	104	749	524	70	594
Total	1,029	129	1,158	1,094	152	1,246
East Leg						
Approach	578	35	613	481	23	504
Departure	396	1	397	504	4	508
Total	974	36	1,010	985	27	1,012
West Leg						
Approach	530	1	531	686	4	690
Departure	475	3	478	536	2	538
Total	1,005	4	1,009	1,222	6	1,228
Total Approaches						
Approach	2,020	133	2,153	2,060	158	2,218
Departure	2,020	133	2,153	2,060	158	2,218
Total	4,040	266	4,306	4,120	316	4,436

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
8 Clovis Avenue/Alluvial Avenue						
NBL	127	0	127	146	0	146
NBT	282	25	307	558	82	640
NBR	61	0	61	67	0	67
SBL	126	0	126	77	0	77
SBT	576	104	680	454	70	524
SBR	34	0	34	13	0	13
EBL	13	0	13	15	0	15
EBT	269	1	270	342	4	346
EBR	153	0	153	175	0	175
WBL	44	0	44	36	0	36
WBT	407	3	410	302	2	304
WBR	89	0	89	77	0	77
North Leg						
Approach	736	104	840	544	70	614
Departure	384	25	409	650	82	732
Total	1,120	129	1,249	1,194	152	1,346
South Leg						
Approach	470	25	495	771	82	853
Departure	773	104	877	665	70	735
Total	1,243	129	1,372	1,436	152	1,588
East Leg						
Approach	540	3	543	415	2	417
Departure	456	1	457	486	4	490
Total	996	4	1,000	901	6	907
West Leg						
Approach	435	1	436	532	4	536
Departure	568	3	571	461	2	463
Total	1,003	4	1,007	993	6	999
Total Approaches						
Approach	2,181	133	2,314	2,262	158	2,420
Departure	2,181	133	2,314	2,262	158	2,420
Total	4,362	266	4,628	4,524	316	4,840

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
9 State Route 168 Westbound Ramps/Herndon Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	66	0	66	66	0	66
SBT	0	0	0	0	0	0
SBR	729	0	729	342	0	342
EBL	0	0	0	0	0	0
EBT	957	2	959	1,653	7	1,660
EBR	491	0	491	529	0	529
WBL	0	0	0	0	0	0
WBT	1,454	6	1,460	1,451	4	1,455
WBR	576	85	661	540	57	597
North Leg						
Approach	795	0	795	408	0	408
Departure	576	85	661	540	57	597
Total	1,371	85	1,456	948	57	1,005
South Leg						
Approach	0	0	0	0	0	0
Departure	491	0	491	529	0	529
Total	491	0	491	529	0	529
East Leg						
Approach	2,030	91	2,121	1,991	61	2,052
Departure	1,023	2	1,025	1,719	7	1,726
Total	3,053	93	3,146	3,710	68	3,778
West Leg						
Approach	1,448	2	1,450	2,182	7	2,189
Departure	2,183	6	2,189	1,793	4	1,797
Total	3,631	8	3,639	3,975	11	3,986
Total Approaches						
Approach	4,273	93	4,366	4,581	68	4,649
Departure	4,273	93	4,366	4,581	68	4,649
Total	8,546	186	8,732	9,162	136	9,298

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
10 State Route 168 Eastbound Ramps/Herndon Avenue						
NBL	454	0	454	497	0	497
NBT	0	0	0	0	0	0
NBR	479	19	498	677	61	738
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	810	2	812	1,359	7	1,366
EBR	213	0	213	360	0	360
WBL	0	0	0	0	0	0
WBT	1,576	91	1,667	1,494	61	1,555
WBR	79	0	79	184	0	184
North Leg						
Approach	0	0	0	0	0	0
Departure	79	0	79	184	0	184
Total	79	0	79	184	0	184
South Leg						
Approach	933	19	952	1,174	61	1,235
Departure	213	0	213	360	0	360
Total	1,146	19	1,165	1,534	61	1,595
East Leg						
Approach	1,655	91	1,746	1,678	61	1,739
Departure	1,289	21	1,310	2,036	68	2,104
Total	2,944	112	3,056	3,714	129	3,843
West Leg						
Approach	1,023	2	1,025	1,719	7	1,726
Departure	2,030	91	2,121	1,991	61	2,052
Total	3,053	93	3,146	3,710	68	3,778
Total Approaches						
Approach	3,611	112	3,723	4,571	129	4,700
Departure	3,611	112	3,723	4,571	129	4,700
Total	7,222	224	7,446	9,142	258	9,400

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
11 Clovis Avenue/Herndon Avenue						
NBL	232	0	232	350	0	350
NBT	255	3	258	402	11	413
NBR	120	0	120	276	0	276
SBL	161	3	164	271	2	273
SBT	283	9	292	262	6	268
SBR	402	91	493	266	61	327
EBL	243	21	264	366	68	434
EBT	832	0	832	1,368	0	1,368
EBR	214	0	214	302	0	302
WBL	148	0	148	316	0	316
WBT	1,021	0	1,021	1,062	0	1,062
WBR	157	1	158	132	4	136
North Leg						
Approach	846	103	949	799	69	868
Departure	655	25	680	900	83	983
Total	1,501	128	1,629	1,699	152	1,851
South Leg						
Approach	607	3	610	1,028	11	1,039
Departure	645	9	654	880	6	886
Total	1,252	12	1,264	1,908	17	1,925
East Leg						
Approach	1,326	1	1,327	1,510	4	1,514
Departure	1,113	3	1,116	1,915	2	1,917
Total	2,439	4	2,443	3,425	6	3,431
West Leg						
Approach	1,289	21	1,310	2,036	68	2,104
Departure	1,655	91	1,746	1,678	61	1,739
Total	2,944	112	3,056	3,714	129	3,843
Total Approaches						
Approach	4,068	128	4,196	5,373	152	5,525
Departure	4,068	128	4,196	5,373	152	5,525
Total	8,136	256	8,392	10,746	304	11,050

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
12 Sunnyside Avenue/Behymer Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	2	0	2	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	253	1	254	179	4	183
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	438	3	441	198	2	200
WBR	0	0	0	0	0	0
North Leg						
Approach	2	0	2	0	0	0
Departure	0	0	0	0	0	0
Total	2	0	2	0	0	0
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	438	3	441	198	2	200
Departure	254	1	255	179	4	183
Total	692	4	696	377	6	383
West Leg						
Approach	253	1	254	179	4	183
Departure	438	3	441	198	2	200
Total	691	4	695	377	6	383
Total Approaches						
Approach	692	4	696	377	6	383
Departure	692	4	696	377	6	383
Total	1,385	8	1,393	754	12	766

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
13 Sunnyside Avenue/Shepherd Avenue						
NBL	54	0	54	80	0	80
NBT	11	4	15	11	14	25
NBR	27	11	38	31	36	67
SBL	2	22	24	4	15	19
SBT	14	44	58	13	30	43
SBR	9	66	75	9	45	54
EBL	8	23	31	9	75	84
EBT	325	46	371	342	150	492
EBR	106	0	106	70	0	70
WBL	31	32	63	29	21	50
WBT	371	132	503	296	89	385
WBR	3	8	11	6	25	31
North Leg						
Approach	25	132	157	26	90	116
Departure	22	35	57	26	114	140
Total	47	167	214	52	204	256
South Leg						
Approach	92	15	107	122	50	172
Departure	151	76	227	112	51	163
Total	243	91	334	234	101	335
East Leg						
Approach	405	172	577	331	135	466
Departure	354	79	433	377	201	578
Total	759	251	1,010	708	336	1,044
West Leg						
Approach	439	69	508	421	225	646
Departure	434	198	632	385	134	519
Total	873	267	1,140	806	359	1,165
Total Approaches						
Approach	961	388	1,349	900	500	1,400
Departure	961	388	1,349	900	500	1,400
Total	1,922	776	2,698	1,800	1,000	2,800

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
14 Sunnyside Avenue/Teague Avenue						
NBL	2	0	2	0	0	0
NBT	74	15	89	120	50	170
NBR	5	0	5	7	0	7
SBL	5	0	5	2	0	2
SBT	139	76	215	112	51	163
SBR	0	0	0	1	0	1
EBL	5	0	5	1	0	1
EBT	4	0	4	1	0	1
EBR	1	0	1	3	0	3
WBL	17	0	17	8	0	8
WBT	6	0	6	3	0	3
WBR	10	0	10	12	0	12
North Leg						
Approach	144	76	220	115	51	166
Departure	89	15	104	133	50	183
Total	233	91	324	248	101	349
South Leg						
Approach	81	15	96	127	50	177
Departure	157	76	233	123	51	174
Total	238	91	329	250	101	351
East Leg						
Approach	33	0	33	23	0	23
Departure	14	0	14	10	0	10
Total	47	0	47	33	0	33
West Leg						
Approach	10	0	10	5	0	5
Departure	8	0	8	4	0	4
Total	18	0	18	9	0	9
Total Approaches						
Approach	268	91	359	270	101	371
Departure	268	91	359	270	101	371
Total	536	182	718	540	202	742

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
15 Sunnyside Avenue/Nees Avenue						
NBL	137	0	137	115	0	115
NBT	57	15	72	98	50	148
NBR	17	0	17	35	0	35
SBL	22	0	22	17	0	17
SBT	115	44	159	90	30	120
SBR	34	32	66	19	21	40
EBL	12	0	12	24	0	24
EBT	269	0	269	364	0	364
EBR	85	0	85	74	0	74
WBL	25	0	25	32	0	32
WBT	367	0	367	337	0	337
WBR	14	0	14	15	0	15
North Leg						
Approach	171	76	247	126	51	177
Departure	83	15	98	137	50	187
Total	254	91	345	263	101	364
South Leg						
Approach	211	15	226	248	50	298
Departure	225	44	269	196	30	226
Total	436	59	495	444	80	524
East Leg						
Approach	406	0	406	384	0	384
Departure	308	0	308	416	0	416
Total	714	0	714	800	0	800
West Leg						
Approach	366	0	366	462	0	462
Departure	538	32	570	471	21	492
Total	904	32	936	933	21	954
Total Approaches						
Approach	1,154	91	1,245	1,220	101	1,321
Departure	1,154	91	1,245	1,220	101	1,321
Total	2,308	182	2,490	2,440	202	2,642

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
16 Fowler Avenue/Behymer Avenue						
NBL	424	3	427	163	2	165
NBT	75	0	75	79	0	79
NBR	1	0	1	3	0	3
SBL	0	0	0	1	0	1
SBT	80	0	80	59	0	59
SBR	16	0	16	5	0	5
EBL	10	0	10	7	0	7
EBT	0	0	0	3	0	3
EBR	233	1	234	176	4	180
WBL	4	0	4	4	0	4
WBT	8	0	8	4	0	4
WBR	0	0	0	1	0	1
North Leg						
Approach	96	0	96	65	0	65
Departure	85	0	85	87	0	87
Total	181	0	181	152	0	152
South Leg						
Approach	500	3	503	245	2	247
Departure	317	1	318	239	4	243
Total	817	4	821	484	6	490
East Leg						
Approach	12	0	12	9	0	9
Departure	1	0	1	7	0	7
Total	13	0	13	16	0	16
West Leg						
Approach	243	1	244	186	4	190
Departure	448	3	451	172	2	174
Total	691	4	695	358	6	364
Total Approaches						
Approach	851	4	855	505	6	511
Departure	851	4	855	505	6	511
Total	1,702	8	1,710	1,010	12	1,022

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
17 Fowler Avenue/Ticonderoga						
NBL	9	0	9	9	0	9
NBT	488	0	488	238	0	238
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	310	0	310	238	0	238
SBR	7	1	8	2	4	6
EBL	7	3	10	3	2	5
EBT	0	0	0	0	0	0
EBR	8	16	24	6	11	17
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	317	1	318	240	4	244
Departure	495	3	498	241	2	243
Total	812	4	816	481	6	487
South Leg						
Approach	497	0	497	247	0	247
Departure	318	16	334	244	11	255
Total	815	16	831	491	11	502
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	15	19	34	9	13	22
Departure	16	1	17	11	4	15
Total	31	20	51	20	17	37
Total Approaches						
Approach	829	20	849	496	17	513
Departure	829	20	849	496	17	513
Total	1,658	40	1,698	992	34	1,026

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
18 Fowler Avenue/Shepherd Avenue						
NBL	141	16	157	109	54	163
NBT	92	0	92	119	0	119
NBR	34	0	34	73	0	73
SBL	185	0	185	110	0	110
SBT	125	16	141	112	11	123
SBR	18	0	18	14	0	14
EBL	20	0	20	23	0	23
EBT	281	22	303	276	15	291
EBR	51	0	51	75	0	75
WBL	36	0	36	47	0	47
WBT	279	8	287	240	25	265
WBR	370	0	370	128	0	128
North Leg						
Approach	328	16	344	236	11	247
Departure	482	0	482	270	0	270
Total	810	16	826	506	11	517
South Leg						
Approach	267	16	283	301	54	355
Departure	212	16	228	234	11	245
Total	479	32	511	535	65	600
East Leg						
Approach	685	8	693	415	25	440
Departure	500	22	522	459	15	474
Total	1,185	30	1,215	874	40	914
West Leg						
Approach	352	22	374	374	15	389
Departure	438	24	462	363	79	442
Total	790	46	836	737	94	831
Total Approaches						
Approach	1,632	62	1,694	1,326	105	1,431
Departure	1,632	62	1,694	1,326	105	1,431
Total	3,264	124	3,388	2,652	210	2,862

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	**Project Trips**	**Existing Plus Project**	**Existing Volumes**	**Project Trips**	**Existing Plus Project**
19 Fowler Avenue/Teague Avenue						
NBL	3	0	3	9	0	9
NBT	164	16	180	309	54	363
NBR	7	0	7	13	0	13
SBL	19	0	19	9	0	9
SBT	238	16	254	247	11	258
SBR	10	0	10	6	0	6
EBL	4	0	4	3	0	3
EBT	6	0	6	3	0	3
EBR	6	0	6	5	0	5
WBL	17	0	17	5	0	5
WBT	8	0	8	7	0	7
WBR	30	0	30	15	0	15
North Leg						
Approach	267	16	283	262	11	273
Departure	198	16	214	327	54	381
Total	465	32	497	589	65	654
South Leg						
Approach	174	16	190	331	54	385
Departure	261	16	277	257	11	268
Total	435	32	467	588	65	653
East Leg						
Approach	55	0	55	27	0	27
Departure	32	0	32	25	0	25
Total	87	0	87	52	0	52
West Leg						
Approach	16	0	16	11	0	11
Departure	21	0	21	22	0	22
Total	37	0	37	33	0	33
Total Approaches						
Approach	512	32	544	631	65	696
Departure	512	32	544	631	65	696
Total	1,024	64	1,088	1,262	130	1,392

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	**Project Trips**	**Existing Plus Project**	**Existing Volumes**	**Project Trips**	**Existing Plus Project**
20 Fowler Avenue/Nees Avenue						
NBL	111	0	111	163	0	163
NBT	123	15	138	270	50	320
NBR	37	0	37	62	0	62
SBL	28	3	31	34	2	36
SBT	215	13	228	201	8	209
SBR	32	0	32	36	0	36
EBL	20	0	20	30	0	30
EBT	202	0	202	269	0	269
EBR	87	0	87	114	0	114
WBL	73	0	73	37	0	37
WBT	272	0	272	222	0	222
WBR	32	1	33	33	4	37
North Leg						
Approach	275	16	291	271	10	281
Departure	175	16	191	333	54	387
Total	450	32	482	604	64	668
South Leg						
Approach	271	15	286	495	50	545
Departure	375	13	388	352	8	360
Total	646	28	674	847	58	905
East Leg						
Approach	377	1	378	292	4	296
Departure	267	3	270	365	2	367
Total	644	4	648	657	6	663
West Leg						
Approach	309	0	309	413	0	413
Departure	415	0	415	421	0	421
Total	724	0	724	834	0	834
Total Approaches						
Approach	1,232	32	1,264	1,471	64	1,535
Departure	1,232	32	1,264	1,471	64	1,535
Total	2,464	64	2,528	2,942	128	3,070

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
21 Fowler Avenue/State Route 168 Westbound Ramps						
NBL	497	0	497	430	0	430
NBT	418	15	433	738	50	788
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	324	13	337	395	8	403
SBR	389	0	389	183	0	183
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	134	0	134	159	0	159
WBT	0	0	0	0	0	0
WBR	31	0	31	15	0	15
North Leg						
Approach	713	13	726	578	8	586
Departure	449	15	464	753	50	803
Total	1,162	28	1,190	1,331	58	1,389
South Leg						
Approach	915	15	930	1,168	50	1,218
Departure	458	13	471	554	8	562
Total	1,373	28	1,401	1,722	58	1,780
East Leg						
Approach	165	0	165	174	0	174
Departure	0	0	0	0	0	0
Total	165	0	165	174	0	174
West Leg						
Approach	0	0	0	0	0	0
Departure	886	0	886	613	0	613
Total	886	0	886	613	0	613
Total Approaches						
Approach	1,793	28	1,821	1,920	58	1,978
Departure	1,793	28	1,821	1,920	58	1,978
Total	3,586	56	3,642	3,840	116	3,956

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
22 Fowler Avenue/State Route 168 Eastbound Ramps						
NBL	0	0	0	0	0	0
NBT	774	4	778	857	14	871
NBR	92	0	92	294	0	294
SBL	14	0	14	23	0	23
SBT	444	13	457	531	8	539
SBR	0	0	0	0	0	0
EBL	141	11	152	311	36	347
EBT	0	0	0	0	0	0
EBR	332	0	332	585	0	585
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	458	13	471	554	8	562
Departure	915	15	930	1,168	50	1,218
Total	1,373	28	1,401	1,722	58	1,780
South Leg						
Approach	866	4	870	1,151	14	1,165
Departure	776	13	789	1,116	8	1,124
Total	1,642	17	1,659	2,267	22	2,289
East Leg						
Approach	0	0	0	0	0	0
Departure	106	0	106	317	0	317
Total	106	0	106	317	0	317
West Leg						
Approach	473	11	484	896	36	932
Departure	0	0	0	0	0	0
Total	473	11	484	896	36	932
Total Approaches						
Approach	1,797	28	1,825	2,601	58	2,659
Departure	1,797	28	1,825	2,601	58	2,659
Total	3,594	56	3,650	5,202	116	5,318

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
23 Sunnyside Avenue/Project Driveway 1						
NBL	0	0	0	0	0	0
NBT	22	10	32	26	32	58
NBR	0	7	7	0	21	21
SBL	0	0	0	0	0	0
SBT	25	28	53	26	19	45
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	19	19	0	13	13
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	25	28	53	26	19	45
Departure	22	10	32	26	32	58
Total	47	38	85	52	51	103
South Leg						
Approach	22	17	39	26	53	79
Departure	25	47	72	26	32	58
Total	47	64	111	52	85	137
East Leg						
Approach	0	19	19	0	13	13
Departure	0	7	7	0	21	21
Total	0	26	26	0	34	34
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	47	64	111	52	85	137
Departure	47	64	111	52	85	137
Total	94	128	222	104	170	274

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
24 Sunnyside Avenue/Project Driveway 2						
NBL	0	0	0	0	0	0
NBT	22	16	38	26	54	80
NBR	0	19	19	0	61	61
SBL	0	0	0	0	0	0
SBT	25	47	72	26	32	58
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	85	85	0	57	57
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	25	47	72	26	32	58
Departure	22	16	38	26	54	80
Total	47	63	110	52	86	138
South Leg						
Approach	22	35	57	26	115	141
Departure	25	132	157	26	89	115
Total	47	167	214	52	204	256
East Leg						
Approach	0	85	85	0	57	57
Departure	0	19	19	0	61	61
Total	0	104	104	0	118	118
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	47	167	214	52	204	256
Departure	47	167	214	52	204	256
Total	94	334	428	104	408	512

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
25 Project Driveway 3/Shepherd Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	164	164	0	110	110
EBL	0	57	57	0	186	186
EBT	354	22	376	377	15	392
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	405	8	413	331	25	356
WBR	0	16	16	0	54	54
North Leg						
Approach	0	164	164	0	110	110
Departure	0	73	73	0	240	240
Total	0	237	237	0	350	350
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	405	24	429	331	79	410
Departure	354	22	376	377	15	392
Total	759	46	805	708	94	802
West Leg						
Approach	354	79	433	377	201	578
Departure	405	172	577	331	135	466
Total	759	251	1,010	708	336	1,044
Total Approaches						
Approach	759	267	1,026	708	390	1,098
Departure	759	267	1,026	708	390	1,098
Total	1,518	534	2,052	1,416	780	2,196

Table D-1 - Existing Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Existing (2022) Volumes	Project Trips	Existing Plus Project	Existing Volumes	Project Trips	Existing Plus Project
26 Stanford Avenue-Project Driveway 4/Perrin Road						
NBL	0	28	28	0	19	19
NBT	0	19	19	0	13	13
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	1	1	0	4	4
SBR	15	0	15	12	0	12
EBL	15	0	15	13	0	13
EBT	0	0	0	0	0	0
EBR	0	10	10	0	32	32
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	15	1	16	12	4	16
Departure	15	19	34	13	13	26
Total	30	20	50	25	17	42
South Leg						
Approach	0	47	47	0	32	32
Departure	0	11	11	0	36	36
Total	0	58	58	0	68	68
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	15	10	25	13	32	45
Departure	15	28	43	12	19	31
Total	30	38	68	25	51	76
Total Approaches						
Approach	30	58	88	25	68	93
Departure	30	58	88	25	68	93
Total	60	116	176	50	136	186

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
1 Willow Avenue/Behymer Avenue						
NBL	84	46	0	130	0	130
NBT	552	176	15	743	32	775
NBR	16	3	0	19	0	19
SBL	44	0	4	48	1	49
SBT	576	178	5	759	11	770
SBR	74	1	0	75	0	75
EBL	67	2	0	69	0	69
EBT	125	7	1	133	0	133
EBR	203	35	0	238	0	238
WBL	16	5	0	21	0	21
WBT	128	7	3	138	0	138
WBR	43	0	12	55	3	58
North Leg						
Approach	694	179	9	882	12	894
Departure	662	178	27	867	35	902
Total	1,356	357	36	1,749	47	1,796
South Leg						
Approach	652	225	15	892	32	924
Departure	795	218	5	1,018	11	1,029
Total	1,447	443	20	1,910	43	1,953
East Leg						
Approach	187	12	15	214	3	217
Departure	185	10	5	200	1	201
Total	372	22	20	414	4	418
West Leg						
Approach	395	44	1	440	0	440
Departure	286	54	3	343	0	343
Total	681	98	4	783	0	783
Total Approaches						
Approach	1,928	460	40	2,428	47	2,475
Departure	1,928	460	40	2,428	47	2,475
Total	3,856	920	80	4,856	94	4,950

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
1 Willow Avenue/Behymer Avenue						
NBL	120	50	0	170	0	170
NBT	451	267	10	728	21	749
NBR	24	12	0	36	0	36
SBL	37	0	14	51	4	55
SBT	354	263	17	634	36	670
SBR	10	2	0	12	0	12
EBL	11	1	0	12	0	12
EBT	45	9	3	57	0	57
EBR	81	47	0	128	0	128
WBL	31	11	0	42	0	42
WBT	89	9	2	100	0	100
WBR	18	0	8	26	2	28
North Leg						
Approach	401	265	31	697	40	737
Departure	480	268	18	766	23	789
Total	881	533	49	1,463	63	1,526
South Leg						
Approach	595	329	10	934	21	955
Departure	466	321	17	804	36	840
Total	1,061	650	27	1,738	57	1,795
East Leg						
Approach	138	20	10	168	2	170
Departure	106	21	17	144	4	148
Total	244	41	27	312	6	318
West Leg						
Approach	137	57	3	197	0	197
Departure	219	61	2	282	0	282
Total	356	118	5	479	0	479
Total Approaches						
Approach	1,271	671	54	1,996	63	2,059
Departure	1,271	671	54	1,996	63	2,059
Total	2,542	1,342	108	3,992	126	4,118

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
2 Willow Avenue/Shepherd Avenue						
NBL	160	25	0	185	0	185
NBT	587	285	0	872	0	872
NBR	49	161	1	211	2	213
SBL	161	74	5	240	11	251
SBT	740	530	0	1,270	0	1,270
SBR	50	151	0	201	0	201
EBL	29	78	0	107	0	107
EBT	243	138	12	393	13	406
EBR	145	5	0	150	0	150
WBL	44	244	3	291	6	297
WBT	298	248	34	580	38	618
WBR	98	99	15	212	32	244
North Leg						
Approach	951	755	5	1,711	11	1,722
Departure	714	462	15	1,191	32	1,223
Total	1,665	1,217	20	2,902	43	2,945
South Leg						
Approach	796	471	1	1,268	2	1,270
Departure	929	779	3	1,711	6	1,717
Total	1,725	1,250	4	2,979	8	2,987
East Leg						
Approach	440	591	52	1,083	76	1,159
Departure	453	373	18	844	26	870
Total	893	964	70	1,927	102	2,029
West Leg						
Approach	417	221	12	650	13	663
Departure	508	424	34	966	38	1,004
Total	925	645	46	1,616	51	1,667
Total Approaches						
Approach	2,604	2,038	70	4,712	102	4,814
Departure	2,604	2,038	70	4,712	102	4,814
Total	5,208	4,076	140	9,424	204	9,628

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
2 Willow Avenue/Shepherd Avenue						
NBL	243	36	0	279	0	279
NBT	657	725	0	1,382	0	1,382
NBR	89	373	3	465	7	472
SBL	127	150	17	294	36	330
SBT	464	537	0	1,001	0	1,001
SBR	31	166	0	197	0	197
EBL	36	216	0	252	0	252
EBT	323	285	38	646	43	689
EBR	113	10	0	123	0	123
WBL	34	300	2	336	4	340
WBT	315	231	23	569	25	594
WBR	145	128	10	283	21	304
North Leg						
Approach	622	853	17	1,492	36	1,528
Departure	838	1,069	10	1,917	21	1,938
Total	1,460	1,922	27	3,409	57	3,466
South Leg						
Approach	989	1,134	3	2,126	7	2,133
Departure	611	847	2	1,460	4	1,464
Total	1,600	1,981	5	3,586	11	3,597
East Leg						
Approach	494	659	35	1,188	50	1,238
Departure	539	808	58	1,405	86	1,491
Total	1,033	1,467	93	2,593	136	2,729
West Leg						
Approach	472	511	38	1,021	43	1,064
Departure	589	433	23	1,045	25	1,070
Total	1,061	944	61	2,066	68	2,134
Total Approaches						
Approach	2,577	3,157	93	5,827	136	5,963
Departure	2,577	3,157	93	5,827	136	5,963
Total	5,154	6,314	186	11,654	272	11,926

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
3 Minnewawa Avenue/Behymer Avenue						
NBL	41	4	0	45	0	45
NBT	212	44	0	256	0	256
NBR	8	3	0	11	0	11
SBL	123	0	3	126	0	126
SBT	225	25	0	250	0	250
SBR	3	0	0	3	0	3
EBL	3	0	0	3	0	3
EBT	114	6	5	125	1	126
EBR	44	2	0	46	0	46
WBL	12	5	0	17	0	17
WBT	145	4	15	164	3	167
WBR	297	0	9	306	0	306
North Leg						
Approach	351	25	3	379	0	379
Departure	512	44	9	565	0	565
Total	863	69	12	944	0	944
South Leg						
Approach	261	51	0	312	0	312
Departure	281	32	0	313	0	313
Total	542	83	0	625	0	625
East Leg						
Approach	454	9	24	487	3	490
Departure	245	9	8	262	1	263
Total	699	18	32	749	4	753
West Leg						
Approach	161	8	5	174	1	175
Departure	189	8	15	212	3	215
Total	350	16	20	386	4	390
Total Approaches						
Approach	1,227	93	32	1,352	4	1,356
Departure	1,227	93	32	1,352	4	1,356
Total	2,454	186	64	2,704	8	2,712

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
3 Minnewawa Avenue/Behymer Avenue						
NBL	46	3	0	49	0	49
NBT	205	38	0	243	0	243
NBR	6	12	0	18	0	18
SBL	95	0	10	105	0	105
SBT	190	49	0	239	0	239
SBR	2	0	0	2	0	2
EBL	3	0	0	3	0	3
EBT	69	6	17	92	4	96
EBR	30	4	0	34	0	34
WBL	6	11	0	17	0	17
WBT	86	7	10	103	2	105
WBR	99	0	6	105	0	105
North Leg						
Approach	287	49	10	346	0	346
Departure	307	38	6	351	0	351
Total	594	87	16	697	0	697
South Leg						
Approach	257	53	0	310	0	310
Departure	226	64	0	290	0	290
Total	483	117	0	600	0	600
East Leg						
Approach	191	18	16	225	2	227
Departure	170	18	27	215	4	219
Total	361	36	43	440	6	446
West Leg						
Approach	102	10	17	129	4	133
Departure	134	10	10	154	2	156
Total	236	20	27	283	6	289
Total Approaches						
Approach	837	130	43	1,010	6	1,016
Departure	837	130	43	1,010	6	1,016
Total	1,674	260	86	2,020	12	2,032

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
4 Minnewawa Avenue/Shepherd Avenue						
NBL	127	64	0	191	0	191
NBT	150	107	0	257	0	257
NBR	41	26	8	75	14	89
SBL	103	102	0	205	0	205
SBT	159	300	0	459	0	459
SBR	29	88	0	117	0	117
EBL	33	51	0	84	0	84
EBT	339	283	19	641	27	668
EBR	152	89	0	241	0	241
WBL	44	38	25	107	41	148
WBT	291	299	55	645	79	724
WBR	91	42	0	133	0	133
North Leg						
Approach	291	490	0	781	0	781
Departure	274	200	0	474	0	474
Total	565	690	0	1,255	0	1,255
South Leg						
Approach	318	197	8	523	14	537
Departure	355	427	25	807	41	848
Total	673	624	33	1,330	55	1,385
East Leg						
Approach	426	379	80	885	120	1,005
Departure	483	411	27	921	41	962
Total	909	790	107	1,806	161	1,967
West Leg						
Approach	524	423	19	966	27	993
Departure	447	451	55	953	79	1,032
Total	971	874	74	1,919	106	2,025
Total Approaches						
Approach	1,559	1,489	107	3,155	161	3,316
Departure	1,559	1,489	107	3,155	161	3,316
Total	3,118	2,978	214	6,310	322	6,632

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
4 Minnewawa Avenue/Shepherd Avenue						
NBL	104	91	0	195	0	195
NBT	152	337	0	489	0	489
NBR	26	50	28	104	46	150
SBL	76	75	0	151	0	151
SBT	142	204	0	346	0	346
SBR	13	90	0	103	0	103
EBL	20	117	0	137	0	137
EBT	390	439	63	892	89	981
EBR	81	72	0	153	0	153
WBL	19	41	17	77	28	105
WBT	342	436	37	815	53	868
WBR	85	116	0	201	0	201
North Leg						
Approach	231	369	0	600	0	600
Departure	257	570	0	827	0	827
Total	488	939	0	1,427	0	1,427
South Leg						
Approach	282	478	28	788	46	834
Departure	242	317	17	576	28	604
Total	524	795	45	1,364	74	1,438
East Leg						
Approach	446	593	54	1,093	81	1,174
Departure	492	564	91	1,147	135	1,282
Total	938	1,157	145	2,240	216	2,456
West Leg						
Approach	491	628	63	1,182	89	1,271
Departure	459	617	37	1,113	53	1,166
Total	950	1,245	100	2,295	142	2,437
Total Approaches						
Approach	1,450	2,068	145	3,663	216	3,879
Departure	1,450	2,068	145	3,663	216	3,879
Total	2,900	4,136	290	7,326	432	7,758

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
5 Clovis Avenue/Shepherd Avenue						
NBL	80	31	0	111	0	111
NBT	59	79	55	193	0	193
NBR	86	19	0	105	27	132
SBL	19	93	40	152	0	152
SBT	71	149	160	380	0	380
SBR	67	54	80	201	0	201
EBL	32	48	28	108	0	108
EBT	337	306	0	643	41	684
EBR	118	16	0	134	0	134
WBL	109	26	0	135	78	213
WBT	294	235	0	529	120	649
WBR	48	51	14	113	0	113
North Leg						
Approach	157	296	280	733	0	733
Departure	139	178	97	414	0	414
Total	296	474	377	1,147	0	1,147
South Leg						
Approach	225	129	55	409	27	436
Departure	298	191	160	649	78	727
Total	523	320	215	1,058	105	1,163
East Leg						
Approach	451	312	14	777	198	975
Departure	442	418	40	900	68	968
Total	893	730	54	1,677	266	1,943
West Leg						
Approach	487	370	28	885	41	926
Departure	441	320	80	841	120	961
Total	928	690	108	1,726	161	1,887
Total Approaches						
Approach	1,320	1,107	377	2,804	266	3,070
Departure	1,320	1,107	377	2,804	266	3,070
Total	2,640	2,214	754	5,608	532	6,140

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
5 Clovis Avenue/Shepherd Avenue						
NBL	140	63	0	203	0	203
NBT	44	167	181	392	0	392
NBR	70	16	0	86	89	175
SBL	10	94	27	131	0	131
SBT	24	133	108	265	0	265
SBR	26	76	54	156	0	156
EBL	32	64	90	186	0	186
EBT	343	384	0	727	136	863
EBR	103	52	0	155	0	155
WBL	77	34	0	111	53	164
WBT	304	489	0	793	81	874
WBR	7	90	45	142	0	142
North Leg						
Approach	60	303	189	552	0	552
Departure	83	321	316	720	0	720
Total	143	624	505	1,272	0	1,272
South Leg						
Approach	254	246	181	681	89	770
Departure	204	219	108	531	53	584
Total	458	465	289	1,212	142	1,354
East Leg						
Approach	388	613	45	1,046	134	1,180
Departure	423	494	27	944	225	1,169
Total	811	1,107	72	1,990	359	2,349
West Leg						
Approach	478	500	90	1,068	136	1,204
Departure	470	628	54	1,152	81	1,233
Total	948	1,128	144	2,220	217	2,437
Total Approaches						
Approach	1,180	1,662	505	3,347	359	3,706
Departure	1,180	1,662	505	3,347	359	3,706
Total	2,360	3,324	1,010	6,694	718	7,412

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
6 Clovis Avenue/Teague Avenue						
NBL	263	2	0	265	0	265
NBT	209	106	51	366	25	391
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	273	224	147	644	72	716
SBR	183	1	12	196	6	202
EBL	73	2	4	79	2	81
EBT	0	0	0	0	0	0
EBR	222	1	0	223	0	223
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	456	225	159	840	78	918
Departure	282	108	55	445	27	472
Total	738	333	214	1,285	105	1,390
South Leg						
Approach	472	108	51	631	25	656
Departure	495	225	147	867	72	939
Total	967	333	198	1,498	97	1,595
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	295	3	4	302	2	304
Departure	446	3	12	461	6	467
Total	741	6	16	763	8	771
Total Approaches						
Approach	1,223	336	214	1,773	105	1,878
Departure	1,223	336	214	1,773	105	1,878
Total	2,446	672	428	3,546	210	3,756

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
6 Clovis Avenue/Teague Avenue						
NBL	156	1	0	157	0	157
NBT	290	271	167	728	82	810
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	223	174	99	496	49	545
SBR	60	2	8	70	4	74
EBL	67	2	14	83	7	90
EBT	0	0	0	0	0	0
EBR	87	2	0	89	0	89
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	283	176	107	566	53	619
Departure	357	273	181	811	89	900
Total	640	449	288	1,377	142	1,519
South Leg						
Approach	446	272	167	885	82	967
Departure	310	176	99	585	49	634
Total	756	448	266	1,470	131	1,601
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	154	4	14	172	7	179
Departure	216	3	8	227	4	231
Total	370	7	22	399	11	410
Total Approaches						
Approach	883	452	288	1,623	142	1,765
Departure	883	452	288	1,623	142	1,765
Total	1,766	904	576	3,246	284	3,530

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
7 Clovis Avenue/Nees Avenue						
NBL	70	83	0	153	0	153
NBT	294	102	41	437	25	462
NBR	20	0	0	20	0	20
SBL	70	0	0	70	0	70
SBT	416	215	120	751	72	823
SBR	42	2	28	72	0	72
EBL	30	1	10	41	0	41
EBT	306	45	0	351	1	352
EBR	194	147	0	341	0	341
WBL	35	0	0	35	32	67
WBT	363	33	0	396	3	399
WBR	180	0	0	180	0	180
North Leg						
Approach	528	217	148	893	72	965
Departure	504	103	51	658	25	683
Total	1,032	320	199	1,551	97	1,648
South Leg						
Approach	384	185	41	610	25	635
Departure	645	362	120	1,127	104	1,231
Total	1,029	547	161	1,737	129	1,866
East Leg						
Approach	578	33	0	611	35	646
Departure	396	45	0	441	1	442
Total	974	78	0	1,052	36	1,088
West Leg						
Approach	530	193	10	733	1	734
Departure	475	118	28	621	3	624
Total	1,005	311	38	1,354	4	1,358
Total Approaches						
Approach	2,020	628	199	2,847	133	2,980
Departure	2,020	628	199	2,847	133	2,980
Total	4,040	1,256	398	5,694	266	5,960

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
7 Clovis Avenue/Nees Avenue						
NBL	124	188	0	312	0	312
NBT	400	264	136	800	82	882
NBR	46	0	0	46	0	46
SBL	43	0	0	43	0	43
SBT	253	170	81	504	49	553
SBR	27	2	19	48	0	48
EBL	22	2	31	55	0	55
EBT	415	53	0	468	4	472
EBR	249	144	0	393	0	393
WBL	22	0	0	22	21	43
WBT	385	62	0	447	2	449
WBR	74	0	0	74	0	74
North Leg						
Approach	323	172	100	595	49	644
Departure	496	266	167	929	82	1,011
Total	819	438	267	1,524	131	1,655
South Leg						
Approach	570	452	136	1,158	82	1,240
Departure	524	314	81	919	70	989
Total	1,094	766	217	2,077	152	2,229
East Leg						
Approach	481	62	0	543	23	566
Departure	504	53	0	557	4	561
Total	985	115	0	1,100	27	1,127
West Leg						
Approach	686	199	31	916	4	920
Departure	536	252	19	807	2	809
Total	1,222	451	50	1,723	6	1,729
Total Approaches						
Approach	2,060	885	267	3,212	158	3,370
Departure	2,060	885	267	3,212	158	3,370
Total	4,120	1,770	534	6,424	316	6,740

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
8 Clovis Avenue/Alluvial Avenue						
NBL	127	0	0	127	0	127
NBT	282	155	39	476	25	501
NBR	61	0	0	61	0	61
SBL	126	28	0	154	0	154
SBT	576	325	114	1,015	104	1,119
SBR	34	0	6	40	0	40
EBL	13	0	2	15	0	15
EBT	269	15	0	284	1	285
EBR	153	1	0	154	0	154
WBL	44	0	0	44	0	44
WBT	407	8	0	415	3	418
WBR	89	15	0	104	0	104
North Leg						
Approach	736	353	120	1,209	104	1,313
Departure	384	170	41	595	25	620
Total	1,120	523	161	1,804	129	1,933
South Leg						
Approach	470	155	39	664	25	689
Departure	773	326	114	1,213	104	1,317
Total	1,243	481	153	1,877	129	2,006
East Leg						
Approach	540	23	0	563	3	566
Departure	456	43	0	499	1	500
Total	996	66	0	1,062	4	1,066
West Leg						
Approach	435	16	2	453	1	454
Departure	568	8	6	582	3	585
Total	1,003	24	8	1,035	4	1,039
Total Approaches						
Approach	2,181	547	161	2,889	133	3,022
Departure	2,181	547	161	2,889	133	3,022
Total	4,362	1,094	322	5,778	266	6,044

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
8 Clovis Avenue/Alluvial Avenue						
NBL	146	1	0	147	0	147
NBT	558	395	129	1,082	82	1,164
NBR	67	0	0	67	0	67
SBL	77	30	0	107	0	107
SBT	454	264	77	795	70	865
SBR	13	0	4	17	0	17
EBL	15	0	7	22	0	22
EBT	342	11	0	353	4	357
EBR	175	1	0	176	0	176
WBL	36	0	0	36	0	36
WBT	302	18	0	320	2	322
WBR	77	39	0	116	0	116
North Leg						
Approach	544	294	81	919	70	989
Departure	650	434	136	1,220	82	1,302
Total	1,194	728	217	2,139	152	2,291
South Leg						
Approach	771	396	129	1,296	82	1,378
Departure	665	265	77	1,007	70	1,077
Total	1,436	661	206	2,303	152	2,455
East Leg						
Approach	415	57	0	472	2	474
Departure	486	41	0	527	4	531
Total	901	98	0	999	6	1,005
West Leg						
Approach	532	12	7	551	4	555
Departure	461	19	4	484	2	486
Total	993	31	11	1,035	6	1,041
Total Approaches						
Approach	2,262	759	217	3,238	158	3,396
Departure	2,262	759	217	3,238	158	3,396
Total	4,524	1,518	434	6,476	316	6,792

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
9 State Route 168 Westbound Ramps/Herndon Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	66	7	0	73	0	73
SBT	0	0	0	0	0	0
SBR	729	0	0	729	0	729
EBL	0	0	0	0	0	0
EBT	957	88	2	1,047	2	1,049
EBR	491	20	0	511	0	511
WBL	0	0	0	0	0	0
WBT	1,454	70	6	1,530	6	1,536
WBR	576	152	74	802	85	887
North Leg						
Approach	795	7	0	802	0	802
Departure	576	152	74	802	85	887
Total	1,371	159	74	1,604	85	1,689
South Leg						
Approach	0	0	0	0	0	0
Departure	491	20	0	511	0	511
Total	491	20	0	511	0	511
East Leg						
Approach	2,030	222	80	2,332	91	2,423
Departure	1,023	95	2	1,120	2	1,122
Total	3,053	317	82	3,452	93	3,545
West Leg						
Approach	1,448	108	2	1,558	2	1,560
Departure	2,183	70	6	2,259	6	2,265
Total	3,631	178	8	3,817	8	3,825
Total Approaches						
Approach	4,273	337	82	4,692	93	4,785
Departure	4,273	337	82	4,692	93	4,785
Total	8,546	674	164	9,384	186	9,570

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
9 State Route 168 Westbound Ramps/Herndon Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	66	7	0	73	0	73
SBT	0	0	0	0	0	0
SBR	342	0	0	342	0	342
EBL	0	0	0	0	0	0
EBT	1,653	88	7	1,748	7	1,755
EBR	529	16	0	545	0	545
WBL	0	0	0	0	0	0
WBT	1,451	136	4	1,591	4	1,595
WBR	540	119	50	709	57	766
North Leg						
Approach	408	7	0	415	0	415
Departure	540	119	50	709	57	766
Total	948	126	50	1,124	57	1,181
South Leg						
Approach	0	0	0	0	0	0
Departure	529	16	0	545	0	545
Total	529	16	0	545	0	545
East Leg						
Approach	1,991	255	54	2,300	61	2,361
Departure	1,719	95	7	1,821	7	1,828
Total	3,710	350	61	4,121	68	4,189
West Leg						
Approach	2,182	104	7	2,293	7	2,300
Departure	1,793	136	4	1,933	4	1,937
Total	3,975	240	11	4,226	11	4,237
Total Approaches						
Approach	4,581	366	61	5,008	68	5,076
Departure	4,581	366	61	5,008	68	5,076
Total	9,162	732	122	10,016	136	10,152

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
10 State Route 168 Eastbound Ramps/Herndon Avenue						
NBL	454	9	0	463	0	463
NBT	0	0	0	0	0	0
NBR	479	75	25	579	19	598
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	810	85	2	897	2	899
EBR	213	10	0	223	0	223
WBL	0	0	0	0	0	0
WBT	1,576	208	80	1,864	91	1,955
WBR	79	4	0	83	0	83
North Leg						
Approach	0	0	0	0	0	0
Departure	79	4	0	83	0	83
Total	79	4	0	83	0	83
South Leg						
Approach	933	84	25	1,042	19	1,061
Departure	213	10	0	223	0	223
Total	1,146	94	25	1,265	19	1,284
East Leg						
Approach	1,655	212	80	1,947	91	2,038
Departure	1,289	160	27	1,476	21	1,497
Total	2,944	372	107	3,423	112	3,535
West Leg						
Approach	1,023	95	2	1,120	2	1,122
Departure	2,030	217	80	2,327	91	2,418
Total	3,053	312	82	3,447	93	3,540
Total Approaches						
Approach	3,611	391	107	4,109	112	4,221
Departure	3,611	391	107	4,109	112	4,221
Total	7,222	782	214	8,218	224	8,442

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
10 State Route 168 Eastbound Ramps/Herndon Avenue						
NBL	497	23	0	520	0	520
NBT	0	0	0	0	0	0
NBR	677	165	84	926	61	987
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	1,359	89	7	1,455	7	1,462
EBR	360	7	0	367	0	367
WBL	0	0	0	0	0	0
WBT	1,494	213	54	1,761	61	1,822
WBR	184	15	0	199	0	199
North Leg						
Approach	0	0	0	0	0	0
Departure	184	15	0	199	0	199
Total	184	15	0	199	0	199
South Leg						
Approach	1,174	188	84	1,446	61	1,507
Departure	360	7	0	367	0	367
Total	1,534	195	84	1,813	61	1,874
East Leg						
Approach	1,678	228	54	1,960	61	2,021
Departure	2,036	254	91	2,381	68	2,449
Total	3,714	482	145	4,341	129	4,470
West Leg						
Approach	1,719	96	7	1,822	7	1,829
Departure	1,991	236	54	2,281	61	2,342
Total	3,710	332	61	4,103	68	4,171
Total Approaches						
Approach	4,571	512	145	5,228	129	5,357
Departure	4,571	512	145	5,228	129	5,357
Total	9,142	1,024	290	10,456	258	10,714

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
11 Clovis Avenue/Herndon Avenue						
NBL	232	18	0	250	0	250
NBT	255	41	8	304	3	307
NBR	120	2	0	122	0	122
SBL	161	24	9	194	3	197
SBT	283	93	25	401	9	410
SBR	402	151	80	633	91	724
EBL	243	64	28	335	21	356
EBT	832	55	0	887	0	887
EBR	214	35	0	249	0	249
WBL	148	4	0	152	0	152
WBT	1,021	42	0	1,063	0	1,063
WBR	157	16	3	176	1	177
North Leg						
Approach	846	268	114	1,228	103	1,331
Departure	655	121	39	815	25	840
Total	1,501	389	153	2,043	128	2,171
South Leg						
Approach	607	61	8	676	3	679
Departure	645	132	25	802	9	811
Total	1,252	193	33	1,478	12	1,490
East Leg						
Approach	1,326	62	3	1,391	1	1,392
Departure	1,113	81	9	1,203	3	1,206
Total	2,439	143	12	2,594	4	2,598
West Leg						
Approach	1,289	154	28	1,471	21	1,492
Departure	1,655	211	80	1,946	91	2,037
Total	2,944	365	108	3,417	112	3,529
Total Approaches						
Approach	4,068	545	153	4,766	128	4,894
Departure	4,068	545	153	4,766	128	4,894
Total	8,136	1,090	306	9,532	256	9,788

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
11 Clovis Avenue/Herndon Avenue						
NBL	350	39	0	389	0	389
NBT	402	119	28	549	11	560
NBR	276	4	0	280	0	280
SBL	271	37	6	314	2	316
SBT	262	76	17	355	6	361
SBR	266	103	54	423	61	484
EBL	366	153	90	609	68	677
EBT	1,368	60	0	1,428	0	1,428
EBR	302	28	0	330	0	330
WBL	316	3	0	319	0	319
WBT	1,062	75	0	1,137	0	1,137
WBR	132	57	10	199	4	203
North Leg						
Approach	799	216	77	1,092	69	1,161
Departure	900	329	128	1,357	83	1,440
Total	1,699	545	205	2,449	152	2,601
South Leg						
Approach	1,028	162	28	1,218	11	1,229
Departure	880	107	17	1,004	6	1,010
Total	1,908	269	45	2,222	17	2,239
East Leg						
Approach	1,510	135	10	1,655	4	1,659
Departure	1,915	101	6	2,022	2	2,024
Total	3,425	236	16	3,677	6	3,683
West Leg						
Approach	2,036	241	90	2,367	68	2,435
Departure	1,678	217	54	1,949	61	2,010
Total	3,714	458	144	4,316	129	4,445
Total Approaches						
Approach	5,373	754	205	6,332	152	6,484
Departure	5,373	754	205	6,332	152	6,484
Total	10,746	1,508	410	12,664	304	12,968

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
12 Sunnyside Avenue/Behymer Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	2	0	0	2	0	2
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	253	5	0	258	1	259
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	438	3	0	441	3	444
WBR	0	0	0	0	0	0
North Leg						
Approach	2	0	0	2	0	2
Departure	0	0	0	0	0	0
Total	2	0	0	2	0	2
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	438	3	0	441	3	444
Departure	254	5	0	259	1	261
Total	692	8	0	700	4	705
West Leg						
Approach	253	5	0	258	1	259
Departure	438	3	0	441	3	444
Total	691	8	0	699	4	703
Total Approaches						
Approach	692	8	0	700	4	705
Departure	692	8	0	700	4	705
Total	1,385	16	0	1,401	8	1,410

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
12 Sunnyside Avenue/Behymer Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	179	4	0	183	4	187
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	198	5	0	203	2	205
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	198	5	0	203	2	205
Departure	179	4	0	183	4	187
Total	377	9	0	386	6	392
West Leg						
Approach	179	4	0	183	4	187
Departure	198	5	0	203	2	205
Total	377	9	0	386	6	392
Total Approaches						
Approach	377	9	0	386	6	392
Departure	377	9	0	386	6	392
Total	754	18	0	772	12	784

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
13 Sunnyside Avenue/Shepherd Avenue						
NBL	54	53	3	110	0	110
NBT	11	0	0	11	4	15
NBR	27	11	0	38	11	49
SBL	2	0	0	2	22	24
SBT	14	0	0	14	44	58
SBR	9	24	0	33	66	99
EBL	8	32	0	40	23	63
EBT	325	339	31	695	46	741
EBR	106	80	9	195	0	195
WBL	31	4	0	35	32	67
WBT	371	207	11	589	132	721
WBR	3	0	0	3	8	11
North Leg						
Approach	25	24	0	49	132	181
Departure	22	32	0	54	35	89
Total	47	56	0	103	167	270
South Leg						
Approach	92	64	3	159	15	174
Departure	151	84	9	244	76	320
Total	243	148	12	403	91	494
East Leg						
Approach	405	211	11	627	172	799
Departure	354	350	31	735	79	814
Total	759	561	42	1,362	251	1,613
West Leg						
Approach	439	451	40	930	69	999
Departure	434	284	14	732	198	930
Total	873	735	54	1,662	267	1,929
Total Approaches						
Approach	961	750	54	1,765	388	2,153
Departure	961	750	54	1,765	388	2,153
Total	1,922	1,500	108	3,530	776	4,306

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
13 Sunnyside Avenue/Shepherd Avenue						
NBL	80	93	10	183	0	183
NBT	11	0	0	11	14	25
NBR	31	7	0	38	36	74
SBL	4	0	0	4	15	19
SBT	13	0	0	13	30	43
SBR	9	54	0	63	45	108
EBL	9	49	0	58	75	133
EBT	342	373	21	736	150	886
EBR	70	84	6	160	0	160
WBL	29	12	0	41	21	62
WBT	296	495	35	826	89	915
WBR	6	0	0	6	25	31
North Leg						
Approach	26	54	0	80	90	170
Departure	26	49	0	75	114	189
Total	52	103	0	155	204	359
South Leg						
Approach	122	100	10	232	50	282
Departure	112	96	6	214	51	265
Total	234	196	16	446	101	547
East Leg						
Approach	331	507	35	873	135	1,008
Departure	377	380	21	778	201	979
Total	708	887	56	1,651	336	1,987
West Leg						
Approach	421	506	27	954	225	1,179
Departure	385	642	45	1,072	134	1,206
Total	806	1,148	72	2,026	359	2,385
Total Approaches						
Approach	900	1,167	72	2,139	500	2,639
Departure	900	1,167	72	2,139	500	2,639
Total	1,800	2,334	144	4,278	1,000	5,278

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
14 Sunnyside Avenue/Teague Avenue						
NBL	2	0	0	2	0	2
NBT	74	15	3	92	15	107
NBR	5	9	0	14	0	14
SBL	5	10	0	15	0	15
SBT	139	42	9	190	76	266
SBR	0	0	0	0	0	0
EBL	5	0	0	5	0	5
EBT	4	0	0	4	0	4
EBR	1	0	0	1	0	1
WBL	17	29	0	46	0	46
WBT	6	0	0	6	0	6
WBR	10	30	0	40	0	40
North Leg						
Approach	144	52	9	205	76	281
Departure	89	45	3	137	15	152
Total	233	97	12	342	91	433
South Leg						
Approach	81	24	3	108	15	123
Departure	157	71	9	237	76	313
Total	238	95	12	345	91	436
East Leg						
Approach	33	59	0	92	0	92
Departure	14	19	0	33	0	33
Total	47	78	0	125	0	125
West Leg						
Approach	10	0	0	10	0	10
Departure	8	0	0	8	0	8
Total	18	0	0	18	0	18
Total Approaches						
Approach	268	135	12	415	91	506
Departure	268	135	12	415	91	506
Total	536	270	24	830	182	1,012

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
14 Sunnyside Avenue/Teague Avenue						
NBL	0	0	0	0	0	0
NBT	120	38	10	168	50	218
NBR	7	32	0	39	0	39
SBL	2	33	0	35	0	35
SBT	112	32	6	150	51	201
SBR	1	0	0	1	0	1
EBL	1	0	0	1	0	1
EBT	1	0	0	1	0	1
EBR	3	0	0	3	0	3
WBL	8	19	0	27	0	27
WBT	3	0	0	3	0	3
WBR	12	19	0	31	0	31
North Leg						
Approach	115	65	6	186	51	237
Departure	133	57	10	200	50	250
Total	248	122	16	386	101	487
South Leg						
Approach	127	70	10	207	50	257
Departure	123	51	6	180	51	231
Total	250	121	16	387	101	488
East Leg						
Approach	23	38	0	61	0	61
Departure	10	65	0	75	0	75
Total	33	103	0	136	0	136
West Leg						
Approach	5	0	0	5	0	5
Departure	4	0	0	4	0	4
Total	9	0	0	9	0	9
Total Approaches						
Approach	270	173	16	459	101	560
Departure	270	173	16	459	101	560
Total	540	346	32	918	202	1,120

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
15 Sunnyside Avenue/Nees Avenue						
NBL	137	0	0	137	0	137
NBT	57	13	3	73	15	88
NBR	17	0	0	17	0	17
SBL	22	0	0	22	0	22
SBT	115	43	9	167	44	211
SBR	34	14	0	48	32	80
EBL	12	5	0	17	0	17
EBT	269	12	0	281	0	281
EBR	85	0	0	85	0	85
WBL	25	0	0	25	0	25
WBT	367	6	0	373	0	373
WBR	14	0	0	14	0	14
North Leg						
Approach	171	57	9	237	76	313
Departure	83	18	3	104	15	119
Total	254	75	12	341	91	432
South Leg						
Approach	211	13	3	227	15	242
Departure	225	43	9	277	44	321
Total	436	56	12	504	59	563
East Leg						
Approach	406	6	0	412	0	412
Departure	308	12	0	320	0	320
Total	714	18	0	732	0	732
West Leg						
Approach	366	17	0	383	0	383
Departure	538	20	0	558	32	590
Total	904	37	0	941	32	973
Total Approaches						
Approach	1,154	93	12	1,259	91	1,350
Departure	1,154	93	12	1,259	91	1,350
Total	2,308	186	24	2,518	182	2,700

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
15 Sunnyside Avenue/Nees Avenue						
NBL	115	0	0	115	0	115
NBT	98	39	10	147	50	197
NBR	35	0	0	35	0	35
SBL	17	0	0	17	0	17
SBT	90	29	6	125	30	155
SBR	19	9	0	28	21	49
EBL	24	15	0	39	0	39
EBT	364	11	0	375	0	375
EBR	74	0	0	74	0	74
WBL	32	0	0	32	0	32
WBT	337	17	0	354	0	354
WBR	15	0	0	15	0	15
North Leg						
Approach	126	38	6	170	51	221
Departure	137	54	10	201	50	251
Total	263	92	16	371	101	472
South Leg						
Approach	248	39	10	297	50	347
Departure	196	29	6	231	30	261
Total	444	68	16	528	80	608
East Leg						
Approach	384	17	0	401	0	401
Departure	416	11	0	427	0	427
Total	800	28	0	828	0	828
West Leg						
Approach	462	26	0	488	0	488
Departure	471	26	0	497	21	518
Total	933	52	0	985	21	1,006
Total Approaches						
Approach	1,220	120	16	1,356	101	1,457
Departure	1,220	120	16	1,356	101	1,457
Total	2,440	240	32	2,712	202	2,914

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
16 Fowler Avenue/Behymer Avenue						
NBL	424	1	0	425	3	428
NBT	75	7	0	82	0	82
NBR	1	0	0	1	0	1
SBL	0	0	0	0	0	0
SBT	80	2	0	82	0	82
SBR	16	0	0	16	0	16
EBL	10	0	0	10	0	10
EBT	0	1	0	1	0	1
EBR	233	1	0	234	1	235
WBL	4	0	0	4	0	4
WBT	8	1	0	9	0	9
WBR	0	0	0	0	0	0
North Leg						
Approach	96	2	0	98	0	98
Departure	85	7	0	92	0	92
Total	181	9	0	190	0	190
South Leg						
Approach	500	8	0	508	3	511
Departure	317	3	0	320	1	321
Total	817	11	0	828	4	832
East Leg						
Approach	12	1	0	13	0	13
Departure	1	1	0	2	0	2
Total	13	2	0	15	0	15
West Leg						
Approach	243	2	0	245	1	246
Departure	448	2	0	450	3	453
Total	691	4	0	695	4	699
Total Approaches						
Approach	851	13	0	864	4	868
Departure	851	13	0	864	4	868
Total	1,702	26	0	1,728	8	1,736

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
16 Fowler Avenue/Behymer Avenue						
NBL	163	1	0	164	2	166
NBT	79	5	0	84	0	84
NBR	3	0	0	3	0	3
SBL	1	0	0	1	0	1
SBT	59	9	0	68	0	68
SBR	5	0	0	5	0	5
EBL	7	0	0	7	0	7
EBT	3	1	0	4	0	4
EBR	176	1	0	177	4	181
WBL	4	0	0	4	0	4
WBT	4	1	0	5	0	5
WBR	1	0	0	1	0	1
North Leg						
Approach	65	9	0	74	0	74
Departure	87	5	0	92	0	92
Total	152	14	0	166	0	166
South Leg						
Approach	245	6	0	251	2	253
Departure	239	10	0	249	4	253
Total	484	16	0	500	6	506
East Leg						
Approach	9	1	0	10	0	10
Departure	7	1	0	8	0	8
Total	16	2	0	18	0	18
West Leg						
Approach	186	2	0	188	4	192
Departure	172	2	0	174	2	176
Total	358	4	0	362	6	368
Total Approaches						
Approach	505	18	0	523	6	529
Departure	505	18	0	523	6	529
Total	1,010	36	0	1,046	12	1,058

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
17 Fowler Avenue/Ticonderoga						
NBL	9	0	0	9	0	9
NBT	488	8	0	496	0	496
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	310	3	0	313	0	313
SBR	7	0	0	7	1	8
EBL	7	0	0	7	3	10
EBT	0	0	0	0	0	0
EBR	8	0	0	8	16	24
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	317	3	0	320	1	321
Departure	495	8	0	503	3	506
Total	812	11	0	823	4	827
South Leg						
Approach	497	8	0	505	0	505
Departure	318	3	0	321	16	337
Total	815	11	0	826	16	842
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	15	0	0	15	19	34
Departure	16	0	0	16	1	17
Total	31	0	0	31	20	51
Total Approaches						
Approach	829	11	0	840	20	860
Departure	829	11	0	840	20	860
Total	1,658	22	0	1,680	40	1,720

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
17 Fowler Avenue/Ticonderoga						
NBL	9	0	0	9	0	9
NBT	238	6	0	244	0	244
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	238	10	0	248	0	248
SBR	2	0	0	2	4	6
EBL	3	0	0	3	2	5
EBT	0	0	0	0	0	0
EBR	6	0	0	6	11	17
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	240	10	0	250	4	254
Departure	241	6	0	247	2	249
Total	481	16	0	497	6	503
South Leg						
Approach	247	6	0	253	0	253
Departure	244	10	0	254	11	265
Total	491	16	0	507	11	518
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	9	0	0	9	13	22
Departure	11	0	0	11	4	15
Total	20	0	0	20	17	37
Total Approaches						
Approach	496	16	0	512	17	529
Departure	496	16	0	512	17	529
Total	992	32	0	1,024	34	1,058

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
18 Fowler Avenue/Shepherd Avenue						
NBL	141	47	4	192	16	208
NBT	92	5	0	97	0	97
NBR	34	4	0	38	0	38
SBL	185	0	0	185	0	185
SBT	125	1	0	126	16	142
SBR	18	9	0	27	0	27
EBL	20	12	0	32	0	32
EBT	281	253	18	552	22	574
EBR	51	77	12	140	0	140
WBL	36	1	0	37	0	37
WBT	279	154	6	439	8	447
WBR	370	0	0	370	0	370
North Leg						
Approach	328	10	0	338	16	354
Departure	482	17	0	499	0	499
Total	810	27	0	837	16	853
South Leg						
Approach	267	56	4	327	16	343
Departure	212	79	12	303	16	319
Total	479	135	16	630	32	662
East Leg						
Approach	685	155	6	846	8	854
Departure	500	257	18	775	22	797
Total	1,185	412	24	1,621	30	1,651
West Leg						
Approach	352	342	30	724	22	746
Departure	438	210	10	658	24	682
Total	790	552	40	1,382	46	1,428
Total Approaches						
Approach	1,632	563	40	2,235	62	2,297
Departure	1,632	563	40	2,235	62	2,297
Total	3,264	1,126	80	4,470	124	4,594

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
18 Fowler Avenue/Shepherd Avenue						
NBL	109	105	14	228	54	282
NBT	119	3	0	122	0	122
NBR	73	3	0	76	0	76
SBL	110	0	0	110	0	110
SBT	112	6	0	118	11	129
SBR	14	22	0	36	0	36
EBL	23	20	0	43	0	43
EBT	276	282	12	570	15	585
EBR	75	78	8	161	0	161
WBL	47	5	0	52	0	52
WBT	240	373	21	634	25	659
WBR	128	0	0	128	0	128
North Leg						
Approach	236	28	0	264	11	275
Departure	270	23	0	293	0	293
Total	506	51	0	557	11	568
South Leg						
Approach	301	111	14	426	54	480
Departure	234	89	8	331	11	342
Total	535	200	22	757	65	822
East Leg						
Approach	415	378	21	814	25	839
Departure	459	285	12	756	15	771
Total	874	663	33	1,570	40	1,610
West Leg						
Approach	374	380	20	774	15	789
Departure	363	500	35	898	79	977
Total	737	880	55	1,672	94	1,766
Total Approaches						
Approach	1,326	897	55	2,278	105	2,383
Departure	1,326	897	55	2,278	105	2,383
Total	2,652	1,794	110	4,556	210	4,766

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
19 Fowler Avenue/Teague Avenue						
NBL	3	4	0	7	0	7
NBT	164	18	4	186	16	202
NBR	7	0	0	7	0	7
SBL	19	0	0	19	0	19
SBT	238	51	12	301	16	317
SBR	10	41	0	51	0	51
EBL	4	21	0	25	0	25
EBT	6	0	0	6	0	6
EBR	6	13	0	19	0	19
WBL	17	0	0	17	0	17
WBT	8	0	0	8	0	8
WBR	30	0	0	30	0	30
North Leg						
Approach	267	92	12	371	16	387
Departure	198	39	4	241	16	257
Total	465	131	16	612	32	644
South Leg						
Approach	174	22	4	200	16	216
Departure	261	64	12	337	16	353
Total	435	86	16	537	32	569
East Leg						
Approach	55	0	0	55	0	55
Departure	32	0	0	32	0	32
Total	87	0	0	87	0	87
West Leg						
Approach	16	34	0	50	0	50
Departure	21	45	0	66	0	66
Total	37	79	0	116	0	116
Total Approaches						
Approach	512	148	16	676	32	708
Departure	512	148	16	676	32	708
Total	1,024	296	32	1,352	64	1,416

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
19 Fowler Avenue/Teague Avenue						
NBL	9	14	0	23	0	23
NBT	309	49	14	372	54	426
NBR	13	0	0	13	0	13
SBL	9	0	0	9	0	9
SBT	247	38	8	293	11	304
SBR	6	34	0	40	0	40
EBL	3	47	0	50	0	50
EBT	3	0	0	3	0	3
EBR	5	8	0	13	0	13
WBL	5	0	0	5	0	5
WBT	7	0	0	7	0	7
WBR	15	0	0	15	0	15
North Leg						
Approach	262	72	8	342	11	353
Departure	327	96	14	437	54	491
Total	589	168	22	779	65	844
South Leg						
Approach	331	63	14	408	54	462
Departure	257	46	8	311	11	322
Total	588	109	22	719	65	784
East Leg						
Approach	27	0	0	27	0	27
Departure	25	0	0	25	0	25
Total	52	0	0	52	0	52
West Leg						
Approach	11	55	0	66	0	66
Departure	22	48	0	70	0	70
Total	33	103	0	136	0	136
Total Approaches						
Approach	631	190	22	843	65	908
Departure	631	190	22	843	65	908
Total	1,262	380	44	1,686	130	1,816

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
20 Fowler Avenue/Nees Avenue						
NBL	111	0	0	111	0	111
NBT	123	17	3	143	15	158
NBR	37	0	0	37	0	37
SBL	28	5	3	36	3	39
SBT	215	45	9	269	13	282
SBR	32	0	0	32	0	32
EBL	20	0	0	20	0	20
EBT	202	12	0	214	0	214
EBR	87	0	0	87	0	87
WBL	73	0	0	73	0	73
WBT	272	6	0	278	0	278
WBR	32	3	1	36	1	37
North Leg						
Approach	275	50	12	337	16	353
Departure	175	20	4	199	16	215
Total	450	70	16	536	32	568
South Leg						
Approach	271	17	3	291	15	306
Departure	375	45	9	429	13	442
Total	646	62	12	720	28	748
East Leg						
Approach	377	9	1	387	1	388
Departure	267	17	3	287	3	290
Total	644	26	4	674	4	678
West Leg						
Approach	309	12	0	321	0	321
Departure	415	6	0	421	0	421
Total	724	18	0	742	0	742
Total Approaches						
Approach	1,232	88	16	1,336	32	1,368
Departure	1,232	88	16	1,336	32	1,368
Total	2,464	176	32	2,672	64	2,736

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
20 Fowler Avenue/Nees Avenue						
NBL	163	0	0	163	0	163
NBT	270	40	10	320	50	370
NBR	62	0	0	62	0	62
SBL	34	4	2	40	2	42
SBT	201	32	6	239	8	247
SBR	36	0	0	36	0	36
EBL	30	0	0	30	0	30
EBT	269	11	0	280	0	280
EBR	114	0	0	114	0	114
WBL	37	0	0	37	0	37
WBT	222	18	0	240	0	240
WBR	33	6	3	42	4	46
North Leg						
Approach	271	36	8	315	10	325
Departure	333	46	13	392	54	446
Total	604	82	21	707	64	771
South Leg						
Approach	495	40	10	545	50	595
Departure	352	32	6	390	8	398
Total	847	72	16	935	58	993
East Leg						
Approach	292	24	3	319	4	323
Departure	365	15	2	382	2	384
Total	657	39	5	701	6	707
West Leg						
Approach	413	11	0	424	0	424
Departure	421	18	0	439	0	439
Total	834	29	0	863	0	863
Total Approaches						
Approach	1,471	111	21	1,603	64	1,667
Departure	1,471	111	21	1,603	64	1,667
Total	2,942	222	42	3,206	128	3,334

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
21 Fowler Avenue/State Route 168 Westbound Ramps						
NBL	497	19	0	516	0	516
NBT	418	15	2	435	15	450
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	324	14	6	344	13	357
SBR	389	19	0	408	0	408
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	134	1	0	135	0	135
WBT	0	0	0	0	0	0
WBR	31	0	0	31	0	31
North Leg						
Approach	713	33	6	752	13	765
Departure	449	15	2	466	15	481
Total	1,162	48	8	1,218	28	1,246
South Leg						
Approach	915	34	2	951	15	966
Departure	458	15	6	479	13	492
Total	1,373	49	8	1,430	28	1,458
East Leg						
Approach	165	1	0	166	0	166
Departure	0	0	0	0	0	0
Total	165	1	0	166	0	166
West Leg						
Approach	0	0	0	0	0	0
Departure	886	38	0	924	0	924
Total	886	38	0	924	0	924
Total Approaches						
Approach	1,793	68	8	1,869	28	1,897
Departure	1,793	68	8	1,869	28	1,897
Total	3,586	136	16	3,738	56	3,794

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
21 Fowler Avenue/State Route 168 Westbound Ramps						
NBL	430	12	0	442	0	442
NBT	738	34	7	779	50	829
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	395	11	4	410	8	418
SBR	183	12	0	195	0	195
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	159	4	0	163	0	163
WBT	0	0	0	0	0	0
WBR	15	0	0	15	0	15
North Leg						
Approach	578	23	4	605	8	613
Departure	753	34	7	794	50	844
Total	1,331	57	11	1,399	58	1,457
South Leg						
Approach	1,168	46	7	1,221	50	1,271
Departure	554	15	4	573	8	581
Total	1,722	61	11	1,794	58	1,852
East Leg						
Approach	174	4	0	178	0	178
Departure	0	0	0	0	0	0
Total	174	4	0	178	0	178
West Leg						
Approach	0	0	0	0	0	0
Departure	613	24	0	637	0	637
Total	613	24	0	637	0	637
Total Approaches						
Approach	1,920	73	11	2,004	58	2,062
Departure	1,920	73	11	2,004	58	2,062
Total	3,840	146	22	4,008	116	4,124

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
22 Fowler Avenue/State Route 168 Eastbound Ramps						
NBL	0	0	0	0	0	0
NBT	774	27	2	803	4	807
NBR	92	4	0	96	0	96
SBL	14	0	0	14	0	14
SBT	444	16	6	466	13	479
SBR	0	0	0	0	0	0
EBL	141	7	0	148	11	159
EBT	0	0	0	0	0	0
EBR	332	6	0	338	0	338
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	458	16	6	480	13	493
Departure	915	34	2	951	15	966
Total	1,373	50	8	1,431	28	1,459
South Leg						
Approach	866	31	2	899	4	903
Departure	776	22	6	804	13	817
Total	1,642	53	8	1,703	17	1,720
East Leg						
Approach	0	0	0	0	0	0
Departure	106	4	0	110	0	110
Total	106	4	0	110	0	110
West Leg						
Approach	473	13	0	486	11	497
Departure	0	0	0	0	0	0
Total	473	13	0	486	11	497
Total Approaches						
Approach	1,797	60	8	1,865	28	1,893
Departure	1,797	60	8	1,865	28	1,893
Total	3,594	120	16	3,730	56	3,786

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
22 Fowler Avenue/State Route 168 Eastbound Ramps						
NBL	0	0	0	0	0	0
NBT	857	24	7	888	14	902
NBR	294	2	0	296	0	296
SBL	23	0	0	23	0	23
SBT	531	15	4	550	8	558
SBR	0	0	0	0	0	0
EBL	311	21	0	332	36	368
EBT	0	0	0	0	0	0
EBR	585	20	0	605	0	605
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	554	15	4	573	8	581
Departure	1,168	45	7	1,220	50	1,270
Total	1,722	60	11	1,793	58	1,851
South Leg						
Approach	1,151	26	7	1,184	14	1,198
Departure	1,116	35	4	1,155	8	1,163
Total	2,267	61	11	2,339	22	2,361
East Leg						
Approach	0	0	0	0	0	0
Departure	317	2	0	319	0	319
Total	317	2	0	319	0	319
West Leg						
Approach	896	41	0	937	36	973
Departure	0	0	0	0	0	0
Total	896	41	0	937	36	973
Total Approaches						
Approach	2,601	82	11	2,694	58	2,752
Departure	2,601	82	11	2,694	58	2,752
Total	5,202	164	22	5,388	116	5,504

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	**Cumulative Project Trips**	**Tract Map 6343 Trips**	**Near-Term (2028) Without Project**	**Project Trips**	**Near-Term (2028) Plus Project**
23 Sunnyside Avenue/Project Driveway 1						
NBL	0	0	0	0	0	0
NBT	22	32	0	54	10	64
NBR	0	0	0	0	7	7
SBL	0	0	0	0	0	0
SBT	25	24	0	49	28	77
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	19	19
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	25	24	0	49	28	77
Departure	22	32	0	54	10	64
Total	47	56	0	103	38	141
South Leg						
Approach	22	32	0	54	17	71
Departure	25	24	0	49	47	96
Total	47	56	0	103	64	167
East Leg						
Approach	0	0	0	0	19	19
Departure	0	0	0	0	7	7
Total	0	0	0	0	26	26
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	47	56	0	103	64	167
Departure	47	56	0	103	64	167
Total	94	112	0	206	128	334

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	**Cumulative Project Trips**	**Tract Map 6343 Trips**	**Near-Term (2028) Without Project**	**Project Trips**	**Near-Term (2028) Plus Project**
23 Sunnyside Avenue/Project Driveway 1						
NBL	0	0	0	0	0	0
NBT	26	49	0	75	32	107
NBR	0	0	0	0	21	21
SBL	0	0	0	0	0	0
SBT	26	54	0	80	19	99
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	13	13
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	26	54	0	80	19	99
Departure	26	49	0	75	32	107
Total	52	103	0	155	51	206
South Leg						
Approach	26	49	0	75	53	128
Departure	26	54	0	80	32	112
Total	52	103	0	155	85	240
East Leg						
Approach	0	0	0	0	13	13
Departure	0	0	0	0	21	21
Total	0	0	0	0	34	34
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	52	103	0	155	85	240
Departure	52	103	0	155	85	240
Total	104	206	0	310	170	480

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
24 Sunnyside Avenue/Project Driveway 2						
NBL	0	0	0	0	0	0
NBT	22	32	0	54	16	70
NBR	0	0	0	0	19	19
SBL	0	0	0	0	0	0
SBT	25	24	0	49	47	96
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	85	85
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	25	24	0	49	47	96
Departure	22	32	0	54	16	70
Total	47	56	0	103	63	166
South Leg						
Approach	22	32	0	54	35	89
Departure	25	24	0	49	132	181
Total	47	56	0	103	167	270
East Leg						
Approach	0	0	0	0	85	85
Departure	0	0	0	0	19	19
Total	0	0	0	0	104	104
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	47	56	0	103	167	270
Departure	47	56	0	103	167	270
Total	94	112	0	206	334	540

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
24 Sunnyside Avenue/Project Driveway 2						
NBL	0	0	0	0	0	0
NBT	26	49	0	75	54	129
NBR	0	0	0	0	61	61
SBL	0	0	0	0	0	0
SBT	26	54	0	80	32	112
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	57	57
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	26	54	0	80	32	112
Departure	26	49	0	75	54	129
Total	52	103	0	155	86	241
South Leg						
Approach	26	49	0	75	115	190
Departure	26	54	0	80	89	169
Total	52	103	0	155	204	359
East Leg						
Approach	0	0	0	0	57	57
Departure	0	0	0	0	61	61
Total	0	0	0	0	118	118
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	52	103	0	155	204	359
Departure	52	103	0	155	204	359
Total	104	206	0	310	408	718

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
25 Project Driveway 3/Shepherd Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	164	164
EBL	0	0	0	0	57	57
EBT	354	347	31	735	22	757
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	405	208	11	627	8	635
WBR	0	0	0	0	16	16
North Leg						
Approach	0	0	0	0	164	164
Departure	0	0	0	0	73	73
Total	0	0	0	0	237	237
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	405	208	11	627	24	651
Departure	354	347	31	735	22	757
Total	759	555	42	1,362	46	1,408
West Leg						
Approach	354	347	31	735	79	814
Departure	405	208	11	627	172	799
Total	759	555	42	1,362	251	1,613
Total Approaches						
Approach	759	555	42	1,362	267	1,629
Departure	759	555	42	1,362	267	1,629
Total	1,518	1,110	84	2,724	534	3,258

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
25 Project Driveway 3/Shepherd Avenue						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	110	110
EBL	0	0	0	0	186	186
EBT	377	379	21	778	15	793
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	331	506	35	873	25	898
WBR	0	0	0	0	54	54
North Leg						
Approach	0	0	0	0	110	110
Departure	0	0	0	0	240	240
Total	0	0	0	0	350	350
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	331	506	35	873	79	952
Departure	377	379	21	778	15	793
Total	708	885	56	1,651	94	1,745
West Leg						
Approach	377	379	21	778	201	979
Departure	331	506	35	873	135	1,008
Total	708	885	56	1,651	336	1,987
Total Approaches						
Approach	708	885	56	1,651	390	2,041
Departure	708	885	56	1,651	390	2,041
Total	1,416	1,770	112	3,302	780	4,082

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	AM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
26 Stanford Avenue-Project Driveway 4/Perrin Road						
NBL	0	0	0	0	28	28
NBT	0	0	0	0	19	19
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	1	1
SBR	15	0	0	15	0	15
EBL	15	0	0	15	0	15
EBT	0	0	0	0	0	0
EBR	0	0	0	0	10	10
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	15	0	0	15	1	16
Departure	15	0	0	15	19	34
Total	30	0	0	30	20	50
South Leg						
Approach	0	0	0	0	47	47
Departure	0	0	0	0	11	11
Total	0	0	0	0	58	58
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	15	0	0	15	10	25
Departure	15	0	0	15	28	43
Total	30	0	0	30	38	68
Total Approaches						
Approach	30	0	0	30	58	88
Departure	30	0	0	30	58	88
Total	60	0	0	60	116	176

Table D-2 - Near-Term (2028) Peak Hour Volume Summary

	PM Peak Hour					
	Existing (2022) Without Project	Cumulative Project Trips	Tract Map 6343 Trips	Near-Term (2028) Without Project	Project Trips	Near-Term (2028) Plus Project
26 Stanford Avenue-Project Driveway 4/Perrin Road						
NBL	0	0	0	0	19	19
NBT	0	0	0	0	13	13
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	4	4
SBR	12	0	0	12	0	12
EBL	13	0	0	13	0	13
EBT	0	0	0	0	0	0
EBR	0	0	0	0	32	32
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	12	0	0	12	4	16
Departure	13	0	0	13	13	26
Total	25	0	0	25	17	42
South Leg						
Approach	0	0	0	0	32	32
Departure	0	0	0	0	36	36
Total	0	0	0	0	68	68
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	13	0	0	13	32	45
Departure	12	0	0	12	19	31
Total	25	0	0	25	51	76
Total Approaches						
Approach	25	0	0	25	68	93
Departure	25	0	0	25	68	93
Total	50	0	0	50	136	186

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
1 Willow Avenue/Behymer Avenue										
NBL	137	0	137	0	137	179	0	179	0	179
NBT	764	15	779	32	811	754	10	764	21	785
NBR	20	0	20	0	20	180	0	180	0	180
SBL	54	4	58	1	59	100	14	114	4	118
SBT	792	5	797	11	808	648	17	665	36	701
SBR	79	0	79	0	79	13	0	13	0	13
EBL	72	0	72	0	72	13	0	13	0	13
EBT	156	1	157	0	157	118	3	121	0	121
EBR	250	0	250	0	250	134	0	134	0	134
WBL	99	0	99	0	99	128	0	128	0	128
WBT	362	3	365	0	365	140	2	142	0	142
WBR	156	12	168	3	171	42	8	50	2	52
North Leg										
Approach	925	9	934	12	946	761	31	792	40	832
Departure	992	27	1,019	35	1,054	809	18	827	23	850
Total	1,917	36	1,953	47	2,000	1,570	49	1,619	63	1,682
South Leg										
Approach	921	15	936	32	968	1,113	10	1,123	21	1,144
Departure	1,141	5	1,146	11	1,157	910	17	927	36	963
Total	2,062	20	2,082	43	2,125	2,023	27	2,050	57	2,107
East Leg										
Approach	617	15	632	3	635	310	10	320	2	322
Departure	230	5	235	1	236	398	17	415	4	419
Total	847	20	867	4	871	708	27	735	6	741
West Leg										
Approach	478	1	479	0	479	265	3	268	0	268
Departure	578	3	581	0	581	332	2	334	0	334
Total	1,056	4	1,060	0	1,060	597	5	602	0	602
Total Approaches										
Approach	2,941	40	2,981	47	3,028	2,449	54	2,503	63	2,566
Departure	2,941	40	2,981	47	3,028	2,449	54	2,503	63	2,566
Total	5,882	80	5,962	94	6,056	4,898	108	5,006	126	5,132

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
2 Willow Avenue/Shepherd Avenue										
NBL	390	0	390	0	390	293	0	293	0	293
NBT	916	0	916	0	916	1,451	0	1,451	0	1,451
NBR	318	1	319	2	321	485	3	488	7	495
SBL	247	5	252	11	263	291	17	308	36	344
SBT	1,334	0	1,334	0	1,334	1,051	0	1,051	0	1,051
SBR	211	0	211	0	211	207	0	207	0	207
EBL	112	0	112	0	112	265	0	265	0	265
EBT	394	12	406	13	419	638	38	676	43	719
EBR	286	0	286	0	286	387	0	387	0	387
WBL	302	3	305	6	311	351	2	353	4	357
WBT	573	34	607	38	645	573	23	596	25	621
WBR	207	15	222	32	254	287	10	297	21	318
North Leg										
Approach	1,792	5	1,797	11	1,808	1,549	17	1,566	36	1,602
Departure	1,235	15	1,250	32	1,282	2,003	10	2,013	21	2,034
Total	3,027	20	3,047	43	3,090	3,552	27	3,579	57	3,636
South Leg										
Approach	1,624	1	1,625	2	1,627	2,229	3	2,232	7	2,239
Departure	1,922	3	1,925	6	1,931	1,789	2	1,791	4	1,795
Total	3,546	4	3,550	8	3,558	4,018	5	4,023	11	4,034
East Leg										
Approach	1,082	52	1,134	76	1,210	1,211	35	1,246	50	1,296
Departure	959	18	977	26	1,003	1,414	58	1,472	86	1,558
Total	2,041	70	2,111	102	2,213	2,625	93	2,718	136	2,854
West Leg										
Approach	792	12	804	13	817	1,290	38	1,328	43	1,371
Departure	1,174	34	1,208	38	1,246	1,073	23	1,096	25	1,121
Total	1,966	46	2,012	51	2,063	2,363	61	2,424	68	2,492
Total Approaches										
Approach	5,290	70	5,360	102	5,462	6,279	93	6,372	136	6,508
Departure	5,290	70	5,360	102	5,462	6,279	93	6,372	136	6,508
Total	10,580	140	10,720	204	10,924	12,558	186	12,744	272	13,016

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
3 Minnewawa Avenue/Behymer Avenue										
NBL	115	0	115	0	115	149	0	149	0	149
NBT	269	0	269	0	269	430	0	430	0	430
NBR	12	0	12	0	12	28	0	28	0	28
SBL	163	3	166	0	166	193	10	203	0	203
SBT	589	0	589	0	589	254	0	254	0	254
SBR	8	0	8	0	8	3	0	3	0	3
EBL	3	0	3	0	3	7	0	7	0	7
EBT	127	5	132	1	133	353	17	370	4	374
EBR	96	0	96	0	96	101	0	101	0	101
WBL	43	0	43	0	43	18	0	18	0	18
WBT	508	15	523	3	526	206	10	216	2	218
WBR	371	9	380	0	380	154	6	160	0	160
North Leg										
Approach	760	3	763	0	763	450	10	460	0	460
Departure	643	9	652	0	652	591	6	597	0	597
Total	1,403	12	1,415	0	1,415	1,041	16	1,057	0	1,057
South Leg										
Approach	396	0	396	0	396	607	0	607	0	607
Departure	728	0	728	0	728	373	0	373	0	373
Total	1,124	0	1,124	0	1,124	980	0	980	0	980
East Leg										
Approach	922	24	946	3	949	378	16	394	2	396
Departure	302	8	310	1	311	574	27	601	4	605
Total	1,224	32	1,256	4	1,260	952	43	995	6	1,001
West Leg										
Approach	226	5	231	1	232	461	17	478	4	482
Departure	631	15	646	3	649	358	10	368	2	370
Total	857	20	877	4	881	819	27	846	6	852
Total Approaches										
Approach	2,304	32	2,336	4	2,340	1,896	43	1,939	6	1,945
Departure	2,304	32	2,336	4	2,340	1,896	43	1,939	6	1,945
Total	4,608	64	4,672	8	4,680	3,792	86	3,878	12	3,890

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
4 Minnewawa Avenue/Shepherd Avenue										
NBL	218	0	218	0	218	313	0	313	0	313
NBT	310	0	310	0	310	681	0	681	0	681
NBR	70	8	78	14	92	80	28	108	46	154
SBL	331	0	331	0	331	159	0	159	0	159
SBT	892	0	892	0	892	504	0	504	0	504
SBR	123	0	123	0	123	108	0	108	0	108
EBL	88	0	88	0	88	144	0	144	0	144
EBT	653	19	672	27	699	870	63	933	89	1,022
EBR	364	0	364	0	364	218	0	218	0	218
WBL	86	25	111	41	152	63	17	80	28	108
WBT	620	55	675	79	754	817	37	854	53	907
WBR	140	0	140	0	140	211	0	211	0	211
North Leg										
Approach	1,346	0	1,346	0	1,346	771	0	771	0	771
Departure	538	0	538	0	538	1,036	0	1,036	0	1,036
Total	1,884	0	1,884	0	1,884	1,807	0	1,807	0	1,807
South Leg										
Approach	598	8	606	14	620	1,074	28	1,102	46	1,148
Departure	1,342	25	1,367	41	1,408	785	17	802	28	830
Total	1,940	33	1,973	55	2,028	1,859	45	1,904	74	1,978
East Leg										
Approach	846	80	926	120	1,046	1,091	54	1,145	81	1,226
Departure	1,054	27	1,081	41	1,122	1,109	91	1,200	135	1,335
Total	1,900	107	2,007	161	2,168	2,200	145	2,345	216	2,561
West Leg										
Approach	1,105	19	1,124	27	1,151	1,232	63	1,295	89	1,384
Departure	961	55	1,016	79	1,095	1,238	37	1,275	53	1,328
Total	2,066	74	2,140	106	2,246	2,470	100	2,570	142	2,712
Total Approaches										
Approach	3,895	107	4,002	161	4,163	4,168	145	4,313	216	4,529
Departure	3,895	107	4,002	161	4,163	4,168	145	4,313	216	4,529
Total	7,790	214	8,004	322	8,326	8,336	290	8,626	432	9,058

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
5 Clovis Avenue/Shepherd Avenue										
NBL	117	0	117	0	117	222	0	222	0	222
NBT	142	55	197	0	197	495	181	676	0	676
NBR	146	0	146	27	173	277	0	277	89	366
SBL	119	40	159	0	159	109	27	136	0	136
SBT	437	160	597	0	597	165	108	273	0	273
SBR	206	80	286	0	286	107	54	161	0	161
EBL	82	28	110	0	110	101	90	191	0	191
EBT	675	0	675	41	716	763	0	763	136	899
EBR	210	0	210	0	210	163	0	163	0	163
WBL	239	0	239	78	317	234	0	234	53	287
WBT	555	0	555	120	675	833	0	833	81	914
WBR	152	14	166	0	166	102	45	147	0	147
North Leg										
Approach	762	280	1,042	0	1,042	381	189	570	0	570
Departure	376	97	473	0	473	698	316	1,014	0	1,014
Total	1,138	377	1,515	0	1,515	1,079	505	1,584	0	1,584
South Leg										
Approach	405	55	460	27	487	994	181	1,175	89	1,264
Departure	886	160	1,046	78	1,124	562	108	670	53	723
Total	1,291	215	1,506	105	1,611	1,556	289	1,845	142	1,987
East Leg										
Approach	946	14	960	198	1,158	1,169	45	1,214	134	1,348
Departure	940	40	980	68	1,048	1,149	27	1,176	225	1,401
Total	1,886	54	1,940	266	2,206	2,318	72	2,390	359	2,749
West Leg										
Approach	967	28	995	41	1,036	1,027	90	1,117	136	1,253
Departure	878	80	958	120	1,078	1,162	54	1,216	81	1,297
Total	1,845	108	1,953	161	2,114	2,189	144	2,333	217	2,550
Total Approaches										
Approach	3,080	377	3,457	266	3,723	3,571	505	4,076	359	4,435
Departure	3,080	377	3,457	266	3,723	3,571	505	4,076	359	4,435
Total	6,160	754	6,914	532	7,446	7,142	1,010	8,152	718	8,870

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
6 Clovis Avenue/Teague Avenue										
NBL	283	0	283	0	283	165	0	165	0	165
NBT	380	51	431	25	456	943	167	1,110	82	1,192
NBR	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0
SBT	761	147	908	72	980	482	99	581	49	630
SBR	283	12	295	6	301	65	8	73	4	77
EBL	79	4	83	2	85	140	14	154	7	161
EBT	0	0	0	0	0	0	0	0	0	0
EBR	234	0	234	0	234	108	0	108	0	108
WBL	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	1,044	159	1,203	78	1,281	547	107	654	53	707
Departure	459	55	514	27	541	1,083	181	1,264	89	1,353
Total	1,503	214	1,717	105	1,822	1,630	288	1,918	142	2,060
South Leg										
Approach	663	51	714	25	739	1,108	167	1,275	82	1,357
Departure	995	147	1,142	72	1,214	590	99	689	49	738
Total	1,658	198	1,856	97	1,953	1,698	266	1,964	131	2,095
East Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
West Leg										
Approach	313	4	317	2	319	248	14	262	7	269
Departure	566	12	578	6	584	230	8	238	4	242
Total	879	16	895	8	903	478	22	500	11	511
Total Approaches										
Approach	2,020	214	2,234	105	2,339	1,903	288	2,191	142	2,333
Departure	2,020	214	2,234	105	2,339	1,903	288	2,191	142	2,333
Total	4,040	428	4,468	210	4,678	3,806	576	4,382	284	4,666

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
7 Clovis Avenue/Nees Avenue										
NBL	161	0	161	0	161	328	0	328	0	328
NBT	401	41	442	25	467	697	136	833	82	915
NBR	21	0	21	0	21	48	0	48	0	48
SBL	115	0	115	0	115	110	0	110	0	110
SBT	660	120	780	72	852	454	81	535	49	584
SBR	108	28	136	0	136	31	19	50	0	50
EBL	61	10	71	0	71	70	31	101	0	101
EBT	399	0	399	1	400	590	0	590	4	594
EBR	358	0	358	0	358	413	0	413	0	413
WBL	37	0	37	32	69	33	0	33	21	54
WBT	468	0	468	3	471	469	0	469	2	471
WBR	233	0	233	0	233	351	0	351	0	351
North Leg										
Approach	883	148	1,031	72	1,103	595	100	695	49	744
Departure	695	51	746	25	771	1,118	167	1,285	82	1,367
Total	1,578	199	1,777	97	1,874	1,713	267	1,980	131	2,111
South Leg										
Approach	583	41	624	25	649	1,073	136	1,209	82	1,291
Departure	1,055	120	1,175	104	1,279	900	81	981	70	1,051
Total	1,638	161	1,799	129	1,928	1,973	217	2,190	152	2,342
East Leg										
Approach	738	0	738	35	773	853	0	853	23	876
Departure	535	0	535	1	536	748	0	748	4	752
Total	1,273	0	1,273	36	1,309	1,601	0	1,601	27	1,628
West Leg										
Approach	818	10	828	1	829	1,073	31	1,104	4	1,108
Departure	737	28	765	3	768	828	19	847	2	849
Total	1,555	38	1,593	4	1,597	1,901	50	1,951	6	1,957
Total Approaches										
Approach	3,022	199	3,221	133	3,354	3,594	267	3,861	158	4,019
Departure	3,022	199	3,221	133	3,354	3,594	267	3,861	158	4,019
Total	6,044	398	6,442	266	6,708	7,188	534	7,722	316	8,038

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
8 Clovis Avenue/Alluvial Avenue										
NBL	279	0	279	0	279	261	0	261	0	261
NBT	459	39	498	25	523	1,001	129	1,130	82	1,212
NBR	91	0	91	0	91	90	0	90	0	90
SBL	162	0	162	0	162	125	0	125	0	125
SBT	946	114	1,060	104	1,164	754	77	831	70	901
SBR	57	6	63	0	63	28	4	32	0	32
EBL	14	2	16	0	16	16	7	23	0	23
EBT	291	0	291	1	292	400	0	400	4	404
EBR	193	0	193	0	193	185	0	185	0	185
WBL	46	0	46	0	46	38	0	38	0	38
WBT	416	0	416	3	419	336	0	336	2	338
WBR	109	0	109	0	109	122	0	122	0	122
North Leg										
Approach	1,165	120	1,285	104	1,389	907	81	988	70	1,058
Departure	582	41	623	25	648	1,139	136	1,275	82	1,357
Total	1,747	161	1,908	129	2,037	2,046	217	2,263	152	2,415
South Leg										
Approach	829	39	868	25	893	1,352	129	1,481	82	1,563
Departure	1,185	114	1,299	104	1,403	977	77	1,054	70	1,124
Total	2,014	153	2,167	129	2,296	2,329	206	2,535	152	2,687
East Leg										
Approach	571	0	571	3	574	496	0	496	2	498
Departure	544	0	544	1	545	615	0	615	4	619
Total	1,115	0	1,115	4	1,119	1,111	0	1,111	6	1,117
West Leg										
Approach	498	2	500	1	501	601	7	608	4	612
Departure	752	6	758	3	761	625	4	629	2	631
Total	1,250	8	1,258	4	1,262	1,226	11	1,237	6	1,243
Total Approaches										
Approach	3,063	161	3,224	133	3,357	3,356	217	3,573	158	3,731
Departure	3,063	161	3,224	133	3,357	3,356	217	3,573	158	3,731
Total	6,126	322	6,448	266	6,714	6,712	434	7,146	316	7,462

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
9 State Route 168 Westbound Ramps/Herndon Avenue										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0
SBL	78	0	78	0	78	77	0	77	0	77
SBT	0	0	0	0	0	0	0	0	0	0
SBR	787	0	787	0	787	406	0	406	0	406
EBL	0	0	0	0	0	0	0	0	0	0
EBT	1,232	2	1,234	2	1,236	1,839	7	1,846	7	1,853
EBR	899	0	899	0	899	609	0	609	0	609
WBL	0	0	0	0	0	0	0	0	0	0
WBT	1,692	6	1,698	6	1,704	2,283	4	2,287	4	2,291
WBR	774	74	848	85	933	722	50	772	57	829
North Leg										
Approach	865	0	865	0	865	483	0	483	0	483
Departure	774	74	848	85	933	722	50	772	57	829
Total	1,639	74	1,713	85	1,798	1,205	50	1,255	57	1,312
South Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	899	0	899	0	899	609	0	609	0	609
Total	899	0	899	0	899	609	0	609	0	609
East Leg										
Approach	2,466	80	2,546	91	2,637	3,005	54	3,059	61	3,120
Departure	1,310	2	1,312	2	1,314	1,916	7	1,923	7	1,930
Total	3,776	82	3,858	93	3,951	4,921	61	4,982	68	5,050
West Leg										
Approach	2,131	2	2,133	2	2,135	2,448	7	2,455	7	2,462
Departure	2,479	6	2,485	6	2,491	2,689	4	2,693	4	2,697
Total	4,610	8	4,618	8	4,626	5,137	11	5,148	11	5,159
Total Approaches										
Approach	5,462	82	5,544	93	5,637	5,936	61	5,997	68	6,065
Departure	5,462	82	5,544	93	5,637	5,936	61	5,997	68	6,065
Total	10,924	164	11,088	186	11,274	11,872	122	11,994	136	12,130

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
10 State Route 168 Eastbound Ramps/Herndon Avenue										
NBL	486	0	486	0	486	788	0	788	0	788
NBT	0	0	0	0	0	0	0	0	0	0
NBR	585	25	610	19	629	874	84	958	61	1,019
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	1,076	2	1,078	2	1,080	1,519	7	1,526	7	1,533
EBR	234	0	234	0	234	397	0	397	0	397
WBL	0	0	0	0	0	0	0	0	0	0
WBT	1,980	80	2,060	91	2,151	2,217	54	2,271	61	2,332
WBR	93	0	93	0	93	214	0	214	0	214
North Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	93	0	93	0	93	214	0	214	0	214
Total	93	0	93	0	93	214	0	214	0	214
South Leg										
Approach	1,071	25	1,096	19	1,115	1,662	84	1,746	61	1,807
Departure	234	0	234	0	234	397	0	397	0	397
Total	1,305	25	1,330	19	1,349	2,059	84	2,143	61	2,204
East Leg										
Approach	2,073	80	2,153	91	2,244	2,431	54	2,485	61	2,546
Departure	1,661	27	1,688	21	1,709	2,393	91	2,484	68	2,552
Total	3,734	107	3,841	112	3,953	4,824	145	4,969	129	5,098
West Leg										
Approach	1,310	2	1,312	2	1,314	1,916	7	1,923	7	1,930
Departure	2,466	80	2,546	91	2,637	3,005	54	3,059	61	3,120
Total	3,776	82	3,858	93	3,951	4,921	61	4,982	68	5,050
Total Approaches										
Approach	4,454	107	4,561	112	4,673	6,009	145	6,154	129	6,283
Departure	4,454	107	4,561	112	4,673	6,009	145	6,154	129	6,283
Total	8,908	214	9,122	224	9,346	12,018	290	12,308	258	12,566

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
11 Clovis Avenue/Herndon Avenue										
NBL	380	0	380	0	380	609	0	609	0	609
NBT	443	8	451	3	454	575	28	603	11	614
NBR	158	0	158	0	158	320	0	320	0	320
SBL	194	9	203	3	206	323	6	329	2	331
SBT	445	25	470	9	479	355	17	372	6	378
SBR	581	80	661	91	752	399	54	453	61	514
EBL	361	28	389	21	410	545	90	635	68	703
EBT	936	0	936	0	936	1,499	0	1,499	0	1,499
EBR	364	0	364	0	364	349	0	349	0	349
WBL	196	0	196	0	196	326	0	326	0	326
WBT	1,112	0	1,112	0	1,112	1,423	0	1,423	0	1,423
WBR	182	3	185	1	186	198	10	208	4	212
North Leg										
Approach	1,220	114	1,334	103	1,437	1,077	77	1,154	69	1,223
Departure	986	39	1,025	25	1,050	1,318	128	1,446	83	1,529
Total	2,206	153	2,359	128	2,487	2,395	205	2,600	152	2,752
South Leg										
Approach	981	8	989	3	992	1,504	28	1,532	11	1,543
Departure	1,005	25	1,030	9	1,039	1,030	17	1,047	6	1,053
Total	1,986	33	2,019	12	2,031	2,534	45	2,579	17	2,596
East Leg										
Approach	1,490	3	1,493	1	1,494	1,947	10	1,957	4	1,961
Departure	1,288	9	1,297	3	1,300	2,142	6	2,148	2	2,150
Total	2,778	12	2,790	4	2,794	4,089	16	4,105	6	4,111
West Leg										
Approach	1,661	28	1,689	21	1,710	2,393	90	2,483	68	2,551
Departure	2,073	80	2,153	91	2,244	2,431	54	2,485	61	2,546
Total	3,734	108	3,842	112	3,954	4,824	144	4,968	129	5,097
Total Approaches										
Approach	5,352	153	5,505	128	5,633	6,921	205	7,126	152	7,278
Departure	5,352	153	5,505	128	5,633	6,921	205	7,126	152	7,278
Total	10,704	306	11,010	256	11,266	13,842	410	14,252	304	14,556

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
12 Sunnyside Avenue/Behymer Avenue										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0
SBL	2	0	2	0	2	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	270	0	270	1	271	236	0	236	4	240
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0
WBT	512	0	512	3	515	234	0	234	2	236
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	2	0	2	0	2	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	2	0	2	0	2	0	0	0	0	0
South Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
East Leg										
Approach	512	0	512	3	515	234	0	234	2	236
Departure	272	0	272	1	273	236	0	236	4	240
Total	784	0	784	4	788	470	0	470	6	476
West Leg										
Approach	270	0	270	1	271	236	0	236	4	240
Departure	512	0	512	3	515	234	0	234	2	236
Total	782	0	782	4	786	470	0	470	6	476
Total Approaches										
Approach	784	0	784	4	788	470	0	470	6	476
Departure	784	0	784	4	788	470	0	470	6	476
Total	1,568	0	1,568	8	1,576	940	0	940	12	952

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
13 Sunnyside Avenue/Shepherd Avenue										
NBL	112	3	115	0	115	182	10	192	0	192
NBT	82	0	82	4	86	286	0	286	14	300
NBR	40	0	40	11	51	40	0	40	36	76
SBL	310	0	310	22	332	153	0	153	15	168
SBT	397	0	397	44	441	157	0	157	30	187
SBR	413	0	413	66	479	341	0	341	45	386
EBL	199	0	199	23	222	353	0	353	75	428
EBT	697	31	728	46	774	751	21	772	150	922
EBR	195	9	204	0	204	162	6	168	0	168
WBL	37	0	37	32	69	43	0	43	21	64
WBT	607	11	618	132	750	831	35	866	89	955
WBR	91	0	91	8	99	309	0	309	25	334
North Leg										
Approach	1,120	0	1,120	132	1,252	651	0	651	90	741
Departure	372	0	372	35	407	948	0	948	114	1,062
Total	1,492	0	1,492	167	1,659	1,599	0	1,599	204	1,803
South Leg										
Approach	234	3	237	15	252	508	10	518	50	568
Departure	629	9	638	76	714	362	6	368	51	419
Total	863	12	875	91	966	870	16	886	101	987
East Leg										
Approach	735	11	746	172	918	1,183	35	1,218	135	1,353
Departure	1,047	31	1,078	79	1,157	944	21	965	201	1,166
Total	1,782	42	1,824	251	2,075	2,127	56	2,183	336	2,519
West Leg										
Approach	1,091	40	1,131	69	1,200	1,266	27	1,293	225	1,518
Departure	1,132	14	1,146	198	1,344	1,354	45	1,399	134	1,533
Total	2,223	54	2,277	267	2,544	2,620	72	2,692	359	3,051
Total Approaches										
Approach	3,180	54	3,234	388	3,622	3,608	72	3,680	500	4,180
Departure	3,180	54	3,234	388	3,622	3,608	72	3,680	500	4,180
Total	6,360	108	6,468	776	7,244	7,216	144	7,360	1,000	8,360

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
14 Sunnyside Avenue/Teague Avenue										
NBL	3	0	3	0	3	0	0	0	0	0
NBT	90	3	93	15	108	326	10	336	50	386
NBR	15	0	15	0	15	41	0	41	0	41
SBL	16	0	16	0	16	37	0	37	0	37
SBT	431	9	440	76	516	183	6	189	51	240
SBR	0	0	0	0	0	1	0	1	0	1
EBL	6	0	6	0	6	2	0	2	0	2
EBT	4	0	4	0	4	1	0	1	0	1
EBR	1	0	1	0	1	3	0	3	0	3
WBL	48	0	48	0	48	28	0	28	0	28
WBT	6	0	6	0	6	3	0	3	0	3
WBR	42	0	42	0	42	37	0	37	0	37
North Leg										
Approach	447	9	456	76	532	221	6	227	51	278
Departure	138	3	141	15	156	365	10	375	50	425
Total	585	12	597	91	688	586	16	602	101	703
South Leg										
Approach	108	3	111	15	126	367	10	377	50	427
Departure	480	9	489	76	565	214	6	220	51	271
Total	588	12	600	91	691	581	16	597	101	698
East Leg										
Approach	96	0	96	0	96	68	0	68	0	68
Departure	35	0	35	0	35	79	0	79	0	79
Total	131	0	131	0	131	147	0	147	0	147
West Leg										
Approach	11	0	11	0	11	6	0	6	0	6
Departure	9	0	9	0	9	4	0	4	0	4
Total	20	0	20	0	20	10	0	10	0	10
Total Approaches										
Approach	662	12	674	91	765	662	16	678	101	779
Departure	662	12	674	91	765	662	16	678	101	779
Total	1,324	24	1,348	182	1,530	1,324	32	1,356	202	1,558

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
15 Sunnyside Avenue/Nees Avenue										
NBL	152	0	152	0	152	227	0	227	0	227
NBT	74	3	77	15	92	249	10	259	50	309
NBR	20	0	20	0	20	54	0	54	0	54
SBL	43	0	43	0	43	20	0	20	0	20
SBT	352	9	361	44	405	151	6	157	30	187
SBR	63	0	63	32	95	29	0	29	21	50
EBL	18	0	18	0	18	54	0	54	0	54
EBT	328	0	328	0	328	494	0	494	0	494
EBR	162	0	162	0	162	140	0	140	0	140
WBL	52	0	52	0	52	50	0	50	0	50
WBT	462	0	462	0	462	483	0	483	0	483
WBR	19	0	19	0	19	28	0	28	0	28
North Leg										
Approach	458	9	467	76	543	200	6	206	51	257
Departure	111	3	114	15	129	331	10	341	50	391
Total	569	12	581	91	672	531	16	547	101	648
South Leg										
Approach	246	3	249	15	264	530	10	540	50	590
Departure	566	9	575	44	619	341	6	347	30	377
Total	812	12	824	59	883	871	16	887	80	967
East Leg										
Approach	533	0	533	0	533	561	0	561	0	561
Departure	391	0	391	0	391	568	0	568	0	568
Total	924	0	924	0	924	1,129	0	1,129	0	1,129
West Leg										
Approach	508	0	508	0	508	688	0	688	0	688
Departure	677	0	677	32	709	739	0	739	21	760
Total	1,185	0	1,185	32	1,217	1,427	0	1,427	21	1,448
Total Approaches										
Approach	1,745	12	1,757	91	1,848	1,979	16	1,995	101	2,096
Departure	1,745	12	1,757	91	1,848	1,979	16	1,995	101	2,096
Total	3,490	24	3,514	182	3,696	3,958	32	3,990	202	4,192

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
16 Fowler Avenue/Behymer Avenue										
NBL	497	0	497	3	500	199	0	199	2	201
NBT	86	0	86	0	86	90	0	90	0	90
NBR	1	0	1	0	1	3	0	3	0	3
SBL	0	0	0	0	0	1	0	1	0	1
SBT	84	0	84	0	84	71	0	71	0	71
SBR	17	0	17	0	17	5	0	5	0	5
EBL	11	0	11	0	11	8	0	8	0	8
EBT	1	0	1	0	1	4	0	4	0	4
EBR	250	0	250	1	251	233	0	233	4	237
WBL	4	0	4	0	4	4	0	4	0	4
WBT	9	0	9	0	9	5	0	5	0	5
WBR	0	0	0	0	0	1	0	1	0	1
North Leg										
Approach	101	0	101	0	101	77	0	77	0	77
Departure	97	0	97	0	97	99	0	99	0	99
Total	198	0	198	0	198	176	0	176	0	176
South Leg										
Approach	584	0	584	3	587	292	0	292	2	294
Departure	338	0	338	1	339	308	0	308	4	312
Total	922	0	922	4	926	600	0	600	6	606
East Leg										
Approach	13	0	13	0	13	10	0	10	0	10
Departure	2	0	2	0	2	8	0	8	0	8
Total	15	0	15	0	15	18	0	18	0	18
West Leg										
Approach	262	0	262	1	263	245	0	245	4	249
Departure	523	0	523	3	526	209	0	209	2	211
Total	785	0	785	4	789	454	0	454	6	460
Total Approaches										
Approach	960	0	960	4	964	624	0	624	6	630
Departure	960	0	960	4	964	624	0	624	6	630
Total	1,920	0	1,920	8	1,928	1,248	0	1,248	12	1,260

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
17 Fowler Avenue/Ticonderoga										
NBL	9	0	9	0	9	9	0	9	0	9
NBT	565	0	565	0	565	286	0	286	0	286
NBR	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0
SBT	331	0	331	0	331	300	0	300	0	300
SBR	7	0	7	1	8	2	0	2	4	6
EBL	7	0	7	3	10	3	0	3	2	5
EBT	0	0	0	0	0	0	0	0	0	0
EBR	8	0	8	16	24	6	0	6	11	17
WBL	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	338	0	338	1	339	302	0	302	4	306
Departure	572	0	572	3	575	289	0	289	2	291
Total	910	0	910	4	914	591	0	591	6	597
South Leg										
Approach	574	0	574	0	574	295	0	295	0	295
Departure	339	0	339	16	355	306	0	306	11	317
Total	913	0	913	16	929	601	0	601	11	612
East Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
West Leg										
Approach	15	0	15	19	34	9	0	9	13	22
Departure	16	0	16	1	17	11	0	11	4	15
Total	31	0	31	20	51	20	0	20	17	37
Total Approaches										
Approach	927	0	927	20	947	606	0	606	17	623
Departure	927	0	927	20	947	606	0	606	17	623
Total	1,854	0	1,854	40	1,894	1,212	0	1,212	34	1,246

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
18 Fowler Avenue/Shepherd Avenue										
NBL	197	4	201	16	217	265	14	279	54	333
NBT	100	0	100	0	100	370	0	370	0	370
NBR	40	0	40	0	40	108	0	108	0	108
SBL	342	0	342	0	342	155	0	155	0	155
SBT	518	0	518	16	534	230	0	230	11	241
SBR	32	0	32	0	32	38	0	38	0	38
EBL	53	0	53	0	53	54	0	54	0	54
EBT	663	18	681	22	703	586	12	598	15	613
EBR	270	12	282	0	282	161	8	169	0	169
WBL	75	0	75	0	75	72	0	72	0	72
WBT	455	6	461	8	469	644	21	665	25	690
WBR	386	0	386	0	386	282	0	282	0	282
North Leg										
Approach	892	0	892	16	908	423	0	423	11	434
Departure	539	0	539	0	539	706	0	706	0	706
Total	1,431	0	1,431	16	1,447	1,129	0	1,129	11	1,140
South Leg										
Approach	337	4	341	16	357	743	14	757	54	811
Departure	863	12	875	16	891	463	8	471	11	482
Total	1,200	16	1,216	32	1,248	1,206	22	1,228	65	1,293
East Leg										
Approach	916	6	922	8	930	998	21	1,019	25	1,044
Departure	1,045	18	1,063	22	1,085	849	12	861	15	876
Total	1,961	24	1,985	30	2,015	1,847	33	1,880	40	1,920
West Leg										
Approach	986	30	1,016	22	1,038	801	20	821	15	836
Departure	684	10	694	24	718	947	35	982	79	1,061
Total	1,670	40	1,710	46	1,756	1,748	55	1,803	94	1,897
Total Approaches										
Approach	3,131	40	3,171	62	3,233	2,965	55	3,020	105	3,125
Departure	3,131	40	3,171	62	3,233	2,965	55	3,020	105	3,125
Total	6,262	80	6,342	124	6,466	5,930	110	6,040	210	6,250

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
19 Fowler Avenue/Teague Avenue										
NBL	7	0	7	0	7	24	0	24	0	24
NBT	191	4	195	16	211	652	14	666	54	720
NBR	19	0	19	0	19	22	0	22	0	22
SBL	135	0	135	0	135	23	0	23	0	23
SBT	750	12	762	16	778	403	8	411	11	422
SBR	54	0	54	0	54	42	0	42	0	42
EBL	26	0	26	0	26	53	0	53	0	53
EBT	10	0	10	0	10	3	0	3	0	3
EBR	20	0	20	0	20	14	0	14	0	14
WBL	30	0	30	0	30	18	0	18	0	18
WBT	8	0	8	0	8	28	0	28	0	28
WBR	43	0	43	0	43	105	0	105	0	105
North Leg										
Approach	939	12	951	16	967	468	8	476	11	487
Departure	260	4	264	16	280	810	14	824	54	878
Total	1,199	16	1,215	32	1,247	1,278	22	1,300	65	1,365
South Leg										
Approach	217	4	221	16	237	698	14	712	54	766
Departure	800	12	812	16	828	435	8	443	11	454
Total	1,017	16	1,033	32	1,065	1,133	22	1,155	65	1,220
East Leg										
Approach	81	0	81	0	81	151	0	151	0	151
Departure	164	0	164	0	164	48	0	48	0	48
Total	245	0	245	0	245	199	0	199	0	199
West Leg										
Approach	56	0	56	0	56	70	0	70	0	70
Departure	69	0	69	0	69	94	0	94	0	94
Total	125	0	125	0	125	164	0	164	0	164
Total Approaches										
Approach	1,293	16	1,309	32	1,341	1,387	22	1,409	65	1,474
Departure	1,293	16	1,309	32	1,341	1,387	22	1,409	65	1,474
Total	2,586	32	2,618	64	2,682	2,774	44	2,818	130	2,948

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
20 Fowler Avenue/Nees Avenue										
NBL	156	0	156	0	156	166	0	166	0	166
NBT	147	3	150	15	165	494	10	504	50	554
NBR	66	0	66	0	66	65	0	65	0	65
SBL	90	3	93	3	96	56	2	58	2	60
SBT	623	9	632	13	645	317	6	323	8	331
SBR	80	0	80	0	80	61	0	61	0	61
EBL	21	0	21	0	21	73	0	73	0	73
EBT	271	0	271	0	271	348	0	348	0	348
EBR	106	0	106	0	106	142	0	142	0	142
WBL	96	0	96	0	96	57	0	57	0	57
WBT	308	0	308	0	308	369	0	369	0	369
WBR	37	1	38	1	39	99	3	102	4	106
North Leg										
Approach	793	12	805	16	821	434	8	442	10	452
Departure	205	4	209	16	225	666	13	679	54	733
Total	998	16	1,014	32	1,046	1,100	21	1,121	64	1,185
South Leg										
Approach	369	3	372	15	387	725	10	735	50	785
Departure	825	9	834	13	847	516	6	522	8	530
Total	1,194	12	1,206	28	1,234	1,241	16	1,257	58	1,315
East Leg										
Approach	441	1	442	1	443	525	3	528	4	532
Departure	427	3	430	3	433	469	2	471	2	473
Total	868	4	872	4	876	994	5	999	6	1,005
West Leg										
Approach	398	0	398	0	398	563	0	563	0	563
Departure	544	0	544	0	544	596	0	596	0	596
Total	942	0	942	0	942	1,159	0	1,159	0	1,159
Total Approaches										
Approach	2,001	16	2,017	32	2,049	2,247	21	2,268	64	2,332
Departure	2,001	16	2,017	32	2,049	2,247	21	2,268	64	2,332
Total	4,002	32	4,034	64	4,098	4,494	42	4,536	128	4,664

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
21 Fowler Avenue/State Route 168 Westbound Ramps										
NBL	539	0	539	0	539	464	0	464	0	464
NBT	452	2	454	15	469	825	7	832	50	882
NBR	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0
SBT	443	6	449	13	462	485	4	489	8	497
SBR	533	0	533	0	533	239	0	239	0	239
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	137	0	137	0	137	171	0	171	0	171
WBT	0	0	0	0	0	0	0	0	0	0
WBR	33	0	33	0	33	18	0	18	0	18
North Leg										
Approach	976	6	982	13	995	724	4	728	8	736
Departure	485	2	487	15	502	843	7	850	50	900
Total	1,461	8	1,469	28	1,497	1,567	11	1,578	58	1,636
South Leg										
Approach	991	2	993	15	1,008	1,289	7	1,296	50	1,346
Departure	580	6	586	13	599	656	4	660	8	668
Total	1,571	8	1,579	28	1,607	1,945	11	1,956	58	2,014
East Leg										
Approach	170	0	170	0	170	189	0	189	0	189
Departure	0	0	0	0	0	0	0	0	0	0
Total	170	0	170	0	170	189	0	189	0	189
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	1,072	0	1,072	0	1,072	703	0	703	0	703
Total	1,072	0	1,072	0	1,072	703	0	703	0	703
Total Approaches										
Approach	2,137	8	2,145	28	2,173	2,202	11	2,213	58	2,271
Departure	2,137	8	2,145	28	2,173	2,202	11	2,213	58	2,271
Total	4,274	16	4,290	56	4,346	4,404	22	4,426	116	4,542

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
22 Fowler Avenue/State Route 168 Eastbound Ramps										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	841	2	843	4	847	936	7	943	14	957
NBR	101	0	101	0	101	311	0	311	0	311
SBL	15	0	15	0	15	29	0	29	0	29
SBT	565	6	571	13	584	627	4	631	8	639
SBR	0	0	0	0	0	0	0	0	0	0
EBL	150	0	150	11	161	353	0	353	36	389
EBT	0	0	0	0	0	0	0	0	0	0
EBR	384	0	384	0	384	635	0	635	0	635
WBL	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	580	6	586	13	599	656	4	660	8	668
Departure	991	2	993	15	1,008	1,289	7	1,296	50	1,346
Total	1,571	8	1,579	28	1,607	1,945	11	1,956	58	2,014
South Leg										
Approach	942	2	944	4	948	1,247	7	1,254	14	1,268
Departure	949	6	955	13	968	1,262	4	1,266	8	1,274
Total	1,891	8	1,899	17	1,916	2,509	11	2,520	22	2,542
East Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	116	0	116	0	116	340	0	340	0	340
Total	116	0	116	0	116	340	0	340	0	340
West Leg										
Approach	534	0	534	11	545	988	0	988	36	1,024
Departure	0	0	0	0	0	0	0	0	0	0
Total	534	0	534	11	545	988	0	988	36	1,024
Total Approaches										
Approach	2,056	8	2,064	28	2,092	2,891	11	2,902	58	2,960
Departure	2,056	8	2,064	28	2,092	2,891	11	2,902	58	2,960
Total	4,112	16	4,128	56	4,184	5,782	22	5,804	116	5,920

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**	**Cumulative (2046) Without Project**	**Tract Map 6343 Trips**	**Final Cumulative (2046) Without Project**	**Project Trips**	**Cumulative (2046) Plus Project**
23 Sunnyside Avenue/Project Driveway 1										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	57	0	372	10	382	79	0	948	32	980
NBR	0	0	0	7	7	0	0	0	21	21
SBL	0	0	0	0	0	0	0	0	0	0
SBT	51	0	1,120	28	1,148	84	0	651	19	670
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	19	19	0	0	0	13	13
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	51	0	1,120	28	1,148	84	0	651	19	670
Departure	57	0	372	10	382	79	0	948	32	980
Total	108	0	1,492	38	1,530	163	0	1,599	51	1,650
South Leg										
Approach	57	0	372	17	389	79	0	948	53	1,001
Departure	51	0	1,120	47	1,167	84	0	651	32	683
Total	108	0	1,492	64	1,556	163	0	1,599	85	1,684
East Leg										
Approach	0	0	0	19	19	0	0	0	13	13
Departure	0	0	0	7	7	0	0	0	21	21
Total	0	0	0	26	26	0	0	0	34	34
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Approaches										
Approach	108	0	1,492	64	1,556	163	0	1,599	85	1,684
Departure	108	0	1,492	64	1,556	163	0	1,599	85	1,684
Total	216	0	2,984	128	3,112	326	0	3,198	170	3,368

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
24 Sunnyside Avenue/Project Driveway 2										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	57	0	372	16	388	79	0	948	54	1,002
NBR	0	0	0	19	19	0	0	0	61	61
SBL	0	0	0	0	0	0	0	0	0	0
SBT	51	0	1,120	47	1,167	84	0	651	32	683
SBR	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	85	85	0	0	0	57	57
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	51	0	1,120	47	1,167	84	0	651	32	683
Departure	57	0	372	16	388	79	0	948	54	1,002
Total	108	0	1,492	63	1,555	163	0	1,599	86	1,685
South Leg										
Approach	57	0	372	35	407	79	0	948	115	1,063
Departure	51	0	1,120	132	1,252	84	0	651	89	740
Total	108	0	1,492	167	1,659	163	0	1,599	204	1,803
East Leg										
Approach	0	0	0	85	85	0	0	0	57	57
Departure	0	0	0	19	19	0	0	0	61	61
Total	0	0	0	104	104	0	0	0	118	118
West Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Approaches										
Approach	108	0	1,492	167	1,659	163	0	1,599	204	1,803
Departure	108	0	1,492	167	1,659	163	0	1,599	204	1,803
Total	216	0	2,984	334	3,318	326	0	3,198	408	3,606

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
25 Project Driveway 3/Shepherd Avenue										
NBL	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	164	164	0	0	0	110	110
EBL	0	0	0	57	57	0	0	0	186	186
EBT	736	31	1,078	22	1,100	794	21	965	15	980
EBR	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0
WBT	644	11	746	8	754	879	35	1,218	25	1,243
WBR	0	0	0	16	16	0	0	0	54	54
North Leg										
Approach	0	0	0	164	164	0	0	0	110	110
Departure	0	0	0	73	73	0	0	0	240	240
Total	0	0	0	237	237	0	0	0	350	350
South Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
East Leg										
Approach	644	11	746	24	770	879	35	1,218	79	1,297
Departure	736	31	1,078	22	1,100	794	21	965	15	980
Total	1,380	42	1,824	46	1,870	1,673	56	2,183	94	2,277
West Leg										
Approach	736	31	1,078	79	1,157	794	21	965	201	1,166
Departure	644	11	746	172	918	879	35	1,218	135	1,353
Total	1,380	42	1,824	251	2,075	1,673	56	2,183	336	2,519
Total Approaches										
Approach	1,380	42	1,824	267	2,091	1,673	56	2,183	390	2,573
Departure	1,380	42	1,824	267	2,091	1,673	56	2,183	390	2,573
Total	2,760	84	3,648	534	4,182	3,346	112	4,366	780	5,146

Table D-3 - Cumulative (2046) Peak Hour Volume Summary

	AM Peak Hour					PM Peak Hour				
	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project	Cumulative (2046) Without Project	Tract Map 6343 Trips	Final Cumulative (2046) Without Project	Project Trips	Cumulative (2046) Plus Project
26 Stanford Avenue-Project Driveway 4/Perrin Road										
NBL	0	0	0	28	28	0	0	0	19	19
NBT	0	0	0	19	19	0	0	0	13	13
NBR	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	1	1	0	0	0	4	4
SBR	16	0	16	0	16	13	0	13	0	13
EBL	16	0	16	0	16	14	0	14	0	14
EBT	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	10	10	0	0	0	32	32
WBL	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0
North Leg										
Approach	16	0	16	1	17	13	0	13	4	17
Departure	16	0	16	19	35	14	0	14	13	27
Total	32	0	32	20	52	27	0	27	17	44
South Leg										
Approach	0	0	0	47	47	0	0	0	32	32
Departure	0	0	0	11	11	0	0	0	36	36
Total	0	0	0	58	58	0	0	0	68	68
East Leg										
Approach	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
West Leg										
Approach	16	0	16	10	26	14	0	14	32	46
Departure	16	0	16	28	44	13	0	13	19	32
Total	32	0	32	38	70	27	0	27	51	78
Total Approaches										
Approach	32	0	32	58	90	27	0	27	68	95
Departure	32	0	32	58	90	27	0	27	68	95
Total	64	0	64	116	180	54	0	54	136	190

APPENDIX E

LEVEL OF SERVICE WORKSHEETS

HCM 6th Signalized Intersection Summary
1: Willow Avenue & Behymer Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	67	125	203	16	128	43	84	552	16	44	576	74
Future Volume (veh/h)	67	125	203	16	128	43	84	552	16	44	576	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	85	158	257	20	162	54	106	699	20	56	729	94
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	1	1	1
Cap, veh/h	106	355	301	55	199	66	129	2876	893	93	2793	844
Arrive On Green	0.06	0.19	0.19	0.03	0.15	0.15	0.07	0.56	0.56	0.05	0.54	0.54
Sat Flow, veh/h	1781	1870	1585	1767	1332	444	1781	5106	1585	1795	5147	1556
Grp Volume(v), veh/h	85	158	257	20	0	216	106	699	20	56	729	94
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1776	1781	1702	1585	1795	1716	1556
Q Serve(g_s), s	6.4	10.1	21.2	1.5	0.0	15.9	7.9	9.4	0.8	4.1	10.2	4.0
Cycle Q Clear(g_c), s	6.4	10.1	21.2	1.5	0.0	15.9	7.9	9.4	0.8	4.1	10.2	4.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	355	301	55	0	266	129	2876	893	93	2793	844
V/C Ratio(X)	0.80	0.44	0.85	0.36	0.00	0.81	0.82	0.24	0.02	0.60	0.26	0.11
Avail Cap(c_a), veh/h	182	603	511	202	0	572	194	2876	893	196	2793	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.7	48.4	52.9	64.1	0.0	55.6	61.8	14.9	13.0	62.6	16.4	15.0
Incr Delay (d2), s/veh	5.2	1.1	8.3	1.5	0.0	12.4	9.3	0.2	0.0	2.3	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	4.8	9.0	0.7	0.0	7.9	3.8	3.5	0.3	1.9	3.8	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	49.4	61.1	65.5	0.0	68.0	71.1	15.1	13.1	64.9	16.7	15.3
LnGrp LOS	E	D	E	E	A	E	E	B	B	E	B	B
Approach Vol, veh/h		500			236			825			879	
Approach Delay, s/veh		58.6			67.8			22.3			19.6	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	79.0	14.2	26.7	12.3	81.7	8.8	32.1
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	14.7	39.3	13.8	43.5	14.7	39.3	15.4	43.5
Max Q Clear Time (g_c+I1), s	9.9	12.2	8.4	17.9	6.1	11.4	3.5	23.2
Green Ext Time (p_c), s	0.0	11.6	0.0	2.3	0.0	10.5	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
2: Willow Avenue & Shepherd Avenue

Shepherd
Existing (2022) NP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	29	243	145	44	298	98	160	587	49	161	740	50
Future Volume (veh/h)	29	243	145	44	298	98	160	587	49	161	740	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	33	276	165	50	339	111	182	667	56	183	841	57
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	1	1	1
Cap, veh/h	140	529	236	164	579	258	231	2858	887	233	2901	887
Arrive On Green	0.04	0.15	0.15	0.05	0.16	0.16	0.07	0.56	0.56	0.07	0.56	0.56
Sat Flow, veh/h	3456	3554	1585	3428	3526	1570	3428	5066	1572	3483	5147	1573
Grp Volume(v), veh/h	33	276	165	50	339	111	182	667	56	183	841	57
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1714	1763	1570	1714	1689	1572	1742	1716	1573
Q Serve(g_s), s	1.3	10.4	14.3	2.0	12.9	9.2	7.6	9.6	2.3	7.5	12.4	2.4
Cycle Q Clear(g_c), s	1.3	10.4	14.3	2.0	12.9	9.2	7.6	9.6	2.3	7.5	12.4	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	529	236	164	579	258	231	2858	887	233	2901	887
V/C Ratio(X)	0.24	0.52	0.70	0.31	0.59	0.43	0.79	0.23	0.06	0.79	0.29	0.06
Avail Cap(c_a), veh/h	462	1073	479	430	1065	474	442	2858	887	449	2901	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.61	0.61	0.61	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	67.4	57.0	58.6	66.7	56.0	54.5	66.6	15.9	14.3	66.6	16.5	14.3
Incr Delay (d2), s/veh	0.3	1.9	8.5	0.2	0.8	1.0	2.3	0.2	0.1	2.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.8	6.3	0.9	5.7	3.7	3.3	3.6	0.9	3.3	4.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.7	58.8	67.2	66.9	56.8	55.4	68.9	16.1	14.4	68.8	16.7	14.5
LnGrp LOS	E	E	E	E	E	E	E	B	B	E	B	B
Approach Vol, veh/h		474			500			905			1081	
Approach Delay, s/veh		62.4			57.5			26.6			25.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	87.4	11.5	30.0	16.0	87.5	13.7	27.8
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	9.6	14.4	3.3	14.9	9.5	11.6	4.0	16.3
Green Ext Time (p_c), s	0.2	12.3	0.0	3.3	0.2	10.4	0.0	4.8

Intersection Summary	
HCM 6th Ctrl Delay	37.1
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	58.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	3	114	44	12	145	297	41	212	8	123	225	3
Future Vol, veh/h	3	114	44	12	145	297	41	212	8	123	225	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	4	4	4	4	4	4	2	2	2
Mvmt Flow	4	137	53	14	175	358	49	255	10	148	271	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19	95.2	29.3	51.7
HCM LOS	C	F	D	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	2%	3%	35%
Vol Thru, %	81%	71%	32%	64%
Vol Right, %	3%	27%	65%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	261	161	454	351
LT Vol	41	3	12	123
Through Vol	212	114	145	225
RT Vol	8	44	297	3
Lane Flow Rate	314	194	547	423
Geometry Grp	1	1	1	1
Degree of Util (X)	0.704	0.455	1.095	0.909
Departure Headway (Hd)	8.484	8.859	7.208	8.095
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	428	409	503	452
Service Time	6.484	6.859	5.268	6.095
HCM Lane V/C Ratio	0.734	0.474	1.087	0.936
HCM Control Delay	29.3	19	95.2	51.7
HCM Lane LOS	D	C	F	F
HCM 95th-tile Q	5.3	2.3	17.5	10

AGENDA ITEM NO. 6.

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

Shepherd

Existing (2022) NP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	33	339	152	44	291	91	127	150	41	103	159	29
Future Volume (veh/h)	33	339	152	44	291	91	127	150	41	103	159	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	404	181	52	346	108	151	179	49	123	189	35
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	115	736	323	127	396	335	177	908	759	149	879	745
Arrive On Green	0.06	0.21	0.21	0.07	0.21	0.21	0.10	0.49	0.49	0.08	0.47	0.47
Sat Flow, veh/h	1795	3582	1572	1767	1856	1572	1781	1870	1565	1781	1870	1585
Grp Volume(v), veh/h	39	404	181	52	346	108	151	179	49	123	189	35
Grp Sat Flow(s),veh/h/ln	1795	1791	1572	1767	1856	1572	1781	1870	1565	1781	1870	1585
Q Serve(g_s), s	2.7	13.1	13.4	3.7	23.4	7.5	10.8	7.1	2.2	8.8	7.7	1.6
Cycle Q Clear(g_c), s	2.7	13.1	13.4	3.7	23.4	7.5	10.8	7.1	2.2	8.8	7.7	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	736	323	127	396	335	177	908	759	149	879	745
V/C Ratio(X)	0.34	0.55	0.56	0.41	0.87	0.32	0.85	0.20	0.06	0.83	0.22	0.05
Avail Cap(c_a), veh/h	290	937	411	285	485	411	288	908	759	288	879	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	46.3	46.4	57.7	49.5	43.2	57.6	19.0	17.8	58.6	20.3	18.7
Incr Delay (d2), s/veh	0.5	0.8	1.9	0.8	15.7	0.9	6.8	0.5	0.2	4.4	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.7	5.3	1.6	12.2	2.9	5.1	3.1	0.8	4.1	3.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	47.1	48.3	58.5	65.1	44.1	64.4	19.5	17.9	63.0	20.9	18.8
LnGrp LOS	E	D	D	E	E	D	E	B	B	E	C	B
Approach Vol, veh/h		624			506			379			347	
Approach Delay, s/veh		48.1			60.0			37.2			35.6	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	67.1	12.3	33.7	14.9	69.1	13.3	32.7
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	12.8	9.7	4.7	25.4	10.8	9.1	5.7	15.4
Green Ext Time (p_c), s	0.1	1.5	0.0	2.2	0.1	1.1	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	46.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
5: Clovis Avenue & Shepherd Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	32	337	118	109	294	48	80	59	86	19	71	67
Future Volume (veh/h)	32	337	118	109	294	48	80	59	86	19	71	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	39	406	142	131	354	58	96	71	104	23	86	81
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	2	2	2	7	7	7	5	5	5
Cap, veh/h	191	533	235	245	592	264	119	1501	670	588	1889	842
Arrive On Green	0.06	0.15	0.15	0.07	0.17	0.17	0.07	0.44	0.44	0.17	0.54	0.54
Sat Flow, veh/h	3428	3526	1551	3456	3554	1585	1711	3413	1522	3374	3469	1547
Grp Volume(v), veh/h	39	406	142	131	354	58	96	71	104	23	86	81
Grp Sat Flow(s),veh/h/ln	1714	1763	1551	1728	1777	1585	1711	1706	1522	1687	1735	1547
Q Serve(g_s), s	1.5	15.5	12.0	5.1	12.9	4.4	7.7	1.7	5.7	0.8	1.6	3.5
Cycle Q Clear(g_c), s	1.5	15.5	12.0	5.1	12.9	4.4	7.7	1.7	5.7	0.8	1.6	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	533	235	245	592	264	119	1501	670	588	1889	842
V/C Ratio(X)	0.20	0.76	0.61	0.53	0.60	0.22	0.80	0.05	0.16	0.04	0.05	0.10
Avail Cap(c_a), veh/h	598	856	377	602	863	385	298	1501	670	588	1889	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	57.0	55.5	62.8	54.0	50.5	64.2	22.4	23.6	48.1	14.9	15.3
Incr Delay (d2), s/veh	0.2	3.3	3.7	0.7	1.4	0.6	4.7	0.1	0.5	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.0	4.8	2.2	5.7	1.8	3.5	0.7	2.1	0.3	0.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	60.3	59.2	63.5	55.5	51.1	68.9	22.5	24.1	48.2	14.9	15.6
LnGrp LOS	E	E	E	E	E	D	E	C	C	D	B	B
Approach Vol, veh/h		587			543			271			190	
Approach Delay, s/veh		60.3			56.9			39.5			19.2	
Approach LOS		E			E			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	81.9	13.4	29.3	30.0	67.3	15.5	27.2
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	24.4	34.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	9.7	5.5	3.5	14.9	2.8	7.7	7.1	17.5
Green Ext Time (p_c), s	0.1	2.2	0.0	3.0	0.0	1.5	0.2	3.7

Intersection Summary	
HCM 6th Ctrl Delay	50.7
HCM 6th LOS	D

AGENDA ITEM NO. 6.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	73	222	263	209	273	183
Future Volume (veh/h)	73	222	263	209	273	183
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	292	346	275	359	241
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	1	1	2	2	2	2
Cap, veh/h	370	330	377	2394	1474	620
Arrive On Green	0.21	0.21	0.21	0.67	0.41	0.41
Sat Flow, veh/h	1795	1598	1781	3647	3647	1494
Grp Volume(v), veh/h	96	292	346	275	359	241
Grp Sat Flow(s),veh/h/ln	1795	1598	1781	1777	1777	1494
Q Serve(g_s), s	3.8	15.1	16.2	2.3	5.6	9.6
Cycle Q Clear(g_c), s	3.8	15.1	16.2	2.3	5.6	9.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	370	330	377	2394	1474	620
V/C Ratio(X)	0.26	0.89	0.92	0.11	0.24	0.39
Avail Cap(c_a), veh/h	530	472	377	2394	1474	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.94
Uniform Delay (d), s/veh	28.3	32.8	32.8	4.9	16.2	17.3
Incr Delay (d2), s/veh	0.1	10.5	26.3	0.1	0.4	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	6.5	9.2	0.7	2.1	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.4	43.3	59.1	5.0	16.6	19.1
LnGrp LOS	C	D	E	A	B	B
Approach Vol, veh/h	388			621	600	
Approach Delay, s/veh	39.6			35.1	17.6	
Approach LOS	D			D	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.0	40.6				62.6		22.4
Change Period (Y+Rc), s	4.0	5.3				5.3		4.9
Max Green Setting (Gmax), s	18.0	27.7				49.7		25.1
Max Q Clear Time (g_c+I1), s	18.2	11.6				4.3		17.1
Green Ext Time (p_c), s	0.0	3.5				2.2		0.4

Intersection Summary			
HCM 6th Ctrl Delay			29.7
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	30	306	194	35	363	180	70	294	20	70	416	42
Future Volume (veh/h)	30	306	194	35	363	180	70	294	20	70	416	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	34	352	223	40	417	207	80	338	23	80	478	48
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	2	2	2
Cap, veh/h	81	427	360	87	436	364	102	1909	819	103	1924	839
Arrive On Green	0.05	0.23	0.23	0.05	0.23	0.23	0.06	0.54	0.54	0.06	0.54	0.54
Sat Flow, veh/h	1781	1870	1579	1795	1885	1575	1767	3526	1513	1781	3554	1550
Grp Volume(v), veh/h	34	352	223	40	417	207	80	338	23	80	478	48
Grp Sat Flow(s),veh/h/ln	1781	1870	1579	1795	1885	1575	1767	1763	1513	1781	1777	1550
Q Serve(g_s), s	2.8	26.8	19.0	3.3	32.7	17.4	6.7	7.3	1.1	6.6	10.7	2.2
Cycle Q Clear(g_c), s	2.8	26.8	19.0	3.3	32.7	17.4	6.7	7.3	1.1	6.6	10.7	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	427	360	87	436	364	102	1909	819	103	1924	839
V/C Ratio(X)	0.42	0.83	0.62	0.46	0.96	0.57	0.78	0.18	0.03	0.78	0.25	0.06
Avail Cap(c_a), veh/h	368	495	418	311	436	364	365	1909	819	309	1924	839
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.7	55.0	52.0	69.4	56.9	51.0	69.7	17.4	16.0	69.7	18.2	16.3
Incr Delay (d2), s/veh	1.3	10.7	3.0	1.4	32.2	2.6	4.7	0.2	0.1	4.6	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	13.7	7.7	1.5	19.1	7.1	3.1	3.0	0.4	3.1	4.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	65.8	55.0	70.8	89.1	53.7	74.5	17.6	16.1	74.3	18.5	16.4
LnGrp LOS	E	E	E	E	F	D	E	B	B	E	B	B
Approach Vol, veh/h		609			664			441			606	
Approach Delay, s/veh		62.1			76.9			27.9			25.7	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	86.5	10.8	40.0	12.7	86.5	11.3	39.5
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	31.0	34.7	31.0	34.7	26.0	39.7	26.0	39.7
Max Q Clear Time (g_c+I1), s	8.7	12.7	4.8	34.7	8.6	9.3	5.3	28.8
Green Ext Time (p_c), s	0.1	4.5	0.0	0.0	0.1	3.3	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Shepherd

Existing (2022) NP - AM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	13	269	153	44	407	89	127	282	61	126	576	34
Future Volume (veh/h)	13	269	153	44	407	89	127	282	61	126	576	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	15	302	172	49	457	100	143	317	69	142	647	38
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	1	1	1
Cap, veh/h	56	431	362	117	503	420	169	1287	276	171	1537	90
Arrive On Green	0.03	0.24	0.24	0.07	0.27	0.27	0.10	0.45	0.45	0.10	0.45	0.45
Sat Flow, veh/h	1739	1826	1536	1781	1870	1562	1767	2872	615	1795	3435	202
Grp Volume(v), veh/h	15	302	172	49	457	100	143	193	193	142	337	348
Grp Sat Flow(s),veh/h/ln	1739	1826	1536	1781	1870	1562	1767	1763	1725	1795	1791	1845
Q Serve(g_s), s	1.1	18.9	12.0	3.3	29.5	6.3	10.0	8.5	8.7	9.7	16.0	16.0
Cycle Q Clear(g_c), s	1.1	18.9	12.0	3.3	29.5	6.3	10.0	8.5	8.7	9.7	16.0	16.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		0.11
Lane Grp Cap(c), veh/h	56	431	362	117	503	420	169	790	773	171	802	826
V/C Ratio(X)	0.27	0.70	0.47	0.42	0.91	0.24	0.84	0.24	0.25	0.83	0.42	0.42
Avail Cap(c_a), veh/h	153	574	483	157	588	491	297	790	773	230	802	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	59.0	43.7	41.1	56.1	44.2	35.7	55.6	21.4	21.4	55.5	23.5	23.5
Incr Delay (d2), s/veh	0.9	1.8	0.7	0.9	16.7	0.3	4.4	0.7	0.8	12.6	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	8.5	4.5	1.5	15.5	2.4	4.5	3.5	3.6	4.9	6.8	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	45.6	41.7	57.0	60.9	36.0	60.0	22.1	22.2	68.1	25.1	25.0
LnGrp LOS	E	D	D	E	E	D	E	C	C	E	C	C
Approach Vol, veh/h		489			606			529			827	
Approach Delay, s/veh		44.6			56.4			32.4			32.4	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	61.6	8.1	39.3	15.9	61.7	12.2	35.2				
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7				
Max Green Setting (Gmax), s	21.0	34.3	11.0	39.3	16.0	39.3	11.0	39.3				
Max Q Clear Time (g_c+I1), s	12.0	18.0	3.1	31.5	11.7	10.7	5.3	20.9				
Green Ext Time (p_c), s	0.1	3.4	0.0	1.9	0.1	2.4	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			40.8									
HCM 6th LOS			D									

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations		↑↑↑↑	↱		↑↑↑↱	↱				↰↰		↱↱
Traffic Volume (veh/h)	0	957	491	0	1454	576	0	0	0	66	0	729
Future Volume (veh/h)	0	957	491	0	1454	576	0	0	0	66	0	729
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1885	0	1885
Adj Flow Rate, veh/h	0	1018	522	0	1818	0				70	0	776
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	0	2	2				1	0	1
Cap, veh/h	0	3548	874	0	4126					962	0	776
Arrive On Green	0.00	0.55	0.55	0.00	0.55	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	6696	1585	0	7481	1585				3483	0	2812
Grp Volume(v), veh/h	0	1018	522	0	1818	0				70	0	776
Grp Sat Flow(s),veh/h/ln	0	1609	1585	0	1870	1585				1742	0	1406
Q Serve(g_s), s	0.0	11.0	28.6	0.0	18.7	0.0				1.9	0.0	35.9
Cycle Q Clear(g_c), s	0.0	11.0	28.6	0.0	18.7	0.0				1.9	0.0	35.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3548	874	0	4126					962	0	776
V/C Ratio(X)	0.00	0.29	0.60	0.00	0.44					0.07	0.00	1.00
Avail Cap(c_a), veh/h	0	3959	975	0	4604					962	0	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.5	19.5	0.0	17.3	0.0				34.8	0.0	47.0
Incr Delay (d2), s/veh	0.0	0.2	3.0	0.0	0.3	0.0				0.1	0.0	32.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.9	10.6	0.0	7.7	0.0				0.8	0.0	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.7	22.5	0.0	17.6	0.0				34.8	0.0	79.2
LnGrp LOS	A	B	C	A	B					C	A	E
Approach Vol, veh/h		1540			1818						846	
Approach Delay, s/veh		18.0			17.6						75.5	
Approach LOS		B			B						E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		78.5		43.2		78.5
Change Period (Y+Rc), s		6.8		7.3		6.8
Max Green Setting (Gmax), s		80.0		35.9		80.0
Max Q Clear Time (g_c+I1), s		30.6		37.9		20.7
Green Ext Time (p_c), s		36.1		0.0		51.0

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
10: SR-168 EB Ramps & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	810	213	0	1576	79	454	0	479	0	0	0
Future Volume (veh/h)	0	810	213	0	1576	79	454	0	479	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1885	1885	1841	0	1841			
Adj Flow Rate, veh/h	0	900	0	0	1751	88	504	0	532			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	0	2	2	0	1	1	4	0	4			
Cap, veh/h	0	2985		0	4464	934	1536	0	853			
Arrive On Green	0.00	0.58	0.00	0.00	0.58	0.58	0.31	0.00	0.31			
Sat Flow, veh/h	0	5274	1585	0	7993	1598	4944	0	2745			
Grp Volume(v), veh/h	0	900	0	0	1751	88	504	0	532			
Grp Sat Flow(s),veh/h/ln	0	1702	1585	0	1527	1598	1648	0	1373			
Q Serve(g_s), s	0.0	11.6	0.0	0.0	16.1	3.1	10.2	0.0	21.5			
Cycle Q Clear(g_c), s	0.0	11.6	0.0	0.0	16.1	3.1	10.2	0.0	21.5			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2985		0	4464	934	1536	0	853			
V/C Ratio(X)	0.00	0.30		0.00	0.39	0.09	0.33	0.00	0.62			
Avail Cap(c_a), veh/h	0	2985		0	4464	934	1536	0	853			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.98	0.00	0.00	0.75	0.75	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	13.6	0.0	0.0	14.6	11.9	34.4	0.0	38.3			
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.2	0.2	0.6	0.0	3.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.2	0.0	0.0	5.2	1.1	4.2	0.0	7.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.9	0.0	0.0	14.7	12.0	35.0	0.0	41.7			
LnGrp LOS	A	B		A	B	B	C	A	D			
Approach Vol, veh/h		900			1839			1036				
Approach Delay, s/veh		13.9			14.6			38.4				
Approach LOS		B			B			D				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		82.8				82.8		47.2				
Change Period (Y+Rc), s		6.8				6.8		6.8				
Max Green Setting (Gmax), s		76.0				76.0		40.4				
Max Q Clear Time (g_c+I1), s		13.6				18.1		23.5				
Green Ext Time (p_c), s		23.9				49.7		8.4				

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
11: Clovis Avenue & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	243	832	214	148	1021	157	232	255	120	161	283	402
Future Volume (veh/h)	243	832	214	148	1021	157	232	255	120	161	283	402
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	261	895	230	159	1098	169	249	274	129	173	304	432
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	1	1	1
Cap, veh/h	309	2190	680	290	2175	675	312	881	381	314	1305	713
Arrive On Green	0.09	0.43	0.43	0.08	0.43	0.43	0.09	0.25	0.25	0.09	0.25	0.25
Sat Flow, veh/h	3428	5066	1572	3456	5106	1585	3456	3475	1503	3483	5147	2812
Grp Volume(v), veh/h	261	895	230	159	1098	169	249	268	135	173	304	432
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1728	1702	1585	1728	1702	1575	1742	1716	1406
Q Serve(g_s), s	11.6	18.9	15.1	6.8	24.4	10.6	10.9	9.9	10.9	7.4	7.3	21.0
Cycle Q Clear(g_c), s	11.6	18.9	15.1	6.8	24.4	10.6	10.9	9.9	10.9	7.4	7.3	21.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		1.00
Lane Grp Cap(c), veh/h	309	2190	680	290	2175	675	312	863	399	314	1305	713
V/C Ratio(X)	0.84	0.41	0.34	0.55	0.50	0.25	0.80	0.31	0.34	0.55	0.23	0.61
Avail Cap(c_a), veh/h	553	2190	680	557	2175	675	669	863	399	674	1305	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.4	30.3	29.3	68.2	32.5	28.6	69.1	46.9	47.2	67.5	45.9	51.0
Incr Delay (d2), s/veh	2.3	0.5	1.3	0.6	0.8	0.9	1.8	0.9	2.3	0.6	0.4	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	7.7	5.9	3.0	10.0	4.2	4.9	4.3	4.5	3.3	3.1	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.7	30.9	30.5	68.8	33.4	29.5	70.9	47.8	49.5	68.1	46.3	54.8
LnGrp LOS	E	C	C	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1386			1426			652			909	
Approach Delay, s/veh		38.5			36.9			57.0			54.5	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	72.0	19.0	45.0	18.0	73.0	19.0	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	13.6	26.4	9.4	12.9	8.8	20.9	12.9	23.0
Green Ext Time (p_c), s	0.4	5.4	0.3	1.4	0.2	6.3	0.4	3.7

Intersection Summary			
HCM 6th Ctrl Delay			44.0
HCM 6th LOS			D

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	0	253	438	0	2	0
Future Vol, veh/h	0	253	438	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	0	0
Mvmt Flow	0	291	503	0	2	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	503	0	-	0	794	503
Stage 1	-	-	-	-	503	-
Stage 2	-	-	-	-	291	-
Critical Hdwy	4.14	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1051	-	-	-	360	573
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1051	-	-	-	360	573
Mov Cap-2 Maneuver	-	-	-	-	360	-
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	763	-

Approach	EB		WB		SB
HCM Control Delay, s	0		0		15.1
HCM LOS					C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1051	-	-	-	360
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	15.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	8	325	106	31	371	3	54	11	27	2	14	9
Future Vol, veh/h	8	325	106	31	371	3	54	11	27	2	14	9
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	1	1	1	10	10	10	12	12	12
Mvmt Flow	8	332	108	32	379	3	55	11	28	2	14	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.9	13.6	10.2	9.4
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	59%	2%	8%	8%
Vol Thru, %	12%	74%	92%	56%
Vol Right, %	29%	24%	1%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	439	405	25
LT Vol	54	8	31	2
Through Vol	11	325	371	14
RT Vol	27	106	3	9
Lane Flow Rate	94	448	413	26
Geometry Grp	1	1	1	1
Degree of Util (X)	0.158	0.576	0.548	0.044
Departure Headway (Hd)	6.069	4.63	4.772	6.141
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	594	770	748	586
Service Time	4.07	2.708	2.853	4.146
HCM Lane V/C Ratio	0.158	0.582	0.552	0.044
HCM Control Delay	10.2	13.9	13.6	9.4
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	0.6	3.7	3.4	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	5	4	1	17	6	10	2	74	5	5	139	0
Future Vol, veh/h	5	4	1	17	6	10	2	74	5	5	139	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	10	10	10	7	7	7
Mvmt Flow	6	5	1	21	7	12	2	90	6	6	170	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	289	282	170	282	279	93	170	0	0	96	0	0
Stage 1	182	182	-	97	97	-	-	-	-	-	-	-
Stage 2	107	100	-	185	182	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.2	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.29	-	-	2.263	-	-
Pot Cap-1 Maneuver	667	630	879	674	632	970	1360	-	-	1467	-	-
Stage 1	824	753	-	914	819	-	-	-	-	-	-	-
Stage 2	903	816	-	821	753	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	649	626	879	665	628	970	1360	-	-	1467	-	-
Mov Cap-2 Maneuver	649	626	-	665	628	-	-	-	-	-	-	-
Stage 1	822	749	-	912	817	-	-	-	-	-	-	-
Stage 2	882	814	-	810	749	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	10.2	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1360	-	-	657	726	1467	-	-
HCM Lane V/C Ratio	0.002	-	-	0.019	0.055	0.004	-	-
HCM Control Delay (s)	7.7	0	-	10.6	10.2	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	24.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✥	
Traffic Vol, veh/h	12	269	85	25	367	14	137	57	17	22	115	34
Future Vol, veh/h	12	269	85	25	367	14	137	57	17	22	115	34
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	1	1	1	10	10	10	7	7	7
Mvmt Flow	13	283	89	26	386	15	144	60	18	23	121	36
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	3
HCM Control Delay	15.4	37.4	19.4	17.4
HCM LOS	C	E	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	71%	0%	100%	0%	0%	100%	0%	13%
Vol Thru, %	29%	0%	0%	100%	51%	0%	96%	67%
Vol Right, %	0%	100%	0%	0%	49%	0%	4%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	17	12	179	175	25	381	171
LT Vol	137	0	12	0	0	25	0	22
Through Vol	57	0	0	179	90	0	367	115
RT Vol	0	17	0	0	85	0	14	34
Lane Flow Rate	204	18	13	189	184	26	401	180
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.502	0.039	0.03	0.415	0.386	0.059	0.84	0.425
Departure Headway (Hd)	8.843	7.762	8.424	7.91	7.559	8.211	7.669	8.505
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	408	463	427	457	478	439	477	425
Service Time	6.56	5.479	6.14	5.626	5.275	5.911	5.369	6.236
HCM Lane V/C Ratio	0.5	0.039	0.03	0.414	0.385	0.059	0.841	0.424
HCM Control Delay	20.2	10.8	11.4	16.1	15	11.4	39.1	17.4
HCM Lane LOS	C	B	B	C	B	B	E	C
HCM 95th-tile Q	2.7	0.1	0.1	2	1.8	0.2	8.3	2.1

HCM 6th AWSC
16: Fowler Avenue & Behymer Avenue

Intersection	
Intersection Delay, s/veh	22.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	10	0	233	4	8	0	424	75	1	0	80	16
Future Vol, veh/h	10	0	233	4	8	0	424	75	1	0	80	16
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	3	3	3
Mvmt Flow	12	0	277	5	10	0	505	89	1	0	95	19
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	9.7	30.2	9.8
HCM LOS	B	A	D	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	85%	4%	33%	0%
Vol Thru, %	15%	0%	67%	83%
Vol Right, %	0%	96%	0%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	500	243	12	96
LT Vol	424	10	4	0
Through Vol	75	0	8	80
RT Vol	1	233	0	16
Lane Flow Rate	595	289	14	114
Geometry Grp	1	1	1	1
Degree of Util (X)	0.85	0.425	0.026	0.177
Departure Headway (Hd)	5.14	5.295	6.491	5.568
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	708	680	550	643
Service Time	3.165	3.338	4.553	3.611
HCM Lane V/C Ratio	0.84	0.425	0.025	0.177
HCM Control Delay	30.2	12.2	9.7	9.8
HCM Lane LOS	D	B	A	A
HCM 95th-tile Q	9.7	2.1	0.1	0.6

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Traffic Vol, veh/h	7	8	9	488	310	7
Future Vol, veh/h	7	8	9	488	310	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	7	7	2	2	3	3
Mvmt Flow	8	9	10	567	360	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	951	364	368	0	-	0
Stage 1	364	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Critical Hdwy	6.47	6.27	4.12	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.363	2.218	-	-	-
Pot Cap-1 Maneuver	282	670	1191	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	279	670	1191	-	-	-
Mov Cap-2 Maneuver	279	-	-	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	546	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	14.3		0.1		0	
HCM LOS	B					

Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1191	-	405	-	-
HCM Lane V/C Ratio		0.009	-	0.043	-	-
HCM Control Delay (s)		8	0	14.3	-	-
HCM Lane LOS		A	A	B	-	-
HCM 95th %tile Q(veh)		0	-	0.1	-	-

HCM 6th Signalized Intersection Summary
18: Fowler Avenue & Shepherd Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	20	281	51	36	279	370	141	92	34	185	125	18
Future Volume (veh/h)	20	281	51	36	279	370	141	92	34	185	125	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	21	293	53	38	291	385	147	96	35	193	130	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	4	4
Cap, veh/h	55	765	334	75	424	359	170	912	773	216	809	118
Arrive On Green	0.03	0.22	0.22	0.04	0.23	0.23	0.10	0.49	0.49	0.12	0.52	0.52
Sat Flow, veh/h	1781	3554	1551	1781	1870	1585	1781	1870	1585	1753	1570	229
Grp Volume(v), veh/h	21	293	53	38	291	385	147	96	35	193	0	149
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1781	1870	1585	1781	1870	1585	1753	0	1799
Q Serve(g_s), s	1.7	10.6	4.2	3.1	21.4	34.0	12.2	4.2	1.7	16.3	0.0	6.6
Cycle Q Clear(g_c), s	1.7	10.6	4.2	3.1	21.4	34.0	12.2	4.2	1.7	16.3	0.0	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	55	765	334	75	424	359	170	912	773	216	0	927
V/C Ratio(X)	0.38	0.38	0.16	0.50	0.69	1.07	0.86	0.11	0.05	0.89	0.00	0.16
Avail Cap(c_a), veh/h	368	806	351	368	424	359	368	912	773	362	0	927
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.2	50.3	47.8	70.3	53.1	58.0	66.9	20.7	20.1	64.8	0.0	19.2
Incr Delay (d2), s/veh	1.6	0.6	0.4	1.9	5.6	67.8	5.0	0.2	0.1	8.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.7	1.6	1.4	10.5	20.2	5.7	1.9	0.7	7.7	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	50.9	48.2	72.2	58.7	125.8	71.9	21.0	20.2	73.2	0.0	19.6
LnGrp LOS	E	D	D	E	E	F	E	C	C	E	A	B
Approach Vol, veh/h		367			714			278			342	
Approach Delay, s/veh		51.8			95.6			47.8			49.9	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	83.0	8.7	40.0	22.5	78.9	10.4	38.3
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	31.0	34.3	31.0	34.0
Max Q Clear Time (g_c+I1), s	14.2	8.6	3.7	36.0	18.3	6.2	5.1	12.6
Green Ext Time (p_c), s	0.2	0.7	0.0	0.0	0.2	0.5	0.0	3.2

Intersection Summary	
HCM 6th Ctrl Delay	69.1
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↱		↰	↑	↱
Traffic Vol, veh/h	4	6	6	17	8	30	3	164	7	19	238	10
Future Vol, veh/h	4	6	6	17	8	30	3	164	7	19	238	10
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	3	3	3	1	1	1
Mvmt Flow	4	7	7	19	9	33	3	180	8	21	262	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	517	498	262	507	505	186	273	0	0	188	0	0
Stage 1	304	304	-	190	190	-	-	-	-	-	-	-
Stage 2	213	194	-	317	315	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.13	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.227	-	-	2.209	-	-
Pot Cap-1 Maneuver	472	477	782	479	473	861	1284	-	-	1392	-	-
Stage 1	710	667	-	816	747	-	-	-	-	-	-	-
Stage 2	794	744	-	698	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	440	469	782	464	465	859	1284	-	-	1392	-	-
Mov Cap-2 Maneuver	440	469	-	464	465	-	-	-	-	-	-	-
Stage 1	709	657	-	814	746	-	-	-	-	-	-	-
Stage 2	751	743	-	675	649	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.9	11.4	0.1	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1284	-	-	541	620	1392	-	-
HCM Lane V/C Ratio	0.003	-	-	0.032	0.097	0.015	-	-
HCM Control Delay (s)	7.8	-	-	11.9	11.4	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

HCM 6th Signalized Intersection Summary
20: Fowler Avenue & Nees Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	20	202	87	73	272	32	111	123	37	28	215	32
Future Volume (veh/h)	20	202	87	73	272	32	111	123	37	28	215	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	22	220	95	79	296	35	121	134	40	30	234	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	27	352	146	101	350	294	147	1175	996	38	1060	899
Arrive On Green	0.02	0.14	0.14	0.06	0.19	0.19	0.08	0.62	0.62	0.02	0.56	0.56
Sat Flow, veh/h	1795	2441	1012	1795	1885	1585	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	22	159	156	79	296	35	121	134	40	30	234	35
Grp Sat Flow(s),veh/h/ln	1795	1791	1663	1795	1885	1585	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	1.5	10.0	10.6	5.2	18.2	2.2	8.0	3.5	1.2	2.0	7.4	1.2
Cycle Q Clear(g_c), s	1.5	10.0	10.6	5.2	18.2	2.2	8.0	3.5	1.2	2.0	7.4	1.2
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	27	258	240	101	350	294	147	1175	996	38	1060	899
V/C Ratio(X)	0.81	0.62	0.65	0.78	0.85	0.12	0.82	0.11	0.04	0.79	0.22	0.04
Avail Cap(c_a), veh/h	239	518	481	239	545	458	239	1175	996	239	1060	899
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	48.2	48.5	55.9	47.2	40.7	54.2	9.2	8.7	58.5	13.1	11.7
Incr Delay (d2), s/veh	19.1	3.7	4.6	4.9	6.6	0.2	4.8	0.2	0.1	12.7	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.6	4.6	2.4	8.9	0.9	3.7	1.4	0.4	1.0	3.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.0	51.9	53.1	60.9	53.8	40.9	59.0	9.4	8.8	71.2	13.6	11.8
LnGrp LOS	E	D	D	E	D	D	E	A	A	E	B	B
Approach Vol, veh/h		337			410			295			299	
Approach Delay, s/veh		54.2			54.1			29.6			19.2	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	72.8	5.8	27.6	6.5	80.1	10.7	22.6
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	16.0	34.7	16.0	34.7	16.0	34.7	16.0	34.7
Max Q Clear Time (g_c+I1), s	10.0	9.4	3.5	20.2	4.0	5.5	7.2	12.6
Green Ext Time (p_c), s	0.1	1.5	0.0	1.2	0.0	0.9	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
21: Fowler Avenue & SR-168 WB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	134	0	31	497	418	0	0	324	389
Future Volume (veh/h)	0	0	0	134	0	31	497	418	0	0	324	389
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1885	0	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				137	0	32	507	427	0	0	331	397
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				1	0	1	1	1	0	0	1	1
Cap, veh/h				183	0	163	577	2748	0	0	975	870
Arrive On Green				0.10	0.00	0.10	0.28	1.00	0.00	0.00	0.54	0.54
Sat Flow, veh/h				1795	0	1598	3483	3676	0	0	1885	1598
Grp Volume(v), veh/h				137	0	32	507	427	0	0	331	397
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1742	1791	0	0	1791	1598
Q Serve(g_s), s				7.4	0.0	1.8	13.9	0.0	0.0	0.0	10.3	15.1
Cycle Q Clear(g_c), s				7.4	0.0	1.8	13.9	0.0	0.0	0.0	10.3	15.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				183	0	163	577	2748	0	0	975	870
V/C Ratio(X)				0.75	0.00	0.20	0.88	0.16	0.00	0.00	0.34	0.46
Avail Cap(c_a), veh/h				429	0	382	801	2748	0	0	975	870
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.94	0.94	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.7	0.0	41.2	35.2	0.0	0.0	0.0	12.7	13.8
Incr Delay (d2), s/veh				12.3	0.0	1.3	6.2	0.1	0.0	0.0	0.9	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	0.0	0.8	5.4	0.0	0.0	0.0	3.9	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				56.0	0.0	42.4	41.5	0.1	0.0	0.0	13.7	15.5
LnGrp LOS				E	A	D	D	A	A	A	B	B
Approach Vol, veh/h					169			934			728	
Approach Delay, s/veh					53.4			22.6			14.7	
Approach LOS					D			C			B	

Timer - Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		83.5			22.3	61.3		16.5
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3
Max Green Setting (Gmax), s		63.0			* 23	34.3		23.9
Max Q Clear Time (g_c+I1), s		2.0			15.9	17.1		9.4
Green Ext Time (p_c), s		5.1			0.6	7.4		0.9

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	141	0	332	0	0	0	0	774	92	14	444	0
Future Volume (veh/h)	141	0	332	0	0	0	0	774	92	14	444	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1856				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	148	0	349				0	815	97	15	467	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	3				0	1	1	2	2	0
Cap, veh/h	862	0	396				0	1743	207	36	2201	0
Arrive On Green	0.25	0.00	0.25				0.00	0.54	0.54	0.02	0.62	0.00
Sat Flow, veh/h	3428	0	1572				0	3309	383	1781	3647	0
Grp Volume(v), veh/h	148	0	349				0	454	458	15	467	0
Grp Sat Flow(s),veh/h/ln	1714	0	1572				0	1791	1807	1781	1777	0
Q Serve(g_s), s	3.4	0.0	21.3				0.0	15.6	15.6	0.8	5.8	0.0
Cycle Q Clear(g_c), s	3.4	0.0	21.3				0.0	15.6	15.6	0.8	5.8	0.0
Prop In Lane	1.00		1.00				0.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	862	0	396				0	971	979	36	2201	0
V/C Ratio(X)	0.17	0.00	0.88				0.00	0.47	0.47	0.41	0.21	0.00
Avail Cap(c_a), veh/h	998	0	458				0	971	979	285	2201	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.90	0.90	0.00
Uniform Delay (d), s/veh	29.3	0.0	36.0				0.0	14.0	14.0	48.4	8.3	0.0
Incr Delay (d2), s/veh	0.2	0.0	18.8				0.0	1.6	1.6	2.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	10.0				0.0	6.0	6.1	0.4	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	0.0	54.8				0.0	15.7	15.7	50.9	8.5	0.0
LnGrp LOS	C	A	D				A	B	B	D	A	A
Approach Vol, veh/h		497						912			482	
Approach Delay, s/veh		47.2						15.7			9.9	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.7	61.0		31.3		68.7
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 16	36.3		29.1		58.0
Max Q Clear Time (g_c+I1), s	2.8	17.6		23.3		7.8
Green Ext Time (p_c), s	0.0	10.3		1.8		5.6

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	11	45	81	31	89	18	120	451	24	37	354	10
Future Volume (veh/h)	11	45	81	31	89	18	120	451	24	37	354	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	12	51	92	35	101	20	136	512	27	42	402	11
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	0	0	0	1	1	1
Cap, veh/h	39	149	127	78	135	27	160	3462	1075	84	3221	977
Arrive On Green	0.02	0.08	0.08	0.04	0.09	0.09	0.09	0.67	0.67	0.05	0.63	0.63
Sat Flow, veh/h	1810	1900	1610	1795	1528	303	1810	5187	1610	1795	5147	1561
Grp Volume(v), veh/h	12	51	92	35	0	121	136	512	27	42	402	11
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	0	1831	1810	1729	1610	1795	1716	1561
Q Serve(g_s), s	0.9	3.4	7.5	2.6	0.0	8.7	10.0	4.9	0.8	3.1	4.3	0.4
Cycle Q Clear(g_c), s	0.9	3.4	7.5	2.6	0.0	8.7	10.0	4.9	0.8	3.1	4.3	0.4
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	149	127	78	0	162	160	3462	1075	84	3221	977
V/C Ratio(X)	0.31	0.34	0.73	0.45	0.00	0.75	0.85	0.15	0.03	0.50	0.12	0.01
Avail Cap(c_a), veh/h	185	612	519	205	0	590	197	3462	1075	196	3221	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.1	58.9	60.8	63.0	0.0	60.0	60.6	8.3	7.6	62.8	10.3	9.5
Incr Delay (d2), s/veh	1.7	1.6	9.2	1.5	0.0	14.1	20.2	0.1	0.0	1.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.7	3.4	1.2	0.0	4.6	5.4	1.7	0.3	1.4	1.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	60.5	70.0	64.5	0.0	74.2	80.8	8.4	7.6	64.5	10.3	9.5
LnGrp LOS	E	E	E	E	A	E	F	A	A	E	B	A
Approach Vol, veh/h		155			156			675			455	
Approach Delay, s/veh		66.6			72.0			22.9			15.3	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	90.2	9.1	18.5	11.6	95.8	10.4	17.1
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	14.7	39.3	13.8	43.5	14.7	39.3	15.4	43.5
Max Q Clear Time (g_c+I1), s	12.0	6.3	2.9	10.7	5.1	6.9	4.6	9.5
Green Ext Time (p_c), s	0.0	6.1	0.0	1.2	0.0	8.1	0.0	0.7

Intersection Summary			
HCM 6th Ctrl Delay			30.5
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	36	323	113	34	315	145	243	657	89	127	464	31
Future Volume (veh/h)	36	323	113	34	315	145	243	657	89	127	464	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	38	344	120	36	335	154	259	699	95	135	494	33
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	152	520	232	148	546	243	309	3041	944	191	2847	872
Arrive On Green	0.04	0.14	0.14	0.04	0.15	0.15	0.09	0.59	0.59	0.05	0.55	0.55
Sat Flow, veh/h	3510	3610	1610	3510	3610	1607	3510	5187	1609	3483	5147	1576
Grp Volume(v), veh/h	38	344	120	36	335	154	259	699	95	135	494	33
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1607	1755	1729	1609	1742	1716	1576
Q Serve(g_s), s	1.5	13.1	10.0	1.4	12.6	13.0	10.5	9.3	3.8	5.5	6.9	1.4
Cycle Q Clear(g_c), s	1.5	13.1	10.0	1.4	12.6	13.0	10.5	9.3	3.8	5.5	6.9	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	520	232	148	546	243	309	3041	944	191	2847	872
V/C Ratio(X)	0.25	0.66	0.52	0.24	0.61	0.63	0.84	0.23	0.10	0.71	0.17	0.04
Avail Cap(c_a), veh/h	470	1090	486	441	1090	485	453	3041	944	449	2847	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.60	0.60	0.60	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	67.1	58.7	57.4	67.2	57.6	57.7	65.1	14.3	13.2	67.4	16.0	14.8
Incr Delay (d2), s/veh	0.3	3.4	4.2	0.2	0.9	2.2	5.9	0.2	0.2	1.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.2	4.3	0.6	5.7	5.4	4.9	3.5	1.4	2.5	2.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.4	62.1	61.5	67.4	58.5	60.0	71.0	14.5	13.4	69.1	16.1	14.9
LnGrp LOS	E	E	E	E	E	E	E	B	B	E	B	B
Approach Vol, veh/h		502			525			1053			662	
Approach Delay, s/veh		62.4			59.5			28.3			26.9	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.1	85.9	11.9	28.1	14.3	90.7	12.9	27.1
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	12.5	8.9	3.5	15.0	7.5	11.3	3.4	15.1
Green Ext Time (p_c), s	0.2	7.7	0.0	3.5	0.1	11.3	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D

HCM 6th AWSC
3: Minnewawa Avenue & Behymer Avenue

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	3	69	30	6	86	99	46	205	6	95	190	2
Future Vol, veh/h	3	69	30	6	86	99	46	205	6	95	190	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	1	1	1
Mvmt Flow	3	78	34	7	98	113	52	233	7	108	216	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Righ	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	11.2	12.7	13.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	3%	3%	33%
Vol Thru, %	80%	68%	45%	66%
Vol Right, %	2%	29%	52%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	257	102	191	287
LT Vol	46	3	6	95
Through Vol	205	69	86	190
RT Vol	6	30	99	2
Lane Flow Rate	292	116	217	326
Geometry Grp	1	1	1	1
Degree of Util (X)	0.439	0.188	0.33	0.489
Departure Headway (Hd)	5.407	5.824	5.473	5.394
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	663	613	653	665
Service Time	3.459	3.89	3.532	3.443
HCM Lane V/C Ratio	0.44	0.189	0.332	0.49
HCM Control Delay	12.7	10.2	11.2	13.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.2	0.7	1.4	2.7

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

Shepherd

Existing (2022) NP - PM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	20	390	81	19	342	85	104	152	26	76	142	13
Future Volume (veh/h)	20	390	81	19	342	85	104	152	26	76	142	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	22	419	87	20	368	91	112	163	28	82	153	14
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	83	794	354	79	416	352	149	944	800	144	938	795
Arrive On Green	0.05	0.22	0.22	0.04	0.22	0.22	0.08	0.50	0.50	0.08	0.50	0.50
Sat Flow, veh/h	1795	3582	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	22	419	87	20	368	91	112	163	28	82	153	14
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	1.5	13.4	5.8	1.4	24.4	6.1	7.9	6.1	1.2	5.7	5.8	0.6
Cycle Q Clear(g_c), s	1.5	13.4	5.8	1.4	24.4	6.1	7.9	6.1	1.2	5.7	5.8	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	794	354	79	416	352	149	944	800	144	938	795
V/C Ratio(X)	0.26	0.53	0.25	0.25	0.88	0.26	0.75	0.17	0.04	0.57	0.16	0.02
Avail Cap(c_a), veh/h	290	937	418	292	497	421	290	944	800	290	938	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.8	44.6	41.6	60.1	49.2	42.0	58.3	17.7	16.5	57.6	17.8	16.5
Incr Delay (d2), s/veh	0.5	0.7	0.5	0.6	16.7	0.6	2.8	0.4	0.1	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.8	2.3	0.6	13.1	2.4	3.6	2.7	0.4	2.6	2.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	45.3	42.1	60.8	65.9	42.7	61.1	18.1	16.6	58.9	18.2	16.6
LnGrp LOS	E	D	D	E	E	D	E	B	B	E	B	B
Approach Vol, veh/h		528			479			303			249	
Approach Delay, s/veh		45.4			61.3			33.9			31.5	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	70.7	10.0	34.5	14.4	71.1	9.7	34.8
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	9.9	7.8	3.5	26.4	7.7	8.1	3.4	15.4
Green Ext Time (p_c), s	0.1	1.1	0.0	2.1	0.1	0.9	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	32	343	103	77	304	7	140	44	70	10	24	26
Future Volume (veh/h)	32	343	103	77	304	7	140	44	70	10	24	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	361	108	81	320	7	147	46	74	11	25	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	182	495	220	240	557	248	172	1644	733	612	1931	861
Arrive On Green	0.05	0.14	0.14	0.07	0.15	0.15	0.09	0.46	0.46	0.17	0.53	0.53
Sat Flow, veh/h	3483	3582	1591	3510	3610	1610	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	34	361	108	81	320	7	147	46	74	11	25	27
Grp Sat Flow(s),veh/h/ln	1742	1791	1591	1755	1805	1610	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	1.3	13.5	8.8	3.1	11.5	0.5	11.2	1.0	3.7	0.4	0.5	1.1
Cycle Q Clear(g_c), s	1.3	13.5	8.8	3.1	11.5	0.5	11.2	1.0	3.7	0.4	0.5	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	495	220	240	557	248	172	1644	733	612	1931	861
V/C Ratio(X)	0.19	0.73	0.49	0.34	0.57	0.03	0.86	0.03	0.10	0.02	0.01	0.03
Avail Cap(c_a), veh/h	607	870	386	612	877	391	315	1644	733	612	1931	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	57.8	55.8	62.2	54.9	50.3	62.4	21.0	21.8	47.9	15.3	15.4
Incr Delay (d2), s/veh	0.2	3.0	2.5	0.3	1.4	0.1	4.6	0.0	0.3	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.2	3.6	1.4	5.2	0.2	5.3	0.4	1.4	0.2	0.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.7	60.8	58.2	62.5	56.3	50.3	67.0	21.1	22.0	47.9	15.3	15.5
LnGrp LOS	E	E	E	E	E	D	E	C	C	D	B	B
Approach Vol, veh/h		503			408			267			63	
Approach Delay, s/veh		60.5			57.4			46.6			21.1	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.9	80.6	12.9	27.6	30.0	69.5	15.2	25.4
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	24.4	34.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	13.2	3.1	3.3	13.5	2.4	5.7	5.1	15.5
Green Ext Time (p_c), s	0.1	0.5	0.0	2.5	0.0	1.0	0.1	3.3

Intersection Summary	
HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D

AGENDA ITEM NO. 6.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	67	87	156	290	223	60
Future Volume (veh/h)	67	87	156	290	223	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1900	1900
Adj Flow Rate, veh/h	83	107	193	358	275	74
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	1	1	1	1	0	0
Cap, veh/h	167	149	231	2819	2206	984
Arrive On Green	0.09	0.09	0.13	0.79	0.61	0.61
Sat Flow, veh/h	1795	1598	1795	3676	3705	1610
Grp Volume(v), veh/h	83	107	193	358	275	74
Grp Sat Flow(s),veh/h/ln	1795	1598	1795	1791	1805	1610
Q Serve(g_s), s	3.7	5.5	8.9	2.0	2.7	1.6
Cycle Q Clear(g_c), s	3.7	5.5	8.9	2.0	2.7	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	167	149	231	2819	2206	984
V/C Ratio(X)	0.50	0.72	0.83	0.13	0.12	0.08
Avail Cap(c_a), veh/h	530	472	380	2819	2206	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.97	0.97
Uniform Delay (d), s/veh	36.7	37.5	36.1	2.1	7.0	6.7
Incr Delay (d2), s/veh	0.9	2.4	3.5	0.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.2	3.9	0.3	0.9	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.5	39.9	39.7	2.2	7.1	6.9
LnGrp LOS	D	D	D	A	A	A
Approach Vol, veh/h	190			551	349	
Approach Delay, s/veh	38.9			15.4	7.0	
Approach LOS	D			B	A	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.9	57.2				72.2		12.8
Change Period (Y+Rc), s	4.0	5.3				5.3		4.9
Max Green Setting (Gmax), s	18.0	27.7				49.7		25.1
Max Q Clear Time (g_c+I1), s	10.9	4.7				4.0		7.5
Green Ext Time (p_c), s	0.1	2.3				2.9		0.2

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
7: Clovis Avenue & Nees Avenue

Shepherd
Existing (2022) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	22	415	249	22	385	74	124	400	46	43	253	27
Future Volume (veh/h)	22	415	249	22	385	74	124	400	46	43	253	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	23	441	265	23	410	79	132	426	49	46	269	29
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	0	0	0
Cap, veh/h	67	477	404	66	473	401	155	1922	838	93	1810	788
Arrive On Green	0.04	0.25	0.25	0.04	0.25	0.25	0.09	0.54	0.54	0.05	0.50	0.50
Sat Flow, veh/h	1810	1900	1610	1795	1885	1596	1795	3582	1562	1810	3610	1572
Grp Volume(v), veh/h	23	441	265	23	410	79	132	426	49	46	269	29
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	1885	1596	1795	1791	1562	1810	1805	1572
Q Serve(g_s), s	1.9	34.0	22.1	1.9	31.2	5.9	10.9	9.4	2.3	3.7	6.0	1.4
Cycle Q Clear(g_c), s	1.9	34.0	22.1	1.9	31.2	5.9	10.9	9.4	2.3	3.7	6.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	477	404	66	473	401	155	1922	838	93	1810	788
V/C Ratio(X)	0.34	0.92	0.66	0.35	0.87	0.20	0.85	0.22	0.06	0.50	0.15	0.04
Avail Cap(c_a), veh/h	374	503	426	311	473	401	371	1922	838	314	1810	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.4	54.8	50.3	70.5	53.8	44.3	67.6	18.3	16.6	69.3	20.1	19.0
Incr Delay (d2), s/veh	1.1	23.0	4.1	1.1	15.9	0.4	4.7	0.3	0.1	1.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	18.9	9.2	0.9	16.6	2.3	5.1	3.9	0.8	1.7	2.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	77.7	54.4	71.6	69.7	44.6	72.2	18.5	16.7	70.8	20.3	19.1
LnGrp LOS	E	E	D	E	E	D	E	B	B	E	C	B
Approach Vol, veh/h		729			512			607			344	
Approach Delay, s/veh		69.1			65.9			30.1			27.0	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	80.5	9.5	43.0	11.7	85.8	9.5	43.0
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	31.0	34.7	31.0	34.7	26.0	39.7	26.0	39.7
Max Q Clear Time (g_c+I1), s	12.9	8.0	3.9	33.2	5.7	11.4	3.9	36.0
Green Ext Time (p_c), s	0.1	2.5	0.0	0.5	0.0	4.3	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	50.9
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	15	342	175	36	302	77	146	558	67	77	454	13
Future Volume (veh/h)	15	342	175	36	302	77	146	558	67	77	454	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	16	372	190	39	328	84	159	607	73	84	493	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	61	418	354	107	466	395	186	1530	184	164	1650	47
Arrive On Green	0.03	0.22	0.22	0.06	0.25	0.25	0.10	0.47	0.47	0.09	0.46	0.46
Sat Flow, veh/h	1795	1885	1595	1795	1885	1598	1810	3237	388	1810	3582	102
Grp Volume(v), veh/h	16	372	190	39	328	84	159	338	342	84	248	259
Grp Sat Flow(s),veh/h/ln	1795	1885	1595	1795	1885	1598	1810	1805	1820	1810	1805	1879
Q Serve(g_s), s	1.1	23.9	13.1	2.6	19.8	5.2	10.8	15.2	15.3	5.5	10.7	10.8
Cycle Q Clear(g_c), s	1.1	23.9	13.1	2.6	19.8	5.2	10.8	15.2	15.3	5.5	10.7	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.05
Lane Grp Cap(c), veh/h	61	418	354	107	466	395	186	853	861	164	831	866
V/C Ratio(X)	0.26	0.89	0.54	0.37	0.70	0.21	0.85	0.40	0.40	0.51	0.30	0.30
Avail Cap(c_a), veh/h	158	593	502	158	593	502	304	853	861	232	831	866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	58.8	47.1	43.0	56.5	42.9	37.4	55.1	21.4	21.4	54.2	21.1	21.1
Incr Delay (d2), s/veh	0.8	10.4	0.9	0.8	2.8	0.3	6.3	1.4	1.4	0.9	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	12.1	5.1	1.2	9.3	2.0	5.1	6.5	6.6	2.5	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	57.6	43.8	57.3	45.7	37.7	61.4	22.8	22.8	55.1	22.0	21.9
LnGrp LOS	E	E	D	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		578			451			839			591	
Approach Delay, s/veh		53.1			45.2			30.1			26.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	63.3	8.3	36.6	15.4	64.8	11.4	33.4
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	21.0	34.3	11.0	39.3	16.0	39.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	12.8	12.8	3.1	21.8	7.5	17.3	4.6	25.9
Green Ext Time (p_c), s	0.1	2.6	0.0	2.0	0.0	4.3	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↱		↑↑↑↱	↱				↰↰		↱↱
Traffic Volume (veh/h)	0	1653	529	0	1451	540	0	0	0	66	0	342
Future Volume (veh/h)	0	1653	529	0	1451	540	0	0	0	66	0	342
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	0	1885
Adj Flow Rate, veh/h	0	1670	534	0	1680	0				67	0	345
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	1	1	0	1	1				1	0	1
Cap, veh/h	0	3259	803	0	3789					570	0	460
Arrive On Green	0.00	0.50	0.50	0.00	0.50	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	6749	1598	0	7541	1598				3483	0	2812
Grp Volume(v), veh/h	0	1670	534	0	1680	0				67	0	345
Grp Sat Flow(s),veh/h/ln	0	1621	1598	0	1885	1598				1742	0	1406
Q Serve(g_s), s	0.0	22.8	33.0	0.0	18.8	0.0				2.2	0.0	15.4
Cycle Q Clear(g_c), s	0.0	22.8	33.0	0.0	18.8	0.0				2.2	0.0	15.4
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3259	803	0	3789					570	0	460
V/C Ratio(X)	0.00	0.51	0.67	0.00	0.44					0.12	0.00	0.75
Avail Cap(c_a), veh/h	0	3341	823	0	3885					1317	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.0	24.5	0.0	21.0	0.0				47.1	0.0	52.6
Incr Delay (d2), s/veh	0.0	0.6	4.3	0.0	0.4	0.0				0.2	0.0	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.4	12.7	0.0	8.0	0.0				1.0	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.6	28.9	0.0	21.4	0.0				47.3	0.0	58.6
LnGrp LOS	A	C	C	A	C					D	A	E
Approach Vol, veh/h		2204			1680						412	
Approach Delay, s/veh		24.1			21.4						56.8	
Approach LOS		C			C						E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.1		28.9		73.1
Change Period (Y+Rc), s		6.8		7.3		6.8
Max Green Setting (Gmax), s		68.0		49.9		68.0
Max Q Clear Time (g_c+I1), s		35.0		17.4		20.8
Green Ext Time (p_c), s		31.4		4.2		39.8

Intersection Summary			
HCM 6th Ctrl Delay			26.2
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
10: SR-168 EB Ramps & Herndon Avenue

Shepherd
Existing (2022) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	1359	360	0	1494	184	497	0	677	0	0	0
Future Volume (veh/h)	0	1359	360	0	1494	184	497	0	677	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885	1885	0	1885			
Adj Flow Rate, veh/h	0	1401	0	0	1540	190	512	0	698			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	1	1	0	1	1	1	0	1			
Cap, veh/h	0	2930		0	4346	909	1651	0	917			
Arrive On Green	0.00	0.57	0.00	0.00	0.57	0.57	0.33	0.00	0.33			
Sat Flow, veh/h	0	5316	1598	0	7993	1598	5063	0	2812			
Grp Volume(v), veh/h	0	1401	0	0	1540	190	512	0	698			
Grp Sat Flow(s),veh/h/ln	0	1716	1598	0	1527	1598	1688	0	1406			
Q Serve(g_s), s	0.0	20.9	0.0	0.0	14.1	7.6	9.9	0.0	28.9			
Cycle Q Clear(g_c), s	0.0	20.9	0.0	0.0	14.1	7.6	9.9	0.0	28.9			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2930		0	4346	909	1651	0	917			
V/C Ratio(X)	0.00	0.48		0.00	0.35	0.21	0.31	0.00	0.76			
Avail Cap(c_a), veh/h	0	2930		0	4346	909	1651	0	917			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.95	0.00	0.00	0.65	0.65	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	16.6	0.0	0.0	15.1	13.7	32.8	0.0	39.3			
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.1	0.3	0.5	0.0	5.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	7.8	0.0	0.0	4.7	2.7	4.1	0.0	10.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.1	0.0	0.0	15.3	14.0	33.3	0.0	45.2			
LnGrp LOS	A	B		A	B	B	C	A	D			
Approach Vol, veh/h		1401			1730			1210				
Approach Delay, s/veh		17.1			15.1			40.2				
Approach LOS		B			B			D				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		80.8				80.8		49.2				
Change Period (Y+Rc), s		6.8				6.8		6.8				
Max Green Setting (Gmax), s		74.0				74.0		42.4				
Max Q Clear Time (g_c+I1), s		22.9				16.1		30.9				
Green Ext Time (p_c), s		36.6				46.9		7.4				

Intersection Summary			
HCM 6th Ctrl Delay			22.7
HCM 6th LOS			C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
11: Clovis Avenue & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	366	1368	302	316	1062	132	350	402	276	271	262	266
Future Volume (veh/h)	366	1368	302	316	1062	132	350	402	276	271	262	266
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	381	1425	315	329	1106	138	365	419	288	282	273	277
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	429	1952	606	378	1876	582	416	957	437	332	1305	703
Arrive On Green	0.12	0.38	0.38	0.11	0.36	0.36	0.12	0.28	0.28	0.10	0.25	0.25
Sat Flow, veh/h	3483	5147	1598	3483	5147	1596	3510	3458	1579	3483	5147	2773
Grp Volume(v), veh/h	381	1425	315	329	1106	138	365	419	288	282	273	277
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1742	1716	1596	1755	1729	1579	1742	1716	1387
Q Serve(g_s), s	16.7	36.8	23.6	14.4	27.0	9.3	15.9	15.5	25.0	12.4	6.5	12.8
Cycle Q Clear(g_c), s	16.7	36.8	23.6	14.4	27.0	9.3	15.9	15.5	25.0	12.4	6.5	12.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	429	1952	606	378	1876	582	416	957	437	332	1305	703
V/C Ratio(X)	0.89	0.73	0.52	0.87	0.59	0.24	0.88	0.44	0.66	0.85	0.21	0.39
Avail Cap(c_a), veh/h	562	1952	606	562	1876	582	679	957	437	674	1305	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	41.3	37.2	68.0	39.9	34.3	67.2	46.1	49.6	69.0	45.6	48.0
Incr Delay (d2), s/veh	9.2	2.0	2.6	6.8	1.4	1.0	4.2	1.5	7.6	2.4	0.4	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	15.6	9.5	6.7	11.4	3.8	7.2	6.8	10.6	5.5	2.8	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.1	43.3	39.8	74.8	41.2	35.2	71.4	47.6	57.1	71.4	46.0	49.6
LnGrp LOS	E	D	D	E	D	D	E	D	E	E	D	D
Approach Vol, veh/h		2121			1573			1072			832	
Approach Delay, s/veh		48.7			47.7			58.3			55.8	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.1	62.5	19.8	48.6	21.8	64.8	23.4	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	18.7	29.0	14.4	27.0	16.4	38.8	17.9	14.8
Green Ext Time (p_c), s	0.4	4.7	0.4	2.2	0.4	0.1	0.5	3.1

Intersection Summary	
HCM 6th Ctrl Delay	51.3
HCM 6th LOS	D

AGENDA ITEM NO. 6.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	0	179	198	0	0	0
Future Vol, veh/h	0	179	198	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	197	218	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	218	0	-	0	415	218
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	197	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1364	-	-	-	598	827
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	841	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1364	-	-	-	598	827
Mov Cap-2 Maneuver	-	-	-	-	598	-
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	841	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1364	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	9	342	70	29	296	6	80	11	31	4	13	9
Future Vol, veh/h	9	342	70	29	296	6	80	11	31	4	13	9
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	0	0	0	0	0	0	0	0	0
Mvmt Flow	10	364	74	31	315	6	85	12	33	4	14	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.2	12.4	10.4	9.2
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	66%	2%	9%	15%
Vol Thru, %	9%	81%	89%	50%
Vol Right, %	25%	17%	2%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	421	331	26
LT Vol	80	9	29	4
Through Vol	11	342	296	13
RT Vol	31	70	6	9
Lane Flow Rate	130	448	352	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.21	0.582	0.475	0.045
Departure Headway (Hd)	5.828	4.68	4.859	5.921
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	619	761	732	608
Service Time	3.829	2.767	2.955	3.928
HCM Lane V/C Ratio	0.21	0.589	0.481	0.046
HCM Control Delay	10.4	14.2	12.4	9.2
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	0.8	3.8	2.6	0.1

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	1	1	3	8	3	12	0	120	7	2	112	1
Future Vol, veh/h	1	1	3	8	3	12	0	120	7	2	112	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	9	9	9	0	0	0	0	0	0	1	1	1
Mvmt Flow	1	1	3	9	3	14	0	140	8	2	130	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	288	283	131	281	279	144	131	0	0	148	0	0
Stage 1	135	135	-	144	144	-	-	-	-	-	-	-
Stage 2	153	148	-	137	135	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.1	6.5	6.2	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	650	614	900	675	632	909	1467	-	-	1440	-	-
Stage 1	852	771	-	864	782	-	-	-	-	-	-	-
Stage 2	833	761	-	871	789	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	637	613	900	671	631	909	1467	-	-	1440	-	-
Mov Cap-2 Maneuver	637	613	-	671	631	-	-	-	-	-	-	-
Stage 1	852	770	-	864	782	-	-	-	-	-	-	-
Stage 2	817	761	-	865	788	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	9.8	0	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1467	-	-	765	770	1440	-	-
HCM Lane V/C Ratio	-	-	-	0.008	0.035	0.002	-	-
HCM Control Delay (s)	0	-	-	9.7	9.8	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	31.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✥	
Traffic Vol, veh/h	24	364	74	32	337	15	115	98	35	17	90	19
Future Vol, veh/h	24	364	74	32	337	15	115	98	35	17	90	19
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	1	1	1
Mvmt Flow	28	418	85	37	387	17	132	113	40	20	103	22
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	3
HCM Control Delay	21.3	52.6	23.7	17.8
HCM LOS	C	F	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	54%	0%	100%	0%	0%	100%	0%	13%
Vol Thru, %	46%	0%	0%	100%	62%	0%	96%	71%
Vol Right, %	0%	100%	0%	0%	38%	0%	4%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	213	35	24	243	195	32	352	126
LT Vol	115	0	24	0	0	32	0	17
Through Vol	98	0	0	243	121	0	337	90
RT Vol	0	35	0	0	74	0	15	19
Lane Flow Rate	245	40	28	279	225	37	405	145
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.62	0.091	0.067	0.638	0.496	0.09	0.929	0.378
Departure Headway (Hd)	9.113	8.113	8.75	8.233	7.96	8.817	8.268	9.385
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	397	441	409	438	451	406	437	382
Service Time	6.875	5.875	6.509	5.992	5.718	6.574	6.025	7.155
HCM Lane V/C Ratio	0.617	0.091	0.068	0.637	0.499	0.091	0.927	0.38
HCM Control Delay	25.7	11.7	12.1	24.5	18.4	12.4	56.2	17.8
HCM Lane LOS	D	B	B	C	C	B	F	C
HCM 95th-tile Q	4	0.3	0.2	4.3	2.7	0.3	10.5	1.7

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	7	3	176	4	4	1	163	79	3	1	59	5
Future Vol, veh/h	7	3	176	4	4	1	163	79	3	1	59	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	8	4	207	5	5	1	192	93	4	1	69	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.2	10.4	8.3
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	4%	44%	2%
Vol Thru, %	32%	2%	44%	91%
Vol Right, %	1%	95%	11%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	245	186	9	65
LT Vol	163	7	4	1
Through Vol	79	3	4	59
RT Vol	3	176	1	5
Lane Flow Rate	288	219	11	76
Geometry Grp	1	1	1	1
Degree of Util (X)	0.37	0.256	0.015	0.1
Departure Headway (Hd)	4.615	4.218	5.047	4.728
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	778	851	707	756
Service Time	2.65	2.247	3.093	2.773
HCM Lane V/C Ratio	0.37	0.257	0.016	0.101
HCM Control Delay	10.4	8.7	8.2	8.3
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.7	1	0	0.3

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰	↱	
Traffic Vol, veh/h	3	6	9	238	238	2
Future Vol, veh/h	3	6	9	238	238	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	3	7	10	264	264	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	549	265	266	0	-	0
Stage 1	265	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	500	779	1310	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	496	779	1310	-	-	-
Mov Cap-2 Maneuver	496	-	-	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	769	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1310	-	655	-	-
HCM Lane V/C Ratio	0.008	-	0.015	-	-
HCM Control Delay (s)	7.8	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

AGENDA ITEM NO. 6.

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑↱	
Traffic Volume (veh/h)	23	276	75	47	240	128	109	119	73	110	112	14
Future Volume (veh/h)	23	276	75	47	240	128	109	119	73	110	112	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	24	291	79	49	253	135	115	125	77	116	118	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	61	526	235	83	301	255	138	1128	955	139	981	125
Arrive On Green	0.03	0.15	0.15	0.05	0.16	0.16	0.08	0.60	0.60	0.08	0.60	0.60
Sat Flow, veh/h	1795	3582	1598	1795	1885	1598	1795	1885	1597	1795	1639	208
Grp Volume(v), veh/h	24	291	79	49	253	135	115	125	77	116	0	133
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1795	1885	1598	1795	1885	1597	1795	0	1847
Q Serve(g_s), s	2.0	11.3	6.7	4.0	19.5	11.6	9.5	4.3	3.1	9.6	0.0	4.7
Cycle Q Clear(g_c), s	2.0	11.3	6.7	4.0	19.5	11.6	9.5	4.3	3.1	9.6	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	61	526	235	83	301	255	138	1128	955	139	0	1106
V/C Ratio(X)	0.40	0.55	0.34	0.59	0.84	0.53	0.84	0.11	0.08	0.84	0.00	0.12
Avail Cap(c_a), veh/h	371	812	362	371	427	362	371	1128	955	371	0	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	59.4	57.4	70.1	61.2	57.9	68.3	13.0	12.7	68.3	0.0	13.0
Incr Delay (d2), s/veh	1.6	1.7	1.6	2.4	13.6	3.2	5.0	0.2	0.2	5.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.2	0.1	1.9	10.3	4.9	4.5	1.8	1.1	4.5	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.5	61.1	59.0	72.6	74.8	61.0	73.3	13.2	12.9	73.3	0.0	13.2
LnGrp LOS	E	E	E	E	E	E	E	B	B	E	A	B
Approach Vol, veh/h		394			437			317			249	
Approach Delay, s/veh		61.4			70.3			34.9			41.2	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	95.5	9.1	29.9	15.6	95.4	11.0	28.0
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	31.0	34.3	31.0	34.0
Max Q Clear Time (g_c+I1), s	11.5	6.7	4.0	21.5	11.6	6.3	6.0	13.3
Green Ext Time (p_c), s	0.1	0.6	0.0	2.4	0.1	0.8	0.0	3.3

Intersection Summary			
HCM 6th Ctrl Delay			54.6
HCM 6th LOS			D

AGENDA ITEM NO. 6.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↱		↰	↑	↱
Traffic Vol, veh/h	3	3	5	5	7	15	9	309	13	9	247	6
Future Vol, veh/h	3	3	5	5	7	15	9	309	13	9	247	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	9	9	9	4	4	4	1	1	1	2	2	2
Mvmt Flow	3	3	5	5	7	16	9	322	14	9	257	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	634	629	257	629	628	329	263	0	0	336	0	0
Stage 1	275	275	-	347	347	-	-	-	-	-	-	-
Stage 2	359	354	-	282	281	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.14	6.54	6.24	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.536	4.036	3.336	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	382	390	765	392	397	708	1307	-	-	1223	-	-
Stage 1	716	670	-	665	631	-	-	-	-	-	-	-
Stage 2	645	618	-	721	675	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	364	385	765	383	391	708	1307	-	-	1223	-	-
Mov Cap-2 Maneuver	364	385	-	383	391	-	-	-	-	-	-	-
Stage 1	711	665	-	660	627	-	-	-	-	-	-	-
Stage 2	619	614	-	707	670	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	12.3	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1307	-	-	487	518	1223	-	-
HCM Lane V/C Ratio	0.007	-	-	0.024	0.054	0.008	-	-
HCM Control Delay (s)	7.8	-	-	12.6	12.3	8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	30	269	114	37	222	33	163	270	62	34	201	36
Future Volume (veh/h)	30	269	114	37	222	33	163	270	62	34	201	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	33	296	125	41	244	36	179	297	68	37	221	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	3	3	3
Cap, veh/h	42	400	165	53	314	266	207	1185	1004	47	1002	849
Arrive On Green	0.02	0.16	0.16	0.03	0.17	0.17	0.12	0.63	0.63	0.03	0.54	0.54
Sat Flow, veh/h	1810	2492	1028	1795	1885	1598	1795	1885	1598	1767	1856	1572
Grp Volume(v), veh/h	33	213	208	41	244	36	179	297	68	37	221	40
Grp Sat Flow(s),veh/h/ln	1810	1805	1715	1795	1885	1598	1795	1885	1598	1767	1856	1572
Q Serve(g_s), s	2.2	13.4	13.9	2.7	14.9	2.3	11.8	8.3	2.0	2.5	7.5	1.4
Cycle Q Clear(g_c), s	2.2	13.4	13.9	2.7	14.9	2.3	11.8	8.3	2.0	2.5	7.5	1.4
Prop In Lane	1.00		0.60	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	42	290	275	53	314	266	207	1185	1004	47	1002	849
V/C Ratio(X)	0.78	0.73	0.76	0.78	0.78	0.14	0.87	0.25	0.07	0.79	0.22	0.05
Avail Cap(c_a), veh/h	271	522	496	269	545	462	269	1185	1004	265	1002	849
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.3	47.9	48.1	57.8	47.9	42.6	52.2	9.8	8.6	58.1	14.4	13.0
Incr Delay (d2), s/veh	11.1	5.6	6.6	8.7	3.6	0.2	16.9	0.5	0.1	10.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.3	6.3	1.3	7.1	0.9	6.1	3.3	0.7	1.2	3.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	53.6	54.8	66.5	51.4	42.8	69.1	10.3	8.8	68.2	14.9	13.1
LnGrp LOS	E	D	D	E	D	D	E	B	A	E	B	B
Approach Vol, veh/h		454			321			544			298	
Approach Delay, s/veh		55.3			52.4			29.5			21.3	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	70.1	6.8	25.3	7.2	80.7	7.5	24.5
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	18.0	30.7	18.0	34.7	18.0	30.7	18.0	34.7
Max Q Clear Time (g_c+I1), s	13.8	9.5	4.2	16.9	4.5	10.3	4.7	15.9
Green Ext Time (p_c), s	0.1	1.3	0.0	1.1	0.0	2.0	0.0	3.3

Intersection Summary			
HCM 6th Ctrl Delay			39.8
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
21: Fowler Avenue & SR-168 WB Ramps

Shepherd
Existing (2022) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	159	0	15	430	738	0	0	395	183
Future Volume (veh/h)	0	0	0	159	0	15	430	738	0	0	395	183
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	0	1856	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				167	0	16	453	777	0	0	416	193
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	0	3	1	1	0	0	1	1
Cap, veh/h				212	0	188	520	2683	0	0	1294	594
Arrive On Green				0.12	0.00	0.12	0.30	1.00	0.00	0.00	0.54	0.54
Sat Flow, veh/h				1767	0	1572	3483	3676	0	0	2479	1094
Grp Volume(v), veh/h				167	0	16	453	777	0	0	311	298
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1742	1791	0	0	1791	1688
Q Serve(g_s), s				9.2	0.0	0.9	12.3	0.0	0.0	0.0	9.6	9.8
Cycle Q Clear(g_c), s				9.2	0.0	0.9	12.3	0.0	0.0	0.0	9.6	9.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				212	0	188	520	2683	0	0	972	916
V/C Ratio(X)				0.79	0.00	0.08	0.87	0.29	0.00	0.00	0.32	0.32
Avail Cap(c_a), veh/h				422	0	376	801	2683	0	0	972	916
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.80	0.80	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				42.8	0.0	39.1	34.1	0.0	0.0	0.0	12.7	12.7
Incr Delay (d2), s/veh				12.9	0.0	0.4	3.5	0.2	0.0	0.0	0.9	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.7	0.0	0.4	4.4	0.1	0.0	0.0	3.7	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				55.7	0.0	39.5	37.7	0.2	0.0	0.0	13.5	13.6
LnGrp LOS				E	A	D	D	A	A	A	B	B
Approach Vol, veh/h					183			1230			609	
Approach Delay, s/veh					54.3			14.0			13.6	
Approach LOS					D			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.7			20.6	61.1		18.3				
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3				
Max Green Setting (Gmax), s		63.0			* 23	34.3		23.9				
Max Q Clear Time (g_c+I1), s		2.0			14.3	11.8		11.2				
Green Ext Time (p_c), s		10.9			0.6	6.9		0.9				

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
22: Fowler Avenue & SR-168 EB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	311	0	585	0	0	0	0	857	294	23	530	0
Future Volume (veh/h)	311	0	585	0	0	0	0	857	294	23	530	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	324	0	609				0	893	306	24	552	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	1	1	2	2	0
Cap, veh/h	1006	0	461				0	1294	442	52	2061	0
Arrive On Green	0.29	0.00	0.29				0.00	0.49	0.49	0.03	0.58	0.00
Sat Flow, veh/h	3456	0	1585				0	2714	895	1781	3647	0
Grp Volume(v), veh/h	324	0	609				0	610	589	24	552	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1791	1724	1781	1777	0
Q Serve(g_s), s	7.3	0.0	29.1				0.0	26.1	26.3	1.3	7.7	0.0
Cycle Q Clear(g_c), s	7.3	0.0	29.1				0.0	26.1	26.3	1.3	7.7	0.0
Prop In Lane	1.00		1.00				0.00		0.52	1.00		0.00
Lane Grp Cap(c), veh/h	1006	0	461				0	884	851	52	2061	0
V/C Ratio(X)	0.32	0.00	1.32				0.00	0.69	0.69	0.46	0.27	0.00
Avail Cap(c_a), veh/h	1006	0	461				0	884	851	285	2061	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.92	0.92	0.00
Uniform Delay (d), s/veh	27.7	0.0	35.4				0.0	19.4	19.5	47.8	10.4	0.0
Incr Delay (d2), s/veh	0.4	0.0	158.8				0.0	4.4	4.6	2.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	31.1				0.0	10.8	10.5	0.6	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.1	0.0	194.2				0.0	23.8	24.1	49.9	10.7	0.0
LnGrp LOS	C	A	F				A	C	C	D	B	A
Approach Vol, veh/h		933						1199			576	
Approach Delay, s/veh		136.5						23.9			12.4	
Approach LOS		F						C			B	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	8.6	56.2	35.2	64.8
Change Period (Y+Rc), s	* 5.7	6.8	6.1	6.8
Max Green Setting (Gmax), s	* 16	36.3	29.1	58.0
Max Q Clear Time (g_c+I1), s	3.3	28.3	31.1	9.7
Green Ext Time (p_c), s	0.0	6.5	0.0	6.8

Intersection Summary	
HCM 6th Ctrl Delay	60.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

1: Willow Avenue & Behymer Avenue

Shepherd I

Existing (2022) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	67	125	203	16	128	46	84	584	16	45	587	74
Future Volume (veh/h)	67	125	203	16	128	46	84	584	16	45	587	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	85	158	257	20	162	58	106	739	20	57	743	94
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	1	1	1
Cap, veh/h	106	360	305	55	199	71	129	2861	888	94	2780	840
Arrive On Green	0.06	0.19	0.19	0.03	0.15	0.15	0.07	0.56	0.56	0.05	0.54	0.54
Sat Flow, veh/h	1781	1870	1585	1767	1304	467	1781	5106	1585	1795	5147	1555
Grp Volume(v), veh/h	85	158	257	20	0	220	106	739	20	57	743	94
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1771	1781	1702	1585	1795	1716	1555
Q Serve(g_s), s	6.4	10.1	21.1	1.5	0.0	16.2	7.9	10.0	0.8	4.2	10.5	4.0
Cycle Q Clear(g_c), s	6.4	10.1	21.1	1.5	0.0	16.2	7.9	10.0	0.8	4.2	10.5	4.0
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	360	305	55	0	270	129	2861	888	94	2780	840
V/C Ratio(X)	0.80	0.44	0.84	0.36	0.00	0.81	0.82	0.26	0.02	0.61	0.27	0.11
Avail Cap(c_a), veh/h	143	603	511	162	0	571	194	2861	888	196	2780	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.7	48.1	52.5	64.1	0.0	55.4	61.8	15.3	13.2	62.6	16.7	15.2
Incr Delay (d2), s/veh	15.1	1.0	7.6	1.5	0.0	12.4	9.3	0.2	0.0	2.3	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	4.7	8.9	0.7	0.0	8.1	3.8	3.7	0.3	1.9	4.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.8	49.1	60.1	65.5	0.0	67.8	71.0	15.5	13.3	65.0	16.9	15.5
LnGrp LOS	E	D	E	E	A	E	E	B	B	E	B	B
Approach Vol, veh/h		500			240			865			894	
Approach Delay, s/veh		59.6			67.6			22.2			19.8	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	78.6	14.2	27.1	12.4	81.3	8.8	32.5
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	14.7	42.3	10.8	43.5	14.7	42.3	12.4	43.5
Max Q Clear Time (g_c+I1), s	9.9	12.5	8.4	18.2	6.2	12.0	3.5	23.1
Green Ext Time (p_c), s	0.0	12.4	0.0	2.3	0.0	11.6	0.0	2.0

Intersection Summary			
HCM 6th Ctrl Delay			33.2
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	29	256	145	50	336	130	160	587	51	172	740	50
Future Volume (veh/h)	29	256	145	50	336	130	160	587	51	172	740	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	33	291	165	57	382	148	182	667	58	195	841	57
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	1	1	1
Cap, veh/h	140	533	238	170	590	263	231	2825	876	245	2885	882
Arrive On Green	0.04	0.15	0.15	0.05	0.17	0.17	0.07	0.56	0.56	0.07	0.56	0.56
Sat Flow, veh/h	3456	3554	1585	3428	3526	1570	3428	5066	1572	3483	5147	1573
Grp Volume(v), veh/h	33	291	165	57	382	148	182	667	58	195	841	57
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1714	1763	1570	1714	1689	1572	1742	1716	1573
Q Serve(g_s), s	1.3	11.0	14.3	2.3	14.7	12.6	7.6	9.7	2.5	8.0	12.4	2.4
Cycle Q Clear(g_c), s	1.3	11.0	14.3	2.3	14.7	12.6	7.6	9.7	2.5	8.0	12.4	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	533	238	170	590	263	231	2825	876	245	2885	882
V/C Ratio(X)	0.24	0.55	0.69	0.34	0.65	0.56	0.79	0.24	0.07	0.80	0.29	0.06
Avail Cap(c_a), veh/h	462	1073	479	430	1065	474	442	2825	876	449	2885	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.60	0.60	0.60	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	67.4	57.0	58.5	66.6	56.4	55.5	66.6	16.3	14.7	66.4	16.7	14.5
Incr Delay (d2), s/veh	0.3	2.0	8.3	0.3	1.0	1.6	2.3	0.2	0.1	2.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.1	6.2	1.0	6.5	5.0	3.3	3.6	0.9	3.6	4.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.7	59.1	66.7	66.8	57.4	57.1	68.9	16.5	14.9	68.5	17.0	14.7
LnGrp LOS	E	E	E	E	E	E	E	B	B	E	B	B
Approach Vol, veh/h		489			587			907			1093	
Approach Delay, s/veh		62.3			58.2			26.9			26.1	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	87.0	11.5	30.5	16.5	86.6	14.0	28.0
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	9.6	14.4	3.3	16.7	10.0	11.7	4.3	16.3
Green Ext Time (p_c), s	0.2	12.3	0.0	3.9	0.2	10.4	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay	38.2
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	60
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	3	115	44	12	148	297	41	212	8	123	225	3
Future Vol, veh/h	3	115	44	12	148	297	41	212	8	123	225	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	4	4	4	4	4	4	2	2	2
Mvmt Flow	4	139	53	14	178	358	49	255	10	148	271	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.2	98.2	29.5	51.7
HCM LOS	C	F	D	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	2%	3%	35%
Vol Thru, %	81%	71%	32%	64%
Vol Right, %	3%	27%	65%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	261	162	457	351
LT Vol	41	3	12	123
Through Vol	212	115	148	225
RT Vol	8	44	297	3
Lane Flow Rate	314	195	551	423
Geometry Grp	1	1	1	1
Degree of Util (X)	0.706	0.458	1.104	0.908
Departure Headway (Hd)	8.511	8.882	7.221	8.126
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	428	408	501	448
Service Time	6.511	6.882	5.279	6.126
HCM Lane V/C Ratio	0.734	0.478	1.1	0.944
HCM Control Delay	29.5	19.2	98.2	51.7
HCM Lane LOS	D	C	F	F
HCM 95th-tile Q	5.4	2.3	17.9	10

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	33	366	152	85	370	91	127	150	55	103	159	29
Future Volume (veh/h)	33	366	152	85	370	91	127	150	55	103	159	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	436	181	101	440	108	151	179	65	123	189	35
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	115	841	369	146	470	398	177	833	697	149	804	681
Arrive On Green	0.06	0.23	0.23	0.08	0.25	0.25	0.10	0.45	0.45	0.08	0.43	0.43
Sat Flow, veh/h	1795	3582	1573	1767	1856	1572	1781	1870	1564	1781	1870	1585
Grp Volume(v), veh/h	39	436	181	101	440	108	151	179	65	123	189	35
Grp Sat Flow(s),veh/h/ln	1795	1791	1573	1767	1856	1572	1781	1870	1564	1781	1870	1585
Q Serve(g_s), s	2.7	13.8	12.9	7.2	30.2	7.2	10.8	7.6	3.1	8.8	8.3	1.7
Cycle Q Clear(g_c), s	2.7	13.8	12.9	7.2	30.2	7.2	10.8	7.6	3.1	8.8	8.3	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	841	369	146	470	398	177	833	697	149	804	681
V/C Ratio(X)	0.34	0.52	0.49	0.69	0.94	0.27	0.85	0.21	0.09	0.83	0.24	0.05
Avail Cap(c_a), veh/h	290	937	411	285	485	411	288	833	697	288	804	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	43.3	43.0	58.0	47.5	38.9	57.6	22.1	20.9	58.6	23.5	21.6
Incr Delay (d2), s/veh	0.5	0.6	1.3	2.2	26.0	0.6	6.8	0.6	0.3	4.4	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.0	5.0	3.2	16.8	2.8	5.1	3.4	1.2	4.1	3.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	44.0	44.3	60.3	73.5	39.5	64.4	22.7	21.1	63.0	24.2	21.8
LnGrp LOS	E	D	D	E	E	D	E	C	C	E	C	C
Approach Vol, veh/h		656			649			395			347	
Approach Delay, s/veh		44.9			65.8			38.4			37.7	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	61.9	12.3	38.9	14.9	63.9	14.7	36.5
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	12.8	10.3	4.7	32.2	10.8	9.6	9.2	15.8
Green Ext Time (p_c), s	0.1	1.5	0.0	0.8	0.1	1.2	0.1	4.5

Intersection Summary	
HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
5: Clovis Avenue & Shepherd Avenue

Shepherd I
Existing (2022) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	32	378	118	187	414	48	80	59	113	19	71	67
Future Volume (veh/h)	32	378	118	187	414	48	80	59	113	19	71	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	39	455	142	225	499	58	96	71	136	23	86	81
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	2	2	2	7	7	7	5	5	5
Cap, veh/h	191	584	257	278	676	302	119	1420	633	588	1806	805
Arrive On Green	0.06	0.17	0.17	0.08	0.19	0.19	0.07	0.42	0.42	0.17	0.52	0.52
Sat Flow, veh/h	3428	3526	1552	3456	3554	1585	1711	3413	1522	3374	3469	1546
Grp Volume(v), veh/h	39	455	142	225	499	58	96	71	136	23	86	81
Grp Sat Flow(s),veh/h/ln	1714	1763	1552	1728	1777	1585	1711	1706	1522	1687	1735	1546
Q Serve(g_s), s	1.5	17.3	11.8	9.0	18.5	4.3	7.7	1.7	8.0	0.8	1.7	3.7
Cycle Q Clear(g_c), s	1.5	17.3	11.8	9.0	18.5	4.3	7.7	1.7	8.0	0.8	1.7	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	584	257	278	676	302	119	1420	633	588	1806	805
V/C Ratio(X)	0.20	0.78	0.55	0.81	0.74	0.19	0.80	0.05	0.21	0.04	0.05	0.10
Avail Cap(c_a), veh/h	598	856	377	602	863	385	298	1420	633	588	1806	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	56.0	53.6	63.3	53.4	47.6	64.2	24.4	26.2	48.1	16.5	17.0
Incr Delay (d2), s/veh	0.2	3.8	2.7	2.1	3.1	0.5	4.7	0.1	0.8	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.8	4.7	3.9	8.3	1.7	3.5	0.7	3.0	0.3	0.7	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	59.7	56.4	65.5	56.5	48.1	68.9	24.4	27.0	48.2	16.5	17.2
LnGrp LOS	E	E	E	E	E	D	E	C	C	D	B	B
Approach Vol, veh/h		636			782			303			190	
Approach Delay, s/veh		59.2			58.4			39.7			20.7	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	78.6	13.4	32.7	30.0	63.9	16.9	29.2
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	24.4	34.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	9.7	5.7	3.5	20.5	2.8	10.0	11.0	19.3
Green Ext Time (p_c), s	0.1	2.2	0.0	3.6	0.0	1.7	0.3	3.9

Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: Clovis Avenue & Teague Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	75	222	263	234	345	189
Future Volume (veh/h)	75	222	263	234	345	189
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1870	1870	1870	1870
Adj Flow Rate, veh/h	99	292	346	308	454	249
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	1	1	2	2	2	2
Cap, veh/h	370	330	356	2394	1516	638
Arrive On Green	0.21	0.21	0.20	0.67	0.43	0.43
Sat Flow, veh/h	1795	1598	1781	3647	3647	1496
Grp Volume(v), veh/h	99	292	346	308	454	249
Grp Sat Flow(s),veh/h/ln	1795	1598	1781	1777	1777	1496
Q Serve(g_s), s	3.9	15.1	16.4	2.6	7.1	9.7
Cycle Q Clear(g_c), s	3.9	15.1	16.4	2.6	7.1	9.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	370	330	356	2394	1516	638
V/C Ratio(X)	0.27	0.89	0.97	0.13	0.30	0.39
Avail Cap(c_a), veh/h	530	472	356	2394	1516	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	28.3	32.8	33.8	5.0	16.0	16.8
Incr Delay (d2), s/veh	0.1	10.5	39.7	0.1	0.4	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	6.5	10.5	0.7	2.7	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.5	43.3	73.5	5.1	16.5	18.3
LnGrp LOS	C	D	E	A	B	B
Approach Vol, veh/h	391			654	703	
Approach Delay, s/veh	39.5			41.3	17.1	
Approach LOS	D			D	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	21.0	41.6				62.6		22.4
Change Period (Y+Rc), s	4.0	5.3				5.3		4.9
Max Green Setting (Gmax), s	17.0	28.7				49.7		25.1
Max Q Clear Time (g_c+I1), s	18.4	11.7				4.6		17.1
Green Ext Time (p_c), s	0.0	4.3				2.5		0.4

Intersection Summary			
HCM 6th Ctrl Delay			31.2
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	30	307	194	67	366	180	70	319	20	70	488	42
Future Volume (veh/h)	30	307	194	67	366	180	70	319	20	70	488	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	34	353	223	77	421	207	80	367	23	80	561	48
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	2	2	2
Cap, veh/h	81	403	340	103	429	359	102	1922	825	103	1937	845
Arrive On Green	0.05	0.22	0.22	0.06	0.23	0.23	0.06	0.55	0.55	0.06	0.55	0.55
Sat Flow, veh/h	1781	1870	1578	1795	1885	1575	1767	3526	1513	1781	3554	1550
Grp Volume(v), veh/h	34	353	223	77	421	207	80	367	23	80	561	48
Grp Sat Flow(s),veh/h/ln	1781	1870	1578	1795	1885	1575	1767	1763	1513	1781	1777	1550
Q Serve(g_s), s	2.8	27.4	19.4	6.3	33.3	17.5	6.7	7.9	1.1	6.6	12.8	2.2
Cycle Q Clear(g_c), s	2.8	27.4	19.4	6.3	33.3	17.5	6.7	7.9	1.1	6.6	12.8	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	403	340	103	429	359	102	1922	825	103	1937	845
V/C Ratio(X)	0.42	0.88	0.66	0.74	0.98	0.58	0.78	0.19	0.03	0.78	0.29	0.06
Avail Cap(c_a), veh/h	380	495	418	311	429	359	365	1922	825	309	1937	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.7	56.9	53.7	69.6	57.6	51.5	69.7	17.3	15.8	69.7	18.4	16.0
Incr Delay (d2), s/veh	1.3	15.2	3.7	3.9	38.4	2.9	4.7	0.2	0.1	4.6	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	14.4	7.9	3.0	20.1	7.1	3.1	3.2	0.4	3.1	5.2	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	72.1	57.4	73.5	96.0	54.4	74.4	17.5	15.8	74.3	18.8	16.1
LnGrp LOS	E	E	E	E	F	D	E	B	B	E	B	B
Approach Vol, veh/h		610			705			470			689	
Approach Delay, s/veh		66.7			81.3			27.1			25.1	
Approach LOS		E			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	87.1	10.8	39.4	12.7	87.1	12.6	37.6
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	31.0	34.7	32.0	33.7	26.0	39.7	26.0	39.7
Max Q Clear Time (g_c+I1), s	8.7	14.8	4.8	35.3	8.6	9.9	8.3	29.4
Green Ext Time (p_c), s	0.1	5.1	0.0	0.0	0.1	3.6	0.1	3.0

Intersection Summary	
HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Shepherd I

Existing (2022) WP - AM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	13	270	153	44	410	89	127	307	61	126	680	34
Future Volume (veh/h)	13	270	153	44	410	89	127	307	61	126	680	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	15	303	172	49	461	100	143	345	69	142	764	38
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	1	1	1
Cap, veh/h	56	434	365	117	506	422	169	1304	257	171	1548	77
Arrive On Green	0.03	0.24	0.24	0.07	0.27	0.27	0.10	0.45	0.45	0.10	0.45	0.45
Sat Flow, veh/h	1739	1826	1536	1781	1870	1562	1767	2920	576	1795	3470	173
Grp Volume(v), veh/h	15	303	172	49	461	100	143	206	208	142	394	408
Grp Sat Flow(s),veh/h/ln	1739	1826	1536	1781	1870	1562	1767	1763	1733	1795	1791	1851
Q Serve(g_s), s	1.1	19.0	12.0	3.3	29.8	6.2	10.0	9.2	9.4	9.7	19.5	19.6
Cycle Q Clear(g_c), s	1.1	19.0	12.0	3.3	29.8	6.2	10.0	9.2	9.4	9.7	19.5	19.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.09
Lane Grp Cap(c), veh/h	56	434	365	117	506	422	169	787	774	171	799	826
V/C Ratio(X)	0.27	0.70	0.47	0.42	0.91	0.24	0.85	0.26	0.27	0.83	0.49	0.49
Avail Cap(c_a), veh/h	153	574	483	157	588	491	254	787	774	230	799	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	59.0	43.6	40.9	56.1	44.1	35.5	55.6	21.7	21.7	55.5	24.6	24.6
Incr Delay (d2), s/veh	0.9	1.8	0.6	0.9	17.1	0.3	10.0	0.8	0.8	12.2	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	8.6	4.5	1.5	15.7	2.4	4.8	3.8	3.9	4.9	8.4	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	45.4	41.6	57.0	61.3	35.9	65.6	22.5	22.6	67.8	26.6	26.5
LnGrp LOS	E	D	D	E	E	D	E	C	C	E	C	C
Approach Vol, veh/h		490			610			557			944	
Approach Delay, s/veh		44.5			56.8			33.6			32.8	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	61.5	8.1	39.5	15.9	61.5	12.2	35.4				
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7				
Max Green Setting (Gmax), s	18.0	37.3	11.0	39.3	16.0	39.3	11.0	39.3				
Max Q Clear Time (g_c+I1), s	12.0	21.6	3.1	31.8	11.7	11.4	5.3	21.0				
Green Ext Time (p_c), s	0.1	4.1	0.0	1.9	0.1	2.6	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			40.8									
HCM 6th LOS			D									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↱		↑↑↑↱	↱				↰↰		↱↱
Traffic Volume (veh/h)	0	959	491	0	1460	661	0	0	0	66	0	729
Future Volume (veh/h)	0	959	491	0	1460	661	0	0	0	66	0	729
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1885	0	1885
Adj Flow Rate, veh/h	0	1020	522	0	1417	0				70	0	776
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	0	2	2				1	0	1
Cap, veh/h	0	3378	832	0	2946					930	0	751
Arrive On Green	0.00	0.52	0.52	0.00	0.52	0.00				0.27	0.00	0.27
Sat Flow, veh/h	0	6696	1585	0	5611	3170				3483	0	2812
Grp Volume(v), veh/h	0	1020	522	0	1417	0				70	0	776
Grp Sat Flow(s),veh/h/ln	0	1609	1585	0	1870	1585				1742	0	1406
Q Serve(g_s), s	0.0	11.6	30.3	0.0	20.9	0.0				2.0	0.0	34.7
Cycle Q Clear(g_c), s	0.0	11.6	30.3	0.0	20.9	0.0				2.0	0.0	34.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3378	832	0	2946					930	0	751
V/C Ratio(X)	0.00	0.30	0.63	0.00	0.48					0.08	0.00	1.03
Avail Cap(c_a), veh/h	0	4019	990	0	3505					930	0	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.4	21.9	0.0	19.6	0.0				35.6	0.0	47.7
Incr Delay (d2), s/veh	0.0	0.2	3.6	0.0	0.5	0.0				0.1	0.0	41.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	11.4	0.0	8.7	0.0				0.8	0.0	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.7	25.4	0.0	20.1	0.0				35.7	0.0	89.6
LnGrp LOS	A	B	C	A	C					D	A	F
Approach Vol, veh/h		1542			1417						846	
Approach Delay, s/veh		20.3			20.1						85.1	
Approach LOS		C			C						F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		75.0		42.0		75.0
Change Period (Y+Rc), s		6.8		7.3		6.8
Max Green Setting (Gmax), s		81.2		34.7		81.2
Max Q Clear Time (g_c+I1), s		32.3		36.7		22.9
Green Ext Time (p_c), s		35.9		0.0		40.7

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
10: SR-168 EB Ramps & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	812	213	0	1667	79	454	0	498	0	0	0
Future Volume (veh/h)	0	812	213	0	1667	79	454	0	498	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1885	1885	1841	0	1841			
Adj Flow Rate, veh/h	0	902	0	0	1852	88	504	0	553			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	0	2	2	0	1	1	4	0	4			
Cap, veh/h	0	2985		0	4464	934	1536	0	853			
Arrive On Green	0.00	0.58	0.00	0.00	0.58	0.58	0.31	0.00	0.31			
Sat Flow, veh/h	0	5274	1585	0	7993	1598	4944	0	2745			
Grp Volume(v), veh/h	0	902	0	0	1852	88	504	0	553			
Grp Sat Flow(s),veh/h/ln	0	1702	1585	0	1527	1598	1648	0	1373			
Q Serve(g_s), s	0.0	11.6	0.0	0.0	17.3	3.1	10.2	0.0	22.6			
Cycle Q Clear(g_c), s	0.0	11.6	0.0	0.0	17.3	3.1	10.2	0.0	22.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2985		0	4464	934	1536	0	853			
V/C Ratio(X)	0.00	0.30		0.00	0.41	0.09	0.33	0.00	0.65			
Avail Cap(c_a), veh/h	0	2985		0	4464	934	1536	0	853			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.98	0.00	0.00	0.74	0.74	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	13.6	0.0	0.0	14.8	11.9	34.4	0.0	38.7			
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.2	0.1	0.6	0.0	3.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.2	0.0	0.0	5.6	1.1	4.2	0.0	8.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.9	0.0	0.0	15.0	12.0	35.0	0.0	42.5			
LnGrp LOS	A	B		A	B	B	C	A	D			
Approach Vol, veh/h		902			1940			1057				
Approach Delay, s/veh		13.9			14.9			38.9				
Approach LOS		B			B			D				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		82.8				82.8		47.2				
Change Period (Y+Rc), s		6.8				6.8		6.8				
Max Green Setting (Gmax), s		76.0				76.0		40.4				
Max Q Clear Time (g_c+I1), s		13.6				19.3		24.6				
Green Ext Time (p_c), s		23.9				50.4		8.3				

Intersection Summary			
HCM 6th Ctrl Delay			21.2
HCM 6th LOS			C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

AGENDA ITEM NO. 6.

HCM 6th Signalized Intersection Summary
11: Clovis Avenue & Herndon Avenue

Shepherd I

Existing (2022) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	264	832	214	148	1021	158	232	258	120	164	292	493
Future Volume (veh/h)	264	832	214	148	1021	158	232	258	120	164	292	493
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	284	895	230	159	1098	170	249	277	129	176	314	530
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	1	1	1
Cap, veh/h	332	2190	680	290	2141	665	312	884	379	314	1305	713
Arrive On Green	0.10	0.43	0.43	0.08	0.42	0.42	0.09	0.25	0.25	0.09	0.25	0.25
Sat Flow, veh/h	3428	5066	1572	3456	5106	1585	3456	3487	1494	3483	5147	2812
Grp Volume(v), veh/h	284	895	230	159	1098	170	249	270	136	176	314	530
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1728	1702	1585	1728	1702	1576	1742	1716	1406
Q Serve(g_s), s	12.6	18.9	15.1	6.8	24.7	10.8	10.9	10.0	10.9	7.5	7.5	26.9
Cycle Q Clear(g_c), s	12.6	18.9	15.1	6.8	24.7	10.8	10.9	10.0	10.9	7.5	7.5	26.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		1.00
Lane Grp Cap(c), veh/h	332	2190	680	290	2141	665	312	863	400	314	1305	713
V/C Ratio(X)	0.86	0.41	0.34	0.55	0.51	0.26	0.80	0.31	0.34	0.56	0.24	0.74
Avail Cap(c_a), veh/h	553	2190	680	557	2141	665	669	863	400	674	1305	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.9	30.3	29.3	68.2	33.3	29.3	69.1	46.9	47.3	67.6	46.0	53.2
Incr Delay (d2), s/veh	3.0	0.5	1.3	0.6	0.9	0.9	1.8	0.9	2.3	0.6	0.4	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	7.7	5.9	3.0	10.2	4.3	4.9	4.3	4.5	3.3	3.2	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.9	30.9	30.5	68.8	34.2	30.2	70.9	47.8	49.6	68.1	46.4	60.1
LnGrp LOS	E	C	C	E	C	C	E	D	D	E	D	E
Approach Vol, veh/h		1409			1427			655			1020	
Approach Delay, s/veh		39.1			37.6			57.0			57.3	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	71.0	19.0	45.0	18.0	73.0	19.0	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	14.6	26.7	9.5	12.9	8.8	20.9	12.9	28.9
Green Ext Time (p_c), s	0.4	5.3	0.3	1.4	0.2	6.3	0.4	3.4

Intersection Summary	
HCM 6th Ctrl Delay	45.3
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↔	
Traffic Vol, veh/h	0	254	441	0	2	0
Future Vol, veh/h	0	254	441	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	0	0
Mvmt Flow	0	292	507	0	2	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	507	0	-	0	799	507
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	292	-
Critical Hdwy	4.14	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1048	-	-	-	357	570
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	762	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1048	-	-	-	357	570
Mov Cap-2 Maneuver	-	-	-	-	357	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	762	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1048	-	-	-	357
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	15.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

AGENDA ITEM NO. 6.

Intersection	
Intersection Delay, s/veh	34.1
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↱			✥			✥	
Traffic Vol, veh/h	31	371	106	63	503	11	54	15	38	24	58	75
Future Vol, veh/h	31	371	106	63	503	11	54	15	38	24	58	75
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	1	1	1	10	10	10	12	12	12
Mvmt Flow	32	379	108	64	513	11	55	15	39	24	59	77
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	35.8	42	13	13.9
HCM LOS	E	E	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	50%	6%	100%	0%	15%
Vol Thru, %	14%	73%	0%	98%	37%
Vol Right, %	36%	21%	0%	2%	48%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	508	63	514	157
LT Vol	54	31	63	0	24
Through Vol	15	371	0	503	58
RT Vol	38	106	0	11	75
Lane Flow Rate	109	518	64	524	160
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.231	0.864	0.122	0.922	0.325
Departure Headway (Hd)	7.623	6	6.853	6.328	7.294
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	469	601	523	572	492
Service Time	5.698	4.048	4.601	4.076	5.358
HCM Lane V/C Ratio	0.232	0.862	0.122	0.916	0.325
HCM Control Delay	13	35.8	10.6	45.9	13.9
HCM Lane LOS	B	E	B	E	B
HCM 95th-tile Q	0.9	9.7	0.4	11.5	1.4

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	5	4	1	17	6	10	2	89	5	5	215	0
Future Vol, veh/h	5	4	1	17	6	10	2	89	5	5	215	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	10	10	10	7	7	7
Mvmt Flow	6	5	1	21	7	12	2	109	6	6	262	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	400	393	262	393	390	112	262	0	0	115	0	0
Stage 1	274	274	-	116	116	-	-	-	-	-	-	-
Stage 2	126	119	-	277	274	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.2	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.29	-	-	2.263	-	-
Pot Cap-1 Maneuver	564	546	782	570	548	947	1257	-	-	1443	-	-
Stage 1	736	687	-	894	803	-	-	-	-	-	-	-
Stage 2	883	801	-	734	687	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	548	542	782	562	544	947	1257	-	-	1443	-	-
Mov Cap-2 Maneuver	548	542	-	562	544	-	-	-	-	-	-	-
Stage 1	735	684	-	892	801	-	-	-	-	-	-	-
Stage 2	862	799	-	724	684	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	11	0.2	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1257	-	-	562	637	1443	-	-
HCM Lane V/C Ratio	0.002	-	-	0.022	0.063	0.004	-	-
HCM Control Delay (s)	7.9	0	-	11.5	11	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	31.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✥	
Traffic Vol, veh/h	12	269	85	25	367	14	137	72	17	22	159	66
Future Vol, veh/h	12	269	85	25	367	14	137	72	17	22	159	66
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	1	1	1	10	10	10	7	7	7
Mvmt Flow	13	283	89	26	386	15	144	76	18	23	167	69
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			3			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			3			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			2			3		
HCM Control Delay	17.4			52.9			23.5			25.9		
HCM LOS	C			F			C			D		

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	66%	0%	100%	0%	0%	100%	0%	9%
Vol Thru, %	34%	0%	0%	100%	51%	0%	96%	64%
Vol Right, %	0%	100%	0%	0%	49%	0%	4%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	209	17	12	179	175	25	381	247
LT Vol	137	0	12	0	0	25	0	22
Through Vol	72	0	0	179	90	0	367	159
RT Vol	0	17	0	0	85	0	14	66
Lane Flow Rate	220	18	13	189	184	26	401	260
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.578	0.042	0.032	0.451	0.421	0.065	0.925	0.636
Departure Headway (Hd)	9.451	8.389	9.124	8.606	8.252	8.85	8.304	8.811
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	381	426	392	417	436	404	437	408
Service Time	7.227	6.164	6.896	6.377	6.023	6.617	6.07	6.583
HCM Lane V/C Ratio	0.577	0.042	0.033	0.453	0.422	0.064	0.918	0.637
HCM Control Delay	24.5	11.5	12.2	18.3	16.9	12.2	55.6	25.9
HCM Lane LOS	C	B	B	C	C	B	F	D
HCM 95th-tile Q	3.5	0.1	0.1	2.3	2	0.2	10.4	4.3

Intersection	
Intersection Delay, s/veh	22.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	10	0	234	4	8	0	427	75	1	0	80	16
Future Vol, veh/h	10	0	234	4	8	0	427	75	1	0	80	16
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	3	3	3
Mvmt Flow	12	0	279	5	10	0	508	89	1	0	95	19
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.3	9.7	30.9	9.8
HCM LOS	B	A	D	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	85%	4%	33%	0%
Vol Thru, %	15%	0%	67%	83%
Vol Right, %	0%	96%	0%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	503	244	12	96
LT Vol	427	10	4	0
Through Vol	75	0	8	80
RT Vol	1	234	0	16
Lane Flow Rate	599	290	14	114
Geometry Grp	1	1	1	1
Degree of Util (X)	0.856	0.428	0.026	0.177
Departure Headway (Hd)	5.144	5.304	6.504	5.577
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	707	677	548	642
Service Time	3.171	3.349	4.57	3.624
HCM Lane V/C Ratio	0.847	0.428	0.026	0.178
HCM Control Delay	30.9	12.3	9.7	9.8
HCM Lane LOS	D	B	A	A
HCM 95th-tile Q	9.9	2.1	0.1	0.6

AGENDA ITEM NO. 6.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰	↱	
Traffic Vol, veh/h	10	24	9	488	310	8
Future Vol, veh/h	10	24	9	488	310	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	7	7	2	2	3	3
Mvmt Flow	12	28	10	567	360	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	952	365	369	0	-	0
Stage 1	365	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Critical Hdwy	6.47	6.27	4.12	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.363	2.218	-	-	-
Pot Cap-1 Maneuver	282	669	1190	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	279	669	1190	-	-	-
Mov Cap-2 Maneuver	279	-	-	-	-	-
Stage 1	683	-	-	-	-	-
Stage 2	546	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	13.3		0.1		0	
HCM LOS	B					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1190	-	474	-	-
HCM Lane V/C Ratio	0.009	-	0.083	-	-
HCM Control Delay (s)	8.1	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	20	303	51	36	287	370	157	92	34	185	141	18
Future Volume (veh/h)	20	303	51	36	287	370	157	92	34	185	141	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	21	316	53	38	299	385	164	96	35	193	147	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	4	4
Cap, veh/h	55	765	334	75	424	359	187	913	773	216	808	104
Arrive On Green	0.03	0.22	0.22	0.04	0.23	0.23	0.11	0.49	0.49	0.12	0.51	0.51
Sat Flow, veh/h	1781	3554	1551	1781	1870	1585	1781	1870	1585	1753	1597	206
Grp Volume(v), veh/h	21	316	53	38	299	385	164	96	35	193	0	166
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1781	1870	1585	1781	1870	1585	1753	0	1804
Q Serve(g_s), s	1.7	11.5	4.2	3.1	22.1	34.0	13.6	4.2	1.7	16.3	0.0	7.5
Cycle Q Clear(g_c), s	1.7	11.5	4.2	3.1	22.1	34.0	13.6	4.2	1.7	16.3	0.0	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	55	765	334	75	424	359	187	913	773	216	0	912
V/C Ratio(X)	0.38	0.41	0.16	0.50	0.71	1.07	0.88	0.11	0.05	0.90	0.00	0.18
Avail Cap(c_a), veh/h	368	806	351	368	424	359	368	913	773	327	0	912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.2	50.7	47.8	70.3	53.4	58.0	66.2	20.7	20.1	64.8	0.0	20.2
Incr Delay (d2), s/veh	1.6	0.7	0.4	1.9	6.3	67.8	5.0	0.2	0.1	13.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.2	1.6	1.4	10.8	20.2	6.4	1.9	0.7	8.0	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	51.3	48.2	72.2	59.7	125.8	71.2	21.0	20.2	78.5	0.0	20.6
LnGrp LOS	E	D	D	E	E	F	E	C	C	E	A	C
Approach Vol, veh/h		390			722			295			359	
Approach Delay, s/veh		52.1			95.6			48.8			51.7	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.8	81.6	8.7	40.0	22.4	78.9	10.4	38.3
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	28.0	37.3	31.0	34.0
Max Q Clear Time (g_c+I1), s	15.6	9.5	3.7	36.0	18.3	6.2	5.1	13.5
Green Ext Time (p_c), s	0.2	0.8	0.0	0.0	0.2	0.5	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	69.2
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↱		↰	↑	↱
Traffic Vol, veh/h	4	6	6	17	8	30	3	180	7	19	254	10
Future Vol, veh/h	4	6	6	17	8	30	3	180	7	19	254	10
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	3	3	3	1	1	1
Mvmt Flow	4	7	7	19	9	33	3	198	8	21	279	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	552	533	279	542	540	204	290	0	0	206	0	0
Stage 1	321	321	-	208	208	-	-	-	-	-	-	-
Stage 2	231	212	-	334	332	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.13	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.227	-	-	2.209	-	-
Pot Cap-1 Maneuver	447	456	765	454	451	842	1266	-	-	1371	-	-
Stage 1	695	655	-	799	734	-	-	-	-	-	-	-
Stage 2	776	731	-	684	648	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	417	448	765	439	443	840	1266	-	-	1371	-	-
Mov Cap-2 Maneuver	417	448	-	439	443	-	-	-	-	-	-	-
Stage 1	694	645	-	797	733	-	-	-	-	-	-	-
Stage 2	733	730	-	661	638	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.2	11.7	0.1	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1266	-	-	519	595	1371	-	-
HCM Lane V/C Ratio	0.003	-	-	0.034	0.102	0.015	-	-
HCM Control Delay (s)	7.9	-	-	12.2	11.7	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

HCM 6th Signalized Intersection Summary
20: Fowler Avenue & Nees Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	20	202	87	73	272	33	111	138	37	31	228	32
Future Volume (veh/h)	20	202	87	73	272	33	111	138	37	31	228	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	22	220	95	79	296	36	121	150	40	34	248	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	27	351	146	101	349	293	147	1170	992	43	1062	900
Arrive On Green	0.02	0.14	0.14	0.06	0.18	0.18	0.08	0.62	0.62	0.02	0.56	0.56
Sat Flow, veh/h	1795	2441	1012	1795	1885	1585	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	22	159	156	79	296	36	121	150	40	34	248	35
Grp Sat Flow(s),veh/h/ln	1795	1791	1662	1795	1885	1585	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	1.5	10.0	10.6	5.2	18.2	2.3	8.0	3.9	1.2	2.3	7.9	1.2
Cycle Q Clear(g_c), s	1.5	10.0	10.6	5.2	18.2	2.3	8.0	3.9	1.2	2.3	7.9	1.2
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	27	258	239	101	349	293	147	1170	992	43	1062	900
V/C Ratio(X)	0.81	0.62	0.65	0.78	0.85	0.12	0.82	0.13	0.04	0.78	0.23	0.04
Avail Cap(c_a), veh/h	284	503	467	269	514	432	180	1170	992	239	1062	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	48.3	48.5	55.9	47.3	40.8	54.2	9.4	8.8	58.2	13.2	11.7
Incr Delay (d2), s/veh	19.1	3.8	4.7	4.9	8.0	0.2	18.6	0.2	0.1	10.9	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.6	4.6	2.4	9.1	0.9	4.3	1.5	0.4	1.1	3.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.0	52.1	53.2	60.8	55.3	40.9	72.9	9.6	8.9	69.1	13.7	11.8
LnGrp LOS	E	D	D	E	E	D	E	A	A	E	B	B
Approach Vol, veh/h		337			411			311			317	
Approach Delay, s/veh		54.3			55.1			34.1			19.4	
Approach LOS		D			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	72.9	5.8	27.5	6.9	79.8	10.7	22.6
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	12.0	37.7	19.0	32.7	16.0	33.7	18.0	33.7
Max Q Clear Time (g_c+I1), s	10.0	9.9	3.5	20.2	4.3	5.9	7.2	12.6
Green Ext Time (p_c), s	0.0	1.6	0.0	1.1	0.0	1.0	0.1	2.5

Intersection Summary			
HCM 6th Ctrl Delay			41.9
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
21: Fowler Avenue & SR-168 WB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	134	0	31	497	433	0	0	337	389
Future Volume (veh/h)	0	0	0	134	0	31	497	433	0	0	337	389
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1885	0	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				137	0	32	507	442	0	0	344	397
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				1	0	1	1	1	0	0	1	1
Cap, veh/h				183	0	163	574	2748	0	0	977	871
Arrive On Green				0.10	0.00	0.10	0.28	1.00	0.00	0.00	0.55	0.55
Sat Flow, veh/h				1795	0	1598	3483	3676	0	0	1885	1598
Grp Volume(v), veh/h				137	0	32	507	442	0	0	344	397
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1742	1791	0	0	1791	1598
Q Serve(g_s), s				7.4	0.0	1.8	13.9	0.0	0.0	0.0	10.8	15.0
Cycle Q Clear(g_c), s				7.4	0.0	1.8	13.9	0.0	0.0	0.0	10.8	15.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				183	0	163	574	2748	0	0	977	871
V/C Ratio(X)				0.75	0.00	0.20	0.88	0.16	0.00	0.00	0.35	0.46
Avail Cap(c_a), veh/h				429	0	382	742	2748	0	0	977	871
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.93	0.93	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.7	0.0	41.2	35.3	0.0	0.0	0.0	12.8	13.8
Incr Delay (d2), s/veh				12.3	0.0	1.3	8.0	0.1	0.0	0.0	1.0	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	0.0	0.8	5.6	0.0	0.0	0.0	4.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				56.0	0.0	42.4	43.3	0.1	0.0	0.0	13.8	15.5
LnGrp LOS				E	A	D	D	A	A	A	B	B
Approach Vol, veh/h					169			949			741	
Approach Delay, s/veh					53.4			23.2			14.7	
Approach LOS					D			C			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		83.5			22.2	61.3		16.5				
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3				
Max Green Setting (Gmax), s		63.0			* 21	36.0		23.9				
Max Q Clear Time (g_c+I1), s		2.0			15.9	17.0		9.4				
Green Ext Time (p_c), s		5.3			0.5	8.0		0.9				

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
22: Fowler Avenue & SR-168 EB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	152	0	332	0	0	0	0	778	92	14	457	0
Future Volume (veh/h)	152	0	332	0	0	0	0	778	92	14	457	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1856				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	160	0	349				0	819	97	15	481	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	3				0	1	1	2	2	0
Cap, veh/h	855	0	392				0	1751	207	36	2209	0
Arrive On Green	0.25	0.00	0.25				0.00	0.54	0.54	0.02	0.62	0.00
Sat Flow, veh/h	3428	0	1572				0	3311	381	1781	3647	0
Grp Volume(v), veh/h	160	0	349				0	456	460	15	481	0
Grp Sat Flow(s),veh/h/ln	1714	0	1572				0	1791	1807	1781	1777	0
Q Serve(g_s), s	3.7	0.0	21.4				0.0	15.6	15.6	0.8	5.9	0.0
Cycle Q Clear(g_c), s	3.7	0.0	21.4				0.0	15.6	15.6	0.8	5.9	0.0
Prop In Lane	1.00		1.00				0.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	855	0	392				0	975	984	36	2209	0
V/C Ratio(X)	0.19	0.00	0.89				0.00	0.47	0.47	0.41	0.22	0.00
Avail Cap(c_a), veh/h	957	0	439				0	975	984	237	2209	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.90	0.90	0.00
Uniform Delay (d), s/veh	29.6	0.0	36.2				0.0	13.9	13.9	48.4	8.3	0.0
Incr Delay (d2), s/veh	0.2	0.0	20.5				0.0	1.6	1.6	2.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	10.2				0.0	6.0	6.0	0.4	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	0.0	56.7				0.0	15.5	15.5	50.9	8.5	0.0
LnGrp LOS	C	A	E				A	B	B	D	A	A
Approach Vol, veh/h		509						916			496	
Approach Delay, s/veh		48.3						15.5			9.8	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.7	61.2		31.0		69.0
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 13	40.2		27.9		59.2
Max Q Clear Time (g_c+I1), s	2.8	17.6		23.4		7.9
Green Ext Time (p_c), s	0.0	11.7		1.5		5.8

Intersection Summary			
HCM 6th Ctrl Delay			22.7
HCM 6th LOS			C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

23: Sunnyside Avenue & Project Driveway 1

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	19	0	32	7	0	53
Future Vol, veh/h	19	0	32	7	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	9	12	12
Mvmt Flow	21	0	35	8	0	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	97	39	0	0	43	0
Stage 1	39	-	-	-	-	-
Stage 2	58	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.22	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.308	-
Pot Cap-1 Maneuver	907	1038	-	-	1504	-
Stage 1	989	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	907	1038	-	-	1504	-
Mov Cap-2 Maneuver	907	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	970	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	907	1504	-
HCM Lane V/C Ratio	-	-	0.023	-	-
HCM Control Delay (s)	-	-	9.1	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗		↑↱			↰↑
Traffic Vol, veh/h	85	0	38	19	0	72
Future Vol, veh/h	85	0	38	19	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	9	12	12
Mvmt Flow	92	0	41	21	0	78

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	130	52	0	0	62	0
Stage 1	52	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.22	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.308	-
Pot Cap-1 Maneuver	869	1021	-	-	1479	-
Stage 1	976	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	869	1021	-	-	1479	-
Mov Cap-2 Maneuver	869	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	869	1479	-
HCM Lane V/C Ratio	-	-	0.106	-	-
HCM Control Delay (s)	-	-	9.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑	↑↱			↱
Traffic Vol, veh/h	57	376	413	16	0	164
Future Vol, veh/h	57	376	413	16	0	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	62	409	449	17	0	178

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	466	0	-	0	-	233
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.219	-	-	-	-	3.3
Pot Cap-1 Maneuver	1094	-	-	-	0	775
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1094	-	-	-	-	775
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB		WB		SB
HCM Control Delay, s	1.1		0		11
HCM LOS					B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1094	-	-	-	775
HCM Lane V/C Ratio	0.057	-	-	-	0.23
HCM Control Delay (s)	8.5	-	-	-	11
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	15	0	10	0	0	0	28	19	0	0	1	15
Future Vol, veh/h	15	0	10	0	0	0	28	19	0	0	1	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	7	2	7	2	2	2	0	0	2	2	7	7
Mvmt Flow	18	0	12	0	0	0	34	23	0	0	1	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	12	0	0	53	43	6	55	49	1
Stage 1	-	-	-	-	-	-	42	42	-	1	1	-
Stage 2	-	-	-	-	-	-	11	1	-	54	48	-
Critical Hdwy	4.17	-	-	4.12	-	-	7.1	6.5	6.22	7.12	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.57	-
Follow-up Hdwy	2.263	-	-	2.218	-	-	3.5	4	3.318	3.518	4.063	3.363
Pot Cap-1 Maneuver	1589	-	-	1607	-	-	951	853	1077	943	833	1069
Stage 1	-	-	-	-	-	-	978	864	-	1022	885	-
Stage 2	-	-	-	-	-	-	1015	899	-	958	845	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1589	-	-	1607	-	-	926	844	1077	916	824	1069
Mov Cap-2 Maneuver	-	-	-	-	-	-	926	844	-	916	824	-
Stage 1	-	-	-	-	-	-	967	854	-	1011	885	-
Stage 2	-	-	-	-	-	-	996	899	-	922	836	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.4	0	9.3	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	891	1589	-	-	1607	-	-	1049
HCM Lane V/C Ratio	0.064	0.011	-	-	-	-	-	0.018
HCM Control Delay (s)	9.3	7.3	0	-	0	-	-	8.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary
1: Willow Avenue & Behymer Avenue

Shepherd

Existing (2022) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	11	45	81	31	89	20	120	472	24	41	390	10
Future Volume (veh/h)	11	45	81	31	89	20	120	472	24	41	390	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	12	51	92	35	101	23	136	536	27	47	443	11
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	0	0	0	1	1	1
Cap, veh/h	39	153	130	78	135	31	160	3440	1068	88	3211	974
Arrive On Green	0.02	0.08	0.08	0.04	0.09	0.09	0.09	0.66	0.66	0.05	0.62	0.62
Sat Flow, veh/h	1810	1900	1610	1795	1486	338	1810	5187	1610	1795	5147	1561
Grp Volume(v), veh/h	12	51	92	35	0	124	136	536	27	47	443	11
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	0	1824	1810	1729	1610	1795	1716	1561
Q Serve(g_s), s	0.9	3.4	7.5	2.6	0.0	9.0	10.0	5.2	0.8	3.5	4.8	0.4
Cycle Q Clear(g_c), s	0.9	3.4	7.5	2.6	0.0	9.0	10.0	5.2	0.8	3.5	4.8	0.4
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	153	130	78	0	165	160	3440	1068	88	3211	974
V/C Ratio(X)	0.31	0.33	0.71	0.45	0.00	0.75	0.85	0.16	0.03	0.53	0.14	0.01
Avail Cap(c_a), veh/h	185	612	519	205	0	588	170	3440	1068	196	3211	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.1	58.6	60.5	63.0	0.0	59.9	60.6	8.5	7.8	62.7	10.4	9.6
Incr Delay (d2), s/veh	1.7	1.5	8.3	1.5	0.0	14.1	27.6	0.1	0.0	1.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.7	3.3	1.2	0.0	4.7	5.7	1.8	0.3	1.6	1.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	60.1	68.8	64.5	0.0	74.0	88.3	8.6	7.8	64.5	10.5	9.6
LnGrp LOS	E	E	E	E	A	E	F	A	A	E	B	A
Approach Vol, veh/h		155			159			699			501	
Approach Delay, s/veh		65.8			71.9			24.1			15.6	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	89.9	9.1	18.7	11.9	95.2	10.4	17.4
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	12.7	41.3	13.8	43.5	14.7	39.3	15.4	43.5
Max Q Clear Time (g_c+I1), s	12.0	6.8	2.9	11.0	5.5	7.2	4.6	9.5
Green Ext Time (p_c), s	0.0	6.9	0.0	1.3	0.0	8.4	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
2: Willow Avenue & Shepherd Avenue

Shepherd

Existing (2022) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	36	366	113	38	340	166	243	657	96	163	464	31
Future Volume (veh/h)	36	366	113	38	340	166	243	657	96	163	464	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	38	389	120	40	362	177	259	699	102	173	494	33
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	152	573	256	155	607	270	309	2908	902	223	2761	846
Arrive On Green	0.04	0.16	0.16	0.04	0.17	0.17	0.09	0.56	0.56	0.06	0.54	0.54
Sat Flow, veh/h	3510	3610	1610	3510	3610	1607	3510	5187	1609	3483	5147	1576
Grp Volume(v), veh/h	38	389	120	40	362	177	259	699	102	173	494	33
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1607	1755	1729	1609	1742	1716	1576
Q Serve(g_s), s	1.5	14.7	9.8	1.6	13.4	14.9	10.5	9.9	4.3	7.1	7.1	1.4
Cycle Q Clear(g_c), s	1.5	14.7	9.8	1.6	13.4	14.9	10.5	9.9	4.3	7.1	7.1	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	573	256	155	607	270	309	2908	902	223	2761	846
V/C Ratio(X)	0.25	0.68	0.47	0.26	0.60	0.66	0.84	0.24	0.11	0.78	0.18	0.04
Avail Cap(c_a), veh/h	470	1090	486	441	1090	486	453	2908	902	449	2761	846
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.60	0.60	0.60	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	67.1	57.5	55.4	67.0	55.8	56.4	65.1	16.2	14.9	66.8	17.2	15.9
Incr Delay (d2), s/veh	0.3	3.3	3.1	0.2	0.8	2.2	5.9	0.2	0.3	2.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.9	4.2	0.7	6.0	6.2	4.9	3.8	1.6	3.2	2.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.4	60.8	58.6	67.2	56.6	58.6	71.0	16.4	15.2	69.0	17.4	16.0
LnGrp LOS	E	E	E	E	E	E	E	B	B	E	B	B
Approach Vol, veh/h		547			579			1060			700	
Approach Delay, s/veh		60.8			57.9			29.6			30.1	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.1	83.5	11.9	30.6	15.6	87.0	13.2	29.2
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	12.5	9.1	3.5	16.9	9.1	11.9	3.6	16.7
Green Ext Time (p_c), s	0.2	7.6	0.0	3.9	0.2	11.3	0.0	5.9

Intersection Summary	
HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	3	73	30	6	88	99	46	205	6	95	190	2
Future Vol, veh/h	3	73	30	6	88	99	46	205	6	95	190	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	1	1	1
Mvmt Flow	3	83	34	7	100	113	52	233	7	108	216	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.3	11.3	12.7	13.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	3%	3%	33%
Vol Thru, %	80%	69%	46%	66%
Vol Right, %	2%	28%	51%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	257	106	193	287
LT Vol	46	3	6	95
Through Vol	205	73	88	190
RT Vol	6	30	99	2
Lane Flow Rate	292	120	219	326
Geometry Grp	1	1	1	1
Degree of Util (X)	0.441	0.196	0.335	0.491
Departure Headway (Hd)	5.435	5.844	5.495	5.421
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	660	611	651	662
Service Time	3.488	3.912	3.554	3.473
HCM Lane V/C Ratio	0.442	0.196	0.336	0.492
HCM Control Delay	12.7	10.3	11.3	13.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.3	0.7	1.5	2.7

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	20	479	81	47	395	85	104	152	72	76	142	13
Future Volume (veh/h)	20	479	81	47	395	85	104	152	72	76	142	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	22	515	87	51	425	91	112	163	77	82	153	14
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	83	784	349	129	463	392	149	897	760	144	892	756
Arrive On Green	0.05	0.22	0.22	0.07	0.24	0.24	0.08	0.48	0.48	0.08	0.47	0.47
Sat Flow, veh/h	1795	3582	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	22	515	87	51	425	91	112	163	77	82	153	14
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	1.5	17.1	5.8	3.5	28.3	5.9	7.9	6.4	3.4	5.7	6.1	0.6
Cycle Q Clear(g_c), s	1.5	17.1	5.8	3.5	28.3	5.9	7.9	6.4	3.4	5.7	6.1	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	784	349	129	463	392	149	897	760	144	892	756
V/C Ratio(X)	0.26	0.66	0.25	0.40	0.92	0.23	0.75	0.18	0.10	0.57	0.17	0.02
Avail Cap(c_a), veh/h	290	937	418	292	497	421	290	897	760	290	892	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.8	46.3	42.0	57.7	47.9	39.4	58.3	19.5	18.8	57.6	19.6	18.2
Incr Delay (d2), s/veh	0.5	1.4	0.4	0.7	22.2	0.5	2.8	0.4	0.3	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.5	2.3	1.6	15.7	2.3	3.6	2.9	1.3	2.6	2.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	47.7	42.4	58.4	70.1	39.9	61.1	20.0	19.0	58.9	20.1	18.3
LnGrp LOS	E	D	D	E	E	D	E	B	B	E	C	B
Approach Vol, veh/h		624			567			352			249	
Approach Delay, s/veh		47.4			64.2			32.9			32.8	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	67.5	10.0	37.7	14.4	67.9	13.3	34.4
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	9.9	8.1	3.5	30.3	7.7	8.4	5.5	19.1
Green Ext Time (p_c), s	0.1	1.1	0.0	1.3	0.1	1.1	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	32	479	103	130	385	7	140	44	159	10	24	26
Future Volume (veh/h)	32	479	103	130	385	7	140	44	159	10	24	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	504	108	137	405	7	147	46	167	11	25	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	182	640	284	250	712	318	170	1489	664	612	1779	793
Arrive On Green	0.05	0.18	0.18	0.07	0.20	0.20	0.09	0.41	0.41	0.17	0.49	0.49
Sat Flow, veh/h	3483	3582	1592	3510	3610	1610	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	34	504	108	137	405	7	147	46	167	11	25	27
Grp Sat Flow(s),veh/h/ln	1742	1791	1592	1755	1805	1610	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	1.3	18.8	8.4	5.3	14.2	0.5	11.2	1.1	9.5	0.4	0.5	1.2
Cycle Q Clear(g_c), s	1.3	18.8	8.4	5.3	14.2	0.5	11.2	1.1	9.5	0.4	0.5	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	640	284	250	712	318	170	1489	664	612	1779	793
V/C Ratio(X)	0.19	0.79	0.38	0.55	0.57	0.02	0.86	0.03	0.25	0.02	0.01	0.03
Avail Cap(c_a), veh/h	607	870	387	612	877	391	173	1489	664	612	1779	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	55.0	50.7	62.9	50.8	45.3	62.5	24.5	27.0	47.9	18.1	18.3
Incr Delay (d2), s/veh	0.2	4.3	1.2	0.7	1.1	0.0	31.5	0.0	0.9	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	8.6	3.4	2.3	6.4	0.2	6.6	0.5	3.7	0.2	0.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.7	59.2	51.9	63.6	51.9	45.3	94.1	24.5	27.9	47.9	18.2	18.4
LnGrp LOS	E	E	D	E	D	D	F	C	C	D	B	B
Approach Vol, veh/h		646			549			360			63	
Approach Delay, s/veh		58.3			54.7			54.5			23.5	
Approach LOS		E			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.8	74.7	12.9	33.6	30.0	63.5	15.6	31.0
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	13.4	45.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	13.2	3.2	3.3	16.2	2.4	11.5	7.3	20.8
Green Ext Time (p_c), s	0.0	0.6	0.0	3.1	0.0	1.6	0.2	3.8

Intersection Summary	
HCM 6th Ctrl Delay	54.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: Clovis Avenue & Teague Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	74	87	156	372	272	64
Future Volume (veh/h)	74	87	156	372	272	64
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1900	1900
Adj Flow Rate, veh/h	91	107	193	459	336	79
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	1	1	1	1	0	0
Cap, veh/h	167	149	230	2818	2209	985
Arrive On Green	0.09	0.09	0.13	0.79	0.61	0.61
Sat Flow, veh/h	1795	1598	1795	3676	3705	1610
Grp Volume(v), veh/h	91	107	193	459	336	79
Grp Sat Flow(s),veh/h/ln	1795	1598	1795	1791	1805	1610
Q Serve(g_s), s	4.1	5.5	8.9	2.7	3.4	1.7
Cycle Q Clear(g_c), s	4.1	5.5	8.9	2.7	3.4	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	167	149	230	2818	2209	985
V/C Ratio(X)	0.54	0.72	0.84	0.16	0.15	0.08
Avail Cap(c_a), veh/h	530	472	275	2818	2209	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.94
Uniform Delay (d), s/veh	36.8	37.5	36.2	2.2	7.1	6.7
Incr Delay (d2), s/veh	1.0	2.4	15.4	0.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.2	4.7	0.4	1.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.8	39.9	51.7	2.3	7.2	6.9
LnGrp LOS	D	D	D	A	A	A
Approach Vol, veh/h	198			652	415	
Approach Delay, s/veh	38.9			16.9	7.1	
Approach LOS	D			B	A	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.9	57.3				72.2		12.8
Change Period (Y+Rc), s	4.0	5.3				5.3		4.9
Max Green Setting (Gmax), s	13.0	32.7				49.7		25.1
Max Q Clear Time (g_c+I1), s	10.9	5.4				4.7		7.5
Green Ext Time (p_c), s	0.1	3.0				3.8		0.3

Intersection Summary			
HCM 6th Ctrl Delay			17.2
HCM 6th LOS			B

HCM 6th Signalized Intersection Summary
7: Clovis Avenue & Nees Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	22	419	249	43	387	74	124	482	46	43	302	27
Future Volume (veh/h)	22	419	249	43	387	74	124	482	46	43	302	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	23	446	265	46	412	79	132	513	49	46	321	29
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	0	0	0
Cap, veh/h	67	480	407	92	503	426	144	1865	813	93	1776	773
Arrive On Green	0.04	0.25	0.25	0.05	0.27	0.27	0.08	0.52	0.52	0.05	0.49	0.49
Sat Flow, veh/h	1810	1900	1610	1795	1885	1596	1795	3582	1562	1810	3610	1572
Grp Volume(v), veh/h	23	446	265	46	412	79	132	513	49	46	321	29
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	1885	1596	1795	1791	1562	1810	1805	1572
Q Serve(g_s), s	1.9	34.4	22.1	3.7	30.7	5.7	11.0	12.0	2.3	3.7	7.4	1.4
Cycle Q Clear(g_c), s	1.9	34.4	22.1	3.7	30.7	5.7	11.0	12.0	2.3	3.7	7.4	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	480	407	92	503	426	144	1865	813	93	1776	773
V/C Ratio(X)	0.34	0.93	0.65	0.50	0.82	0.19	0.92	0.28	0.06	0.50	0.18	0.04
Avail Cap(c_a), veh/h	374	503	426	335	503	426	144	1865	813	314	1776	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.4	54.7	50.1	69.3	51.6	42.4	68.5	20.1	17.8	69.3	21.2	19.7
Incr Delay (d2), s/veh	1.1	23.7	4.0	1.6	10.7	0.3	48.0	0.3	0.1	1.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	19.2	9.2	1.7	15.7	2.3	6.9	5.0	0.9	1.7	3.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	78.4	54.1	70.9	62.3	42.7	116.5	20.4	17.9	70.8	21.5	19.8
LnGrp LOS	E	E	D	E	E	D	F	C	B	E	C	B
Approach Vol, veh/h		734			537			694			396	
Approach Delay, s/veh		69.4			60.1			38.5			27.1	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	79.1	9.5	45.4	11.7	83.4	11.7	43.2
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	12.0	51.7	31.0	36.7	26.0	37.7	28.0	39.7
Max Q Clear Time (g_c+I1), s	13.0	9.4	3.9	32.7	5.7	14.0	5.7	36.4
Green Ext Time (p_c), s	0.0	3.3	0.0	1.3	0.0	5.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	51.1
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	15	346	175	36	304	77	146	640	67	77	524	13
Future Volume (veh/h)	15	346	175	36	304	77	146	640	67	77	524	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	16	376	190	39	330	84	159	696	73	84	570	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	61	422	357	107	470	398	186	1548	162	164	1651	41
Arrive On Green	0.03	0.22	0.22	0.06	0.25	0.25	0.10	0.47	0.47	0.09	0.46	0.46
Sat Flow, veh/h	1795	1885	1595	1795	1885	1598	1810	3290	345	1810	3598	88
Grp Volume(v), veh/h	16	376	190	39	330	84	159	382	387	84	286	298
Grp Sat Flow(s),veh/h/ln	1795	1885	1595	1795	1885	1598	1810	1805	1829	1810	1805	1882
Q Serve(g_s), s	1.1	24.2	13.1	2.6	19.9	5.2	10.8	17.7	17.8	5.5	12.7	12.7
Cycle Q Clear(g_c), s	1.1	24.2	13.1	2.6	19.9	5.2	10.8	17.7	17.8	5.5	12.7	12.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.05
Lane Grp Cap(c), veh/h	61	422	357	107	470	398	186	850	861	164	828	863
V/C Ratio(X)	0.26	0.89	0.53	0.37	0.70	0.21	0.86	0.45	0.45	0.51	0.34	0.35
Avail Cap(c_a), veh/h	158	593	502	158	593	502	261	850	861	232	828	863
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	58.8	47.0	42.7	56.5	42.7	37.2	55.2	22.2	22.2	54.2	21.7	21.8
Incr Delay (d2), s/veh	0.8	10.7	0.8	0.8	2.8	0.3	13.4	1.7	1.7	0.9	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	12.3	5.1	1.2	9.4	2.0	5.5	7.6	7.7	2.5	5.4	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	57.7	43.6	57.3	45.6	37.5	68.6	23.9	23.9	55.1	22.8	22.8
LnGrp LOS	E	E	D	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		582			453			928			668	
Approach Delay, s/veh		53.2			45.1			31.6			26.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	63.1	8.3	36.8	15.4	64.5	11.4	33.7
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	18.0	37.3	11.0	39.3	16.0	39.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	12.8	14.7	3.1	21.9	7.5	19.8	4.6	26.2
Green Ext Time (p_c), s	0.1	3.1	0.0	2.0	0.0	4.8	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
9: SR-168 WB Ramps & Herndon Avenue

Shepherd I
Existing (2022) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↱		↑↑↑↱	↱				↰↰		↱↱
Traffic Volume (veh/h)	0	1660	529	0	1455	597	0	0	0	66	0	342
Future Volume (veh/h)	0	1660	529	0	1455	597	0	0	0	66	0	342
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	0	1885
Adj Flow Rate, veh/h	0	1677	534	0	1753	0				67	0	345
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	1	1	0	1	1				1	0	1
Cap, veh/h	0	3260	803	0	3791					570	0	460
Arrive On Green	0.00	0.50	0.50	0.00	0.50	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	6749	1598	0	7541	1598				3483	0	2812
Grp Volume(v), veh/h	0	1677	534	0	1753	0				67	0	345
Grp Sat Flow(s),veh/h/ln	0	1621	1598	0	1885	1598				1742	0	1406
Q Serve(g_s), s	0.0	22.9	33.0	0.0	19.9	0.0				2.2	0.0	15.4
Cycle Q Clear(g_c), s	0.0	22.9	33.0	0.0	19.9	0.0				2.2	0.0	15.4
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3260	803	0	3791					570	0	460
V/C Ratio(X)	0.00	0.51	0.66	0.00	0.46					0.12	0.00	0.75
Avail Cap(c_a), veh/h	0	3341	823	0	3885					1317	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.0	24.5	0.0	21.3	0.0				47.1	0.0	52.6
Incr Delay (d2), s/veh	0.0	0.6	4.3	0.0	0.4	0.0				0.2	0.0	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.4	12.7	0.0	8.5	0.0				1.0	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.6	28.8	0.0	21.6	0.0				47.3	0.0	58.6
LnGrp LOS	A	C	C	A	C					D	A	E
Approach Vol, veh/h		2211			1753						412	
Approach Delay, s/veh		24.1			21.6						56.8	
Approach LOS		C			C						E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.2		28.9		73.2
Change Period (Y+Rc), s		6.8		7.3		6.8
Max Green Setting (Gmax), s		68.0		49.9		68.0
Max Q Clear Time (g_c+I1), s		35.0		17.4		21.9
Green Ext Time (p_c), s		31.4		4.2		40.0

Intersection Summary			
HCM 6th Ctrl Delay			26.2
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
10: SR-168 EB Ramps & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	1366	360	0	1555	184	497	0	738	0	0	0
Future Volume (veh/h)	0	1366	360	0	1555	184	497	0	738	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885	1885	0	1885			
Adj Flow Rate, veh/h	0	1408	0	0	1603	190	512	0	761			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	1	1	0	1	1	1	0	1			
Cap, veh/h	0	2930		0	4346	909	1651	0	917			
Arrive On Green	0.00	0.57	0.00	0.00	0.57	0.57	0.33	0.00	0.33			
Sat Flow, veh/h	0	5316	1598	0	7993	1598	5063	0	2812			
Grp Volume(v), veh/h	0	1408	0	0	1603	190	512	0	761			
Grp Sat Flow(s),veh/h/ln	0	1716	1598	0	1527	1598	1688	0	1406			
Q Serve(g_s), s	0.0	21.1	0.0	0.0	14.9	7.6	9.9	0.0	32.5			
Cycle Q Clear(g_c), s	0.0	21.1	0.0	0.0	14.9	7.6	9.9	0.0	32.5			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2930		0	4346	909	1651	0	917			
V/C Ratio(X)	0.00	0.48		0.00	0.37	0.21	0.31	0.00	0.83			
Avail Cap(c_a), veh/h	0	2930		0	4346	909	1651	0	917			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.95	0.00	0.00	0.63	0.63	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	16.6	0.0	0.0	15.3	13.7	32.8	0.0	40.5			
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.2	0.3	0.5	0.0	8.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	7.9	0.0	0.0	4.9	2.7	4.1	0.0	12.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.1	0.0	0.0	15.4	14.0	33.3	0.0	49.1			
LnGrp LOS	A	B		A	B	B	C	A	D			
Approach Vol, veh/h		1408			1793			1273				
Approach Delay, s/veh		17.1			15.3			42.7				
Approach LOS		B			B			D				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		80.8				80.8		49.2				
Change Period (Y+Rc), s		6.8				6.8		6.8				
Max Green Setting (Gmax), s		74.0				74.0		42.4				
Max Q Clear Time (g_c+I1), s		23.1				16.9		34.5				
Green Ext Time (p_c), s		36.7				47.7		5.7				

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	434	1368	302	316	1062	136	350	413	276	273	268	327
Future Volume (veh/h)	434	1368	302	316	1062	136	350	413	276	273	268	327
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	452	1425	315	329	1106	142	365	430	288	284	279	341
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	498	1952	606	378	1775	551	416	955	436	334	1305	703
Arrive On Green	0.14	0.38	0.38	0.11	0.34	0.34	0.12	0.28	0.28	0.10	0.25	0.25
Sat Flow, veh/h	3483	5147	1598	3483	5147	1596	3510	3458	1579	3483	5147	2773
Grp Volume(v), veh/h	452	1425	315	329	1106	142	365	430	288	284	279	341
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1742	1716	1596	1755	1729	1579	1742	1716	1387
Q Serve(g_s), s	19.8	36.8	23.6	14.4	27.8	9.9	15.9	15.9	25.0	12.4	6.6	16.2
Cycle Q Clear(g_c), s	19.8	36.8	23.6	14.4	27.8	9.9	15.9	15.9	25.0	12.4	6.6	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	1952	606	378	1775	551	416	955	436	334	1305	703
V/C Ratio(X)	0.91	0.73	0.52	0.87	0.62	0.26	0.88	0.45	0.66	0.85	0.21	0.48
Avail Cap(c_a), veh/h	562	1952	606	562	1775	551	679	955	436	674	1305	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.4	41.3	37.2	68.0	42.4	36.5	67.2	46.4	49.7	69.0	45.7	49.2
Incr Delay (d2), s/veh	13.5	1.9	2.5	6.8	1.7	1.1	4.2	1.5	7.6	2.4	0.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	15.6	9.5	6.7	11.8	4.0	7.2	7.0	10.6	5.6	2.9	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.9	43.2	39.7	74.8	44.0	37.6	71.4	47.9	57.3	71.3	46.0	51.6
LnGrp LOS	E	D	D	E	D	D	E	D	E	E	D	D
Approach Vol, veh/h		2192			1577			1083			904	
Approach Delay, s/veh		50.1			49.9			58.3			56.1	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.1	59.5	19.9	48.5	21.8	64.8	23.4	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	21.8	29.8	14.4	27.0	16.4	38.8	17.9	18.2
Green Ext Time (p_c), s	0.3	4.4	0.4	2.3	0.4	0.1	0.5	3.4

Intersection Summary	
HCM 6th Ctrl Delay	52.5
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	0	183	200	0	0	0
Future Vol, veh/h	0	183	200	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	201	220	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	220	0	-	0	421	220
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	201	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1361	-	-	-	593	825
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	838	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1361	-	-	-	593	825
Mov Cap-2 Maneuver	-	-	-	-	593	-
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	838	-

Approach	EB		WB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS					A	

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1361	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	62
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↱			✥			✥	
Traffic Vol, veh/h	84	492	70	50	385	31	80	25	67	19	43	54
Future Vol, veh/h	84	492	70	50	385	31	80	25	67	19	43	54
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	0	0	0	0	0	0	0	0	0
Mvmt Flow	89	523	74	53	410	33	85	27	71	20	46	57
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	107.6	28.4	14.9	13.4
HCM LOS	F	D	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	47%	13%	100%	0%	16%
Vol Thru, %	15%	76%	0%	93%	37%
Vol Right, %	39%	11%	0%	7%	47%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	172	646	50	416	116
LT Vol	80	84	50	0	19
Through Vol	25	492	0	385	43
RT Vol	67	70	0	31	54
Lane Flow Rate	183	687	53	443	123
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.364	1.148	0.103	0.793	0.25
Departure Headway (Hd)	7.6	6.012	7.314	6.749	7.786
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	476	598	493	540	464
Service Time	5.6	4.092	5.014	4.449	5.786
HCM Lane V/C Ratio	0.384	1.149	0.108	0.82	0.265
HCM Control Delay	14.9	107.6	10.9	30.5	13.4
HCM Lane LOS	B	F	B	D	B
HCM 95th-tile Q	1.6	22.3	0.3	7.5	1

AGENDA ITEM NO. 6.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	1	1	3	8	3	12	0	170	7	2	163	1
Future Vol, veh/h	1	1	3	8	3	12	0	170	7	2	163	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	9	9	9	0	0	0	0	0	0	1	1	1
Mvmt Flow	1	1	3	9	3	14	0	198	8	2	190	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	406	401	191	399	397	202	191	0	0	206	0	0
Stage 1	195	195	-	202	202	-	-	-	-	-	-	-
Stage 2	211	206	-	197	195	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.1	6.5	6.2	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	543	527	833	565	544	844	1395	-	-	1371	-	-
Stage 1	791	726	-	805	738	-	-	-	-	-	-	-
Stage 2	775	718	-	809	743	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	531	526	833	561	543	844	1395	-	-	1371	-	-
Mov Cap-2 Maneuver	531	526	-	561	543	-	-	-	-	-	-	-
Stage 1	791	725	-	805	738	-	-	-	-	-	-	-
Stage 2	759	718	-	803	742	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	10.5	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1395	-	-	677	676	1371	-	-
HCM Lane V/C Ratio	-	-	-	0.009	0.04	0.002	-	-
HCM Control Delay (s)	0	-	-	10.4	10.5	7.6	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

15: Sunnyside Avenue & Nees Avenue

Intersection	
Intersection Delay, s/veh	44.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✥	
Traffic Vol, veh/h	24	364	74	32	337	15	115	148	35	17	120	40
Future Vol, veh/h	24	364	74	32	337	15	115	148	35	17	120	40
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	1	1	1
Mvmt Flow	28	418	85	37	387	17	132	170	40	20	138	46
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	3
HCM Control Delay	25.9	80.1	39	24.7
HCM LOS	D	F	E	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	44%	0%	100%	0%	0%	100%	0%	10%
Vol Thru, %	56%	0%	0%	100%	62%	0%	96%	68%
Vol Right, %	0%	100%	0%	0%	38%	0%	4%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	263	35	24	243	195	32	352	177
LT Vol	115	0	24	0	0	32	0	17
Through Vol	148	0	0	243	121	0	337	120
RT Vol	0	35	0	0	74	0	15	40
Lane Flow Rate	302	40	28	279	225	37	405	203
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.803	0.096	0.073	0.694	0.542	0.1	1.036	0.554
Departure Headway (Hd)	9.84	8.885	9.75	9.229	8.952	9.775	9.219	10.106
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	372	406	370	393	406	369	397	360
Service Time	7.54	6.585	7.45	6.929	6.652	7.475	6.919	7.806
HCM Lane V/C Ratio	0.812	0.099	0.076	0.71	0.554	0.1	1.02	0.564
HCM Control Delay	42.5	12.5	13.2	30.4	21.8	13.6	86.1	24.7
HCM Lane LOS	E	B	B	D	C	B	F	C
HCM 95th-tile Q	6.9	0.3	0.2	5.1	3.1	0.3	13.2	3.2

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	7	3	180	4	4	1	165	79	3	1	59	5
Future Vol, veh/h	7	3	180	4	4	1	165	79	3	1	59	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	8	4	212	5	5	1	194	93	4	1	69	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.2	10.4	8.3
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	4%	44%	2%
Vol Thru, %	32%	2%	44%	91%
Vol Right, %	1%	95%	11%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	247	190	9	65
LT Vol	165	7	4	1
Through Vol	79	3	4	59
RT Vol	3	180	1	5
Lane Flow Rate	291	224	11	76
Geometry Grp	1	1	1	1
Degree of Util (X)	0.373	0.262	0.015	0.101
Departure Headway (Hd)	4.627	4.225	5.061	4.745
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	776	849	705	753
Service Time	2.664	2.253	3.107	2.788
HCM Lane V/C Ratio	0.375	0.264	0.016	0.101
HCM Control Delay	10.4	8.8	8.2	8.3
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.7	1.1	0	0.3

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰	↱	
Traffic Vol, veh/h	5	17	9	238	238	6
Future Vol, veh/h	5	17	9	238	238	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	6	19	10	264	264	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	552	268	271	0	-	0
Stage 1	268	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	498	776	1304	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	494	776	1304	-	-	-
Mov Cap-2 Maneuver	494	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	769	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1304	-	687	-	-
HCM Lane V/C Ratio	0.008	-	0.036	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑↱	
Traffic Volume (veh/h)	23	291	75	47	265	128	163	119	73	110	123	14
Future Volume (veh/h)	23	291	75	47	265	128	163	119	73	110	123	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	24	306	79	49	279	135	172	125	77	116	129	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	61	573	256	83	326	276	195	1103	934	139	917	107
Arrive On Green	0.03	0.16	0.16	0.05	0.17	0.17	0.11	0.59	0.59	0.08	0.55	0.55
Sat Flow, veh/h	1795	3582	1598	1795	1885	1598	1795	1885	1597	1795	1658	193
Grp Volume(v), veh/h	24	306	79	49	279	135	172	125	77	116	0	144
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1795	1885	1598	1795	1885	1597	1795	0	1850
Q Serve(g_s), s	2.0	11.8	6.6	4.0	21.6	11.5	14.2	4.4	3.2	9.6	0.0	5.7
Cycle Q Clear(g_c), s	2.0	11.8	6.6	4.0	21.6	11.5	14.2	4.4	3.2	9.6	0.0	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	61	573	256	83	326	276	195	1103	934	139	0	1024
V/C Ratio(X)	0.40	0.53	0.31	0.59	0.86	0.49	0.88	0.11	0.08	0.84	0.00	0.14
Avail Cap(c_a), veh/h	371	812	362	371	427	362	371	1103	934	371	0	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	57.9	55.7	70.1	60.3	56.1	65.9	13.8	13.6	68.3	0.0	16.2
Incr Delay (d2), s/veh	1.6	1.4	1.3	2.4	15.6	2.5	5.0	0.2	0.2	5.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.4	2.7	1.9	11.4	4.8	6.7	1.9	1.2	4.5	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.5	59.3	56.9	72.6	75.9	58.6	70.8	14.0	13.7	73.3	0.0	16.5
LnGrp LOS	E	E	E	E	E	E	E	B	B	E	A	B
Approach Vol, veh/h		409			463			374			260	
Approach Delay, s/veh		59.6			70.5			40.1			41.8	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.3	88.7	9.1	31.9	15.6	93.5	11.0	30.0				
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0				
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	31.0	34.3	31.0	34.0				
Max Q Clear Time (g_c+I1), s	16.2	7.7	4.0	23.6	11.6	6.4	6.0	13.8				
Green Ext Time (p_c), s	0.2	0.7	0.0	2.3	0.1	0.8	0.0	3.5				

Intersection Summary			
HCM 6th Ctrl Delay			55.0
HCM 6th LOS			E

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↱		↰	↑	↱
Traffic Vol, veh/h	3	3	5	5	7	15	9	363	13	9	258	6
Future Vol, veh/h	3	3	5	5	7	15	9	363	13	9	258	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	9	9	9	4	4	4	1	1	1	2	2	2
Mvmt Flow	3	3	5	5	7	16	9	378	14	9	269	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	702	697	269	697	696	385	275	0	0	392	0	0
Stage 1	287	287	-	403	403	-	-	-	-	-	-	-
Stage 2	415	410	-	294	293	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.14	6.54	6.24	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.536	4.036	3.336	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	344	356	753	353	363	658	1294	-	-	1167	-	-
Stage 1	706	662	-	620	596	-	-	-	-	-	-	-
Stage 2	601	584	-	710	667	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	327	351	753	344	358	658	1294	-	-	1167	-	-
Mov Cap-2 Maneuver	327	351	-	344	358	-	-	-	-	-	-	-
Stage 1	701	657	-	616	592	-	-	-	-	-	-	-
Stage 2	575	580	-	696	662	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.2	13.1	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1294	-	-	452	475	1167	-	-
HCM Lane V/C Ratio	0.007	-	-	0.025	0.059	0.008	-	-
HCM Control Delay (s)	7.8	-	-	13.2	13.1	8.1	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

HCM 6th Signalized Intersection Summary
20: Fowler Avenue & Nees Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	30	269	114	37	222	37	163	320	62	36	209	36
Future Volume (veh/h)	30	269	114	37	222	37	163	320	62	36	209	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	33	296	125	41	244	41	179	352	68	40	230	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	3	3	3
Cap, veh/h	42	400	165	53	314	266	195	1180	1000	51	1015	860
Arrive On Green	0.02	0.16	0.16	0.03	0.17	0.17	0.11	0.63	0.63	0.03	0.55	0.55
Sat Flow, veh/h	1810	2492	1028	1795	1885	1598	1795	1885	1598	1767	1856	1572
Grp Volume(v), veh/h	33	213	208	41	244	41	179	352	68	40	230	40
Grp Sat Flow(s),veh/h/ln	1810	1805	1715	1795	1885	1598	1795	1885	1598	1767	1856	1572
Q Serve(g_s), s	2.2	13.4	13.9	2.7	14.9	2.6	11.8	10.3	2.0	2.7	7.7	1.4
Cycle Q Clear(g_c), s	2.2	13.4	13.9	2.7	14.9	2.6	11.8	10.3	2.0	2.7	7.7	1.4
Prop In Lane	1.00		0.60	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	42	290	275	53	314	266	195	1180	1000	51	1015	860
V/C Ratio(X)	0.78	0.73	0.76	0.78	0.78	0.15	0.92	0.30	0.07	0.78	0.23	0.05
Avail Cap(c_a), veh/h	271	522	496	269	545	462	195	1180	1000	280	1015	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.3	47.9	48.1	57.8	47.9	42.8	53.0	10.3	8.8	57.9	14.1	12.6
Incr Delay (d2), s/veh	11.1	5.6	6.6	8.7	3.6	0.2	42.0	0.6	0.1	9.2	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.3	6.3	1.3	7.1	1.0	7.5	4.1	0.7	1.3	3.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	53.6	54.8	66.5	51.4	43.0	95.0	11.0	8.9	67.1	14.6	12.7
LnGrp LOS	E	D	D	E	D	D	F	B	A	E	B	B
Approach Vol, veh/h		454			326			599			310	
Approach Delay, s/veh		55.3			52.3			35.8			21.1	
Approach LOS		E			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	70.9	6.8	25.3	7.5	80.4	7.5	24.5
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	13.0	35.7	18.0	34.7	19.0	29.7	18.0	34.7
Max Q Clear Time (g_c+I1), s	13.8	9.7	4.2	16.9	4.7	12.3	4.7	15.9
Green Ext Time (p_c), s	0.0	1.5	0.0	1.1	0.0	2.3	0.0	3.3

Intersection Summary			
HCM 6th Ctrl Delay			41.5
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
21: Fowler Avenue & SR-168 WB Ramps

Shepherd
Existing (2022) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	159	0	15	430	788	0	0	403	183
Future Volume (veh/h)	0	0	0	159	0	15	430	788	0	0	403	183
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	0	1856	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				167	0	16	453	829	0	0	424	193
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	0	3	1	1	0	0	1	1
Cap, veh/h				212	0	188	517	2683	0	0	1305	588
Arrive On Green				0.12	0.00	0.12	0.30	1.00	0.00	0.00	0.54	0.54
Sat Flow, veh/h				1767	0	1572	3483	3676	0	0	2494	1081
Grp Volume(v), veh/h				167	0	16	453	829	0	0	315	302
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1742	1791	0	0	1791	1691
Q Serve(g_s), s				9.2	0.0	0.9	12.4	0.0	0.0	0.0	9.8	9.9
Cycle Q Clear(g_c), s				9.2	0.0	0.9	12.4	0.0	0.0	0.0	9.8	9.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.64
Lane Grp Cap(c), veh/h				212	0	188	517	2683	0	0	973	919
V/C Ratio(X)				0.79	0.00	0.08	0.88	0.31	0.00	0.00	0.32	0.33
Avail Cap(c_a), veh/h				422	0	376	707	2683	0	0	973	919
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.79	0.79	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				42.8	0.0	39.1	34.3	0.0	0.0	0.0	12.6	12.7
Incr Delay (d2), s/veh				12.9	0.0	0.4	5.9	0.2	0.0	0.0	0.9	1.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.7	0.0	0.4	4.6	0.1	0.0	0.0	3.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				55.7	0.0	39.5	40.2	0.2	0.0	0.0	13.5	13.6
LnGrp LOS				E	A	D	D	A	A	A	B	B
Approach Vol, veh/h					183			1282			617	
Approach Delay, s/veh					54.3			14.4			13.6	
Approach LOS					D			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.7			20.6	61.2		18.3				
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3				
Max Green Setting (Gmax), s		63.0			* 20	37.0		23.9				
Max Q Clear Time (g_c+I1), s		2.0			14.4	11.9		11.2				
Green Ext Time (p_c), s		11.9			0.5	7.4		0.9				

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	347	0	585	0	0	0	0	871	294	23	538	0
Future Volume (veh/h)	347	0	585	0	0	0	0	871	294	23	538	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	361	0	609				0	907	306	24	560	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	1	1	2	2	0
Cap, veh/h	1006	0	461				0	1300	437	52	2061	0
Arrive On Green	0.29	0.00	0.29				0.00	0.49	0.49	0.02	0.39	0.00
Sat Flow, veh/h	3456	0	1585				0	2726	885	1781	3647	0
Grp Volume(v), veh/h	361	0	609				0	616	597	24	560	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1791	1726	1781	1777	0
Q Serve(g_s), s	8.3	0.0	29.1				0.0	26.5	26.8	1.3	10.8	0.0
Cycle Q Clear(g_c), s	8.3	0.0	29.1				0.0	26.5	26.8	1.3	10.8	0.0
Prop In Lane	1.00		1.00				0.00		0.51	1.00		0.00
Lane Grp Cap(c), veh/h	1006	0	461				0	884	852	52	2061	0
V/C Ratio(X)	0.36	0.00	1.32				0.00	0.70	0.70	0.46	0.27	0.00
Avail Cap(c_a), veh/h	1006	0	461				0	884	852	201	2061	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.92	0.92	0.00
Uniform Delay (d), s/veh	28.1	0.0	35.4				0.0	19.5	19.6	48.2	16.1	0.0
Incr Delay (d2), s/veh	0.5	0.0	158.8				0.0	4.5	4.8	2.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	31.1				0.0	11.0	10.7	0.6	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	0.0	194.2				0.0	24.1	24.4	50.4	16.4	0.0
LnGrp LOS	C	A	F				A	C	C	D	B	A
Approach Vol, veh/h		970						1213			584	
Approach Delay, s/veh		132.5						24.2			17.8	
Approach LOS		F						C			B	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	8.6	56.2	35.2	64.8
Change Period (Y+Rc), s	* 5.7	6.8	6.1	6.8
Max Green Setting (Gmax), s	* 11	41.0	29.1	58.0
Max Q Clear Time (g_c+I1), s	3.3	28.8	31.1	12.8
Green Ext Time (p_c), s	0.0	9.5	0.0	6.9

Intersection Summary	
HCM 6th Ctrl Delay	60.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱		↱			↰
Traffic Vol, veh/h	13	0	58	21	0	45
Future Vol, veh/h	13	0	58	21	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	0	63	23	0	49

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	75	0	0	86	0
Stage 1	75	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	876	992	-	-	1523	-
Stage 1	953	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	876	992	-	-	1523	-
Mov Cap-2 Maneuver	876	-	-	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	979	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	876	1523	-
HCM Lane V/C Ratio	-	-	0.016	-	-
HCM Control Delay (s)	-	-	9.2	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	57	0	80	61	0	58
Future Vol, veh/h	57	0	80	61	0	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	0	87	66	0	63

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	183	120	0	0	153	0
Stage 1	120	-	-	-	-	-
Stage 2	63	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	811	937	-	-	1440	-
Stage 1	910	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	811	937	-	-	1440	-
Mov Cap-2 Maneuver	811	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	965	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	811	1440	-
HCM Lane V/C Ratio	-	-	0.076	-	-
HCM Control Delay (s)	-	-	9.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

25: Shepherd Avenue & Project Driveway 3

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑	↑↱			↱
Traffic Vol, veh/h	186	392	356	54	0	110
Future Vol, veh/h	186	392	356	54	0	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	0	0	0	0
Mvmt Flow	202	426	387	59	0	120

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	446	0	-	0	-	223
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.115	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2095	-	-	-	-	3.3
Pot Cap-1 Maneuver	1119	-	-	-	0	787
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1119	-	-	-	-	787
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB		WB		SB	
HCM Control Delay, s	2.9		0		10.4	
HCM LOS					B	

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1119	-	-	-	787
HCM Lane V/C Ratio	0.181	-	-	-	0.152
HCM Control Delay (s)	8.9	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	0.5

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	13	0	32	0	0	0	19	13	0	0	4	12
Future Vol, veh/h	13	0	32	0	0	0	19	13	0	0	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	62	62	62	62	62	62	62	62	62	62	62	62
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	0	0
Mvmt Flow	21	0	52	0	0	0	31	21	0	0	6	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2	0	0	52	0	0	83	70	26	81	96	2
Stage 1	-	-	-	-	-	-	68	68	-	2	2	-
Stage 2	-	-	-	-	-	-	15	2	-	79	94	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.22	7.12	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.318	3.518	4	3.3
Pot Cap-1 Maneuver	1634	-	-	1554	-	-	909	824	1050	907	798	1088
Stage 1	-	-	-	-	-	-	947	842	-	1021	898	-
Stage 2	-	-	-	-	-	-	1010	898	-	930	821	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1634	-	-	1554	-	-	878	813	1050	881	788	1088
Mov Cap-2 Maneuver	-	-	-	-	-	-	878	813	-	881	788	-
Stage 1	-	-	-	-	-	-	935	831	-	1008	898	-
Stage 2	-	-	-	-	-	-	985	898	-	895	810	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0	9.5	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	850	1634	-	-	1554	-	-	993
HCM Lane V/C Ratio	0.061	0.013	-	-	-	-	-	0.026
HCM Control Delay (s)	9.5	7.2	0	-	0	-	-	8.7
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary
1: Willow Avenue & Behymer Avenue

Shepherd

Near Term (2028) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	69	133	238	21	138	58	130	775	19	49	770	75
Future Volume (veh/h)	69	133	238	21	138	58	130	775	19	49	770	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	87	168	301	27	175	73	165	981	24	62	975	95
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	1	1	1
Cap, veh/h	108	402	341	67	224	93	189	2707	840	96	2459	742
Arrive On Green	0.06	0.21	0.21	0.04	0.18	0.18	0.11	0.53	0.53	0.05	0.48	0.48
Sat Flow, veh/h	1781	1870	1585	1767	1243	519	1781	5106	1585	1795	5147	1554
Grp Volume(v), veh/h	87	168	301	27	0	248	165	981	24	62	975	95
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1762	1781	1702	1585	1795	1716	1554
Q Serve(g_s), s	6.5	10.5	24.8	2.0	0.0	18.1	12.3	15.1	1.0	4.6	16.5	4.6
Cycle Q Clear(g_c), s	6.5	10.5	24.8	2.0	0.0	18.1	12.3	15.1	1.0	4.6	16.5	4.6
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	402	341	67	0	317	189	2707	840	96	2459	742
V/C Ratio(X)	0.80	0.42	0.88	0.40	0.00	0.78	0.87	0.36	0.03	0.65	0.40	0.13
Avail Cap(c_a), veh/h	182	603	511	202	0	568	194	2707	840	196	2459	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	45.7	51.4	63.5	0.0	52.8	59.5	18.4	15.1	62.6	22.7	19.6
Incr Delay (d2), s/veh	5.1	0.8	12.7	1.5	0.0	9.1	27.5	0.3	0.1	2.7	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.9	10.9	0.9	0.0	8.7	6.9	5.7	0.4	2.1	6.4	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.7	46.5	64.0	64.9	0.0	61.9	87.0	18.8	15.2	65.3	23.2	20.0
LnGrp LOS	E	D	E	E	A	E	F	B	B	E	C	B
Approach Vol, veh/h		556			275			1170			1132	
Approach Delay, s/veh		59.3			62.2			28.3			25.2	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	70.2	14.4	30.8	12.5	77.3	9.7	35.5
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	14.7	39.3	13.8	43.5	14.7	39.3	15.4	43.5
Max Q Clear Time (g_c+I1), s	14.3	18.5	8.5	20.1	6.6	17.1	4.0	26.8
Green Ext Time (p_c), s	0.0	12.9	0.0	2.6	0.0	13.0	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
2: Willow Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	107	406	150	297	618	244	185	872	213	251	1270	201
Future Volume (veh/h)	107	406	150	297	618	244	185	872	213	251	1270	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	122	461	170	338	702	277	210	991	242	285	1443	228
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	1	1	1
Cap, veh/h	189	662	295	384	888	395	259	2195	681	334	2335	713
Arrive On Green	0.05	0.19	0.19	0.11	0.25	0.25	0.08	0.43	0.43	0.10	0.45	0.45
Sat Flow, veh/h	3456	3554	1585	3428	3526	1571	3428	5066	1571	3483	5147	1572
Grp Volume(v), veh/h	122	461	170	338	702	277	210	991	242	285	1443	228
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1714	1763	1571	1714	1689	1571	1742	1716	1572
Q Serve(g_s), s	5.0	17.6	14.2	14.1	27.0	23.2	8.7	20.0	15.0	11.7	30.9	13.4
Cycle Q Clear(g_c), s	5.0	17.6	14.2	14.1	27.0	23.2	8.7	20.0	15.0	11.7	30.9	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	662	295	384	888	395	259	2195	681	334	2335	713
V/C Ratio(X)	0.64	0.70	0.58	0.88	0.79	0.70	0.81	0.45	0.36	0.85	0.62	0.32
Avail Cap(c_a), veh/h	462	1073	479	430	1065	474	442	2195	681	449	2335	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	67.1	55.2	53.8	63.4	50.7	49.3	66.0	28.9	27.5	64.5	30.1	25.3
Incr Delay (d2), s/veh	1.4	3.1	4.1	1.8	0.4	0.4	2.3	0.7	1.5	8.1	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	8.1	5.9	6.1	11.6	9.1	3.8	8.0	5.8	5.4	12.4	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	58.3	57.9	65.2	51.0	49.7	68.3	29.6	29.0	72.6	31.2	26.4
LnGrp LOS	E	E	E	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		753			1317			1443			1956	
Approach Delay, s/veh		59.8			54.4			35.1			36.6	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	71.5	13.5	42.7	20.2	68.5	23.0	33.2
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	10.7	32.9	7.0	29.0	13.7	22.0	16.1	19.6
Green Ext Time (p_c), s	0.2	5.9	0.1	6.1	0.2	12.3	0.2	7.1

Intersection Summary	
HCM 6th Ctrl Delay	43.7
HCM 6th LOS	D

AGENDA ITEM NO. 6.

Intersection	
Intersection Delay, s/veh	100.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	3	126	46	17	167	306	45	256	11	126	250	3
Future Vol, veh/h	3	126	46	17	167	306	45	256	11	126	250	3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	3	3	3	4	4	4	4	4	4	2	2	2
Mvmt Flow	4	152	55	20	201	369	54	308	13	152	301	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	24.2	169.3	51.5	88.4
HCM LOS	C	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	2%	3%	33%
Vol Thru, %	82%	72%	34%	66%
Vol Right, %	4%	26%	62%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	312	175	490	379
LT Vol	45	3	17	126
Through Vol	256	126	167	250
RT Vol	11	46	306	3
Lane Flow Rate	376	211	590	457
Geometry Grp	1	1	1	1
Degree of Util (X)	0.875	0.532	1.286	1.045
Departure Headway (Hd)	9.454	10.196	8.075	9.087
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	387	356	455	402
Service Time	7.454	8.196	6.075	7.087
HCM Lane V/C Ratio	0.972	0.593	1.297	1.137
HCM Control Delay	51.5	24.2	169.3	88.4
HCM Lane LOS	F	C	F	F
HCM 95th-tile Q	8.6	3	24.7	13.6

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

	↰	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	84	668	241	148	724	133	191	257	89	205	459	117
Future Volume (veh/h)	84	668	241	148	724	133	191	257	89	205	459	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	795	287	176	862	158	227	306	106	244	546	139
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	148	897	394	202	524	444	252	619	518	268	636	539
Arrive On Green	0.08	0.25	0.25	0.11	0.28	0.28	0.14	0.33	0.33	0.15	0.34	0.34
Sat Flow, veh/h	1795	3582	1573	1767	1856	1572	1781	1870	1564	1781	1870	1585
Grp Volume(v), veh/h	100	795	287	176	862	158	227	306	106	244	546	139
Grp Sat Flow(s),veh/h/ln	1795	1791	1573	1767	1856	1572	1781	1870	1564	1781	1870	1585
Q Serve(g_s), s	7.0	27.8	21.7	12.7	36.7	10.4	16.3	17.0	6.3	17.5	35.4	8.2
Cycle Q Clear(g_c), s	7.0	27.8	21.7	12.7	36.7	10.4	16.3	17.0	6.3	17.5	35.4	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	897	394	202	524	444	252	619	518	268	636	539
V/C Ratio(X)	0.68	0.89	0.73	0.87	1.65	0.36	0.90	0.49	0.20	0.91	0.86	0.26
Avail Cap(c_a), veh/h	290	937	411	285	524	444	288	619	518	288	636	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	46.9	44.7	56.7	46.7	37.2	54.9	34.8	31.2	54.3	40.0	31.0
Incr Delay (d2), s/veh	1.5	8.1	5.3	14.5	299.2	0.8	25.4	2.8	0.9	28.5	14.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	12.9	8.8	6.3	59.7	4.0	8.9	8.0	2.4	9.8	18.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.5	55.1	50.0	71.1	345.8	38.0	80.3	37.6	32.1	82.9	54.0	32.2
LnGrp LOS	E	E	D	E	F	D	F	D	C	F	D	C
Approach Vol, veh/h		1182			1196			639			929	
Approach Delay, s/veh		54.2			264.8			51.9			58.3	
Approach LOS		D			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.4	50.2	14.7	42.7	23.6	49.0	18.8	38.6
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	18.3	37.4	9.0	38.7	19.5	19.0	14.7	29.8
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.1	1.8	0.1	2.8

Intersection Summary	
HCM 6th Ctrl Delay	118.6
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	108	684	134	213	649	113	111	193	132	152	380	201
Future Volume (veh/h)	108	684	134	213	649	113	111	193	132	152	380	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	130	824	161	257	782	136	134	233	159	183	458	242
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	2	2	2	7	7	7	5	5	5
Cap, veh/h	243	856	377	311	930	415	157	1124	501	588	1429	637
Arrive On Green	0.07	0.24	0.24	0.09	0.26	0.26	0.09	0.33	0.33	0.17	0.41	0.41
Sat Flow, veh/h	3428	3526	1552	3456	3554	1585	1711	3413	1522	3374	3469	1546
Grp Volume(v), veh/h	130	824	161	257	782	136	134	233	159	183	458	242
Grp Sat Flow(s),veh/h/ln	1714	1763	1552	1728	1777	1585	1711	1706	1522	1687	1735	1546
Q Serve(g_s), s	5.1	32.3	12.3	10.2	29.2	9.7	10.8	6.9	10.9	6.6	12.5	15.3
Cycle Q Clear(g_c), s	5.1	32.3	12.3	10.2	29.2	9.7	10.8	6.9	10.9	6.6	12.5	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	856	377	311	930	415	157	1124	501	588	1429	637
V/C Ratio(X)	0.53	0.96	0.43	0.83	0.84	0.33	0.85	0.21	0.32	0.31	0.32	0.38
Avail Cap(c_a), veh/h	598	856	377	602	930	415	298	1124	501	588	1429	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	52.4	44.8	62.6	48.9	41.7	62.6	33.8	35.1	50.5	27.9	28.7
Incr Delay (d2), s/veh	0.7	22.1	1.1	2.2	7.3	0.7	4.9	0.4	1.6	1.4	0.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	16.4	4.7	4.5	13.4	3.8	4.8	2.9	4.2	2.9	5.2	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.5	74.5	45.9	64.8	56.2	42.4	67.5	34.2	36.8	51.8	28.5	30.4
LnGrp LOS	E	E	D	E	E	D	E	C	D	D	C	C
Approach Vol, veh/h		1115			1175			526			883	
Approach Delay, s/veh		69.1			56.5			43.5			33.9	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	63.4	15.5	42.6	30.0	51.8	18.2	40.0
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	24.4	34.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	12.8	17.3	7.1	31.2	8.6	12.9	12.2	34.3
Green Ext Time (p_c), s	0.1	8.4	0.2	1.7	0.3	3.7	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: Clovis Avenue & Teague Avenue

Shepherd
Near Term (2028) WP - AM Peak Hour

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	81	223	265	391	716	202
Future Volume (veh/h)	81	223	265	391	716	202
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	293	349	514	942	266
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	1	1	2	2	2	2
Cap, veh/h	372	331	377	2392	1472	619
Arrive On Green	0.21	0.21	0.21	0.67	0.41	0.41
Sat Flow, veh/h	1795	1598	1781	3647	3647	1494
Grp Volume(v), veh/h	107	293	349	514	942	266
Grp Sat Flow(s),veh/h/ln	1795	1598	1781	1777	1777	1494
Q Serve(g_s), s	4.3	15.1	16.3	4.7	18.0	10.8
Cycle Q Clear(g_c), s	4.3	15.1	16.3	4.7	18.0	10.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	372	331	377	2392	1472	619
V/C Ratio(X)	0.29	0.89	0.93	0.21	0.64	0.43
Avail Cap(c_a), veh/h	530	472	377	2392	1472	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	28.4	32.7	32.8	5.3	19.8	17.7
Incr Delay (d2), s/veh	0.2	10.6	27.9	0.2	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	6.5	9.5	1.3	7.0	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.6	43.3	60.7	5.5	21.7	19.7
LnGrp LOS	C	D	E	A	C	B
Approach Vol, veh/h	400			863	1208	
Approach Delay, s/veh	39.4			27.8	21.3	
Approach LOS	D			C	C	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.0	40.5				62.5		22.5
Change Period (Y+Rc), s	4.0	5.3				5.3		4.9
Max Green Setting (Gmax), s	18.0	27.7				49.7		25.1
Max Q Clear Time (g_c+I1), s	18.3	20.0				6.7		17.1
Green Ext Time (p_c), s	0.0	4.8				4.4		0.5

Intersection Summary			
HCM 6th Ctrl Delay			26.5
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	41	352	341	67	399	180	153	462	20	70	823	72
Future Volume (veh/h)	41	352	341	67	399	180	153	462	20	70	823	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	47	405	392	77	459	207	176	531	23	80	946	83
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	2	2	2
Cap, veh/h	92	489	413	103	504	421	199	1760	754	103	1580	689
Arrive On Green	0.05	0.26	0.26	0.06	0.27	0.27	0.11	0.50	0.50	0.06	0.44	0.44
Sat Flow, veh/h	1781	1870	1580	1795	1885	1575	1767	3526	1511	1781	3554	1549
Grp Volume(v), veh/h	47	405	392	77	459	207	176	531	23	80	946	83
Grp Sat Flow(s),veh/h/ln	1781	1870	1580	1795	1885	1575	1767	1763	1511	1781	1777	1549
Q Serve(g_s), s	3.9	30.6	36.6	6.3	35.4	16.6	14.7	13.3	1.2	6.6	30.2	4.7
Cycle Q Clear(g_c), s	3.9	30.6	36.6	6.3	35.4	16.6	14.7	13.3	1.2	6.6	30.2	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	489	413	103	504	421	199	1760	754	103	1580	689
V/C Ratio(X)	0.51	0.83	0.95	0.74	0.91	0.49	0.88	0.30	0.03	0.78	0.60	0.12
Avail Cap(c_a), veh/h	368	495	418	311	504	421	365	1760	754	309	1580	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.3	52.2	54.4	69.6	53.2	46.3	65.6	22.1	19.1	69.7	31.5	24.5
Incr Delay (d2), s/veh	1.6	11.7	31.5	3.9	21.0	1.3	4.7	0.4	0.1	4.6	1.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	15.7	17.8	3.0	19.3	6.6	6.8	5.5	0.4	3.1	13.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.9	63.9	86.0	73.5	74.2	47.7	70.3	22.5	19.2	74.3	33.2	24.8
LnGrp LOS	E	E	F	E	E	D	E	C	B	E	C	C
Approach Vol, veh/h		844			743			730			1109	
Approach Delay, s/veh		74.6			66.8			33.9			35.6	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.9	72.0	11.7	45.4	12.7	80.2	12.6	44.5
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	31.0	34.7	31.0	34.7	26.0	39.7	26.0	39.7
Max Q Clear Time (g_c+I1), s	16.7	32.2	5.9	37.4	8.6	15.3	8.3	38.6
Green Ext Time (p_c), s	0.2	1.7	0.0	0.0	0.1	5.1	0.1	0.6

Intersection Summary	
HCM 6th Ctrl Delay	51.6
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	15	285	154	44	418	104	127	501	61	154	1119	40
Future Volume (veh/h)	15	285	154	44	418	104	127	501	61	154	1119	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	17	320	173	49	470	117	143	563	69	173	1257	45
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	1	1	1
Cap, veh/h	62	447	376	117	513	429	169	1335	163	199	1547	55
Arrive On Green	0.04	0.24	0.24	0.07	0.27	0.27	0.10	0.42	0.42	0.11	0.44	0.44
Sat Flow, veh/h	1739	1826	1536	1781	1870	1563	1767	3151	385	1795	3525	126
Grp Volume(v), veh/h	17	320	173	49	470	117	143	314	318	173	638	664
Grp Sat Flow(s),veh/h/ln	1739	1826	1536	1781	1870	1563	1767	1763	1774	1795	1791	1860
Q Serve(g_s), s	1.2	20.1	12.0	3.3	30.4	7.3	10.0	15.6	15.7	11.9	38.8	38.9
Cycle Q Clear(g_c), s	1.2	20.1	12.0	3.3	30.4	7.3	10.0	15.6	15.7	11.9	38.8	38.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		0.07
Lane Grp Cap(c), veh/h	62	447	376	117	513	429	169	747	752	199	786	816
V/C Ratio(X)	0.27	0.72	0.46	0.42	0.92	0.27	0.84	0.42	0.42	0.87	0.81	0.81
Avail Cap(c_a), veh/h	153	574	483	157	588	491	297	747	752	230	786	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69
Uniform Delay (d), s/veh	58.7	43.2	40.2	56.1	43.9	35.6	55.6	25.3	25.3	54.7	30.6	30.6
Incr Delay (d2), s/veh	0.9	2.4	0.6	0.9	17.9	0.4	4.4	1.7	1.7	17.4	6.3	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	9.1	4.5	1.5	16.1	2.8	4.5	6.7	6.7	6.2	17.2	17.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	45.7	40.8	57.0	61.9	35.9	60.0	27.0	27.0	72.1	36.9	36.8
LnGrp LOS	E	D	D	E	E	D	E	C	C	E	D	D
Approach Vol, veh/h		510			636			775			1475	
Approach Delay, s/veh		44.5			56.7			33.1			41.0	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	60.6	8.5	40.0	17.9	58.7	12.2	36.3
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	12.0	34.3	11.0	39.3	16.0	39.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	12.0	40.9	3.2	32.4	13.9	17.7	5.3	22.1
Green Ext Time (p_c), s	0.1	0.0	0.0	1.9	0.0	3.9	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
9: SR-168 WB Ramps & Herndon Avenue

Shepherd I

Near Term (2028) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↱		↑↑↑↱	↱				↰↰		↱↱
Traffic Volume (veh/h)	0	1049	511	0	1536	887	0	0	0	73	0	729
Future Volume (veh/h)	0	1049	511	0	1536	887	0	0	0	73	0	729
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1885	0	1885
Adj Flow Rate, veh/h	0	1116	544	0	1634	0				78	0	776
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	0	2	2				1	0	1
Cap, veh/h	0	3475	856	0	3030					962	0	776
Arrive On Green	0.00	0.54	0.54	0.00	0.54	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	6696	1585	0	5611	3170				3483	0	2812
Grp Volume(v), veh/h	0	1116	544	0	1634	0				78	0	776
Grp Sat Flow(s),veh/h/ln	0	1609	1585	0	1870	1585				1742	0	1406
Q Serve(g_s), s	0.0	12.5	31.2	0.0	24.6	0.0				2.2	0.0	35.9
Cycle Q Clear(g_c), s	0.0	12.5	31.2	0.0	24.6	0.0				2.2	0.0	35.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3475	856	0	3030					962	0	776
V/C Ratio(X)	0.00	0.32	0.64	0.00	0.54					0.08	0.00	1.00
Avail Cap(c_a), veh/h	0	3959	975	0	3453					962	0	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.89	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.6	20.9	0.0	19.4	0.0				34.8	0.0	47.0
Incr Delay (d2), s/veh	0.0	0.2	3.6	0.0	0.6	0.0				0.1	0.0	32.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.5	11.7	0.0	10.2	0.0				0.9	0.0	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.9	24.5	0.0	20.0	0.0				34.9	0.0	79.2
LnGrp LOS	A	B	C	A	C					C	A	E
Approach Vol, veh/h		1660			1634						854	
Approach Delay, s/veh		19.4			20.0						75.1	
Approach LOS		B			C						E	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		77.0		43.2		77.0						
Change Period (Y+Rc), s		6.8		7.3		6.8						
Max Green Setting (Gmax), s		80.0		35.9		80.0						
Max Q Clear Time (g_c+I1), s		33.2		37.9		26.6						
Green Ext Time (p_c), s		37.0		0.0		43.3						

Intersection Summary				
HCM 6th Ctrl Delay			31.1	
HCM 6th LOS			C	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	899	223	0	1955	83	463	0	598	0	0	0
Future Volume (veh/h)	0	899	223	0	1955	83	463	0	598	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1885	1885	1841	0	1841			
Adj Flow Rate, veh/h	0	999	0	0	2172	92	514	0	664			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	0	2	2	0	1	1	4	0	4			
Cap, veh/h	0	2985		0	4464	934	1536	0	853			
Arrive On Green	0.00	0.58	0.00	0.00	0.58	0.58	0.31	0.00	0.31			
Sat Flow, veh/h	0	5274	1585	0	7993	1598	4944	0	2745			
Grp Volume(v), veh/h	0	999	0	0	2172	92	514	0	664			
Grp Sat Flow(s),veh/h/ln	0	1702	1585	0	1527	1598	1648	0	1373			
Q Serve(g_s), s	0.0	13.1	0.0	0.0	21.5	3.3	10.4	0.0	28.6			
Cycle Q Clear(g_c), s	0.0	13.1	0.0	0.0	21.5	3.3	10.4	0.0	28.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2985		0	4464	934	1536	0	853			
V/C Ratio(X)	0.00	0.33		0.00	0.49	0.10	0.33	0.00	0.78			
Avail Cap(c_a), veh/h	0	2985		0	4464	934	1536	0	853			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.97	0.00	0.00	0.63	0.63	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	13.9	0.0	0.0	15.7	11.9	34.5	0.0	40.7			
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.2	0.1	0.6	0.0	6.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.8	0.0	0.0	7.0	1.2	4.2	0.0	10.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.2	0.0	0.0	15.9	12.0	35.0	0.0	47.7			
LnGrp LOS	A	B		A	B	B	D	A	D			
Approach Vol, veh/h		999			2264			1178				
Approach Delay, s/veh		14.2			15.8			42.2				
Approach LOS		B			B			D				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		82.8				82.8		47.2				
Change Period (Y+Rc), s		6.8				6.8		6.8				
Max Green Setting (Gmax), s		76.0				76.0		40.4				
Max Q Clear Time (g_c+I1), s		15.1				23.5		30.6				
Green Ext Time (p_c), s		27.2				50.1		6.4				

Intersection Summary			
HCM 6th Ctrl Delay			22.4
HCM 6th LOS			C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
11: Clovis Avenue & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	356	887	249	152	1063	177	250	307	122	197	410	724
Future Volume (veh/h)	356	887	249	152	1063	177	250	307	122	197	410	724
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	383	954	268	163	1143	190	269	330	131	212	441	778
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	1	1	1
Cap, veh/h	430	2181	677	290	1985	616	319	932	347	315	1305	713
Arrive On Green	0.13	0.43	0.43	0.08	0.39	0.39	0.09	0.26	0.26	0.09	0.25	0.25
Sat Flow, veh/h	3428	5066	1572	3456	5106	1585	3456	3649	1358	3483	5147	2812
Grp Volume(v), veh/h	383	954	268	163	1143	190	269	306	155	212	441	778
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1728	1702	1585	1728	1702	1603	1742	1716	1406
Q Serve(g_s), s	17.0	20.5	18.1	7.0	27.3	12.9	11.9	11.4	12.3	9.1	10.8	39.3
Cycle Q Clear(g_c), s	17.0	20.5	18.1	7.0	27.3	12.9	11.9	11.4	12.3	9.1	10.8	39.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	430	2181	677	290	1985	616	319	869	409	315	1305	713
V/C Ratio(X)	0.89	0.44	0.40	0.56	0.58	0.31	0.84	0.35	0.38	0.67	0.34	1.09
Avail Cap(c_a), veh/h	553	2181	677	557	1985	616	669	869	409	674	1305	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.7	31.0	30.3	68.3	37.3	32.9	69.3	47.2	47.6	68.3	47.2	57.8
Incr Delay (d2), s/veh	10.7	0.6	1.5	0.6	1.2	1.3	2.4	1.1	2.6	0.9	0.7	61.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	8.3	7.1	3.1	11.4	5.1	5.3	4.9	5.2	4.1	4.7	19.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.4	31.5	31.8	68.9	38.5	34.2	71.6	48.3	50.2	69.2	47.9	119.2
LnGrp LOS	E	C	C	E	D	C	E	D	D	E	D	F
Approach Vol, veh/h		1605			1496			730			1431	
Approach Delay, s/veh		42.5			41.3			57.3			89.8	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.5	66.3	19.0	45.3	18.0	72.7	19.3	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	19.0	29.3	11.1	14.3	9.0	22.5	13.9	41.3
Green Ext Time (p_c), s	0.4	4.8	0.3	1.6	0.2	6.5	0.4	0.0

Intersection Summary			
HCM 6th Ctrl Delay			57.1
HCM 6th LOS			E

HCM 6th TWSC
12: Behymer Avenue & Sunnyside Avenue

Shepherd

Near Term (2028) WP - AM Peak Hour

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	0	259	444	0	2	0
Future Vol, veh/h	0	259	444	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	0	0
Mvmt Flow	0	298	510	0	2	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	510	0	-	0	808	510
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	298	-
Critical Hdwy	4.14	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1045	-	-	-	353	567
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	758	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1045	-	-	-	353	567
Mov Cap-2 Maneuver	-	-	-	-	353	-
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	758	-

Approach	EB		WB		SB
HCM Control Delay, s	0		0		15.3
HCM LOS					C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1045	-	-	-	353
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	15.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	279.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣		↰	↱			✣			✣	
Traffic Vol, veh/h	63	741	195	67	721	11	110	15	49	24	58	99
Future Vol, veh/h	63	741	195	67	721	11	110	15	49	24	58	99
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	1	1	1	10	10	10	12	12	12
Mvmt Flow	64	756	199	68	736	11	112	15	50	24	59	101
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	420.4	219.3	20.6	20.3
HCM LOS	F	F	C	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	63%	6%	100%	0%	13%
Vol Thru, %	9%	74%	0%	98%	32%
Vol Right, %	28%	20%	0%	2%	55%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	999	67	732	181
LT Vol	110	63	67	0	24
Through Vol	15	741	0	721	58
RT Vol	49	195	0	11	99
Lane Flow Rate	178	1019	68	747	185
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.403	1.878	0.143	1.453	0.407
Departure Headway (Hd)	10.611	7.296	8.703	8.173	10.353
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	343	510	415	448	351
Service Time	8.611	5.296	6.403	5.873	8.353
HCM Lane V/C Ratio	0.519	1.998	0.164	1.667	0.527
HCM Control Delay	20.6	420.4	12.8	238.2	20.3
HCM Lane LOS	C	F	B	F	C
HCM 95th-tile Q	1.9	59.9	0.5	32.4	1.9

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	5	4	1	46	6	40	2	107	14	15	266	0
Future Vol, veh/h	5	4	1	46	6	40	2	107	14	15	266	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	10	10	10	7	7	7
Mvmt Flow	6	5	1	56	7	49	2	130	17	18	324	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	531	511	324	506	503	139	324	0	0	147	0	0
Stage 1	360	360	-	143	143	-	-	-	-	-	-	-
Stage 2	171	151	-	363	360	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.2	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.29	-	-	2.263	-	-
Pot Cap-1 Maneuver	462	469	722	480	474	915	1192	-	-	1405	-	-
Stage 1	662	630	-	865	782	-	-	-	-	-	-	-
Stage 2	836	776	-	660	630	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	426	461	722	469	465	915	1192	-	-	1405	-	-
Mov Cap-2 Maneuver	426	461	-	469	465	-	-	-	-	-	-	-
Stage 1	661	620	-	863	780	-	-	-	-	-	-	-
Stage 2	782	774	-	643	620	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	12.5	0.1	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1192	-	-	459	595	1405	-	-
HCM Lane V/C Ratio	0.002	-	-	0.027	0.189	0.013	-	-
HCM Control Delay (s)	8	0	-	13.1	12.5	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0	-	-

Intersection	
Intersection Delay, s/veh	45.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✥	
Traffic Vol, veh/h	17	281	85	25	373	14	137	88	17	22	211	80
Future Vol, veh/h	17	281	85	25	373	14	137	88	17	22	211	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	1	1	1	10	10	10	7	7	7
Mvmt Flow	18	296	89	26	393	15	144	93	18	23	222	84
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	3
HCM Control Delay	20	79.2	29.3	44.9
HCM LOS	C	F	D	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	61%	0%	100%	0%	0%	100%	0%	7%
Vol Thru, %	39%	0%	0%	100%	52%	0%	96%	67%
Vol Right, %	0%	100%	0%	0%	48%	0%	4%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	225	17	17	187	179	25	387	313
LT Vol	137	0	17	0	0	25	0	22
Through Vol	88	0	0	187	94	0	373	211
RT Vol	0	17	0	0	85	0	14	80
Lane Flow Rate	237	18	18	197	188	26	407	329
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.656	0.044	0.048	0.502	0.46	0.07	1.029	0.834
Departure Headway (Hd)	10.275	9.227	9.968	9.444	9.096	9.642	9.091	9.385
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	353	390	361	385	399	374	403	389
Service Time	7.975	6.927	7.668	7.144	6.796	7.342	6.791	7.085
HCM Lane V/C Ratio	0.671	0.046	0.05	0.512	0.471	0.07	1.01	0.846
HCM Control Delay	30.6	12.4	13.2	21.3	19.3	13.1	83.5	44.9
HCM Lane LOS	D	B	B	C	C	B	F	E
HCM 95th-tile Q	4.4	0.1	0.2	2.7	2.3	0.2	13.1	7.7

Intersection	
Intersection Delay, s/veh	24.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	10	1	235	4	9	0	428	82	1	0	82	16
Future Vol, veh/h	10	1	235	4	9	0	428	82	1	0	82	16
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	3	3	3
Mvmt Flow	12	1	280	5	11	0	510	98	1	0	98	19
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.5	9.8	32.9	9.9
HCM LOS	B	A	D	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	84%	4%	31%	0%
Vol Thru, %	16%	0%	69%	84%
Vol Right, %	0%	96%	0%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	511	246	13	98
LT Vol	428	10	4	0
Through Vol	82	1	9	82
RT Vol	1	235	0	16
Lane Flow Rate	608	293	15	117
Geometry Grp	1	1	1	1
Degree of Util (X)	0.872	0.435	0.028	0.182
Departure Headway (Hd)	5.163	5.344	6.55	5.617
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	700	674	544	637
Service Time	3.192	3.391	4.618	3.664
HCM Lane V/C Ratio	0.869	0.435	0.028	0.184
HCM Control Delay	32.9	12.5	9.8	9.9
HCM Lane LOS	D	B	A	A
HCM 95th-tile Q	10.5	2.2	0.1	0.7

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Traffic Vol, veh/h	10	24	9	496	313	8
Future Vol, veh/h	10	24	9	496	313	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	7	7	2	2	3	3
Mvmt Flow	12	28	10	577	364	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	966	369	373	0	-	0
Stage 1	369	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Critical Hdwy	6.47	6.27	4.12	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.363	2.218	-	-	-
Pot Cap-1 Maneuver	276	666	1185	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	273	666	1185	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1185	-	468	-	-
HCM Lane V/C Ratio	0.009	-	0.084	-	-
HCM Control Delay (s)	8.1	0	13.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	32	574	140	37	447	370	208	97	38	185	142	27
Future Volume (veh/h)	32	574	140	37	447	370	208	97	38	185	142	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	33	598	146	39	466	385	217	101	40	193	148	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	4	4
Cap, veh/h	71	795	347	76	424	359	240	896	759	216	703	133
Arrive On Green	0.04	0.22	0.22	0.04	0.23	0.23	0.13	0.48	0.48	0.12	0.47	0.47
Sat Flow, veh/h	1781	3554	1551	1781	1870	1585	1781	1870	1585	1753	1505	285
Grp Volume(v), veh/h	33	598	146	39	466	385	217	101	40	193	0	176
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1781	1870	1585	1781	1870	1585	1753	0	1789
Q Serve(g_s), s	2.7	23.6	12.1	3.2	34.0	34.0	18.0	4.5	2.0	16.3	0.0	8.7
Cycle Q Clear(g_c), s	2.7	23.6	12.1	3.2	34.0	34.0	18.0	4.5	2.0	16.3	0.0	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	71	795	347	76	424	359	240	896	759	216	0	836
V/C Ratio(X)	0.46	0.75	0.42	0.51	1.10	1.07	0.90	0.11	0.05	0.89	0.00	0.21
Avail Cap(c_a), veh/h	368	806	351	368	424	359	368	896	759	362	0	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.4	54.3	49.9	70.3	58.0	58.0	63.9	21.5	20.9	64.8	0.0	23.6
Incr Delay (d2), s/veh	1.8	4.6	1.5	2.0	73.3	67.8	13.2	0.3	0.1	8.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.9	4.8	1.5	24.2	20.2	8.9	2.0	0.8	7.7	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.2	58.9	51.4	72.2	131.3	125.8	77.2	21.8	21.0	73.2	0.0	24.2
LnGrp LOS	E	E	D	E	F	F	E	C	C	E	A	C
Approach Vol, veh/h		777			890			358			369	
Approach Delay, s/veh		58.1			126.3			55.3			49.8	
Approach LOS		E			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	75.8	10.0	40.0	22.5	77.6	10.4	39.6
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	31.0	34.3	31.0	34.0
Max Q Clear Time (g_c+I1), s	20.0	10.7	4.7	36.0	18.3	6.5	5.2	25.6
Green Ext Time (p_c), s	0.2	0.8	0.0	0.0	0.2	0.6	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	81.8
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↱		↰	↑	↱
Traffic Vol, veh/h	25	6	19	17	8	30	7	202	7	19	317	51
Future Vol, veh/h	25	6	19	17	8	30	7	202	7	19	317	51
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	3	3	3	1	1	1
Mvmt Flow	27	7	21	19	9	33	8	222	8	21	348	56

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	655	636	348	674	688	228	404	0	0	230	0	0
Stage 1	390	390	-	242	242	-	-	-	-	-	-	-
Stage 2	265	246	-	432	446	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.13	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.227	-	-	2.209	-	-
Pot Cap-1 Maneuver	382	398	700	371	372	816	1149	-	-	1344	-	-
Stage 1	638	611	-	766	709	-	-	-	-	-	-	-
Stage 2	745	706	-	606	577	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	353	389	700	349	363	814	1149	-	-	1344	-	-
Mov Cap-2 Maneuver	353	389	-	349	363	-	-	-	-	-	-	-
Stage 1	634	601	-	761	704	-	-	-	-	-	-	-
Stage 2	700	701	-	572	568	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	13	0.3	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1149	-	-	441	511	1344	-	-
HCM Lane V/C Ratio	0.007	-	-	0.125	0.118	0.016	-	-
HCM Control Delay (s)	8.2	-	-	14.3	13	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.4	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	20	214	87	73	278	37	111	158	37	39	282	32
Future Volume (veh/h)	20	214	87	73	278	37	111	158	37	39	282	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	22	233	95	79	302	40	121	172	40	42	307	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	27	366	144	101	355	299	147	1152	977	54	1055	894
Arrive On Green	0.02	0.15	0.15	0.06	0.19	0.19	0.08	0.61	0.61	0.03	0.56	0.56
Sat Flow, veh/h	1795	2485	977	1795	1885	1585	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	22	165	163	79	302	40	121	172	40	42	307	35
Grp Sat Flow(s),veh/h/ln	1795	1791	1671	1795	1885	1585	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	1.5	10.4	11.0	5.2	18.6	2.5	8.0	4.7	1.2	2.8	10.3	1.2
Cycle Q Clear(g_c), s	1.5	10.4	11.0	5.2	18.6	2.5	8.0	4.7	1.2	2.8	10.3	1.2
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	27	264	246	101	355	299	147	1152	977	54	1055	894
V/C Ratio(X)	0.81	0.63	0.66	0.78	0.85	0.13	0.82	0.15	0.04	0.78	0.29	0.04
Avail Cap(c_a), veh/h	239	518	483	239	545	458	239	1152	977	239	1055	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	48.1	48.3	55.9	47.1	40.5	54.2	10.0	9.3	57.8	13.9	11.9
Incr Delay (d2), s/veh	19.1	3.8	4.7	4.9	7.1	0.2	4.8	0.3	0.1	8.5	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.8	4.8	2.4	9.1	1.0	3.7	1.9	0.4	1.4	4.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.0	51.9	53.0	60.9	54.2	40.7	59.0	10.2	9.4	66.3	14.6	12.0
LnGrp LOS	E	D	D	E	D	D	E	B	A	E	B	B
Approach Vol, veh/h		350			421			333			384	
Approach Delay, s/veh		54.1			54.1			27.9			20.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	72.4	5.8	27.9	7.6	78.7	10.7	23.0
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	16.0	34.7	16.0	34.7	16.0	34.7	16.0	34.7
Max Q Clear Time (g_c+I1), s	10.0	12.3	3.5	20.6	4.8	6.7	7.2	13.0
Green Ext Time (p_c), s	0.1	1.9	0.0	1.2	0.0	1.1	0.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	39.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	135	0	31	516	450	0	0	357	408
Future Volume (veh/h)	0	0	0	135	0	31	516	450	0	0	357	408
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1885	0	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				138	0	32	527	459	0	0	364	416
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				1	0	1	1	1	0	0	1	1
Cap, veh/h				184	0	164	596	2746	0	0	965	860
Arrive On Green				0.10	0.00	0.10	0.29	1.00	0.00	0.00	0.54	0.54
Sat Flow, veh/h				1795	0	1598	3483	3676	0	0	1885	1598
Grp Volume(v), veh/h				138	0	32	527	459	0	0	364	416
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1742	1791	0	0	1791	1598
Q Serve(g_s), s				7.5	0.0	1.8	14.5	0.0	0.0	0.0	11.8	16.2
Cycle Q Clear(g_c), s				7.5	0.0	1.8	14.5	0.0	0.0	0.0	11.8	16.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				184	0	164	596	2746	0	0	965	860
V/C Ratio(X)				0.75	0.00	0.20	0.88	0.17	0.00	0.00	0.38	0.48
Avail Cap(c_a), veh/h				429	0	382	801	2746	0	0	965	860
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.93	0.93	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.6	0.0	41.1	34.8	0.0	0.0	0.0	13.4	14.4
Incr Delay (d2), s/veh				12.3	0.0	1.2	7.0	0.1	0.0	0.0	1.1	1.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	0.0	0.8	5.7	0.0	0.0	0.0	4.5	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				55.9	0.0	42.3	41.8	0.1	0.0	0.0	14.5	16.3
LnGrp LOS				E	A	D	D	A	A	A	B	B
Approach Vol, veh/h					170			986			780	
Approach Delay, s/veh					53.4			22.4			15.5	
Approach LOS					D			C			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		83.5			22.8	60.7		16.5				
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3				
Max Green Setting (Gmax), s		63.0			* 23	34.3		23.9				
Max Q Clear Time (g_c+I1), s		2.0			16.5	18.2		9.5				
Green Ext Time (p_c), s		5.6			0.6	7.6		0.9				

Intersection Summary			
HCM 6th Ctrl Delay			22.3
HCM 6th LOS			C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
22: Fowler Avenue & SR-168 EB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	159	0	338	0	0	0	0	807	96	14	479	0
Future Volume (veh/h)	159	0	338	0	0	0	0	807	96	14	479	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1856				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	167	0	356				0	849	101	15	504	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	3				0	1	1	2	2	0
Cap, veh/h	877	0	402				0	1729	206	36	2187	0
Arrive On Green	0.26	0.00	0.26				0.00	0.54	0.54	0.02	0.62	0.00
Sat Flow, veh/h	3428	0	1572				0	3309	382	1781	3647	0
Grp Volume(v), veh/h	167	0	356				0	473	477	15	504	0
Grp Sat Flow(s),veh/h/ln	1714	0	1572				0	1791	1807	1781	1777	0
Q Serve(g_s), s	3.8	0.0	21.8				0.0	16.6	16.6	0.8	6.4	0.0
Cycle Q Clear(g_c), s	3.8	0.0	21.8				0.0	16.6	16.6	0.8	6.4	0.0
Prop In Lane	1.00		1.00				0.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	877	0	402				0	963	972	36	2187	0
V/C Ratio(X)	0.19	0.00	0.89				0.00	0.49	0.49	0.41	0.23	0.00
Avail Cap(c_a), veh/h	998	0	458				0	963	972	285	2187	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.88	0.88	0.00
Uniform Delay (d), s/veh	29.1	0.0	35.8				0.0	14.5	14.5	48.4	8.6	0.0
Incr Delay (d2), s/veh	0.2	0.0	19.2				0.0	1.8	1.8	2.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	10.2				0.0	6.4	6.5	0.4	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	0.0	55.0				0.0	16.3	16.3	50.8	8.8	0.0
LnGrp LOS	C	A	D				A	B	B	D	A	A
Approach Vol, veh/h		523						950			519	
Approach Delay, s/veh		46.8						16.3			10.1	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.7	60.6		31.7		68.3
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 16	36.3		29.1		58.0
Max Q Clear Time (g_c+I1), s	2.8	18.6		23.8		8.4
Green Ext Time (p_c), s	0.0	10.3		1.8		6.1

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	19	0	64	7	0	77
Future Vol, veh/h	19	0	64	7	0	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	9	12	12
Mvmt Flow	21	0	70	8	0	84

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	158	74	0	0	78	0
Stage 1	74	-	-	-	-	-
Stage 2	84	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.22	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.308	-
Pot Cap-1 Maneuver	838	993	-	-	1459	-
Stage 1	954	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	838	993	-	-	1459	-
Mov Cap-2 Maneuver	838	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	944	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	838	1459	-
HCM Lane V/C Ratio	-	-	0.025	-	-
HCM Control Delay (s)	-	-	9.4	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱		↑↱			↰↑
Traffic Vol, veh/h	85	0	70	19	0	96
Future Vol, veh/h	85	0	70	19	0	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	9	12	12
Mvmt Flow	92	0	76	21	0	104

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	191	87	0	0	97	0
Stage 1	87	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.22	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.308	-
Pot Cap-1 Maneuver	803	977	-	-	1436	-
Stage 1	941	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	803	977	-	-	1436	-
Mov Cap-2 Maneuver	803	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	925	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	803	1436	-
HCM Lane V/C Ratio	-	-	0.115	-	-
HCM Control Delay (s)	-	-	10.1	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑	↑↑↱			↱
Traffic Vol, veh/h	57	757	635	16	0	164
Future Vol, veh/h	57	757	635	16	0	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	62	823	690	17	0	178

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	707	0	-	0	-	354
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.219	-	-	-	-	3.3
Pot Cap-1 Maneuver	889	-	-	-	0	648
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	889	-	-	-	-	648
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	889	-	-	-	648
HCM Lane V/C Ratio	0.07	-	-	-	0.275
HCM Control Delay (s)	9.4	-	-	-	12.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.1

26: Project Driveway 4/Stanford Avenue & Perrin Road

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	15	0	10	0	0	0	28	19	0	0	1	15
Future Vol, veh/h	15	0	10	0	0	0	28	19	0	0	1	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	7	2	7	2	2	2	0	0	2	2	7	7
Mvmt Flow	18	0	12	0	0	0	34	23	0	0	1	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	12	0	0	53	43	6	55	49	1
Stage 1	-	-	-	-	-	-	42	42	-	1	1	-
Stage 2	-	-	-	-	-	-	11	1	-	54	48	-
Critical Hdwy	4.17	-	-	4.12	-	-	7.1	6.5	6.22	7.12	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.57	-
Follow-up Hdwy	2.263	-	-	2.218	-	-	3.5	4	3.318	3.518	4.063	3.363
Pot Cap-1 Maneuver	1589	-	-	1607	-	-	951	853	1077	943	833	1069
Stage 1	-	-	-	-	-	-	978	864	-	1022	885	-
Stage 2	-	-	-	-	-	-	1015	899	-	958	845	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1589	-	-	1607	-	-	926	844	1077	916	824	1069
Mov Cap-2 Maneuver	-	-	-	-	-	-	926	844	-	916	824	-
Stage 1	-	-	-	-	-	-	967	854	-	1011	885	-
Stage 2	-	-	-	-	-	-	996	899	-	922	836	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.4	0	9.3	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	891	1589	-	-	1607	-	-	1049
HCM Lane V/C Ratio	0.064	0.011	-	-	-	-	-	0.018
HCM Control Delay (s)	9.3	7.3	0	-	0	-	-	8.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

AGENDA ITEM NO. 6.

HCM 6th Signalized Intersection Summary
1: Willow Avenue & Behymer Avenue

Shepherd
Near Term (2028) WP - PM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	12	57	128	42	100	28	170	749	36	55	670	12
Future Volume (veh/h)	12	57	128	42	100	28	170	749	36	55	670	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	14	65	145	48	114	32	193	851	41	62	761	14
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	1	1	1	0	0	0	1	1	1
Cap, veh/h	44	209	177	89	175	49	197	3233	1003	96	2922	886
Arrive On Green	0.02	0.11	0.11	0.05	0.12	0.12	0.11	0.62	0.62	0.05	0.57	0.57
Sat Flow, veh/h	1810	1900	1610	1795	1416	398	1810	5187	1610	1795	5147	1560
Grp Volume(v), veh/h	14	65	145	48	0	146	193	851	41	62	761	14
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	0	1814	1810	1729	1610	1795	1716	1560
Q Serve(g_s), s	1.0	4.3	11.9	3.5	0.0	10.4	14.4	10.0	1.3	4.6	10.1	0.5
Cycle Q Clear(g_c), s	1.0	4.3	11.9	3.5	0.0	10.4	14.4	10.0	1.3	4.6	10.1	0.5
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	209	177	89	0	224	197	3233	1003	96	2922	886
V/C Ratio(X)	0.32	0.31	0.82	0.54	0.00	0.65	0.98	0.26	0.04	0.65	0.26	0.02
Avail Cap(c_a), veh/h	185	612	519	205	0	584	197	3233	1003	196	2922	886
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.49	0.49	0.49	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	55.3	58.7	62.7	0.0	56.4	60.0	11.5	9.8	62.6	14.8	12.7
Incr Delay (d2), s/veh	1.5	1.0	10.5	1.9	0.0	7.0	39.2	0.1	0.0	2.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.1	5.3	1.6	0.0	5.1	8.5	3.5	0.5	2.1	3.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.3	56.3	69.2	64.6	0.0	63.4	99.2	11.6	9.9	65.3	15.0	12.8
LnGrp LOS	E	E	E	E	A	E	F	B	A	E	B	B
Approach Vol, veh/h		224			194			1085			837	
Approach Delay, s/veh		65.3			63.7			27.1			18.7	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	82.3	9.5	23.2	12.5	89.8	11.3	21.4
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	14.7	39.3	13.8	43.5	14.7	39.3	15.4	43.5
Max Q Clear Time (g_c+I1), s	16.4	12.1	3.0	12.4	6.6	12.0	5.5	13.9
Green Ext Time (p_c), s	0.0	11.3	0.0	1.5	0.0	13.0	0.0	1.0

Intersection Summary			
HCM 6th Ctrl Delay			30.8
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
2: Willow Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	252	689	123	340	594	304	279	1382	472	330	1001	197
Future Volume (veh/h)	252	689	123	340	594	304	279	1382	472	330	1001	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	268	733	131	362	632	323	297	1470	502	351	1065	210
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	319	926	413	408	1047	467	347	1767	548	398	1833	561
Arrive On Green	0.09	0.26	0.26	0.12	0.29	0.29	0.10	0.34	0.34	0.11	0.36	0.36
Sat Flow, veh/h	3510	3610	1610	3510	3610	1609	3510	5187	1609	3483	5147	1575
Grp Volume(v), veh/h	268	733	131	362	632	323	297	1470	502	351	1065	210
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1609	1755	1729	1609	1742	1716	1575
Q Serve(g_s), s	10.9	27.5	9.5	14.7	21.8	25.9	12.1	37.8	43.4	14.4	24.4	14.4
Cycle Q Clear(g_c), s	10.9	27.5	9.5	14.7	21.8	25.9	12.1	37.8	43.4	14.4	24.4	14.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	926	413	408	1047	467	347	1767	548	398	1833	561
V/C Ratio(X)	0.84	0.79	0.32	0.89	0.60	0.69	0.86	0.83	0.92	0.88	0.58	0.37
Avail Cap(c_a), veh/h	470	1090	486	441	1090	486	453	1767	548	449	1833	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	64.9	50.3	43.6	63.1	44.3	45.7	64.3	44.0	45.8	63.3	37.9	34.7
Incr Delay (d2), s/veh	5.8	4.8	1.0	2.0	0.1	0.4	9.9	4.7	22.5	15.1	1.3	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	12.9	3.9	6.5	9.5	10.3	5.8	16.3	20.4	7.1	10.1	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.7	55.1	44.7	65.1	44.4	46.1	74.2	48.7	68.3	78.3	39.2	36.5
LnGrp LOS	E	E	D	E	D	D	E	D	E	E	D	D
Approach Vol, veh/h		1132			1317			2269			1626	
Approach Delay, s/veh		57.6			50.5			56.4			47.3	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.6	57.4	18.8	48.3	22.9	55.1	23.7	43.4
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	14.1	26.4	12.9	27.9	16.4	45.4	16.7	29.5
Green Ext Time (p_c), s	0.2	9.9	0.3	6.1	0.2	0.0	0.1	7.6

Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	16.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	3	96	34	17	105	105	49	243	18	105	239	2
Future Vol, veh/h	3	96	34	17	105	105	49	243	18	105	239	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	1	1	1
Mvmt Flow	3	109	39	19	119	119	56	276	20	119	272	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.3	14.3	17.5	19.9
HCM LOS	B	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	2%	7%	30%
Vol Thru, %	78%	72%	46%	69%
Vol Right, %	6%	26%	46%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	310	133	227	346
LT Vol	49	3	17	105
Through Vol	243	96	105	239
RT Vol	18	34	105	2
Lane Flow Rate	352	151	258	393
Geometry Grp	1	1	1	1
Degree of Util (X)	0.591	0.28	0.447	0.657
Departure Headway (Hd)	6.035	6.659	6.241	6.015
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	595	538	575	598
Service Time	4.087	4.724	4.299	4.065
HCM Lane V/C Ratio	0.592	0.281	0.449	0.657
HCM Control Delay	17.5	12.3	14.3	19.9
HCM Lane LOS	C	B	B	C
HCM 95th-tile Q	3.8	1.1	2.3	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	137	981	153	105	868	201	195	489	150	151	346	103
Future Volume (veh/h)	137	981	153	105	868	201	195	489	150	151	346	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	147	1055	165	113	933	216	210	526	161	162	372	111
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	173	984	439	151	497	421	236	723	613	188	673	571
Arrive On Green	0.10	0.27	0.27	0.08	0.26	0.26	0.13	0.38	0.38	0.10	0.36	0.36
Sat Flow, veh/h	1795	3582	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	147	1055	165	113	933	216	210	526	161	162	372	111
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	10.5	35.7	10.9	7.9	34.0	14.9	15.0	31.0	9.0	11.5	20.5	6.2
Cycle Q Clear(g_c), s	10.5	35.7	10.9	7.9	34.0	14.9	15.0	31.0	9.0	11.5	20.5	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	984	439	151	497	421	236	723	613	188	673	571
V/C Ratio(X)	0.85	1.07	0.38	0.75	1.88	0.51	0.89	0.73	0.26	0.86	0.55	0.19
Avail Cap(c_a), veh/h	290	984	439	292	497	421	290	723	613	290	673	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	47.1	38.1	58.3	48.0	40.9	55.6	34.3	27.5	57.3	33.5	28.9
Incr Delay (d2), s/veh	2.8	43.4	0.4	2.8	402.5	1.7	21.5	6.3	1.0	9.7	3.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	21.1	4.2	3.6	70.9	5.9	8.0	14.9	3.5	5.6	9.7	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	90.5	38.6	61.1	450.5	42.6	77.0	40.6	28.5	66.9	36.7	29.6
LnGrp LOS	E	F	D	E	F	D	E	D	C	E	D	C
Approach Vol, veh/h		1367			1262			897			645	
Approach Delay, s/veh		81.0			345.8			46.9			43.1	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.1	52.4	16.5	40.0	17.6	55.9	14.8	41.7
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	17.0	22.5	12.5	36.0	13.5	33.0	9.9	37.7
Green Ext Time (p_c), s	0.1	2.6	0.1	0.0	0.1	0.4	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	148.0
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
5: Clovis Avenue & Shepherd Avenue

Shepherd I

Near Term (2028) WP - PM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	186	863	155	164	874	142	203	392	175	131	265	156
Future Volume (veh/h)	186	863	155	164	874	142	203	392	175	131	265	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	196	908	163	173	920	149	214	413	184	138	279	164
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	249	870	387	250	877	391	238	1255	560	612	1409	628
Arrive On Green	0.07	0.24	0.24	0.07	0.24	0.24	0.13	0.35	0.35	0.17	0.39	0.39
Sat Flow, veh/h	3483	3582	1594	3510	3610	1610	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	196	908	163	173	920	149	214	413	184	138	279	164
Grp Sat Flow(s),veh/h/ln	1742	1791	1594	1755	1805	1610	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	7.8	34.0	12.1	6.7	34.0	10.8	16.3	11.8	11.8	4.7	7.1	9.7
Cycle Q Clear(g_c), s	7.8	34.0	12.1	6.7	34.0	10.8	16.3	11.8	11.8	4.7	7.1	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	870	387	250	877	391	238	1255	560	612	1409	628
V/C Ratio(X)	0.79	1.04	0.42	0.69	1.05	0.38	0.90	0.33	0.33	0.23	0.20	0.26
Avail Cap(c_a), veh/h	607	870	387	612	877	391	315	1255	560	612	1409	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.9	53.0	44.7	63.5	53.0	44.2	59.8	33.6	33.6	49.7	28.2	29.0
Incr Delay (d2), s/veh	2.1	42.3	1.1	1.3	44.2	0.9	18.1	0.7	1.5	0.9	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	19.9	4.8	3.0	20.2	4.3	8.5	5.2	4.7	2.1	3.1	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	95.3	45.8	64.8	97.2	45.1	77.9	34.3	35.1	50.5	28.5	30.0
LnGrp LOS	E	F	D	E	F	D	E	C	D	D	C	C
Approach Vol, veh/h		1267			1242			811			581	
Approach Delay, s/veh		84.4			86.4			46.0			34.2	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	60.3	15.6	40.0	30.0	54.4	15.6	40.0
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	24.4	34.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	18.3	11.7	9.8	36.0	6.7	13.8	8.7	36.0
Green Ext Time (p_c), s	0.1	6.1	0.3	0.0	0.2	5.9	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	69.6
HCM 6th LOS	E

6: Clovis Avenue & Teague Avenue

Near Term (2028) WP - PM Peak Hour

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	90	89	157	810	545	74
Future Volume (veh/h)	90	89	157	810	545	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1900	1900
Adj Flow Rate, veh/h	111	110	194	1000	673	91
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	1	1	1	1	0	0
Cap, veh/h	168	150	232	2817	2202	982
Arrive On Green	0.09	0.09	0.13	0.79	0.61	0.61
Sat Flow, veh/h	1795	1598	1795	3676	3705	1610
Grp Volume(v), veh/h	111	110	194	1000	673	91
Grp Sat Flow(s),veh/h/ln	1795	1598	1795	1791	1805	1610
Q Serve(g_s), s	5.1	5.7	9.0	7.0	7.6	2.0
Cycle Q Clear(g_c), s	5.1	5.7	9.0	7.0	7.6	2.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	168	150	232	2817	2202	982
V/C Ratio(X)	0.66	0.74	0.84	0.36	0.31	0.09
Avail Cap(c_a), veh/h	530	472	380	2817	2202	982
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.94
Uniform Delay (d), s/veh	37.2	37.5	36.1	2.7	7.9	6.9
Incr Delay (d2), s/veh	1.7	2.6	3.7	0.4	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.2	3.9	1.2	2.4	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.9	40.1	39.8	3.0	8.3	7.0
LnGrp LOS	D	D	D	A	A	A
Approach Vol, veh/h	221			1194	764	
Approach Delay, s/veh	39.5			9.0	8.1	
Approach LOS	D			A	A	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	15.0	57.2				72.1		12.9
Change Period (Y+Rc), s	4.0	5.3				5.3		4.9
Max Green Setting (Gmax), s	18.0	27.7				49.7		25.1
Max Q Clear Time (g_c+I1), s	11.0	9.6				9.0		7.7
Green Ext Time (p_c), s	0.1	5.4				10.1		0.3

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

AGENDA ITEM NO. 6.

7: Clovis Avenue & Nees Avenue

Near Term (2028) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	55	472	393	43	449	74	312	882	46	43	553	48
Future Volume (veh/h)	55	472	393	43	449	74	312	882	46	43	553	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	59	502	418	46	478	79	332	938	49	46	588	51
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	0	0	0
Cap, veh/h	99	503	426	92	492	416	352	1823	795	93	1313	571
Arrive On Green	0.05	0.26	0.26	0.05	0.26	0.26	0.20	0.51	0.51	0.05	0.36	0.36
Sat Flow, veh/h	1810	1900	1610	1795	1885	1596	1795	3582	1561	1810	3610	1570
Grp Volume(v), veh/h	59	502	418	46	478	79	332	938	49	46	588	51
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	1885	1596	1795	1791	1561	1810	1805	1570
Q Serve(g_s), s	4.8	39.6	38.7	3.7	37.7	5.8	27.3	26.1	2.4	3.7	18.6	3.2
Cycle Q Clear(g_c), s	4.8	39.6	38.7	3.7	37.7	5.8	27.3	26.1	2.4	3.7	18.6	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	503	426	92	492	416	352	1823	795	93	1313	571
V/C Ratio(X)	0.59	1.00	0.98	0.50	0.97	0.19	0.94	0.51	0.06	0.50	0.45	0.09
Avail Cap(c_a), veh/h	374	503	426	311	492	416	371	1823	795	314	1313	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.56	0.56	0.56	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.3	55.1	54.8	69.3	54.9	43.1	59.4	24.5	18.7	69.3	36.3	31.4
Incr Delay (d2), s/veh	2.1	39.7	38.5	1.6	33.3	0.3	20.8	0.6	0.1	1.5	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	24.0	19.8	1.7	22.0	2.3	14.2	10.9	0.9	1.7	8.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.4	94.8	93.3	70.9	88.2	43.4	80.2	25.1	18.8	70.8	37.4	31.7
LnGrp LOS	E	F	F	E	F	D	F	C	B	E	D	C
Approach Vol, veh/h		979			603			1319			685	
Approach Delay, s/veh		92.7			81.0			38.7			39.2	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.4	59.9	12.2	44.4	11.7	81.6	11.7	45.0
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	31.0	34.7	31.0	34.7	26.0	39.7	26.0	39.7
Max Q Clear Time (g_c+I1), s	29.3	20.6	6.8	39.7	5.7	28.1	5.7	41.6
Green Ext Time (p_c), s	0.1	4.6	0.1	0.0	0.0	6.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	60.7
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Shepherd I

Near Term (2028) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	22	357	176	36	322	116	147	1164	67	107	865	17
Future Volume (veh/h)	22	357	176	36	322	116	147	1164	67	107	865	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	388	191	39	350	126	160	1265	73	116	940	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	81	434	367	107	460	390	187	1597	92	171	1636	31
Arrive On Green	0.05	0.23	0.23	0.06	0.24	0.24	0.10	0.46	0.46	0.09	0.45	0.45
Sat Flow, veh/h	1795	1885	1596	1795	1885	1598	1810	3464	200	1810	3621	69
Grp Volume(v), veh/h	24	388	191	39	350	126	160	658	680	116	469	489
Grp Sat Flow(s),veh/h/ln	1795	1885	1596	1795	1885	1598	1810	1805	1859	1810	1805	1886
Q Serve(g_s), s	1.6	24.9	13.1	2.6	21.5	8.1	10.9	38.7	38.8	7.8	24.0	24.0
Cycle Q Clear(g_c), s	1.6	24.9	13.1	2.6	21.5	8.1	10.9	38.7	38.8	7.8	24.0	24.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		0.04
Lane Grp Cap(c), veh/h	81	434	367	107	460	390	187	832	857	171	816	852
V/C Ratio(X)	0.30	0.89	0.52	0.37	0.76	0.32	0.85	0.79	0.79	0.68	0.57	0.57
Avail Cap(c_a), veh/h	158	593	502	158	593	502	304	832	857	232	816	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	57.7	46.6	42.1	56.5	43.8	38.8	55.1	28.6	28.6	54.8	25.4	25.4
Incr Delay (d2), s/veh	0.7	11.6	0.8	0.8	4.4	0.5	6.6	7.6	7.5	1.4	2.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	12.7	5.1	1.2	10.3	3.2	5.2	17.4	18.0	3.5	10.3	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	58.2	42.9	57.3	48.3	39.3	61.7	36.1	36.1	56.2	27.7	27.6
LnGrp LOS	E	E	D	E	D	D	E	D	D	E	C	C
Approach Vol, veh/h		603			515			1498			1074	
Approach Delay, s/veh		53.4			46.8			38.8			30.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	62.2	9.7	36.2	15.8	63.3	11.4	34.5
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	21.0	34.3	11.0	39.3	16.0	39.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	12.9	26.0	3.6	23.5	9.8	40.8	4.6	26.9
Green Ext Time (p_c), s	0.1	3.5	0.0	2.2	0.1	0.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	40.0
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↱		↑↑↑↱	↱				↰↰		↱↱
Traffic Volume (veh/h)	0	1755	545	0	1595	766	0	0	0	73	0	342
Future Volume (veh/h)	0	1755	545	0	1595	766	0	0	0	73	0	342
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	0	1885
Adj Flow Rate, veh/h	0	1773	551	0	1505	0				74	0	345
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	1	1	0	1	1				1	0	1
Cap, veh/h	0	3284	809	0	2864					571	0	461
Arrive On Green	0.00	0.51	0.51	0.00	0.51	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	6749	1598	0	5656	3195				3483	0	2812
Grp Volume(v), veh/h	0	1773	551	0	1505	0				74	0	345
Grp Sat Flow(s),veh/h/ln	0	1621	1598	0	1885	1598				1742	0	1406
Q Serve(g_s), s	0.0	24.5	34.3	0.0	23.6	0.0				2.4	0.0	15.4
Cycle Q Clear(g_c), s	0.0	24.5	34.3	0.0	23.6	0.0				2.4	0.0	15.4
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3284	809	0	2864					571	0	461
V/C Ratio(X)	0.00	0.54	0.68	0.00	0.53					0.13	0.00	0.75
Avail Cap(c_a), veh/h	0	3341	823	0	2913					1317	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.1	24.6	0.0	21.9	0.0				47.1	0.0	52.6
Incr Delay (d2), s/veh	0.0	0.6	4.6	0.0	0.6	0.0				0.3	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.0	13.3	0.0	10.1	0.0				1.1	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.8	29.2	0.0	22.6	0.0				47.4	0.0	58.5
LnGrp LOS	A	C	C	A	C					D	A	E
Approach Vol, veh/h		2324			1505						419	
Approach Delay, s/veh		24.3			22.6						56.5	
Approach LOS		C			C						E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		73.6		29.0		73.6
Change Period (Y+Rc), s		6.8		7.3		6.8
Max Green Setting (Gmax), s		68.0		49.9		68.0
Max Q Clear Time (g_c+I1), s		36.3		17.4		25.6
Green Ext Time (p_c), s		30.5		4.2		33.7

Intersection Summary	
HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	1462	367	0	1822	199	520	0	987	0	0	0
Future Volume (veh/h)	0	1462	367	0	1822	199	520	0	987	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885	1885	0	1885			
Adj Flow Rate, veh/h	0	1507	0	0	1878	205	536	0	1018			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	1	1	0	1	1	1	0	1			
Cap, veh/h	0	2930		0	4346	909	1651	0	917			
Arrive On Green	0.00	0.57	0.00	0.00	0.57	0.57	0.33	0.00	0.33			
Sat Flow, veh/h	0	5316	1598	0	7993	1598	5063	0	2812			
Grp Volume(v), veh/h	0	1507	0	0	1878	205	536	0	1018			
Grp Sat Flow(s),veh/h/ln	0	1716	1598	0	1527	1598	1688	0	1406			
Q Serve(g_s), s	0.0	23.2	0.0	0.0	18.3	8.2	10.4	0.0	42.4			
Cycle Q Clear(g_c), s	0.0	23.2	0.0	0.0	18.3	8.2	10.4	0.0	42.4			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2930		0	4346	909	1651	0	917			
V/C Ratio(X)	0.00	0.51		0.00	0.43	0.23	0.32	0.00	1.11			
Avail Cap(c_a), veh/h	0	2930		0	4346	909	1651	0	917			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.94	0.00	0.00	0.54	0.54	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	17.1	0.0	0.0	16.0	13.8	33.0	0.0	43.8			
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.2	0.3	0.5	0.0	64.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	8.7	0.0	0.0	6.0	2.9	4.3	0.0	22.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.7	0.0	0.0	16.2	14.1	33.5	0.0	108.5			
LnGrp LOS	A	B		A	B	B	C	A	F			
Approach Vol, veh/h		1507			2083			1554				
Approach Delay, s/veh		17.7			16.0			82.6				
Approach LOS		B			B			F				

Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		80.8				80.8		49.2
Change Period (Y+Rc), s		6.8				6.8		6.8
Max Green Setting (Gmax), s		74.0				74.0		42.4
Max Q Clear Time (g_c+I1), s		25.2				20.3		44.4
Green Ext Time (p_c), s		37.7				49.2		0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	677	1428	330	319	1137	203	389	560	280	316	361	484
Future Volume (veh/h)	677	1428	330	319	1137	203	389	560	280	316	361	484
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	705	1488	344	332	1184	211	405	583	292	329	376	504
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	562	1889	586	381	1622	503	457	950	434	380	1305	703
Arrive On Green	0.16	0.37	0.37	0.11	0.32	0.32	0.13	0.27	0.27	0.11	0.25	0.25
Sat Flow, veh/h	3483	5147	1598	3483	5147	1596	3510	3458	1579	3483	5147	2773
Grp Volume(v), veh/h	705	1488	344	332	1184	211	405	583	292	329	376	504
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1742	1716	1596	1755	1729	1579	1742	1716	1387
Q Serve(g_s), s	25.0	39.9	26.9	14.5	31.7	16.2	17.6	22.8	25.5	14.4	9.1	25.7
Cycle Q Clear(g_c), s	25.0	39.9	26.9	14.5	31.7	16.2	17.6	22.8	25.5	14.4	9.1	25.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	562	1889	586	381	1622	503	457	950	434	380	1305	703
V/C Ratio(X)	1.25	0.79	0.59	0.87	0.73	0.42	0.89	0.61	0.67	0.87	0.29	0.72
Avail Cap(c_a), veh/h	562	1889	586	562	1622	503	679	950	434	674	1305	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	43.7	39.6	67.9	47.2	41.9	66.3	49.1	50.0	67.9	46.6	52.8
Incr Delay (d2), s/veh	123.5	2.1	2.6	7.1	2.9	2.6	7.0	3.0	8.1	2.4	0.6	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.5	16.9	10.8	6.8	13.7	6.7	8.2	10.1	10.9	6.4	3.9	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	188.5	45.8	42.2	75.0	50.2	44.5	73.3	52.0	58.1	70.3	47.1	59.0
LnGrp LOS	F	D	D	E	D	D	E	D	E	E	D	E
Approach Vol, veh/h		2537			1727			1280			1209	
Approach Delay, s/veh		84.9			54.2			60.1			58.4	
Approach LOS		F			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	54.8	21.9	48.3	22.0	62.9	25.2	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	27.0	33.7	16.4	27.5	16.5	41.9	19.6	27.7
Green Ext Time (p_c), s	0.0	3.2	0.5	2.8	0.4	0.0	0.6	3.8

Intersection Summary	
HCM 6th Ctrl Delay	67.6
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	0	187	205	0	0	0
Future Vol, veh/h	0	187	205	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	205	225	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	225	0	-	0	430	225
Stage 1	-	-	-	-	225	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1356	-	-	-	586	819
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	834	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1356	-	-	-	586	819
Mov Cap-2 Maneuver	-	-	-	-	586	-
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	834	-

Approach	EB		WB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS					A	

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1356	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	523.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↱			✥			✥	
Traffic Vol, veh/h	133	886	160	62	915	31	183	25	74	19	43	108
Future Vol, veh/h	133	886	160	62	915	31	183	25	74	19	43	108
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	0	0	0	0	0	0	0	0	0
Mvmt Flow	141	943	170	66	973	33	195	27	79	20	46	115
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	724.1	508.7	37.7	26.9
HCM LOS	F	F	E	D

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	65%	11%	100%	0%	11%
Vol Thru, %	9%	75%	0%	97%	25%
Vol Right, %	26%	14%	0%	3%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	282	1179	62	946	170
LT Vol	183	133	62	0	19
Through Vol	25	886	0	915	43
RT Vol	74	160	0	31	108
Lane Flow Rate	300	1254	66	1006	181
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.67	2.55	0.149	2.134	0.419
Departure Headway (Hd)	12.546	9.02	10.515	9.964	14.081
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	291	414	344	372	259
Service Time	10.546	7.02	8.215	7.664	12.081
HCM Lane V/C Ratio	1.031	3.029	0.192	2.704	0.699
HCM Control Delay	37.7	724.1	15	541.1	26.9
HCM Lane LOS	E	F	B	F	D
HCM 95th-tile Q	4.4	82	0.5	56.3	2

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	1	1	3	27	3	31	0	218	39	35	201	1
Future Vol, veh/h	1	1	3	27	3	31	0	218	39	35	201	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	9	9	9	0	0	0	0	0	0	1	1	1
Mvmt Flow	1	1	3	31	3	36	0	253	45	41	234	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	612	615	235	595	593	276	235	0	0	298	0	0
Stage 1	317	317	-	276	276	-	-	-	-	-	-	-
Stage 2	295	298	-	319	317	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.1	6.5	6.2	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	395	397	787	419	421	768	1344	-	-	1269	-	-
Stage 1	680	642	-	735	685	-	-	-	-	-	-	-
Stage 2	699	654	-	697	658	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	363	382	787	404	405	768	1344	-	-	1269	-	-
Mov Cap-2 Maneuver	363	382	-	404	405	-	-	-	-	-	-	-
Stage 1	680	618	-	735	685	-	-	-	-	-	-	-
Stage 2	663	654	-	667	634	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	12.8	0	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1344	-	-	544	532	1269	-	-
HCM Lane V/C Ratio	-	-	-	0.011	0.133	0.032	-	-
HCM Control Delay (s)	0	-	-	11.7	12.8	7.9	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.5	0.1	-	-

Intersection	
Intersection Delay, s/veh	71.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✣	
Traffic Vol, veh/h	39	375	74	32	354	15	115	197	35	17	155	49
Future Vol, veh/h	39	375	74	32	354	15	115	197	35	17	155	49
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	1	1	1
Mvmt Flow	45	431	85	37	407	17	132	226	40	20	178	56
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	3
HCM Control Delay	32.6	135.4	75.2	38.2
HCM LOS	D	F	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	37%	0%	100%	0%	0%	100%	0%	8%
Vol Thru, %	63%	0%	0%	100%	63%	0%	96%	70%
Vol Right, %	0%	100%	0%	0%	37%	0%	4%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	312	35	39	250	199	32	369	221
LT Vol	115	0	39	0	0	32	0	17
Through Vol	197	0	0	250	125	0	354	155
RT Vol	0	35	0	0	74	0	15	49
Lane Flow Rate	359	40	45	287	229	37	424	254
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.997	0.102	0.126	0.769	0.595	0.11	1.203	0.725
Departure Headway (Hd)	10.73	9.802	10.832	10.305	10.03	10.774	10.214	11.073
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	341	368	333	353	361	335	361	328
Service Time	8.43	7.502	8.532	8.005	7.73	8.474	7.914	8.773
HCM Lane V/C Ratio	1.053	0.109	0.135	0.813	0.634	0.11	1.175	0.774
HCM Control Delay	82.1	13.6	15.1	40.2	26.4	14.8	145.9	38.2
HCM Lane LOS	F	B	C	E	D	B	F	E
HCM 95th-tile Q	11.1	0.3	0.4	6.2	3.7	0.4	17.9	5.3

16: Fowler Avenue & Behymer Avenue

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	7	4	181	4	5	1	166	84	3	1	68	5
Future Vol, veh/h	7	4	181	4	5	1	166	84	3	1	68	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	8	5	213	5	6	1	195	99	4	1	80	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	8.3	10.6	8.4
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	66%	4%	40%	1%
Vol Thru, %	33%	2%	50%	92%
Vol Right, %	1%	94%	10%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	253	192	10	74
LT Vol	166	7	4	1
Through Vol	84	4	5	68
RT Vol	3	181	1	5
Lane Flow Rate	298	226	12	87
Geometry Grp	1	1	1	1
Degree of Util (X)	0.384	0.268	0.017	0.115
Departure Headway (Hd)	4.65	4.273	5.11	4.772
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	771	840	698	748
Service Time	2.691	2.303	3.161	2.821
HCM Lane V/C Ratio	0.387	0.269	0.017	0.116
HCM Control Delay	10.6	8.9	8.3	8.4
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.8	1.1	0.1	0.4

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Traffic Vol, veh/h	5	17	9	244	248	6
Future Vol, veh/h	5	17	9	244	248	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	6	19	10	271	276	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	571	280	283	0	-	0
Stage 1	280	-	-	-	-	-
Stage 2	291	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	486	764	1291	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	482	764	1291	-	-	-
Mov Cap-2 Maneuver	482	-	-	-	-	-
Stage 1	765	-	-	-	-	-
Stage 2	763	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	10.5		0.3		0	
HCM LOS	B					

Minor Lane/Major Mvmt		NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1291	-	674	-	-
HCM Lane V/C Ratio		0.008	-	0.036	-	-
HCM Control Delay (s)		7.8	0	10.5	-	-
HCM Lane LOS		A	A	B	-	-
HCM 95th %tile Q(veh)		0	-	0.1	-	-

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	43	585	161	52	659	128	282	122	76	110	129	36
Future Volume (veh/h)	43	585	161	52	659	128	282	122	76	110	129	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	45	616	169	55	694	135	297	128	80	116	136	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	81	802	358	86	427	362	319	980	830	139	594	166
Arrive On Green	0.05	0.22	0.22	0.05	0.23	0.23	0.18	0.52	0.52	0.08	0.42	0.42
Sat Flow, veh/h	1795	3582	1598	1795	1885	1598	1795	1885	1597	1795	1417	396
Grp Volume(v), veh/h	45	616	169	55	694	135	297	128	80	116	0	174
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1795	1885	1598	1795	1885	1597	1795	0	1814
Q Serve(g_s), s	3.7	24.2	13.8	4.5	34.0	10.7	24.5	5.2	3.8	9.6	0.0	9.2
Cycle Q Clear(g_c), s	3.7	24.2	13.8	4.5	34.0	10.7	24.5	5.2	3.8	9.6	0.0	9.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	81	802	358	86	427	362	319	980	830	139	0	760
V/C Ratio(X)	0.56	0.77	0.47	0.64	1.62	0.37	0.93	0.13	0.10	0.84	0.00	0.23
Avail Cap(c_a), veh/h	371	812	362	371	427	362	371	980	830	371	0	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.1	54.6	50.5	70.1	58.0	49.0	60.8	18.6	18.2	68.3	0.0	28.0
Incr Delay (d2), s/veh	2.2	5.1	1.8	2.9	291.4	1.2	26.2	0.3	0.2	5.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	11.4	5.7	2.1	50.3	4.4	13.3	2.3	1.5	4.5	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.3	59.6	52.3	73.0	349.4	50.2	87.0	18.8	18.5	73.3	0.0	28.7
LnGrp LOS	E	E	D	E	F	D	F	B	B	E	A	C
Approach Vol, veh/h		830			884			505			290	
Approach Delay, s/veh		58.8			286.5			58.9			46.5	
Approach LOS		E			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.6	68.6	10.8	40.0	15.6	83.6	11.2	39.6
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	31.0	34.3	31.0	34.0
Max Q Clear Time (g_c+I1), s	26.5	11.2	5.7	36.0	11.6	7.2	6.5	26.2
Green Ext Time (p_c), s	0.2	0.8	0.0	0.0	0.1	0.8	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	137.6
HCM 6th LOS	F

AGENDA ITEM NO. 6.

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↱		↰	↑	↱
Traffic Vol, veh/h	50	3	13	5	7	15	23	426	13	9	304	40
Future Vol, veh/h	50	3	13	5	7	15	23	426	13	9	304	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	9	9	9	4	4	4	1	1	1	2	2	2
Mvmt Flow	52	3	14	5	7	16	24	444	14	9	317	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	846	841	317	864	876	451	359	0	0	458	0	0
Stage 1	335	335	-	499	499	-	-	-	-	-	-	-
Stage 2	511	506	-	365	377	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.14	6.54	6.24	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.536	4.036	3.336	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	274	294	708	272	285	604	1205	-	-	1103	-	-
Stage 1	664	630	-	550	540	-	-	-	-	-	-	-
Stage 2	533	528	-	650	612	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	256	286	708	259	277	604	1205	-	-	1103	-	-
Mov Cap-2 Maneuver	256	286	-	259	277	-	-	-	-	-	-	-
Stage 1	651	625	-	539	529	-	-	-	-	-	-	-
Stage 2	502	517	-	629	607	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.9	15	0.4	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1205	-	-	294	389	1103	-	-
HCM Lane V/C Ratio	0.02	-	-	0.234	0.072	0.008	-	-
HCM Control Delay (s)	8	-	-	20.9	15	8.3	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0.2	0	-	-

HCM 6th Signalized Intersection Summary
20: Fowler Avenue & Nees Avenue

Shepherd
Near Term (2028) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	30	280	114	37	240	46	163	370	62	42	247	36
Future Volume (veh/h)	30	280	114	37	240	46	163	370	62	42	247	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	33	308	125	41	264	51	179	407	68	46	271	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	3	3	3
Cap, veh/h	42	414	164	53	321	272	207	1165	987	59	995	844
Arrive On Green	0.02	0.16	0.16	0.03	0.17	0.17	0.12	0.62	0.62	0.03	0.54	0.54
Sat Flow, veh/h	1810	2522	1002	1795	1885	1598	1795	1885	1598	1767	1856	1572
Grp Volume(v), veh/h	33	219	214	41	264	51	179	407	68	46	271	40
Grp Sat Flow(s),veh/h/ln	1810	1805	1720	1795	1885	1598	1795	1885	1598	1767	1856	1572
Q Serve(g_s), s	2.2	13.8	14.3	2.7	16.2	3.3	11.8	12.6	2.0	3.1	9.5	1.5
Cycle Q Clear(g_c), s	2.2	13.8	14.3	2.7	16.2	3.3	11.8	12.6	2.0	3.1	9.5	1.5
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	42	296	282	53	321	272	207	1165	987	59	995	844
V/C Ratio(X)	0.78	0.74	0.76	0.78	0.82	0.19	0.87	0.35	0.07	0.78	0.27	0.05
Avail Cap(c_a), veh/h	271	522	497	269	545	462	269	1165	987	265	995	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.3	47.7	47.9	57.8	48.1	42.7	52.2	11.2	9.1	57.5	15.1	13.2
Incr Delay (d2), s/veh	11.1	5.6	6.6	8.7	4.6	0.3	16.9	0.8	0.1	7.9	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.5	6.5	1.3	7.8	1.3	6.1	5.0	0.7	1.5	3.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	53.3	54.5	66.5	52.6	43.0	69.1	12.0	9.3	65.4	15.8	13.3
LnGrp LOS	E	D	D	E	D	D	E	B	A	E	B	B
Approach Vol, veh/h		466			356			654			357	
Approach Delay, s/veh		55.0			52.8			27.3			21.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	69.7	6.8	25.7	8.0	79.5	7.5	25.0
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	18.0	30.7	18.0	34.7	18.0	30.7	18.0	34.7
Max Q Clear Time (g_c+I1), s	13.8	11.5	4.2	18.2	5.1	14.6	4.7	16.3
Green Ext Time (p_c), s	0.1	1.6	0.0	1.2	0.0	2.6	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D

AGENDA ITEM NO. 6.

HCM 6th Signalized Intersection Summary
21: Fowler Avenue & SR-168 WB Ramps

Shepherd

Near Term (2028) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	163	0	15	442	829	0	0	418	195
Future Volume (veh/h)	0	0	0	163	0	15	442	829	0	0	418	195
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	0	1856	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				172	0	16	465	873	0	0	440	205
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	0	3	1	1	0	0	1	1
Cap, veh/h				217	0	193	532	2673	0	0	1276	589
Arrive On Green				0.12	0.00	0.12	0.31	1.00	0.00	0.00	0.54	0.54
Sat Flow, veh/h				1767	0	1572	3483	3676	0	0	2474	1099
Grp Volume(v), veh/h				172	0	16	465	873	0	0	330	315
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1742	1791	0	0	1791	1687
Q Serve(g_s), s				9.5	0.0	0.9	12.7	0.0	0.0	0.0	10.5	10.6
Cycle Q Clear(g_c), s				9.5	0.0	0.9	12.7	0.0	0.0	0.0	10.5	10.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.65
Lane Grp Cap(c), veh/h				217	0	193	532	2673	0	0	961	905
V/C Ratio(X)				0.79	0.00	0.08	0.87	0.33	0.00	0.00	0.34	0.35
Avail Cap(c_a), veh/h				422	0	376	801	2673	0	0	961	905
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.76	0.76	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				42.6	0.0	38.9	33.8	0.0	0.0	0.0	13.2	13.2
Incr Delay (d2), s/veh				12.9	0.0	0.4	3.8	0.2	0.0	0.0	1.0	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.8	0.0	0.4	4.6	0.1	0.0	0.0	4.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				55.5	0.0	39.3	37.6	0.2	0.0	0.0	14.2	14.3
LnGrp LOS				E	A	D	D	A	A	A	B	B
Approach Vol, veh/h					188			1338			645	
Approach Delay, s/veh					54.1			13.2			14.2	
Approach LOS					D			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.4			21.0	60.4		18.6				
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3				
Max Green Setting (Gmax), s		63.0			* 23	34.3		23.9				
Max Q Clear Time (g_c+I1), s		2.0			14.7	12.6		11.5				
Green Ext Time (p_c), s		12.9			0.6	7.3		0.9				

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
22: Fowler Avenue & SR-168 EB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	368	0	605	0	0	0	0	902	296	23	557	0
Future Volume (veh/h)	368	0	605	0	0	0	0	902	296	23	557	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	383	0	630				0	940	308	24	580	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	1	1	2	2	0
Cap, veh/h	1006	0	461				0	1311	428	52	2061	0
Arrive On Green	0.29	0.00	0.29				0.00	0.49	0.49	0.03	0.58	0.00
Sat Flow, veh/h	3456	0	1585				0	2749	866	1781	3647	0
Grp Volume(v), veh/h	383	0	630				0	633	615	24	580	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1791	1729	1781	1777	0
Q Serve(g_s), s	8.8	0.0	29.1				0.0	27.7	27.9	1.3	8.2	0.0
Cycle Q Clear(g_c), s	8.8	0.0	29.1				0.0	27.7	27.9	1.3	8.2	0.0
Prop In Lane	1.00		1.00				0.00		0.50	1.00		0.00
Lane Grp Cap(c), veh/h	1006	0	461				0	884	854	52	2061	0
V/C Ratio(X)	0.38	0.00	1.37				0.00	0.72	0.72	0.46	0.28	0.00
Avail Cap(c_a), veh/h	1006	0	461				0	884	854	285	2061	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.90	0.90	0.00
Uniform Delay (d), s/veh	28.3	0.0	35.4				0.0	19.8	19.9	47.8	10.5	0.0
Incr Delay (d2), s/veh	0.5	0.0	178.1				0.0	4.9	5.2	2.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	33.6				0.0	11.5	11.3	0.6	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	0.0	213.6				0.0	24.7	25.1	49.9	10.8	0.0
LnGrp LOS	C	A	F				A	C	C	D	B	A
Approach Vol, veh/h		1013						1248			604	
Approach Delay, s/veh		143.7						24.9			12.4	
Approach LOS		F						C			B	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	8.6	56.2	35.2	64.8
Change Period (Y+Rc), s	* 5.7	6.8	6.1	6.8
Max Green Setting (Gmax), s	* 16	36.3	29.1	58.0
Max Q Clear Time (g_c+I1), s	3.3	29.9	31.1	10.2
Green Ext Time (p_c), s	0.0	5.4	0.0	7.2

Intersection Summary	
HCM 6th Ctrl Delay	64.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

23: Sunnyside Avenue & Project Driveway 1

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	13	0	107	21	0	99
Future Vol, veh/h	13	0	107	21	0	99
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	0	116	23	0	108

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	236	128	0	0	139	0
Stage 1	128	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	757	927	-	-	1457	-
Stage 1	903	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	757	927	-	-	1457	-
Mov Cap-2 Maneuver	757	-	-	-	-	-
Stage 1	903	-	-	-	-	-
Stage 2	921	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	757	1457	-
HCM Lane V/C Ratio	-	-	0.019	-	-
HCM Control Delay (s)	-	-	9.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

24: Sunnyside Avenue & Project Driveway 2

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	57	0	129	61	0	112
Future Vol, veh/h	57	0	129	61	0	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	0	140	66	0	122

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	295	173	0	0	206	0
Stage 1	173	-	-	-	-	-
Stage 2	122	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	700	876	-	-	1377	-
Stage 1	862	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	700	876	-	-	1377	-
Mov Cap-2 Maneuver	700	-	-	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	908	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	700	1377	-
HCM Lane V/C Ratio	-	-	0.089	-	-
HCM Control Delay (s)	-	-	10.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

25: Shepherd Avenue & Project Driveway 3

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑	↑↑↱			↱
Traffic Vol, veh/h	186	793	898	54	0	110
Future Vol, veh/h	186	793	898	54	0	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	0	0	0	0
Mvmt Flow	202	862	976	59	0	120

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1035	0	-	0	-	518
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.115	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2095	-	-	-	-	3.3
Pot Cap-1 Maneuver	674	-	-	-	0	508
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	674	-	-	-	-	508
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB		WB		SB	
HCM Control Delay, s	2.4		0		14.3	
HCM LOS					B	

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	674	-	-	-	508
HCM Lane V/C Ratio	0.3	-	-	-	0.235
HCM Control Delay (s)	12.6	-	-	-	14.3
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	1.3	-	-	-	0.9

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	13	0	32	0	0	0	19	13	0	0	4	12
Future Vol, veh/h	13	0	32	0	0	0	19	13	0	0	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	62	62	62	62	62	62	62	62	62	62	62	62
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	0	0
Mvmt Flow	21	0	52	0	0	0	31	21	0	0	6	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2	0	0	52	0	0	83	70	26	81	96	2
Stage 1	-	-	-	-	-	-	68	68	-	2	2	-
Stage 2	-	-	-	-	-	-	15	2	-	79	94	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.22	7.12	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.318	3.518	4	3.3
Pot Cap-1 Maneuver	1634	-	-	1554	-	-	909	824	1050	907	798	1088
Stage 1	-	-	-	-	-	-	947	842	-	1021	898	-
Stage 2	-	-	-	-	-	-	1010	898	-	930	821	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1634	-	-	1554	-	-	878	813	1050	881	788	1088
Mov Cap-2 Maneuver	-	-	-	-	-	-	878	813	-	881	788	-
Stage 1	-	-	-	-	-	-	935	831	-	1008	898	-
Stage 2	-	-	-	-	-	-	985	898	-	895	810	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0	9.5	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	850	1634	-	-	1554	-	-	993
HCM Lane V/C Ratio	0.061	0.013	-	-	-	-	-	0.026
HCM Control Delay (s)	9.5	7.2	0	-	0	-	-	8.7
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	72	157	250	99	365	168	137	779	20	58	797	79
Future Volume (veh/h)	72	157	250	99	365	168	137	779	20	58	797	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	78	171	272	108	397	183	149	847	22	63	866	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	1	1	1
Cap, veh/h	100	591	501	131	387	179	173	2004	622	96	1796	541
Arrive On Green	0.06	0.32	0.32	0.07	0.32	0.32	0.10	0.39	0.39	0.05	0.35	0.35
Sat Flow, veh/h	1781	1870	1585	1767	1202	554	1781	5106	1585	1795	5147	1550
Grp Volume(v), veh/h	78	171	272	108	0	580	149	847	22	63	866	86
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1756	1781	1702	1585	1795	1716	1550
Q Serve(g_s), s	5.8	9.3	19.1	8.1	0.0	43.5	11.1	16.3	1.2	4.6	17.8	5.2
Cycle Q Clear(g_c), s	5.8	9.3	19.1	8.1	0.0	43.5	11.1	16.3	1.2	4.6	17.8	5.2
Prop In Lane	1.00		1.00	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	591	501	131	0	566	173	2004	622	96	1796	541
V/C Ratio(X)	0.78	0.29	0.54	0.82	0.00	1.03	0.86	0.42	0.04	0.65	0.48	0.16
Avail Cap(c_a), veh/h	182	603	511	202	0	566	194	2004	622	196	1796	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	34.8	38.1	61.6	0.0	45.8	60.1	29.9	25.3	62.6	34.4	30.3
Incr Delay (d2), s/veh	4.9	0.3	1.3	8.5	0.0	44.4	23.5	0.6	0.1	2.8	0.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.2	7.5	3.9	0.0	25.4	6.0	6.5	0.4	2.1	7.3	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	35.1	39.4	70.1	0.0	90.1	83.5	30.4	25.4	65.4	35.3	30.9
LnGrp LOS	E	D	D	E	A	F	F	C	C	E	D	C
Approach Vol, veh/h		521			688			1018			1015	
Approach Delay, s/veh		42.3			87.0			38.1			36.8	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	52.8	13.8	50.0	12.5	58.7	14.6	49.2
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	14.7	39.3	13.8	43.5	14.7	39.3	15.4	43.5
Max Q Clear Time (g_c+I1), s	13.1	19.8	7.8	45.5	6.6	18.3	10.1	21.1
Green Ext Time (p_c), s	0.0	11.1	0.0	0.0	0.0	10.9	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	48.7
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
2: Willow Avenue & Shepherd Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	112	406	286	305	607	222	390	916	319	252	1334	211
Future Volume (veh/h)	112	406	286	305	607	222	390	916	319	252	1334	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	122	441	311	332	660	241	424	996	347	274	1450	229
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	1	1	1
Cap, veh/h	189	865	386	378	1083	483	442	1929	598	324	1775	541
Arrive On Green	0.05	0.24	0.24	0.11	0.31	0.31	0.13	0.38	0.38	0.09	0.34	0.34
Sat Flow, veh/h	3456	3554	1585	3428	3526	1571	3428	5066	1571	3483	5147	1570
Grp Volume(v), veh/h	122	441	311	332	660	241	424	996	347	274	1450	229
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1714	1763	1571	1714	1689	1571	1742	1716	1570
Q Serve(g_s), s	5.0	15.5	26.8	13.8	23.1	18.2	17.8	22.0	25.4	11.2	37.3	16.2
Cycle Q Clear(g_c), s	5.0	15.5	26.8	13.8	23.1	18.2	17.8	22.0	25.4	11.2	37.3	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	865	386	378	1083	483	442	1929	598	324	1775	541
V/C Ratio(X)	0.64	0.51	0.81	0.88	0.61	0.50	0.96	0.52	0.58	0.85	0.82	0.42
Avail Cap(c_a), veh/h	462	1073	479	430	1083	483	442	1929	598	449	1775	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	67.1	47.4	51.6	63.5	42.8	41.1	62.8	34.6	35.7	64.7	43.3	36.4
Incr Delay (d2), s/veh	1.4	1.1	11.3	1.7	0.1	0.1	32.1	1.0	4.1	6.6	3.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.0	11.7	6.0	9.8	7.0	9.5	8.9	10.3	5.2	15.8	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	48.5	62.9	65.3	42.9	41.2	94.9	35.6	39.7	71.3	46.9	38.4
LnGrp LOS	E	D	E	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		874			1233			1767			1953	
Approach Delay, s/veh		56.4			48.6			50.6			49.4	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	55.7	13.5	50.8	19.8	60.9	22.8	41.5
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	19.8	39.3	7.0	25.1	13.2	27.4	15.8	28.8
Green Ext Time (p_c), s	0.0	0.0	0.1	6.3	0.2	9.4	0.2	6.4

Intersection Summary	
HCM 6th Ctrl Delay	50.6
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	457.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	3	132	96	43	523	380	115	269	12	166	589	8
Future Vol, veh/h	3	132	96	43	523	380	115	269	12	166	589	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	4	4	4	4	4	4	2	2	2
Mvmt Flow	3	143	104	47	568	413	125	292	13	180	640	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	50.7	671.2	118.1	492.6
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	1%	5%	22%
Vol Thru, %	68%	57%	55%	77%
Vol Right, %	3%	42%	40%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	396	231	946	763
LT Vol	115	3	43	166
Through Vol	269	132	523	589
RT Vol	12	96	380	8
Lane Flow Rate	430	251	1028	829
Geometry Grp	1	1	1	1
Degree of Util (X)	1.046	0.656	2.42	2.006
Departure Headway (Hd)	16.358	18.311	10.996	12.772
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	228	201	339	290
Service Time	14.358	16.311	8.996	10.772
HCM Lane V/C Ratio	1.886	1.249	3.032	2.859
HCM Control Delay	118.1	50.7	671.2	492.6
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	9.9	3.9	62.8	40.7

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	88	672	364	111	675	140	218	310	78	331	892	123
Future Volume (veh/h)	88	672	364	111	675	140	218	310	78	331	892	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	730	396	121	734	152	237	337	85	360	970	134
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	147	937	412	148	488	414	262	635	531	288	663	561
Arrive On Green	0.08	0.26	0.26	0.08	0.26	0.26	0.15	0.34	0.34	0.16	0.35	0.35
Sat Flow, veh/h	1795	3582	1573	1767	1856	1572	1781	1870	1564	1781	1870	1585
Grp Volume(v), veh/h	96	730	396	121	734	152	237	337	85	360	970	134
Grp Sat Flow(s),veh/h/ln	1795	1791	1573	1767	1856	1572	1781	1870	1564	1781	1870	1585
Q Serve(g_s), s	6.7	24.6	32.3	8.8	34.2	10.3	17.0	18.9	4.9	21.0	46.1	7.8
Cycle Q Clear(g_c), s	6.7	24.6	32.3	8.8	34.2	10.3	17.0	18.9	4.9	21.0	46.1	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	937	412	148	488	414	262	635	531	288	663	561
V/C Ratio(X)	0.65	0.78	0.96	0.82	1.50	0.37	0.91	0.53	0.16	1.25	1.46	0.24
Avail Cap(c_a), veh/h	290	937	412	285	488	414	288	635	531	288	663	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.9	44.5	47.4	58.6	47.9	39.1	54.6	34.6	30.0	54.5	42.0	29.6
Incr Delay (d2), s/veh	1.4	3.5	29.2	4.2	237.1	0.9	27.3	3.2	0.6	138.4	217.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	10.9	15.4	4.0	47.3	3.9	9.4	8.9	1.9	20.2	60.2	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	48.0	76.6	62.8	285.0	40.0	81.8	37.7	30.6	192.9	259.0	30.6
LnGrp LOS	E	D	E	E	F	D	F	D	C	F	F	C
Approach Vol, veh/h		1222			1007			659			1464	
Approach Delay, s/veh		58.1			221.3			52.7			221.9	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.1	52.1	14.7	40.2	25.0	50.1	14.9	40.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	19.0	48.1	8.7	36.2	23.0	20.9	10.8	34.3
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.0	1.8	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	150.1
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
5: Clovis Avenue & Shepherd Avenue

Cumulative Year (2046) NP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	110	675	210	239	555	166	117	197	146	159	597	286
Future Volume (veh/h)	110	675	210	239	555	166	117	197	146	159	597	286
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	120	734	228	260	603	180	127	214	159	173	649	311
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	2	2	2	7	7	7	5	5	5
Cap, veh/h	243	819	361	281	864	385	149	1360	606	419	1510	673
Arrive On Green	0.07	0.23	0.23	0.08	0.24	0.24	0.09	0.40	0.40	0.12	0.44	0.44
Sat Flow, veh/h	3428	3526	1552	3456	3554	1585	1711	3413	1522	3374	3469	1546
Grp Volume(v), veh/h	120	734	228	260	603	180	127	214	159	173	649	311
Grp Sat Flow(s),veh/h/ln	1714	1763	1552	1728	1777	1585	1711	1706	1522	1687	1735	1546
Q Serve(g_s), s	4.7	28.3	18.5	10.5	21.7	13.6	10.2	5.6	9.8	6.6	18.2	19.9
Cycle Q Clear(g_c), s	4.7	28.3	18.5	10.5	21.7	13.6	10.2	5.6	9.8	6.6	18.2	19.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	819	361	281	864	385	149	1360	606	419	1510	673
V/C Ratio(X)	0.49	0.90	0.63	0.92	0.70	0.47	0.85	0.16	0.26	0.41	0.43	0.46
Avail Cap(c_a), veh/h	279	856	377	281	864	385	213	1360	606	419	1510	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	52.1	48.4	63.9	48.3	45.2	63.0	27.0	28.3	56.6	27.5	27.9
Incr Delay (d2), s/veh	0.6	12.1	3.9	33.7	2.8	1.3	14.4	0.2	1.0	3.0	0.9	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	13.5	7.4	5.8	9.6	5.3	5.0	2.3	3.7	3.0	7.5	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	64.2	52.2	97.6	51.1	46.5	77.3	27.3	29.3	59.6	28.3	30.2
LnGrp LOS	E	E	D	F	D	D	E	C	C	E	C	C
Approach Vol, veh/h		1082			1043			500			1133	
Approach Delay, s/veh		61.6			61.9			40.6			33.6	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	66.6	15.5	40.0	23.0	61.5	17.0	38.5
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	17.4	54.3	11.4	34.0	17.4	54.3	11.4	34.0
Max Q Clear Time (g_c+I1), s	12.2	21.9	6.7	23.7	8.6	11.8	12.5	30.3
Green Ext Time (p_c), s	0.1	17.0	0.1	4.2	0.2	4.1	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	50.5
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: Clovis Avenue & Teague Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	83	234	283	431	908	295
Future Volume (veh/h)	83	234	283	431	908	295
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	254	308	468	987	321
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	2	2	2	2
Cap, veh/h	328	292	272	2477	1767	748
Arrive On Green	0.18	0.18	0.15	0.70	0.50	0.50
Sat Flow, veh/h	1795	1598	1781	3647	3647	1504
Grp Volume(v), veh/h	90	254	308	468	987	321
Grp Sat Flow(s),veh/h/ln	1795	1598	1781	1777	1777	1504
Q Serve(g_s), s	3.7	13.1	13.0	3.9	16.4	11.6
Cycle Q Clear(g_c), s	3.7	13.1	13.0	3.9	16.4	11.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	328	292	272	2477	1767	748
V/C Ratio(X)	0.27	0.87	1.13	0.19	0.56	0.43
Avail Cap(c_a), veh/h	530	472	272	2477	1767	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.79	0.79
Uniform Delay (d), s/veh	29.9	33.7	36.0	4.5	14.9	13.7
Incr Delay (d2), s/veh	0.2	5.6	94.4	0.2	1.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.3	12.4	1.0	5.9	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.0	39.4	130.4	4.7	15.9	15.1
LnGrp LOS	C	D	F	A	B	B
Approach Vol, veh/h	344			776	1308	
Approach Delay, s/veh	36.9			54.6	15.7	
Approach LOS	D			D	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.0	47.6				64.6		20.4
Change Period (Y+Rc), s	4.0	5.3				5.3		4.9
Max Green Setting (Gmax), s	13.0	32.7				49.7		25.1
Max Q Clear Time (g_c+I1), s	15.0	18.4				5.9		15.1
Green Ext Time (p_c), s	0.0	7.9				3.9		0.4

Intersection Summary			
HCM 6th Ctrl Delay			31.1
HCM 6th LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	71	399	358	37	468	233	161	442	21	115	780	136
Future Volume (veh/h)	71	399	358	37	468	233	161	442	21	115	780	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	77	434	389	40	509	253	175	480	23	125	848	148
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	2	2	2
Cap, veh/h	103	487	411	87	474	396	198	1707	731	148	1616	705
Arrive On Green	0.06	0.26	0.26	0.05	0.25	0.25	0.11	0.48	0.48	0.08	0.45	0.45
Sat Flow, veh/h	1781	1870	1580	1795	1885	1575	1767	3526	1510	1781	3554	1549
Grp Volume(v), veh/h	77	434	389	40	509	253	175	480	23	125	848	148
Grp Sat Flow(s),veh/h/ln	1781	1870	1580	1795	1885	1575	1767	1763	1510	1781	1777	1549
Q Serve(g_s), s	6.4	33.5	36.2	3.3	37.7	21.5	14.6	12.2	1.2	10.4	25.6	8.6
Cycle Q Clear(g_c), s	6.4	33.5	36.2	3.3	37.7	21.5	14.6	12.2	1.2	10.4	25.6	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	103	487	411	87	474	396	198	1707	731	148	1616	705
V/C Ratio(X)	0.75	0.89	0.95	0.46	1.07	0.64	0.88	0.28	0.03	0.85	0.52	0.21
Avail Cap(c_a), veh/h	368	495	418	311	474	396	365	1707	731	309	1616	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.6	53.4	54.4	69.4	56.1	50.1	65.6	23.1	20.3	67.8	29.3	24.6
Incr Delay (d2), s/veh	4.1	18.3	30.6	1.4	62.4	4.0	4.7	0.4	0.1	5.1	1.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	17.9	17.6	1.5	25.7	8.8	6.7	5.1	0.4	4.9	10.9	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.7	71.8	85.1	70.8	118.6	54.0	70.3	23.5	20.3	72.9	30.5	25.3
LnGrp LOS	E	E	F	E	F	D	E	C	C	E	C	C
Approach Vol, veh/h		900			802			678			1121	
Approach Delay, s/veh		77.7			95.8			35.5			34.5	
Approach LOS		E			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.8	73.5	12.6	43.0	16.4	77.9	11.3	44.4
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	31.0	34.7	31.0	34.7	26.0	39.7	26.0	39.7
Max Q Clear Time (g_c+I1), s	16.6	27.6	8.4	39.7	12.4	14.2	5.3	38.2
Green Ext Time (p_c), s	0.2	4.2	0.1	0.0	0.1	4.6	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	59.8
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	16	291	193	46	416	109	279	498	91	162	1060	63
Future Volume (veh/h)	16	291	193	46	416	109	279	498	91	162	1060	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	17	316	210	50	452	118	303	541	99	176	1152	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	1	1	1
Cap, veh/h	62	433	364	117	500	418	297	1272	232	202	1283	76
Arrive On Green	0.04	0.24	0.24	0.07	0.27	0.27	0.17	0.43	0.43	0.11	0.37	0.37
Sat Flow, veh/h	1739	1826	1536	1781	1870	1562	1767	2964	540	1795	3433	202
Grp Volume(v), veh/h	17	316	210	50	452	118	303	321	319	176	601	619
Grp Sat Flow(s),veh/h/ln	1739	1826	1536	1781	1870	1562	1767	1763	1741	1795	1791	1845
Q Serve(g_s), s	1.2	20.0	15.1	3.4	29.2	7.5	21.0	15.9	16.0	12.1	39.5	39.6
Cycle Q Clear(g_c), s	1.2	20.0	15.1	3.4	29.2	7.5	21.0	15.9	16.0	12.1	39.5	39.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.11
Lane Grp Cap(c), veh/h	62	433	364	117	500	418	297	757	747	202	669	689
V/C Ratio(X)	0.27	0.73	0.58	0.43	0.90	0.28	1.02	0.42	0.43	0.87	0.90	0.90
Avail Cap(c_a), veh/h	153	574	483	157	588	491	297	757	747	230	669	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	58.7	44.0	42.1	56.1	44.2	36.3	52.0	24.9	24.9	54.6	36.9	36.9
Incr Delay (d2), s/veh	0.9	2.6	1.0	0.9	16.0	0.4	57.6	1.7	1.8	17.8	12.6	12.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	9.1	5.7	1.5	15.2	0.0	13.8	6.7	6.7	6.3	18.8	19.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	46.5	43.1	57.0	60.2	36.7	109.6	26.6	26.7	72.4	49.4	49.3
LnGrp LOS	E	D	D	E	E	D	F	C	C	E	D	D
Approach Vol, veh/h		543			620			943			1396	
Approach Delay, s/veh		45.6			55.5			53.3			52.3	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	52.4	8.5	39.1	18.1	59.4	12.2	35.3
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	21.0	34.3	11.0	39.3	16.0	39.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	23.0	41.6	3.2	31.2	14.1	18.0	5.4	22.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.0	0.0	4.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	52.1
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
9: SR-168 WB Ramps & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↱		↑↑↑↱	↱				↰↰		↱↱
Traffic Volume (veh/h)	0	1234	899	0	1698	848	0	0	0	78	0	787
Future Volume (veh/h)	0	1234	899	0	1698	848	0	0	0	78	0	787
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1885	0	1885
Adj Flow Rate, veh/h	0	1313	956	0	1715	0				83	0	837
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	0	2	2				1	0	1
Cap, veh/h	0	3959	975	0	3452					962	0	776
Arrive On Green	0.00	0.62	0.62	0.00	0.62	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	6696	1585	0	5611	3170				3483	0	2812
Grp Volume(v), veh/h	0	1313	956	0	1715	0				83	0	837
Grp Sat Flow(s),veh/h/ln	0	1609	1585	0	1870	1585				1742	0	1406
Q Serve(g_s), s	0.0	12.8	76.0	0.0	22.0	0.0				2.3	0.0	35.9
Cycle Q Clear(g_c), s	0.0	12.8	76.0	0.0	22.0	0.0				2.3	0.0	35.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3959	975	0	3452					962	0	776
V/C Ratio(X)	0.00	0.33	0.98	0.00	0.50					0.09	0.00	1.08
Avail Cap(c_a), veh/h	0	3959	975	0	3453					962	0	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.88	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.1	24.2	0.0	13.9	0.0				34.9	0.0	47.0
Incr Delay (d2), s/veh	0.0	0.2	24.4	0.0	0.5	0.0				0.1	0.0	55.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	31.6	0.0	8.7	0.0				1.0	0.0	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.3	48.7	0.0	14.3	0.0				35.0	0.0	102.4
LnGrp LOS	A	B	D	A	B					C	A	F
Approach Vol, veh/h		2269			1715						920	
Approach Delay, s/veh		27.6			14.3						96.3	
Approach LOS		C			B						F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		86.8		43.2		86.8
Change Period (Y+Rc), s		6.8		7.3		6.8
Max Green Setting (Gmax), s		80.0		35.9		80.0
Max Q Clear Time (g_c+I1), s		78.0		37.9		24.0
Green Ext Time (p_c), s		2.0		0.0		46.6

Intersection Summary	
HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
10: SR-168 EB Ramps & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	1078	234	0	2060	93	486	0	610	0	0	0
Future Volume (veh/h)	0	1078	234	0	2060	93	486	0	610	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1885	1885	1841	0	1841			
Adj Flow Rate, veh/h	0	1172	0	0	2239	101	528	0	663			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	2	0	1	1	4	0	4			
Cap, veh/h	0	2985		0	4464	934	1536	0	853			
Arrive On Green	0.00	0.58	0.00	0.00	0.58	0.58	0.31	0.00	0.31			
Sat Flow, veh/h	0	5274	1585	0	7993	1598	4944	0	2745			
Grp Volume(v), veh/h	0	1172	0	0	2239	101	528	0	663			
Grp Sat Flow(s),veh/h/ln	0	1702	1585	0	1527	1598	1648	0	1373			
Q Serve(g_s), s	0.0	16.1	0.0	0.0	22.4	3.6	10.7	0.0	28.5			
Cycle Q Clear(g_c), s	0.0	16.1	0.0	0.0	22.4	3.6	10.7	0.0	28.5			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2985		0	4464	934	1536	0	853			
V/C Ratio(X)	0.00	0.39		0.00	0.50	0.11	0.34	0.00	0.78			
Avail Cap(c_a), veh/h	0	2985		0	4464	934	1536	0	853			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.96	0.00	0.00	0.54	0.54	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	14.6	0.0	0.0	15.9	12.0	34.6	0.0	40.7			
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.2	0.1	0.6	0.0	6.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	5.9	0.0	0.0	7.3	1.3	4.4	0.0	10.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.9	0.0	0.0	16.1	12.1	35.2	0.0	47.6			
LnGrp LOS	A	B		A	B	B	D	A	D			
Approach Vol, veh/h		1172			2340			1191				
Approach Delay, s/veh		14.9			15.9			42.1				
Approach LOS		B			B			D				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		82.8				82.8		47.2				
Change Period (Y+Rc), s		6.8				6.8		6.8				
Max Green Setting (Gmax), s		76.0				76.0		40.4				
Max Q Clear Time (g_c+I1), s		18.1				24.4		30.5				
Green Ext Time (p_c), s		32.6				49.6		6.5				

Intersection Summary			
HCM 6th Ctrl Delay			22.3
HCM 6th LOS			C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
11: Clovis Avenue & Herndon Avenue

Shepherd

Cumulative Year (2046) NP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	389	936	364	196	1112	185	380	451	158	203	470	661
Future Volume (veh/h)	389	936	364	196	1112	185	380	451	158	203	470	661
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	418	1006	391	211	1196	199	409	485	170	218	505	711
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	1	1	1
Cap, veh/h	464	1974	613	290	1726	536	460	1113	376	315	1305	713
Arrive On Green	0.14	0.39	0.39	0.08	0.34	0.34	0.13	0.30	0.30	0.09	0.25	0.25
Sat Flow, veh/h	3428	5066	1572	3456	5106	1585	3456	3757	1269	3483	5147	2812
Grp Volume(v), veh/h	418	1006	391	211	1196	199	409	438	217	218	505	711
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1728	1702	1585	1728	1702	1621	1742	1716	1406
Q Serve(g_s), s	18.6	23.4	31.3	9.2	31.4	14.7	18.0	16.1	16.9	9.4	12.6	39.2
Cycle Q Clear(g_c), s	18.6	23.4	31.3	9.2	31.4	14.7	18.0	16.1	16.9	9.4	12.6	39.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	464	1974	613	290	1726	536	460	1008	480	315	1305	713
V/C Ratio(X)	0.90	0.51	0.64	0.73	0.69	0.37	0.89	0.43	0.45	0.69	0.39	1.00
Avail Cap(c_a), veh/h	553	1974	613	557	1726	536	669	1008	480	674	1305	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.0	36.0	38.4	69.3	44.3	38.8	66.1	44.0	44.3	68.4	47.9	57.8
Incr Delay (d2), s/veh	12.8	0.8	4.3	1.3	2.3	2.0	7.8	1.4	3.1	1.0	0.9	33.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	9.6	12.5	4.1	13.3	6.0	8.3	6.9	7.1	4.2	5.4	16.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.8	36.8	42.7	70.6	46.7	40.8	73.9	45.4	47.4	69.4	48.7	90.9
LnGrp LOS	E	D	D	E	D	D	E	D	D	E	D	F
Approach Vol, veh/h		1815			1606			1064			1434	
Approach Delay, s/veh		47.8			49.1			56.8			72.8	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	58.4	19.0	51.6	18.0	66.4	25.6	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	20.6	33.4	11.4	18.9	11.2	33.3	20.0	41.2
Green Ext Time (p_c), s	0.4	3.3	0.3	2.3	0.3	3.5	0.6	0.0

Intersection Summary			
HCM 6th Ctrl Delay			55.8
HCM 6th LOS			E

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	0	270	512	0	2	0
Future Vol, veh/h	0	270	512	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	0	0
Mvmt Flow	0	293	557	0	2	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	557	0	-	0	850	557
Stage 1	-	-	-	-	557	-
Stage 2	-	-	-	-	293	-
Critical Hdwy	4.14	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1004	-	-	-	334	534
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	762	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1004	-	-	-	334	534
Mov Cap-2 Maneuver	-	-	-	-	334	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	762	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1004	-	-	-	334
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	15.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	693.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	199	728	204	37	618	91	115	82	40	310	397	413
Future Vol, veh/h	199	728	204	37	618	91	115	82	40	310	397	413
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	1	1	1	10	10	10	12	12	12
Mvmt Flow	203	743	208	38	631	93	117	84	41	316	405	421
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	847.6	438.6	79.6	838.4
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	49%	18%	5%	28%
Vol Thru, %	35%	64%	83%	35%
Vol Right, %	17%	18%	12%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	237	1131	746	1120
LT Vol	115	199	37	310
Through Vol	82	728	618	397
RT Vol	40	204	91	413
Lane Flow Rate	242	1154	761	1143
Geometry Grp	1	1	1	1
Degree of Util (X)	0.656	2.783	1.831	2.775
Departure Headway (Hd)	30.997	16.797	20.644	14.527
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	121	231	183	263
Service Time	28.997	14.797	18.644	12.527
HCM Lane V/C Ratio	2	4.996	4.158	4.346
HCM Control Delay	79.6	847.6	438.6	838.4
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	3.4	52.1	23.3	59.3

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	6	4	1	48	6	42	3	93	15	16	440	0
Future Vol, veh/h	6	4	1	48	6	42	3	93	15	16	440	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	10	10	10	7	7	7
Mvmt Flow	7	4	1	52	7	46	3	101	16	17	478	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	654	635	478	630	627	109	478	0	0	117	0	0
Stage 1	512	512	-	115	115	-	-	-	-	-	-	-
Stage 2	142	123	-	515	512	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.2	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.29	-	-	2.263	-	-
Pot Cap-1 Maneuver	383	399	591	397	403	950	1044	-	-	1441	-	-
Stage 1	548	540	-	895	804	-	-	-	-	-	-	-
Stage 2	866	798	-	546	540	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	355	391	591	387	395	950	1044	-	-	1441	-	-
Mov Cap-2 Maneuver	355	391	-	387	395	-	-	-	-	-	-	-
Stage 1	546	531	-	892	802	-	-	-	-	-	-	-
Stage 2	815	796	-	532	531	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.7	13.6	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1044	-	-	382	523	1441	-	-
HCM Lane V/C Ratio	0.003	-	-	0.031	0.2	0.012	-	-
HCM Control Delay (s)	8.5	0	-	14.7	13.6	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0	-	-

Intersection	
Intersection Delay, s/veh	130.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✥	
Traffic Vol, veh/h	18	328	162	52	462	19	152	77	20	43	361	63
Future Vol, veh/h	18	328	162	52	462	19	152	77	20	43	361	63
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	1	1	1	10	10	10	7	7	7
Mvmt Flow	19	345	171	55	486	20	160	81	21	45	380	66
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	3
HCM Control Delay	34.4	196.3	41	207.5
HCM LOS	D	F	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	66%	0%	100%	0%	0%	100%	0%	9%
Vol Thru, %	34%	0%	0%	100%	40%	0%	96%	77%
Vol Right, %	0%	100%	0%	0%	60%	0%	4%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	229	20	18	219	271	52	481	467
LT Vol	152	0	18	0	0	52	0	43
Through Vol	77	0	0	219	109	0	462	361
RT Vol	0	20	0	0	162	0	19	63
Lane Flow Rate	241	21	19	230	286	55	506	492
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.724	0.057	0.053	0.616	0.731	0.157	1.375	1.355
Departure Headway (Hd)	12.865	11.76	11.989	11.455	11.009	11.481	10.915	10.863
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	284	307	301	318	331	314	339	339
Service Time	10.565	9.46	9.689	9.155	8.709	9.181	8.615	8.563
HCM Lane V/C Ratio	0.849	0.068	0.063	0.723	0.864	0.175	1.493	1.451
HCM Control Delay	43.2	15.2	15.4	30.9	38.5	16.3	215.8	207.5
HCM Lane LOS	E	C	C	D	E	C	F	F
HCM 95th-tile Q	5.1	0.2	0.2	3.8	5.5	0.5	22.9	22.3

Intersection	
Intersection Delay, s/veh	27.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	11	1	250	4	9	0	497	86	1	0	84	17
Future Vol, veh/h	11	1	250	4	9	0	497	86	1	0	84	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	3	3	3
Mvmt Flow	12	1	272	4	10	0	540	93	1	0	91	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.4	9.8	37.4	9.8
HCM LOS	B	A	E	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	85%	4%	31%	0%
Vol Thru, %	15%	0%	69%	83%
Vol Right, %	0%	95%	0%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	584	262	13	101
LT Vol	497	11	4	0
Through Vol	86	1	9	84
RT Vol	1	250	0	17
Lane Flow Rate	635	285	14	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.905	0.426	0.026	0.171
Departure Headway (Hd)	5.134	5.389	6.587	5.623
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	666	541	637
Service Time	3.161	3.434	4.653	3.669
HCM Lane V/C Ratio	0.901	0.428	0.026	0.173
HCM Control Delay	37.4	12.4	9.8	9.8
HCM Lane LOS	E	B	A	A
HCM 95th-tile Q	11.8	2.1	0.1	0.6

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰	↱	
Traffic Vol, veh/h	7	8	9	565	331	7
Future Vol, veh/h	7	8	9	565	331	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	7	2	2	3	3
Mvmt Flow	8	9	10	614	360	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	998	364	368	0	-	0
Stage 1	364	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Critical Hdwy	6.47	6.27	4.12	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.363	2.218	-	-	-
Pot Cap-1 Maneuver	265	670	1191	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	262	670	1191	-	-	-
Mov Cap-2 Maneuver	262	-	-	-	-	-
Stage 1	683	-	-	-	-	-
Stage 2	519	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.7	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1191	-	388	-	-
HCM Lane V/C Ratio	0.008	-	0.042	-	-
HCM Control Delay (s)	8	0	14.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	53	681	282	75	461	386	201	100	40	342	518	32
Future Volume (veh/h)	53	681	282	75	461	386	201	100	40	342	518	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	55	709	294	78	480	402	209	104	42	356	540	33
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	4	4
Cap, veh/h	85	785	343	98	426	361	232	722	612	362	794	49
Arrive On Green	0.05	0.22	0.22	0.05	0.23	0.23	0.13	0.39	0.39	0.21	0.46	0.46
Sat Flow, veh/h	1781	3554	1551	1781	1870	1585	1781	1870	1585	1753	1717	105
Grp Volume(v), veh/h	55	709	294	78	480	402	209	104	42	356	0	573
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1781	1870	1585	1781	1870	1585	1753	0	1822
Q Serve(g_s), s	4.5	29.1	27.3	6.5	34.2	34.2	17.3	5.4	2.5	30.3	0.0	37.0
Cycle Q Clear(g_c), s	4.5	29.1	27.3	6.5	34.2	34.2	17.3	5.4	2.5	30.3	0.0	37.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	85	785	343	98	426	361	232	722	612	362	0	843
V/C Ratio(X)	0.64	0.90	0.86	0.80	1.13	1.11	0.90	0.14	0.07	0.98	0.00	0.68
Avail Cap(c_a), veh/h	368	806	351	368	426	361	368	722	612	362	0	843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.1	56.9	56.2	70.1	57.9	57.9	64.3	29.9	29.0	59.2	0.0	31.6
Incr Delay (d2), s/veh	3.0	13.9	19.6	5.5	82.6	81.4	11.5	0.4	0.2	42.4	0.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	14.4	12.4	3.1	25.5	21.7	8.5	2.5	1.0	17.4	0.0	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	70.7	75.7	75.6	140.5	139.3	75.7	30.3	29.2	101.6	0.0	36.0
LnGrp LOS	E	E	E	E	F	F	E	C	C	F	A	D
Approach Vol, veh/h		1058			960			355			929	
Approach Delay, s/veh		72.2			134.7			56.9			61.1	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.5	75.1	11.2	40.2	35.0	63.6	12.2	39.1
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	31.0	34.3	31.0	34.0
Max Q Clear Time (g_c+I1), s	19.3	39.0	6.5	36.2	32.3	7.4	8.5	31.1
Green Ext Time (p_c), s	0.2	0.0	0.1	0.0	0.0	0.6	0.1	2.0

Intersection Summary	
HCM 6th Ctrl Delay	85.6
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↱		↰	↑	↱
Traffic Vol, veh/h	26	10	20	30	8	43	7	195	19	135	762	54
Future Vol, veh/h	26	10	20	30	8	43	7	195	19	135	762	54
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	3	3	3	1	1	1
Mvmt Flow	28	11	22	33	9	47	8	212	21	147	828	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1391	1371	828	1407	1420	225	887	0	0	233	0	0
Stage 1	1122	1122	-	239	239	-	-	-	-	-	-	-
Stage 2	269	249	-	1168	1181	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.13	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.227	-	-	2.209	-	-
Pot Cap-1 Maneuver	121	147	374	118	138	819	759	-	-	1340	-	-
Stage 1	252	284	-	769	711	-	-	-	-	-	-	-
Stage 2	741	704	-	238	266	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	98	129	374	95	121	817	759	-	-	1340	-	-
Mov Cap-2 Maneuver	98	129	-	95	121	-	-	-	-	-	-	-
Stage 1	249	253	-	761	703	-	-	-	-	-	-	-
Stage 2	681	696	-	191	237	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	48.6	40.6	0.3	1.1
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	759	-	-	141	186	1340	-	-
HCM Lane V/C Ratio	0.01	-	-	0.432	0.473	0.11	-	-
HCM Control Delay (s)	9.8	-	-	48.6	40.6	8	-	-
HCM Lane LOS	A	-	-	E	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.9	2.3	0.4	-	-

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	21	271	106	96	308	38	156	150	66	93	632	80
Future Volume (veh/h)	21	271	106	96	308	38	156	150	66	93	632	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	23	295	115	104	335	41	170	163	72	101	687	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	28	416	158	129	417	351	197	1014	859	126	939	795
Arrive On Green	0.02	0.17	0.17	0.07	0.22	0.22	0.11	0.54	0.54	0.07	0.50	0.50
Sat Flow, veh/h	1795	2514	954	1795	1885	1587	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	23	208	202	104	335	41	170	163	72	101	687	87
Grp Sat Flow(s),veh/h/ln	1795	1791	1677	1795	1885	1587	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	1.5	13.2	13.7	6.8	20.2	2.5	11.2	5.3	2.6	6.7	34.5	3.5
Cycle Q Clear(g_c), s	1.5	13.2	13.7	6.8	20.2	2.5	11.2	5.3	2.6	6.7	34.5	3.5
Prop In Lane	1.00		0.57	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	28	296	277	129	417	351	197	1014	859	126	939	795
V/C Ratio(X)	0.81	0.70	0.73	0.81	0.80	0.12	0.86	0.16	0.08	0.80	0.73	0.11
Avail Cap(c_a), veh/h	239	518	485	239	545	459	239	1014	859	239	939	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	47.3	47.5	54.9	44.2	37.3	52.5	14.0	13.4	55.0	23.8	16.0
Incr Delay (d2), s/veh	18.0	4.7	5.7	4.4	6.1	0.1	20.1	0.3	0.2	4.5	5.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.1	6.0	3.2	9.8	1.0	6.0	2.2	0.9	3.1	15.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	52.0	53.2	59.3	50.3	37.5	72.6	14.4	13.6	59.4	28.8	16.3
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	C	B
Approach Vol, veh/h		433			480			405			875	
Approach Delay, s/veh		53.9			51.2			38.7			31.1	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	65.0	5.9	31.9	12.4	69.8	12.6	25.1
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	16.0	34.7	16.0	34.7	16.0	34.7	16.0	34.7
Max Q Clear Time (g_c+I1), s	13.2	36.5	3.5	22.2	8.7	7.3	8.8	15.7
Green Ext Time (p_c), s	0.1	0.0	0.0	1.3	0.1	1.2	0.1	3.2

Intersection Summary	
HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
21: Fowler Avenue & SR-168 WB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	137	0	33	539	454	0	0	449	533
Future Volume (veh/h)	0	0	0	137	0	33	539	454	0	0	449	533
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1885	0	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				140	0	34	550	463	0	0	458	544
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				1	0	1	1	1	0	0	1	1
Cap, veh/h				186	0	166	618	2741	0	0	951	848
Arrive On Green				0.10	0.00	0.10	0.30	1.00	0.00	0.00	0.53	0.53
Sat Flow, veh/h				1795	0	1598	3483	3676	0	0	1885	1598
Grp Volume(v), veh/h				140	0	34	550	463	0	0	458	544
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1742	1791	0	0	1791	1598
Q Serve(g_s), s				7.6	0.0	1.9	15.1	0.0	0.0	0.0	16.1	24.2
Cycle Q Clear(g_c), s				7.6	0.0	1.9	15.1	0.0	0.0	0.0	16.1	24.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				186	0	166	618	2741	0	0	951	848
V/C Ratio(X)				0.75	0.00	0.21	0.89	0.17	0.00	0.00	0.48	0.64
Avail Cap(c_a), veh/h				429	0	382	801	2741	0	0	951	848
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.6	0.0	41.0	34.3	0.0	0.0	0.0	14.8	16.7
Incr Delay (d2), s/veh				12.2	0.0	1.3	7.9	0.1	0.0	0.0	1.7	3.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	0.0	0.8	5.9	0.0	0.0	0.0	6.3	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				55.7	0.0	42.3	42.1	0.1	0.0	0.0	16.5	20.4
LnGrp LOS				E	A	D	D	A	A	A	B	C
Approach Vol, veh/h					174			1013			1002	
Approach Delay, s/veh					53.1			22.9			18.6	
Approach LOS					D			C			B	

Timer - Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		83.3			23.4	59.9		16.7
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3
Max Green Setting (Gmax), s		63.0			* 23	34.3		23.9
Max Q Clear Time (g_c+I1), s		2.0			17.1	26.2		9.6
Green Ext Time (p_c), s		5.6			0.6	5.6		0.9

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
22: Fowler Avenue & SR-168 EB Ramps

Shepherd

Cumulative Year (2046) NP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	150	0	384	0	0	0	0	843	101	15	571	0
Future Volume (veh/h)	150	0	384	0	0	0	0	843	101	15	571	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1856				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	158	0	404				0	887	106	16	601	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	3				0	1	1	2	2	0
Cap, veh/h	954	0	438				0	1652	197	38	2106	0
Arrive On Green	0.28	0.00	0.28				0.00	0.51	0.51	0.03	0.79	0.00
Sat Flow, veh/h	3428	0	1572				0	3308	384	1781	3647	0
Grp Volume(v), veh/h	158	0	404				0	494	499	16	601	0
Grp Sat Flow(s),veh/h/ln	1714	0	1572				0	1791	1806	1781	1777	0
Q Serve(g_s), s	3.5	0.0	24.9				0.0	18.5	18.5	0.9	4.6	0.0
Cycle Q Clear(g_c), s	3.5	0.0	24.9				0.0	18.5	18.5	0.9	4.6	0.0
Prop In Lane	1.00		1.00				0.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	954	0	438				0	921	929	38	2106	0
V/C Ratio(X)	0.17	0.00	0.92				0.00	0.54	0.54	0.42	0.29	0.00
Avail Cap(c_a), veh/h	998	0	458				0	921	929	285	2106	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.79	0.79	0.00
Uniform Delay (d), s/veh	27.3	0.0	35.0				0.0	16.3	16.3	48.0	4.8	0.0
Incr Delay (d2), s/veh	0.2	0.0	25.0				0.0	2.2	2.2	2.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	12.2				0.0	7.4	7.4	0.4	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	0.0	60.0				0.0	18.5	18.5	50.1	5.1	0.0
LnGrp LOS	C	A	E				A	B	B	D	A	A
Approach Vol, veh/h		562						993			617	
Approach Delay, s/veh		50.9						18.5			6.2	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.9	58.2		33.9		66.1
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 16	36.3		29.1		58.0
Max Q Clear Time (g_c+I1), s	2.9	20.5		26.9		6.6
Green Ext Time (p_c), s	0.0	9.9		0.9		7.6

Intersection Summary		
HCM 6th Ctrl Delay		23.4
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
1: Willow Avenue & Behymer Avenue

Shepherd

Cumulative Year (2046) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	13	121	134	128	142	50	179	764	180	114	665	13
Future Volume (veh/h)	13	121	134	128	142	50	179	764	180	114	665	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	14	132	146	139	154	54	195	830	196	124	723	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	1	1	0	0	0	1	1	1
Cap, veh/h	44	216	183	163	225	79	197	2848	884	148	2689	815
Arrive On Green	0.02	0.11	0.11	0.09	0.17	0.17	0.11	0.55	0.55	0.08	0.52	0.52
Sat Flow, veh/h	1810	1900	1610	1795	1333	468	1810	5187	1610	1795	5147	1560
Grp Volume(v), veh/h	14	132	146	139	0	208	195	830	196	124	723	14
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	0	1801	1810	1729	1610	1795	1716	1560
Q Serve(g_s), s	1.0	8.9	11.9	10.3	0.0	14.7	14.5	11.6	8.4	9.2	10.5	0.6
Cycle Q Clear(g_c), s	1.0	8.9	11.9	10.3	0.0	14.7	14.5	11.6	8.4	9.2	10.5	0.6
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	216	183	163	0	304	197	2848	884	148	2689	815
V/C Ratio(X)	0.32	0.61	0.80	0.85	0.00	0.68	0.99	0.29	0.22	0.84	0.27	0.02
Avail Cap(c_a), veh/h	185	612	519	205	0	580	197	2848	884	196	2689	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.44	0.44	0.44	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	57.0	58.3	60.5	0.0	52.7	60.1	16.3	15.6	61.1	17.9	15.5
Incr Delay (d2), s/veh	1.5	3.3	9.1	19.9	0.0	6.0	39.6	0.1	0.3	16.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.4	5.3	5.5	0.0	7.1	8.6	4.3	3.1	4.8	4.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.3	60.3	67.4	80.3	0.0	58.7	99.7	16.5	15.9	77.8	18.1	15.6
LnGrp LOS	E	E	E	F	A	E	F	B	B	E	B	B
Approach Vol, veh/h		292			347			1221			861	
Approach Delay, s/veh		64.1			67.4			29.7			26.7	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	76.2	9.5	29.3	16.4	79.8	16.9	21.9
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	14.7	39.3	13.8	43.5	14.7	39.3	15.4	43.5
Max Q Clear Time (g_c+I1), s	16.5	12.5	3.0	16.7	11.2	13.6	12.3	13.9
Green Ext Time (p_c), s	0.0	10.6	0.0	2.2	0.0	13.8	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	265	676	387	353	596	297	293	1451	488	308	1051	207
Future Volume (veh/h)	265	676	387	353	596	297	293	1451	488	308	1051	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	282	719	412	376	634	316	312	1544	519	328	1118	220
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	333	1048	467	421	1169	521	361	1605	498	376	1618	495
Arrive On Green	0.09	0.29	0.29	0.12	0.32	0.32	0.10	0.31	0.31	0.11	0.31	0.31
Sat Flow, veh/h	3510	3610	1610	3510	3610	1609	3510	5187	1609	3483	5147	1574
Grp Volume(v), veh/h	282	719	412	376	634	316	312	1544	519	328	1118	220
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1609	1755	1729	1609	1742	1716	1574
Q Serve(g_s), s	11.5	25.6	35.4	15.3	20.9	24.0	12.7	42.4	44.9	13.4	27.6	16.1
Cycle Q Clear(g_c), s	11.5	25.6	35.4	15.3	20.9	24.0	12.7	42.4	44.9	13.4	27.6	16.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	1048	467	421	1169	521	361	1605	498	376	1618	495
V/C Ratio(X)	0.85	0.69	0.88	0.89	0.54	0.61	0.86	0.96	1.04	0.87	0.69	0.44
Avail Cap(c_a), veh/h	470	1090	486	441	1169	521	453	1605	498	449	1618	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	64.6	45.6	49.1	62.9	40.2	41.3	64.0	49.2	50.1	63.7	43.5	39.6
Incr Delay (d2), s/veh	7.2	2.5	18.2	2.2	0.1	0.2	11.4	15.1	52.0	12.4	2.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	11.7	16.3	6.8	9.0	9.4	6.1	19.9	24.8	6.5	11.7	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.8	48.1	67.2	65.1	40.3	41.5	75.4	64.4	102.0	76.1	45.8	42.3
LnGrp LOS	E	D	E	E	D	D	E	E	F	E	D	D
Approach Vol, veh/h		1413			1326			2375			1666	
Approach Delay, s/veh		58.4			47.6			74.0			51.3	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	51.3	19.3	53.1	22.0	50.6	24.2	48.3
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	14.7	29.6	13.5	26.0	15.4	46.9	17.3	37.4
Green Ext Time (p_c), s	0.2	7.9	0.3	6.4	0.2	0.0	0.1	4.7

Intersection Summary			
HCM 6th Ctrl Delay			60.0
HCM 6th LOS			E

Intersection	
Intersection Delay, s/veh	253.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	7	370	101	18	216	160	149	430	28	203	254	3
Future Vol, veh/h	7	370	101	18	216	160	149	430	28	203	254	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	1	1	1
Mvmt Flow	8	402	110	20	235	174	162	467	30	221	276	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	222.3	131.1	386.4	215.1
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	1%	5%	44%
Vol Thru, %	71%	77%	55%	55%
Vol Right, %	5%	21%	41%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	607	478	394	460
LT Vol	149	7	18	203
Through Vol	430	370	216	254
RT Vol	28	101	160	3
Lane Flow Rate	660	520	428	500
Geometry Grp	1	1	1	1
Degree of Util (X)	1.766	1.37	1.114	1.347
Departure Headway (Hd)	12.302	13.219	14.225	13.783
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	303	281	261	270
Service Time	10.302	11.219	12.225	11.783
HCM Lane V/C Ratio	2.178	1.851	1.64	1.852
HCM Control Delay	386.4	222.3	131.1	215.1
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	33.8	19.7	12.2	18.5

AGENDA ITEM NO. 6.

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

Shepherd

Cumulative Year (2046) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	144	933	218	80	854	211	313	681	108	159	504	108
Future Volume (veh/h)	144	933	218	80	854	211	313	681	108	159	504	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	155	1003	234	86	918	227	337	732	116	171	542	116
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	181	1008	450	146	497	421	290	705	598	197	608	515
Arrive On Green	0.10	0.28	0.28	0.08	0.26	0.26	0.16	0.37	0.37	0.11	0.32	0.32
Sat Flow, veh/h	1795	3582	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	155	1003	234	86	918	227	337	732	116	171	542	116
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	11.0	36.3	16.0	6.0	34.0	15.8	21.0	48.6	6.4	12.2	35.6	6.9
Cycle Q Clear(g_c), s	11.0	36.3	16.0	6.0	34.0	15.8	21.0	48.6	6.4	12.2	35.6	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	1008	450	146	497	421	290	705	598	197	608	515
V/C Ratio(X)	0.86	0.99	0.52	0.59	1.85	0.54	1.16	1.04	0.19	0.87	0.89	0.23
Avail Cap(c_a), veh/h	290	1008	450	292	497	421	290	705	598	290	608	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	46.6	39.3	57.7	48.0	41.3	54.5	40.7	27.5	56.9	41.9	32.2
Incr Delay (d2), s/veh	4.3	19.5	0.8	1.4	389.1	2.0	104.1	44.1	0.7	12.2	17.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	18.2	6.2	2.7	69.1	6.3	17.6	30.1	2.5	6.1	18.9	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	66.1	40.1	59.1	437.1	43.3	158.6	84.8	28.2	69.1	59.8	33.2
LnGrp LOS	E	E	D	E	F	D	F	F	C	E	E	C
Approach Vol, veh/h		1392			1231			1185			829	
Approach Delay, s/veh		61.3			338.0			100.3			58.0	
Approach LOS		E			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	47.9	17.1	40.0	18.3	54.6	14.5	42.6
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	13.0	37.6	13.0	36.0	14.2	50.6	8.0	38.3
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	144.1
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
5: Clovis Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	191	763	163	234	833	147	222	676	277	136	273	161
Future Volume (veh/h)	191	763	163	234	833	147	222	676	277	136	273	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	201	803	172	246	877	155	234	712	292	143	287	169
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	254	859	382	300	912	407	258	1215	542	612	1330	593
Arrive On Green	0.07	0.24	0.24	0.09	0.25	0.25	0.14	0.34	0.34	0.17	0.37	0.37
Sat Flow, veh/h	3483	3582	1594	3510	3610	1610	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	201	803	172	246	877	155	234	712	292	143	287	169
Grp Sat Flow(s),veh/h/ln	1742	1791	1594	1755	1805	1610	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	7.9	30.7	12.9	9.6	33.6	11.1	17.8	22.8	20.6	4.9	7.6	10.4
Cycle Q Clear(g_c), s	7.9	30.7	12.9	9.6	33.6	11.1	17.8	22.8	20.6	4.9	7.6	10.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	859	382	300	912	407	258	1215	542	612	1330	593
V/C Ratio(X)	0.79	0.93	0.45	0.82	0.96	0.38	0.91	0.59	0.54	0.23	0.22	0.28
Avail Cap(c_a), veh/h	607	870	387	612	912	407	315	1215	542	612	1330	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	52.1	45.3	62.9	51.7	43.3	59.1	38.4	37.6	49.8	30.3	31.2
Incr Delay (d2), s/veh	2.1	17.0	1.2	2.1	21.2	0.9	20.8	1.8	3.3	0.9	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	15.4	5.1	4.3	17.3	4.4	9.5	10.2	8.3	2.2	3.3	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.9	69.1	46.6	65.1	72.9	44.1	79.9	40.2	40.9	50.6	30.7	32.4
LnGrp LOS	E	E	D	E	E	D	E	D	D	D	C	C
Approach Vol, veh/h		1176			1278			1238			599	
Approach Delay, s/veh		65.3			67.9			47.9			36.0	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.6	57.3	15.8	41.4	30.0	52.8	17.6	39.6
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	24.4	34.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	19.8	12.4	9.9	35.6	6.9	24.8	11.6	32.7
Green Ext Time (p_c), s	0.1	6.2	0.3	0.0	0.2	6.0	0.3	0.8

Intersection Summary	
HCM 6th Ctrl Delay	56.9
HCM 6th LOS	E

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	154	108	165	1110	581	73
Future Volume (veh/h)	154	108	165	1110	581	73
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1900	1900
Adj Flow Rate, veh/h	167	117	179	1207	632	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	0	0
Cap, veh/h	212	189	169	2729	2241	1000
Arrive On Green	0.12	0.12	0.09	0.76	0.62	0.62
Sat Flow, veh/h	1795	1598	1795	3676	3705	1610
Grp Volume(v), veh/h	167	117	179	1207	632	79
Grp Sat Flow(s),veh/h/ln	1795	1598	1795	1791	1805	1610
Q Serve(g_s), s	7.7	5.9	8.0	10.3	6.8	1.7
Cycle Q Clear(g_c), s	7.7	5.9	8.0	10.3	6.8	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	212	189	169	2729	2241	1000
V/C Ratio(X)	0.79	0.62	1.06	0.44	0.28	0.08
Avail Cap(c_a), veh/h	530	472	169	2729	2241	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.90	0.90
Uniform Delay (d), s/veh	36.4	35.7	38.5	3.6	7.4	6.4
Incr Delay (d2), s/veh	2.5	1.2	85.8	0.5	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	2.3	7.4	2.1	2.2	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.9	36.9	124.3	4.2	7.7	6.6
LnGrp LOS	D	D	F	A	A	A
Approach Vol, veh/h	284			1386	711	
Approach Delay, s/veh	38.1			19.7	7.6	
Approach LOS	D			B	A	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.0	58.1				70.1		14.9
Change Period (Y+Rc), s	4.0	5.3				5.3		4.9
Max Green Setting (Gmax), s	8.0	37.7				49.7		25.1
Max Q Clear Time (g_c+I1), s	10.0	8.8				12.3		9.7
Green Ext Time (p_c), s	0.0	5.8				13.0		0.4

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	101	590	413	33	469	351	328	833	48	110	535	50
Future Volume (veh/h)	101	590	413	33	469	351	328	833	48	110	535	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	107	628	439	35	499	373	349	886	51	117	569	53
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	0	0	0
Cap, veh/h	130	503	426	83	451	382	368	1748	762	140	1300	565
Arrive On Green	0.07	0.26	0.26	0.05	0.24	0.24	0.21	0.49	0.49	0.08	0.36	0.36
Sat Flow, veh/h	1810	1900	1610	1795	1885	1596	1795	3582	1561	1810	3610	1570
Grp Volume(v), veh/h	107	628	439	35	499	373	349	886	51	117	569	53
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	1885	1596	1795	1791	1561	1810	1805	1570
Q Serve(g_s), s	8.8	39.7	39.7	2.8	35.9	34.8	28.8	25.2	2.6	9.6	18.0	3.4
Cycle Q Clear(g_c), s	8.8	39.7	39.7	2.8	35.9	34.8	28.8	25.2	2.6	9.6	18.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	503	426	83	451	382	368	1748	762	140	1300	565
V/C Ratio(X)	0.83	1.25	1.03	0.42	1.11	0.98	0.95	0.51	0.07	0.84	0.44	0.09
Avail Cap(c_a), veh/h	374	503	426	311	451	382	371	1748	762	314	1300	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.44	0.44	0.44	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.7	55.2	55.1	69.6	57.1	56.7	58.8	26.1	20.3	68.3	36.5	31.8
Incr Delay (d2), s/veh	5.0	127.7	51.5	1.3	74.7	40.1	19.1	0.5	0.1	5.0	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	36.3	21.8	1.3	26.0	17.9	14.7	10.6	1.0	4.6	8.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.7	182.9	106.7	70.9	131.8	96.7	77.9	26.6	20.4	73.3	37.5	32.1
LnGrp LOS	E	F	F	E	F	F	E	C	C	E	D	C
Approach Vol, veh/h		1174			907			1286			739	
Approach Delay, s/veh		144.4			115.0			40.3			42.8	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.8	59.3	14.7	41.2	15.6	78.5	10.9	45.0
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	31.0	34.7	31.0	34.7	26.0	39.7	26.0	39.7
Max Q Clear Time (g_c+I1), s	30.8	20.0	10.8	37.9	11.6	27.2	4.8	41.7
Green Ext Time (p_c), s	0.0	4.5	0.1	0.0	0.1	6.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	87.0
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Shepherd
Cumulative Year (2046) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	23	400	185	38	336	122	261	1130	90	125	831	32
Future Volume (veh/h)	23	400	185	38	336	122	261	1130	90	125	831	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	435	201	41	365	133	284	1228	98	136	903	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	83	479	405	109	506	429	304	1471	117	172	1282	50
Arrive On Green	0.05	0.25	0.25	0.06	0.27	0.27	0.17	0.44	0.44	0.10	0.36	0.36
Sat Flow, veh/h	1795	1885	1596	1795	1885	1598	1810	3381	269	1810	3539	137
Grp Volume(v), veh/h	25	435	201	41	365	133	284	655	671	136	461	477
Grp Sat Flow(s),veh/h/ln	1795	1885	1596	1795	1885	1598	1810	1805	1845	1810	1805	1871
Q Serve(g_s), s	1.7	28.0	13.4	2.7	22.0	8.3	19.4	40.2	40.4	9.2	27.3	27.3
Cycle Q Clear(g_c), s	1.7	28.0	13.4	2.7	22.0	8.3	19.4	40.2	40.4	9.2	27.3	27.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.07
Lane Grp Cap(c), veh/h	83	479	405	109	506	429	304	785	803	172	654	678
V/C Ratio(X)	0.30	0.91	0.50	0.38	0.72	0.31	0.93	0.83	0.84	0.79	0.70	0.70
Avail Cap(c_a), veh/h	158	593	502	158	593	502	304	785	803	232	654	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	57.6	45.2	39.8	56.4	41.5	36.5	51.3	31.3	31.4	55.3	34.1	34.1
Incr Delay (d2), s/veh	0.7	15.0	0.6	0.8	3.7	0.4	34.3	10.1	10.1	6.7	4.8	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	14.6	5.2	1.2	10.4	3.2	11.4	18.7	19.2	4.4	12.4	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.4	60.2	40.4	57.2	45.2	37.0	85.6	41.4	41.5	62.0	39.0	38.8
LnGrp LOS	E	E	D	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		661			539			1610			1074	
Approach Delay, s/veh		54.1			44.1			49.2			41.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	51.0	9.8	39.2	15.9	60.1	11.6	37.4
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	21.0	34.3	11.0	39.3	16.0	39.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	21.4	29.3	3.7	24.0	11.2	42.4	4.7	30.0
Green Ext Time (p_c), s	0.0	2.4	0.0	2.3	0.1	0.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	47.3
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
9: SR-168 WB Ramps & Herndon Avenue

Cumulative Year (2046) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1846	609	0	2287	772	0	0	0	77	0	406
Future Volume (veh/h)	0	1846	609	0	2287	772	0	0	0	77	0	406
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	0	1885
Adj Flow Rate, veh/h	0	1865	615	0	2553	0				78	0	410
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	1	1	0	1	1				1	0	1
Cap, veh/h	0	3321	818	0	3862					664	0	536
Arrive On Green	0.00	0.51	0.51	0.00	0.51	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	6749	1598	0	7541	1598				3483	0	2812
Grp Volume(v), veh/h	0	1865	615	0	2553	0				78	0	410
Grp Sat Flow(s),veh/h/ln	0	1621	1598	0	1885	1598				1742	0	1406
Q Serve(g_s), s	0.0	26.0	40.3	0.0	33.0	0.0				2.4	0.0	18.2
Cycle Q Clear(g_c), s	0.0	26.0	40.3	0.0	33.0	0.0				2.4	0.0	18.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3321	818	0	3862					664	0	536
V/C Ratio(X)	0.00	0.56	0.75	0.00	0.66					0.12	0.00	0.77
Avail Cap(c_a), veh/h	0	3341	823	0	3885					1317	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.84	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.1	25.5	0.0	23.8	0.0				44.2	0.0	50.6
Incr Delay (d2), s/veh	0.0	0.7	6.3	0.0	0.8	0.0				0.2	0.0	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.5	15.8	0.0	14.0	0.0				1.1	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.7	31.8	0.0	24.5	0.0				44.4	0.0	56.2
LnGrp LOS	A	C	C	A	C					D	A	E
Approach Vol, veh/h		2480			2553						488	
Approach Delay, s/veh		25.0			24.5						54.3	
Approach LOS		C			C						D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		74.4		32.5		74.4
Change Period (Y+Rc), s		6.8		7.3		6.8
Max Green Setting (Gmax), s		68.0		49.9		68.0
Max Q Clear Time (g_c+I1), s		42.3		20.2		35.0
Green Ext Time (p_c), s		25.1		4.9		32.6

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	1526	397	0	2271	214	788	0	958	0	0	0
Future Volume (veh/h)	0	1526	397	0	2271	214	788	0	958	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885	1885	0	1885			
Adj Flow Rate, veh/h	0	1573	0	0	2341	221	812	0	988			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	1	1	0	1	1	1	0	1			
Cap, veh/h	0	2930		0	4346	909	1651	0	917			
Arrive On Green	0.00	0.57	0.00	0.00	0.57	0.57	0.33	0.00	0.33			
Sat Flow, veh/h	0	5316	1598	0	7993	1598	5063	0	2812			
Grp Volume(v), veh/h	0	1573	0	0	2341	221	812	0	988			
Grp Sat Flow(s),veh/h/ln	0	1716	1598	0	1527	1598	1688	0	1406			
Q Serve(g_s), s	0.0	24.7	0.0	0.0	24.8	9.0	16.7	0.0	42.4			
Cycle Q Clear(g_c), s	0.0	24.7	0.0	0.0	24.8	9.0	16.7	0.0	42.4			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2930		0	4346	909	1651	0	917			
V/C Ratio(X)	0.00	0.54		0.00	0.54	0.24	0.49	0.00	1.08			
Avail Cap(c_a), veh/h	0	2930		0	4346	909	1651	0	917			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.92	0.00	0.00	0.16	0.16	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	17.4	0.0	0.0	17.4	14.0	35.2	0.0	43.8			
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.1	0.1	1.0	0.0	52.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	9.2	0.0	0.0	8.1	3.1	7.0	0.0	21.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	18.0	0.0	0.0	17.5	14.1	36.2	0.0	96.6			
LnGrp LOS	A	B		A	B	B	D	A	F			
Approach Vol, veh/h		1573			2562			1800				
Approach Delay, s/veh		18.0			17.2			69.4				
Approach LOS		B			B			E				

Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		80.8				80.8		49.2
Change Period (Y+Rc), s		6.8				6.8		6.8
Max Green Setting (Gmax), s		74.0				74.0		42.4
Max Q Clear Time (g_c+I1), s		26.7				26.8		44.4
Green Ext Time (p_c), s		38.1				46.2		0.0

Intersection Summary			
HCM 6th Ctrl Delay			33.2
HCM 6th LOS			C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	635	1499	349	326	1423	208	609	603	320	329	372	453
Future Volume (veh/h)	635	1499	349	326	1423	208	609	603	320	329	372	453
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	661	1561	364	340	1482	217	634	628	333	343	388	472
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	562	1560	484	389	1305	405	673	1148	525	394	1305	703
Arrive On Green	0.16	0.30	0.30	0.11	0.25	0.25	0.19	0.33	0.33	0.11	0.25	0.25
Sat Flow, veh/h	3483	5147	1598	3483	5147	1596	3510	3458	1581	3483	5147	2773
Grp Volume(v), veh/h	661	1561	364	340	1482	217	634	628	333	343	388	472
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1742	1716	1596	1755	1729	1581	1742	1716	1387
Q Serve(g_s), s	25.0	47.0	31.9	14.9	39.3	18.2	27.6	23.0	27.6	15.0	9.4	23.7
Cycle Q Clear(g_c), s	25.0	47.0	31.9	14.9	39.3	18.2	27.6	23.0	27.6	15.0	9.4	23.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	562	1560	484	389	1305	405	673	1148	525	394	1305	703
V/C Ratio(X)	1.18	1.00	0.75	0.87	1.14	0.54	0.94	0.55	0.63	0.87	0.30	0.67
Avail Cap(c_a), veh/h	562	1560	484	562	1305	405	679	1148	525	674	1305	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	54.0	48.7	67.8	57.8	50.0	61.8	42.3	43.8	67.6	46.7	52.0
Incr Delay (d2), s/veh	90.7	17.7	6.4	7.7	70.9	5.0	21.2	1.9	5.7	2.8	0.6	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.0	22.3	13.3	6.9	25.2	7.7	14.1	10.0	11.5	6.7	4.1	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	155.7	71.7	55.1	75.5	128.8	55.0	83.0	44.1	49.5	70.5	47.3	57.1
LnGrp LOS	F	F	E	E	F	D	F	D	D	E	D	E
Approach Vol, veh/h		2586			2039			1595			1203	
Approach Delay, s/veh		90.9			112.1			60.7			57.7	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	45.3	22.5	57.2	22.3	53.0	34.7	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	27.0	41.3	17.0	29.6	16.9	49.0	29.6	25.7
Green Ext Time (p_c), s	0.0	0.0	0.5	2.8	0.4	0.0	0.1	4.1

Intersection Summary	
HCM 6th Ctrl Delay	84.8
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	0	236	234	0	0	0
Future Vol, veh/h	0	236	234	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	257	254	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	254	0	-	0	511	254
Stage 1	-	-	-	-	254	-
Stage 2	-	-	-	-	257	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1323	-	-	-	526	790
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	791	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1323	-	-	-	526	790
Mov Cap-2 Maneuver	-	-	-	-	526	-
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	791	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1323	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

AGENDA ITEM NO. 6.

Intersection	
Intersection Delay, s/veh	949.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	353	772	168	43	866	309	192	286	40	153	157	341
Future Vol, veh/h	353	772	168	43	866	309	192	286	40	153	157	341
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	0	0	0	0	0	0	0	0	0
Mvmt Flow	376	821	179	46	921	329	204	304	43	163	167	363
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	1260.1	1145.2	337.3	454.8
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	27%	4%	24%
Vol Thru, %	55%	60%	71%	24%
Vol Right, %	8%	13%	25%	52%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	518	1293	1218	651
LT Vol	192	353	43	153
Through Vol	286	772	866	157
RT Vol	40	168	309	341
Lane Flow Rate	551	1376	1296	693
Geometry Grp	1	1	1	1
Degree of Util (X)	1.473	3.665	3.402	1.795
Departure Headway (Hd)	37.557	24.747	25.855	32.165
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	105	165	155	125
Service Time	35.557	22.747	23.855	30.165
HCM Lane V/C Ratio	5.248	8.339	8.361	5.544
HCM Control Delay	337.3	1260.1	1145.2	454.8
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	10.6	52.3	45.7	15.9

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	2	1	3	28	3	37	0	336	41	37	189	1
Future Vol, veh/h	2	1	3	28	3	37	0	336	41	37	189	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	9	9	9	0	0	0	0	0	0	1	1	1
Mvmt Flow	2	1	3	30	3	40	0	365	45	40	205	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	695	696	206	676	674	388	206	0	0	410	0	0
Stage 1	286	286	-	388	388	-	-	-	-	-	-	-
Stage 2	409	410	-	288	286	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.1	6.5	6.2	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	348	357	817	370	379	665	1377	-	-	1154	-	-
Stage 1	706	662	-	640	612	-	-	-	-	-	-	-
Stage 2	606	584	-	724	679	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	315	343	817	357	364	665	1377	-	-	1154	-	-
Mov Cap-2 Maneuver	315	343	-	357	364	-	-	-	-	-	-	-
Stage 1	706	636	-	640	612	-	-	-	-	-	-	-
Stage 2	566	584	-	692	653	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.9	13.9	0	1.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1377	-	-	464	478	1154	-	-
HCM Lane V/C Ratio	-	-	-	0.014	0.155	0.035	-	-
HCM Control Delay (s)	0	-	-	12.9	13.9	8.2	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.5	0.1	-	-

Intersection	
Intersection Delay, s/veh	178.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✥	
Traffic Vol, veh/h	54	494	140	50	483	28	227	259	54	20	157	29
Future Vol, veh/h	54	494	140	50	483	28	227	259	54	20	157	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	1	1	1
Mvmt Flow	59	537	152	54	525	30	247	282	59	22	171	32
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	3
HCM Control Delay	65.5	283.3	265.1	42.2
HCM LOS	F	F	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	47%	0%	100%	0%	0%	100%	0%	10%
Vol Thru, %	53%	0%	0%	100%	54%	0%	95%	76%
Vol Right, %	0%	100%	0%	0%	46%	0%	5%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	486	54	54	329	305	50	511	206
LT Vol	227	0	54	0	0	50	0	20
Through Vol	259	0	0	329	165	0	483	157
RT Vol	0	54	0	0	140	0	28	29
Lane Flow Rate	528	59	59	358	331	54	555	224
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	1.551	0.157	0.166	0.965	0.863	0.164	1.591	0.687
Departure Headway (Hd)	12.001	11.012	12.698	12.161	11.816	12.422	11.842	13.847
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	306	328	285	301	311	291	311	264
Service Time	9.701	8.712	10.398	9.861	9.516	10.122	9.542	11.547
HCM Lane V/C Ratio	1.725	0.18	0.207	1.189	1.064	0.186	1.785	0.848
HCM Control Delay	292.8	15.8	17.9	80.1	58.1	17.5	309.3	42.2
HCM Lane LOS	F	C	C	F	F	C	F	E
HCM 95th-tile Q	27.1	0.5	0.6	9.7	7.7	0.6	28.8	4.5

AGENDA ITEM NO. 6.

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	8	4	233	4	5	1	199	90	3	1	71	5
Future Vol, veh/h	8	4	233	4	5	1	199	90	3	1	71	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	9	4	253	4	5	1	216	98	3	1	77	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	8.4	11.2	8.6
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	68%	3%	40%	1%
Vol Thru, %	31%	2%	50%	92%
Vol Right, %	1%	95%	10%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	292	245	10	77
LT Vol	199	8	4	1
Through Vol	90	4	5	71
RT Vol	3	233	1	5
Lane Flow Rate	317	266	11	84
Geometry Grp	1	1	1	1
Degree of Util (X)	0.418	0.32	0.016	0.114
Departure Headway (Hd)	4.746	4.321	5.221	4.901
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	755	831	681	726
Service Time	2.798	2.358	3.285	2.964
HCM Lane V/C Ratio	0.42	0.32	0.016	0.116
HCM Control Delay	11.2	9.4	8.4	8.6
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.1	1.4	0	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↰↑	↑↱	
Traffic Vol, veh/h	3	6	9	286	300	2
Future Vol, veh/h	3	6	9	286	300	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	3	7	10	311	326	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	658	327	328	0	-	0
Stage 1	327	-	-	-	-	-
Stage 2	331	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	432	719	1243	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	732	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	428	719	1243	-	-	-
Mov Cap-2 Maneuver	428	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1243	-	586	-	-
HCM Lane V/C Ratio	0.008	-	0.017	-	-
HCM Control Delay (s)	7.9	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	54	598	169	72	665	282	279	370	108	155	230	38
Future Volume (veh/h)	54	598	169	72	665	282	279	370	108	155	230	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	57	629	178	76	700	297	294	389	114	163	242	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	87	794	354	96	427	362	316	923	782	186	659	109
Arrive On Green	0.05	0.22	0.22	0.05	0.23	0.23	0.18	0.49	0.49	0.10	0.42	0.42
Sat Flow, veh/h	1795	3582	1598	1795	1885	1598	1795	1885	1597	1795	1577	261
Grp Volume(v), veh/h	57	629	178	76	700	297	294	389	114	163	0	282
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1795	1885	1598	1795	1885	1597	1795	0	1838
Q Serve(g_s), s	4.7	24.9	14.6	6.3	34.0	26.5	24.2	19.9	5.9	13.4	0.0	15.8
Cycle Q Clear(g_c), s	4.7	24.9	14.6	6.3	34.0	26.5	24.2	19.9	5.9	13.4	0.0	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	87	794	354	96	427	362	316	923	782	186	0	768
V/C Ratio(X)	0.66	0.79	0.50	0.79	1.64	0.82	0.93	0.42	0.15	0.87	0.00	0.37
Avail Cap(c_a), veh/h	371	812	362	371	427	362	371	923	782	371	0	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.1	55.1	51.1	70.2	58.0	55.1	60.9	24.6	21.0	66.2	0.0	30.0
Incr Delay (d2), s/veh	3.1	5.9	2.1	5.5	297.6	15.0	25.8	1.4	0.4	5.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	11.7	6.0	3.0	51.0	12.0	13.1	9.0	2.3	6.3	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.3	61.0	53.2	75.7	355.6	70.1	86.7	26.0	21.4	71.2	0.0	31.4
LnGrp LOS	E	E	D	E	F	E	F	C	C	E	A	C
Approach Vol, veh/h		864			1073			797			445	
Approach Delay, s/veh		60.2			256.8			47.7			46.0	
Approach LOS		E			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.4	68.3	11.3	40.0	19.6	79.2	12.0	39.3
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	31.0	34.3	31.0	34.0
Max Q Clear Time (g_c+I1), s	26.2	17.8	6.7	36.0	15.4	21.9	8.3	26.9
Green Ext Time (p_c), s	0.2	1.3	0.1	0.0	0.2	2.0	0.1	3.8

Intersection Summary	
HCM 6th Ctrl Delay	121.4
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↱		↰	↑	↱
Traffic Vol, veh/h	53	3	14	18	28	105	24	666	22	23	411	42
Future Vol, veh/h	53	3	14	18	28	105	24	666	22	23	411	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	9	9	9	4	4	4	1	1	1	2	2	2
Mvmt Flow	55	3	15	19	29	109	25	694	23	24	428	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1301	1243	428	1263	1276	706	472	0	0	717	0	0
Stage 1	476	476	-	756	756	-	-	-	-	-	-	-
Stage 2	825	767	-	507	520	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.14	6.54	6.24	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.536	4.036	3.336	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	133	169	612	145	165	432	1095	-	-	884	-	-
Stage 1	557	545	-	397	413	-	-	-	-	-	-	-
Stage 2	357	401	-	544	529	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	82	161	612	134	157	432	1095	-	-	884	-	-
Mov Cap-2 Maneuver	82	161	-	134	157	-	-	-	-	-	-	-
Stage 1	544	530	-	388	404	-	-	-	-	-	-	-
Stage 2	242	392	-	514	515	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	100.5	34.9	0.3	0.4
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1095	-	-	102	272	884	-	-
HCM Lane V/C Ratio	0.023	-	-	0.715	0.578	0.027	-	-
HCM Control Delay (s)	8.4	-	-	100.5	34.9	9.2	-	-
HCM Lane LOS	A	-	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.7	3.3	0.1	-	-

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	73	348	142	57	369	102	166	504	65	58	323	61
Future Volume (veh/h)	73	348	142	57	369	102	166	504	65	58	323	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	79	378	154	62	401	111	180	548	71	63	351	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	3	3	3
Cap, veh/h	101	619	249	80	443	376	208	958	812	81	813	689
Arrive On Green	0.06	0.25	0.25	0.04	0.24	0.24	0.12	0.51	0.51	0.05	0.44	0.44
Sat Flow, veh/h	1810	2514	1010	1795	1885	1598	1795	1885	1598	1767	1856	1572
Grp Volume(v), veh/h	79	270	262	62	401	111	180	548	71	63	351	66
Grp Sat Flow(s),veh/h/ln	1810	1805	1718	1795	1885	1598	1795	1885	1598	1767	1856	1572
Q Serve(g_s), s	5.2	15.9	16.3	4.1	24.8	6.9	11.8	24.2	2.7	4.2	15.7	3.0
Cycle Q Clear(g_c), s	5.2	15.9	16.3	4.1	24.8	6.9	11.8	24.2	2.7	4.2	15.7	3.0
Prop In Lane	1.00		0.59	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	445	423	80	443	376	208	958	812	81	813	689
V/C Ratio(X)	0.78	0.61	0.62	0.77	0.90	0.30	0.87	0.57	0.09	0.78	0.43	0.10
Avail Cap(c_a), veh/h	271	522	497	269	545	462	269	958	812	265	813	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	40.1	40.2	56.7	44.6	37.7	52.2	20.5	15.2	56.6	23.3	19.8
Incr Delay (d2), s/veh	4.9	2.3	2.6	5.8	15.9	0.4	17.1	2.5	0.2	5.9	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	7.1	7.0	1.9	13.1	2.7	6.2	10.6	1.0	2.0	6.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	42.3	42.8	62.5	60.5	38.1	69.3	23.0	15.4	62.5	25.0	20.0
LnGrp LOS	E	D	D	E	E	D	E	C	B	E	C	C
Approach Vol, veh/h		611			574			799			480	
Approach Delay, s/veh		44.9			56.4			32.7			29.3	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	57.9	10.7	33.5	9.5	66.3	9.4	34.9
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	18.0	30.7	18.0	34.7	18.0	30.7	18.0	34.7
Max Q Clear Time (g_c+I1), s	13.8	17.7	7.2	26.8	6.2	26.2	6.1	18.3
Green Ext Time (p_c), s	0.1	1.9	0.1	1.4	0.0	1.6	0.0	4.1

Intersection Summary			
HCM 6th Ctrl Delay			40.6
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
21: Fowler Avenue & SR-168 WB Ramps

Shepherd
Cumulative Year (2046) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	171	0	18	464	832	0	0	488	240
Future Volume (veh/h)	0	0	0	171	0	18	464	832	0	0	488	240
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	0	1856	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				180	0	19	488	876	0	0	514	253
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	0	3	1	1	0	0	1	1
Cap, veh/h				226	0	201	554	2655	0	0	1223	600
Arrive On Green				0.13	0.00	0.13	0.32	1.00	0.00	0.00	0.53	0.53
Sat Flow, veh/h				1767	0	1572	3483	3676	0	0	2423	1142
Grp Volume(v), veh/h				180	0	19	488	876	0	0	395	372
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1742	1791	0	0	1791	1680
Q Serve(g_s), s				9.9	0.0	1.1	13.3	0.0	0.0	0.0	13.4	13.5
Cycle Q Clear(g_c), s				9.9	0.0	1.1	13.3	0.0	0.0	0.0	13.4	13.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.68
Lane Grp Cap(c), veh/h				226	0	201	554	2655	0	0	940	882
V/C Ratio(X)				0.80	0.00	0.09	0.88	0.33	0.00	0.00	0.42	0.42
Avail Cap(c_a), veh/h				422	0	376	801	2655	0	0	940	882
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.70	0.70	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				42.3	0.0	38.5	33.2	0.0	0.0	0.0	14.5	14.5
Incr Delay (d2), s/veh				12.7	0.0	0.4	4.4	0.2	0.0	0.0	1.4	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.0	0.0	0.4	4.7	0.1	0.0	0.0	5.2	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				55.0	0.0	38.9	37.6	0.2	0.0	0.0	15.8	16.0
LnGrp LOS				E	A	D	D	A	A	A	B	B
Approach Vol, veh/h					199			1364			767	
Approach Delay, s/veh					53.5			13.6			15.9	
Approach LOS					D			B			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		80.9			21.6	59.3		19.1				
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3				
Max Green Setting (Gmax), s		63.0			* 23	34.3		23.9				
Max Q Clear Time (g_c+I1), s		2.0			15.3	15.5		11.9				
Green Ext Time (p_c), s		12.9			0.6	8.1		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			17.8									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

AGENDA ITEM NO. 6.

HCM 6th Signalized Intersection Summary
22: Fowler Avenue & SR-168 EB Ramps

Shepherd

Cumulative Year (2046) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	353	0	635	0	0	0	0	943	311	29	629	0
Future Volume (veh/h)	353	0	635	0	0	0	0	943	311	29	629	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	368	0	661				0	982	324	30	655	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	1	1	2	2	0
Cap, veh/h	1006	0	461				0	1296	425	60	2061	0
Arrive On Green	0.29	0.00	0.29				0.00	0.49	0.49	0.05	0.77	0.00
Sat Flow, veh/h	3456	0	1585				0	2745	869	1781	3647	0
Grp Volume(v), veh/h	368	0	661				0	661	645	30	655	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1791	1729	1781	1777	0
Q Serve(g_s), s	8.5	0.0	29.1				0.0	29.9	30.4	1.6	5.6	0.0
Cycle Q Clear(g_c), s	8.5	0.0	29.1				0.0	29.9	30.4	1.6	5.6	0.0
Prop In Lane	1.00		1.00				0.00		0.50	1.00		0.00
Lane Grp Cap(c), veh/h	1006	0	461				0	876	846	60	2061	0
V/C Ratio(X)	0.37	0.00	1.43				0.00	0.76	0.76	0.50	0.32	0.00
Avail Cap(c_a), veh/h	1006	0	461				0	876	846	285	2061	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	28.1	0.0	35.4				0.0	20.7	20.8	46.9	5.4	0.0
Incr Delay (d2), s/veh	0.5	0.0	207.0				0.0	6.0	6.4	2.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	37.3				0.0	12.6	12.4	0.7	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	0.0	242.5				0.0	26.7	27.3	48.9	5.8	0.0
LnGrp LOS	C	A	F				A	C	C	D	A	A
Approach Vol, veh/h		1029						1306			685	
Approach Delay, s/veh		166.0						27.0			7.7	
Approach LOS		F						C			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.1	55.7		35.2		64.8
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 16	36.3		29.1		58.0
Max Q Clear Time (g_c+I1), s	3.6	32.4		31.1		7.6
Green Ext Time (p_c), s	0.0	3.5		0.0		8.5

Intersection Summary	
HCM 6th Ctrl Delay	70.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑	↱			↱
Traffic Vol, veh/h	0	965	1218	0	0	0
Future Vol, veh/h	0	965	1218	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	0	0	0	0
Mvmt Flow	0	1049	1324	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1324	0	-	0	-	1324
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.11	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.209	-	-	-	-	3.3
Pot Cap-1 Maneuver	525	-	-	-	0	193
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	525	-	-	-	-	193
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	525	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	14	0	0	0	0	13
Future Vol, veh/h	14	0	0	0	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	2	2	2	0
Mvmt Flow	15	0	0	0	0	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	31	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	30	-
Critical Hdwy	4.1	-	-	-	6.42	6.2
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.2	-	-	-	3.518	3.3
Pot Cap-1 Maneuver	1635	-	-	-	983	1090
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	993	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1635	-	-	-	974	1090
Mov Cap-2 Maneuver	-	-	-	-	974	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	993	-

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	8.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1635	-	-	-	1090
HCM Lane V/C Ratio	0.009	-	-	-	0.013
HCM Control Delay (s)	7.2	0	-	-	8.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 6th Signalized Intersection Summary
1: Willow Avenue & Behymer Avenue

Shepherd

Cumulative Year (2046) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	72	157	250	99	365	171	137	811	20	59	808	79
Future Volume (veh/h)	72	157	250	99	365	171	137	811	20	59	808	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	78	171	272	108	397	186	149	882	22	64	878	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	1	1	1
Cap, veh/h	100	591	501	131	385	180	173	2003	622	97	1796	541
Arrive On Green	0.06	0.32	0.32	0.07	0.32	0.32	0.10	0.39	0.39	0.05	0.35	0.35
Sat Flow, veh/h	1781	1870	1585	1767	1195	560	1781	5106	1585	1795	5147	1550
Grp Volume(v), veh/h	78	171	272	108	0	583	149	882	22	64	878	86
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1767	0	1755	1781	1702	1585	1795	1716	1550
Q Serve(g_s), s	5.8	9.3	19.1	8.1	0.0	43.5	11.1	17.1	1.2	4.7	18.1	5.2
Cycle Q Clear(g_c), s	5.8	9.3	19.1	8.1	0.0	43.5	11.1	17.1	1.2	4.7	18.1	5.2
Prop In Lane	1.00		1.00	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	591	501	131	0	565	173	2003	622	97	1796	541
V/C Ratio(X)	0.78	0.29	0.54	0.82	0.00	1.03	0.86	0.44	0.04	0.66	0.49	0.16
Avail Cap(c_a), veh/h	182	603	511	202	0	565	194	2003	622	196	1796	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	34.8	38.1	61.6	0.0	45.8	60.1	30.1	25.3	62.7	34.5	30.3
Incr Delay (d2), s/veh	4.9	0.3	1.3	8.5	0.0	46.1	23.1	0.6	0.1	2.9	1.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.2	7.5	3.9	0.0	25.6	6.0	6.9	0.4	2.2	7.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	35.1	39.4	70.1	0.0	91.8	83.1	30.7	25.4	65.5	35.4	30.9
LnGrp LOS	E	D	D	E	A	F	F	C	C	E	D	C
Approach Vol, veh/h		521			691			1053			1028	
Approach Delay, s/veh		42.3			88.4			38.0			36.9	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	52.8	13.8	50.0	12.6	58.7	14.6	49.2
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	14.7	39.3	13.8	43.5	14.7	39.3	15.4	43.5
Max Q Clear Time (g_c+I1), s	13.1	20.1	7.8	45.5	6.7	19.1	10.1	21.1
Green Ext Time (p_c), s	0.0	11.1	0.0	0.0	0.0	11.0	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	48.9
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
2: Willow Avenue & Shepherd Avenue

Shepherd I

Cumulative Year (2046) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	112	419	286	311	645	254	390	916	321	263	1334	211
Future Volume (veh/h)	112	419	286	311	645	254	390	916	321	263	1334	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	122	455	311	338	701	276	424	996	349	286	1450	229
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	1	1	1
Cap, veh/h	189	868	387	384	1092	487	442	1900	589	335	1762	537
Arrive On Green	0.05	0.24	0.24	0.11	0.31	0.31	0.13	0.38	0.38	0.10	0.34	0.34
Sat Flow, veh/h	3456	3554	1585	3428	3526	1571	3428	5066	1571	3483	5147	1569
Grp Volume(v), veh/h	122	455	311	338	701	276	424	996	349	286	1450	229
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1714	1763	1571	1714	1689	1571	1742	1716	1569
Q Serve(g_s), s	5.0	16.1	26.8	14.1	24.8	21.3	17.8	22.2	25.9	11.7	37.4	16.3
Cycle Q Clear(g_c), s	5.0	16.1	26.8	14.1	24.8	21.3	17.8	22.2	25.9	11.7	37.4	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	868	387	384	1092	487	442	1900	589	335	1762	537
V/C Ratio(X)	0.64	0.52	0.80	0.88	0.64	0.57	0.96	0.52	0.59	0.85	0.82	0.43
Avail Cap(c_a), veh/h	462	1073	479	430	1092	487	442	1900	589	449	1762	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	67.1	47.5	51.5	63.4	43.1	41.9	62.8	35.2	36.4	64.5	43.6	36.7
Incr Delay (d2), s/veh	1.4	1.2	11.1	1.8	0.1	0.2	32.1	1.0	4.3	7.7	3.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.2	11.7	6.1	10.5	8.2	9.5	9.0	10.5	5.4	15.9	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	48.7	62.6	65.2	43.3	42.1	94.9	36.3	40.7	72.2	47.4	38.8
LnGrp LOS	E	D	E	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		888			1315			1769			1965	
Approach Delay, s/veh		56.3			48.7			51.2			50.0	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	55.4	13.5	51.1	20.3	60.1	23.0	41.6
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	19.8	39.4	7.0	26.8	13.7	27.9	16.1	28.8
Green Ext Time (p_c), s	0.0	0.0	0.1	6.6	0.2	9.1	0.2	6.5

Intersection Summary	
HCM 6th Ctrl Delay	51.0
HCM 6th LOS	D

HCM 6th AWSC
3: Minnewawa Avenue & Behymer Avenue

Shepherd I

Cumulative Year (2046) WP - AM Peak Hour

Intersection	
Intersection Delay, s/veh	460.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	3	133	96	43	526	380	115	269	12	166	589	8
Future Vol, veh/h	3	133	96	43	526	380	115	269	12	166	589	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	4	4	4	4	4	4	2	2	2
Mvmt Flow	3	145	104	47	572	413	125	292	13	180	640	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	51.1	676.2	118.6	493.6
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	1%	5%	22%
Vol Thru, %	68%	57%	55%	77%
Vol Right, %	3%	41%	40%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	396	232	949	763
LT Vol	115	3	43	166
Through Vol	269	133	526	589
RT Vol	12	96	380	8
Lane Flow Rate	430	252	1032	829
Geometry Grp	1	1	1	1
Degree of Util (X)	1.047	0.659	2.431	2.008
Departure Headway (Hd)	16.423	18.374	11.016	12.814
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	224	199	340	290
Service Time	14.423	16.374	9.016	10.814
HCM Lane V/C Ratio	1.92	1.266	3.035	2.859
HCM Control Delay	118.6	51.1	676.2	493.6
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	9.9	3.9	63.2	40.6

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	88	699	364	152	754	140	218	310	92	331	892	123
Future Volume (veh/h)	88	699	364	152	754	140	218	310	92	331	892	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	760	396	165	820	152	237	337	100	360	970	134
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	147	937	412	191	533	452	262	590	493	288	617	523
Arrive On Green	0.08	0.26	0.26	0.11	0.29	0.29	0.15	0.32	0.32	0.16	0.33	0.33
Sat Flow, veh/h	1795	3582	1573	1767	1856	1572	1781	1870	1564	1781	1870	1585
Grp Volume(v), veh/h	96	760	396	165	820	152	237	337	100	360	970	134
Grp Sat Flow(s),veh/h/ln	1795	1791	1573	1767	1856	1572	1781	1870	1564	1781	1870	1585
Q Serve(g_s), s	6.7	25.9	32.3	11.9	37.4	9.9	17.0	19.6	6.1	21.0	42.9	8.0
Cycle Q Clear(g_c), s	6.7	25.9	32.3	11.9	37.4	9.9	17.0	19.6	6.1	21.0	42.9	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	937	412	191	533	452	262	590	493	288	617	523
V/C Ratio(X)	0.65	0.81	0.96	0.87	1.54	0.34	0.91	0.57	0.20	1.25	1.57	0.26
Avail Cap(c_a), veh/h	290	937	412	285	533	452	288	590	493	288	617	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.9	45.0	47.4	57.1	46.3	36.5	54.6	37.2	32.6	54.5	43.6	31.9
Incr Delay (d2), s/veh	1.4	4.4	29.2	11.5	251.3	0.7	27.3	4.0	0.9	138.4	265.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	11.6	15.4	5.8	53.6	3.8	9.4	9.4	2.4	20.2	64.5	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	49.4	76.6	68.5	297.6	37.3	81.8	41.2	33.5	192.9	308.6	33.1
LnGrp LOS	E	D	E	E	F	D	F	D	C	F	F	C
Approach Vol, veh/h		1252			1137			674			1464	
Approach Delay, s/veh		58.7			229.5			54.3			255.0	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.1	48.9	14.7	43.4	25.0	47.0	18.0	40.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	19.0	44.9	8.7	39.4	23.0	21.6	13.9	34.3
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.0	1.8	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	164.4
HCM 6th LOS	F

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	110	716	210	317	675	166	117	197	173	159	597	286
Future Volume (veh/h)	110	716	210	317	675	166	117	197	173	159	597	286
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	120	778	228	345	734	180	127	214	188	173	649	311
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	2	2	2	7	7	7	5	5	5
Cap, veh/h	243	841	370	281	886	395	149	1338	597	419	1489	664
Arrive On Green	0.07	0.24	0.24	0.08	0.25	0.25	0.09	0.39	0.39	0.12	0.43	0.43
Sat Flow, veh/h	3428	3526	1552	3456	3554	1585	1711	3413	1522	3374	3469	1546
Grp Volume(v), veh/h	120	778	228	345	734	180	127	214	188	173	649	311
Grp Sat Flow(s),veh/h/ln	1714	1763	1552	1728	1777	1585	1711	1706	1522	1687	1735	1546
Q Serve(g_s), s	4.7	30.2	18.4	11.4	27.4	13.5	10.2	5.7	12.0	6.6	18.4	20.1
Cycle Q Clear(g_c), s	4.7	30.2	18.4	11.4	27.4	13.5	10.2	5.7	12.0	6.6	18.4	20.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	841	370	281	886	395	149	1338	597	419	1489	664
V/C Ratio(X)	0.49	0.93	0.62	1.23	0.83	0.46	0.85	0.16	0.31	0.41	0.44	0.47
Avail Cap(c_a), veh/h	279	856	377	281	886	395	213	1338	597	419	1489	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	52.1	47.6	64.3	49.7	44.5	63.0	27.6	29.5	56.6	28.1	28.6
Incr Delay (d2), s/veh	0.6	15.8	3.5	129.1	6.9	1.2	14.4	0.3	1.4	3.0	0.9	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	14.7	7.3	9.9	12.6	5.3	5.0	2.3	4.5	3.0	7.6	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	67.8	51.1	193.4	56.6	45.7	77.3	27.8	30.9	59.6	29.0	30.9
LnGrp LOS	E	E	D	F	E	D	E	C	C	E	C	C
Approach Vol, veh/h		1126			1259			529			1133	
Approach Delay, s/veh		64.0			92.5			40.8			34.2	
Approach LOS		E			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	65.8	15.5	40.9	23.0	60.6	17.0	39.4
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	17.4	54.3	11.4	34.0	17.4	54.3	11.4	34.0
Max Q Clear Time (g_c+I1), s	12.2	22.1	6.7	29.4	8.6	14.0	13.4	32.2
Green Ext Time (p_c), s	0.1	17.0	0.1	2.6	0.2	4.4	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	61.5
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
6: Clovis Avenue & Teague Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	85	234	283	456	980	301
Future Volume (veh/h)	85	234	283	456	980	301
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	254	308	496	1065	327
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	2	2	2	2
Cap, veh/h	329	293	251	2476	1807	765
Arrive On Green	0.18	0.18	0.14	0.70	0.51	0.51
Sat Flow, veh/h	1795	1598	1781	3647	3647	1505
Grp Volume(v), veh/h	92	254	308	496	1065	327
Grp Sat Flow(s),veh/h/ln	1795	1598	1781	1777	1777	1505
Q Serve(g_s), s	3.7	13.1	12.0	4.2	17.9	11.6
Cycle Q Clear(g_c), s	3.7	13.1	12.0	4.2	17.9	11.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	329	293	251	2476	1807	765
V/C Ratio(X)	0.28	0.87	1.22	0.20	0.59	0.43
Avail Cap(c_a), veh/h	594	528	251	2476	1807	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.67	0.67
Uniform Delay (d), s/veh	29.9	33.7	36.5	4.5	14.7	13.1
Incr Delay (d2), s/veh	0.2	3.1	131.2	0.2	1.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.1	14.1	1.1	6.3	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.0	36.8	167.7	4.7	15.6	14.3
LnGrp LOS	C	D	F	A	B	B
Approach Vol, veh/h	346			804	1392	
Approach Delay, s/veh	35.0			67.2	15.3	
Approach LOS	C			E	B	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	48.5				64.5		20.5
Change Period (Y+Rc), s	4.0	5.3				5.3		4.9
Max Green Setting (Gmax), s	12.0	30.7				46.7		28.1
Max Q Clear Time (g_c+I1), s	14.0	19.9				6.2		15.1
Green Ext Time (p_c), s	0.0	6.9				4.2		0.5

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	71	400	358	69	471	233	161	467	21	115	852	136
Future Volume (veh/h)	71	400	358	69	471	233	161	467	21	115	852	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	77	435	389	75	512	253	175	508	23	125	926	148
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	2	2	2
Cap, veh/h	103	481	406	103	484	405	198	1689	723	147	1597	696
Arrive On Green	0.06	0.26	0.26	0.06	0.26	0.26	0.11	0.48	0.48	0.08	0.45	0.45
Sat Flow, veh/h	1781	1870	1580	1795	1885	1575	1767	3526	1509	1781	3554	1549
Grp Volume(v), veh/h	77	435	389	75	512	253	175	508	23	125	926	148
Grp Sat Flow(s),veh/h/ln	1781	1870	1580	1795	1885	1575	1767	1763	1509	1781	1777	1549
Q Serve(g_s), s	6.4	33.8	36.4	6.2	38.5	21.3	14.6	13.2	1.2	10.4	29.1	8.7
Cycle Q Clear(g_c), s	6.4	33.8	36.4	6.2	38.5	21.3	14.6	13.2	1.2	10.4	29.1	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	103	481	406	103	484	405	198	1689	723	147	1597	696
V/C Ratio(X)	0.75	0.90	0.96	0.73	1.06	0.62	0.88	0.30	0.03	0.85	0.58	0.21
Avail Cap(c_a), veh/h	392	483	408	323	484	405	412	1689	723	202	1597	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.6	53.9	54.9	69.5	55.7	49.3	65.6	23.8	20.7	67.9	30.8	25.1
Incr Delay (d2), s/veh	4.1	20.7	33.9	3.6	56.7	3.5	4.6	0.4	0.1	16.7	1.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	18.3	18.0	2.9	25.5	8.7	6.7	5.5	0.4	5.3	12.5	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.7	74.6	88.8	73.2	112.4	52.9	70.2	24.2	20.8	84.6	32.3	25.8
LnGrp LOS	E	E	F	E	F	D	E	C	C	F	C	C
Approach Vol, veh/h		901			840			706			1199	
Approach Delay, s/veh		80.7			91.0			35.5			37.0	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.8	72.7	12.6	43.8	16.4	77.1	12.6	43.9
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	25.0	30.7	33.0	32.7	17.0	48.7	27.0	38.7
Max Q Clear Time (g_c+I1), s	16.6	31.1	8.4	40.5	12.4	15.2	8.2	38.4
Green Ext Time (p_c), s	0.2	0.0	0.1	0.0	0.1	5.3	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	59.9
HCM 6th LOS	E

AGENDA ITEM NO. 6.

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Shepherd I

Cumulative Year (2046) WP - AM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	16	292	193	46	419	109	279	523	91	162	1164	63
Future Volume (veh/h)	16	292	193	46	419	109	279	523	91	162	1164	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	17	317	210	50	455	118	303	568	99	176	1265	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	1	1	1
Cap, veh/h	62	435	366	117	502	419	297	1280	222	202	1287	69
Arrive On Green	0.04	0.24	0.24	0.07	0.27	0.27	0.17	0.43	0.43	0.11	0.37	0.37
Sat Flow, veh/h	1739	1826	1536	1781	1870	1562	1767	2989	519	1795	3453	185
Grp Volume(v), veh/h	17	317	210	50	455	118	303	334	333	176	655	678
Grp Sat Flow(s),veh/h/ln	1739	1826	1536	1781	1870	1562	1767	1763	1745	1795	1791	1848
Q Serve(g_s), s	1.2	20.0	15.1	3.4	29.4	7.5	21.0	16.7	16.8	12.1	45.2	45.4
Cycle Q Clear(g_c), s	1.2	20.0	15.1	3.4	29.4	7.5	21.0	16.7	16.8	12.1	45.2	45.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		0.10
Lane Grp Cap(c), veh/h	62	435	366	117	502	419	297	755	747	202	667	689
V/C Ratio(X)	0.27	0.73	0.57	0.43	0.91	0.28	1.02	0.44	0.45	0.87	0.98	0.98
Avail Cap(c_a), veh/h	153	574	483	157	588	491	297	755	747	230	667	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.60	0.60	0.60
Uniform Delay (d), s/veh	58.7	43.9	42.0	56.1	44.2	36.2	52.0	25.2	25.3	54.6	38.8	38.8
Incr Delay (d2), s/veh	0.9	2.6	1.0	0.9	16.3	0.4	57.6	1.9	1.9	16.1	22.9	23.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	9.1	5.7	1.5	15.4	0.0	13.8	7.1	7.1	6.2	23.1	23.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	46.5	43.0	57.0	60.5	36.6	109.6	27.1	27.2	70.7	61.7	61.9
LnGrp LOS	E	D	D	E	E	D	F	C	C	E	E	E
Approach Vol, veh/h		544			623			970			1509	
Approach Delay, s/veh		45.5			55.7			52.9			62.8	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	52.3	8.5	39.3	18.1	59.2	12.2	35.5
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	21.0	34.3	11.0	39.3	16.0	39.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	23.0	47.4	3.2	31.4	14.1	18.8	5.4	22.0
Green Ext Time (p_c), s	0.0	0.0	0.0	2.0	0.0	4.1	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	56.4
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
9: SR-168 WB Ramps & Herndon Avenue

Shepherd I
Cumulative Year (2046) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↱		↑↑↑↱	↱				↰↰		↱↱
Traffic Volume (veh/h)	0	1236	899	0	1704	933	0	0	0	78	0	787
Future Volume (veh/h)	0	1236	899	0	1704	933	0	0	0	78	0	787
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1885	0	1885
Adj Flow Rate, veh/h	0	1315	956	0	1792	0				83	0	837
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	0	2	2				1	0	1
Cap, veh/h	0	4016	989	0	3502					930	0	751
Arrive On Green	0.00	0.62	0.62	0.00	0.62	0.00				0.27	0.00	0.27
Sat Flow, veh/h	0	6696	1585	0	5611	3170				3483	0	2812
Grp Volume(v), veh/h	0	1315	956	0	1792	0				83	0	837
Grp Sat Flow(s),veh/h/ln	0	1609	1585	0	1870	1585				1742	0	1406
Q Serve(g_s), s	0.0	12.5	74.2	0.0	22.9	0.0				2.3	0.0	34.7
Cycle Q Clear(g_c), s	0.0	12.5	74.2	0.0	22.9	0.0				2.3	0.0	34.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4016	989	0	3502					930	0	751
V/C Ratio(X)	0.00	0.33	0.97	0.00	0.51					0.09	0.00	1.12
Avail Cap(c_a), veh/h	0	4019	990	0	3505					930	0	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.86	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.5	23.1	0.0	13.5	0.0				35.8	0.0	47.7
Incr Delay (d2), s/veh	0.0	0.2	21.5	0.0	0.5	0.0				0.1	0.0	69.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	30.1	0.0	8.9	0.0				1.0	0.0	19.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.8	44.7	0.0	13.9	0.0				35.9	0.0	116.9
LnGrp LOS	A	B	D	A	B					D	A	F
Approach Vol, veh/h		2271			1792						920	
Approach Delay, s/veh		25.6			13.9						109.6	
Approach LOS		C			B						F	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	87.9	42.0	87.9
Change Period (Y+Rc), s	6.8	7.3	6.8
Max Green Setting (Gmax), s	81.2	34.7	81.2
Max Q Clear Time (g_c+I1), s	76.2	36.7	24.9
Green Ext Time (p_c), s	4.9	0.0	48.3

Intersection Summary	
HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	1080	234	0	2151	93	486	0	629	0	0	0
Future Volume (veh/h)	0	1080	234	0	2151	93	486	0	629	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1885	1885	1841	0	1841			
Adj Flow Rate, veh/h	0	1174	0	0	2338	101	528	0	684			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	2	0	1	1	4	0	4			
Cap, veh/h	0	2985		0	4464	934	1536	0	853			
Arrive On Green	0.00	0.58	0.00	0.00	0.58	0.58	0.31	0.00	0.31			
Sat Flow, veh/h	0	5274	1585	0	7993	1598	4944	0	2745			
Grp Volume(v), veh/h	0	1174	0	0	2338	101	528	0	684			
Grp Sat Flow(s),veh/h/ln	0	1702	1585	0	1527	1598	1648	0	1373			
Q Serve(g_s), s	0.0	16.1	0.0	0.0	23.8	3.6	10.7	0.0	29.7			
Cycle Q Clear(g_c), s	0.0	16.1	0.0	0.0	23.8	3.6	10.7	0.0	29.7			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2985		0	4464	934	1536	0	853			
V/C Ratio(X)	0.00	0.39		0.00	0.52	0.11	0.34	0.00	0.80			
Avail Cap(c_a), veh/h	0	2985		0	4464	934	1536	0	853			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.96	0.00	0.00	0.50	0.50	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	14.6	0.0	0.0	16.2	12.0	34.6	0.0	41.1			
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.2	0.1	0.6	0.0	7.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	5.9	0.0	0.0	7.8	1.3	4.4	0.0	10.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.9	0.0	0.0	16.4	12.1	35.2	0.0	49.0			
LnGrp LOS	A	B		A	B	B	D	A	D			
Approach Vol, veh/h		1174			2439			1212				
Approach Delay, s/veh		14.9			16.2			43.0				
Approach LOS		B			B			D				

Timer - Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		82.8				82.8		47.2
Change Period (Y+Rc), s		6.8				6.8		6.8
Max Green Setting (Gmax), s		76.0				76.0		40.4
Max Q Clear Time (g_c+I1), s		18.1				25.8		31.7
Green Ext Time (p_c), s		32.7				48.7		5.9

Intersection Summary			
HCM 6th Ctrl Delay			22.6
HCM 6th LOS			C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
11: Clovis Avenue & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	410	936	364	196	1112	186	380	454	158	206	479	752
Future Volume (veh/h)	410	936	364	196	1112	186	380	454	158	206	479	752
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	441	1006	391	211	1196	200	409	488	170	222	515	809
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	1	1	1
Cap, veh/h	486	1974	613	290	1694	526	460	1115	374	315	1305	713
Arrive On Green	0.14	0.39	0.39	0.08	0.33	0.33	0.13	0.30	0.30	0.09	0.25	0.25
Sat Flow, veh/h	3428	5066	1572	3456	5106	1585	3456	3763	1263	3483	5147	2812
Grp Volume(v), veh/h	441	1006	391	211	1196	200	409	440	218	222	515	809
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1728	1702	1585	1728	1702	1622	1742	1716	1406
Q Serve(g_s), s	19.6	23.4	31.3	9.2	31.7	15.0	18.0	16.2	17.0	9.6	12.9	39.3
Cycle Q Clear(g_c), s	19.6	23.4	31.3	9.2	31.7	15.0	18.0	16.2	17.0	9.6	12.9	39.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	486	1974	613	290	1694	526	460	1008	481	315	1305	713
V/C Ratio(X)	0.91	0.51	0.64	0.73	0.71	0.38	0.89	0.44	0.45	0.71	0.39	1.13
Avail Cap(c_a), veh/h	553	1974	613	557	1694	526	669	1008	481	674	1305	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	36.0	38.4	69.3	45.2	39.6	66.1	44.1	44.4	68.5	48.0	57.8
Incr Delay (d2), s/veh	14.3	0.8	4.2	1.3	2.5	2.1	7.8	1.4	3.1	1.1	0.9	77.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	9.6	12.5	4.1	13.5	6.1	8.3	6.9	7.2	4.3	5.6	21.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.8	36.8	42.7	70.6	47.7	41.7	73.9	45.5	47.4	69.6	48.9	135.2
LnGrp LOS	E	D	D	E	D	D	E	D	D	E	D	F
Approach Vol, veh/h		1838			1607			1067			1546	
Approach Delay, s/veh		48.4			50.0			56.8			97.0	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	57.4	19.0	51.6	18.0	66.4	25.6	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	21.6	33.7	11.6	19.0	11.2	33.3	20.0	41.3
Green Ext Time (p_c), s	0.3	3.2	0.3	2.3	0.3	3.5	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	62.7
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		Y	
Traffic Vol, veh/h	0	271	515	0	2	0
Future Vol, veh/h	0	271	515	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	0	0
Mvmt Flow	0	295	560	0	2	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	560	0	-	0	855	560
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	295	-
Critical Hdwy	4.14	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.236	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1001	-	-	-	331	532
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	760	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1001	-	-	-	331	532
Mov Cap-2 Maneuver	-	-	-	-	331	-
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	760	-

Approach	EB		WB		SB	
HCM Control Delay, s	0		0		15.9	
HCM LOS					C	

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1001	-	-	-	331
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	15.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	806.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣		↰	↱			✣			✣	
Traffic Vol, veh/h	222	774	204	69	750	99	115	86	51	332	441	479
Future Vol, veh/h	222	774	204	69	750	99	115	86	51	332	441	479
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	3	3	3	1	1	1	10	10	10	12	12	12
Mvmt Flow	227	790	208	70	765	101	117	88	52	339	450	489
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	959.9	535.8	98	1001
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	46%	18%	100%	0%	27%
Vol Thru, %	34%	65%	0%	88%	35%
Vol Right, %	20%	17%	0%	12%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	252	1200	69	849	1252
LT Vol	115	222	69	0	332
Through Vol	86	774	0	750	441
RT Vol	51	204	0	99	479
Lane Flow Rate	257	1224	70	866	1278
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.695	3.023	0.186	2.144	3.133
Departure Headway (Hd)	36.549	18.98	22.296	21.649	15.679
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	103	208	163	182	243
Service Time	34.549	16.98	19.996	19.349	13.679
HCM Lane V/C Ratio	2.495	5.885	0.429	4.758	5.259
HCM Control Delay	98	959.9	30	576.9	1001
HCM Lane LOS	F	F	D	F	F
HCM 95th-tile Q	3.5	52.1	0.7	28.5	65.3

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	6	4	1	48	6	42	3	108	15	16	516	0
Future Vol, veh/h	6	4	1	48	6	42	3	108	15	16	516	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	10	10	10	7	7	7
Mvmt Flow	7	4	1	52	7	46	3	117	16	17	561	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	753	734	561	729	726	125	561	0	0	133	0	0
Stage 1	595	595	-	131	131	-	-	-	-	-	-	-
Stage 2	158	139	-	598	595	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.2	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.29	-	-	2.263	-	-
Pot Cap-1 Maneuver	329	350	531	341	354	931	971	-	-	1421	-	-
Stage 1	494	496	-	877	792	-	-	-	-	-	-	-
Stage 2	849	785	-	492	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	304	343	531	332	347	931	971	-	-	1421	-	-
Mov Cap-2 Maneuver	304	343	-	332	347	-	-	-	-	-	-	-
Stage 1	493	488	-	874	790	-	-	-	-	-	-	-
Stage 2	798	783	-	478	488	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.3	15	0.2	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	971	-	-	331	464	1421	-	-
HCM Lane V/C Ratio	0.003	-	-	0.036	0.225	0.012	-	-
HCM Control Delay (s)	8.7	0	-	16.3	15	7.6	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.9	0	-	-

Intersection	
Intersection Delay, s/veh	165.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✥	
Traffic Vol, veh/h	18	328	162	52	462	19	152	92	20	43	405	95
Future Vol, veh/h	18	328	162	52	462	19	152	92	20	43	405	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	1	1	1	10	10	10	7	7	7
Mvmt Flow	19	345	171	55	486	20	160	97	21	45	426	100
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	3
HCM Control Delay	36.6	204	48.4	304.8
HCM LOS	E	F	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	62%	0%	100%	0%	0%	100%	0%	8%
Vol Thru, %	38%	0%	0%	100%	40%	0%	96%	75%
Vol Right, %	0%	100%	0%	0%	60%	0%	4%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	244	20	18	219	271	52	481	543
LT Vol	152	0	18	0	0	52	0	43
Through Vol	92	0	0	219	109	0	462	405
RT Vol	0	20	0	0	162	0	19	95
Lane Flow Rate	257	21	19	230	286	55	506	572
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.778	0.057	0.054	0.621	0.737	0.158	1.39	1.587
Departure Headway (Hd)	13.466	12.376	12.672	12.135	11.686	12.142	11.572	10.996
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	272	291	284	299	311	297	319	337
Service Time	11.166	10.076	10.372	9.835	9.386	9.842	9.272	8.696
HCM Lane V/C Ratio	0.945	0.072	0.067	0.769	0.92	0.185	1.586	1.697
HCM Control Delay	51.1	15.8	16.1	32.8	41.1	17.1	224.2	304.8
HCM Lane LOS	F	C	C	D	E	C	F	F
HCM 95th-tile Q	5.9	0.2	0.2	3.9	5.5	0.6	22.4	30.4

AGENDA ITEM NO. 6.

Intersection	
Intersection Delay, s/veh	27.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	11	1	251	4	9	0	500	86	1	0	84	17
Future Vol, veh/h	11	1	251	4	9	0	500	86	1	0	84	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	4	4	4	4	4	4	2	2	2	3	3	3
Mvmt Flow	12	1	273	4	10	0	543	93	1	0	91	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.5	9.9	38.3	9.9
HCM LOS	B	A	E	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	85%	4%	31%	0%
Vol Thru, %	15%	0%	69%	83%
Vol Right, %	0%	95%	0%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	587	263	13	101
LT Vol	500	11	4	0
Through Vol	86	1	9	84
RT Vol	1	251	0	17
Lane Flow Rate	638	286	14	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.911	0.429	0.026	0.172
Departure Headway (Hd)	5.141	5.4	6.604	5.635
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	708	666	540	636
Service Time	3.169	3.447	4.672	3.683
HCM Lane V/C Ratio	0.901	0.429	0.026	0.173
HCM Control Delay	38.3	12.5	9.9	9.9
HCM Lane LOS	E	B	A	A
HCM 95th-tile Q	12	2.2	0.1	0.6

17: Fowler Avenue & Ticonderoga

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Traffic Vol, veh/h	10	24	9	565	331	8
Future Vol, veh/h	10	24	9	565	331	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	7	2	2	3	3
Mvmt Flow	11	26	10	614	360	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	999	365	369	0	-	0
Stage 1	365	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Critical Hdwy	6.47	6.27	4.12	-	-	-
Critical Hdwy Stg 1	5.47	-	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-	-
Follow-up Hdwy	3.563	3.363	2.218	-	-	-
Pot Cap-1 Maneuver	264	669	1190	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	261	669	1190	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	682	-	-	-	-	-
Stage 2	519	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1190	-	458	-	-
HCM Lane V/C Ratio	0.008	-	0.081	-	-
HCM Control Delay (s)	8.1	0	13.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

HCM 6th Signalized Intersection Summary
18: Fowler Avenue & Shepherd Avenue

Shepherd

Cumulative Year (2046) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑↱	
Traffic Volume (veh/h)	53	703	282	75	469	386	217	100	40	342	534	32
Future Volume (veh/h)	53	703	282	75	469	386	217	100	40	342	534	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	55	732	294	78	489	402	226	104	42	356	556	33
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	4	4
Cap, veh/h	85	794	347	98	431	365	249	717	608	362	775	46
Arrive On Green	0.05	0.22	0.22	0.05	0.23	0.23	0.14	0.38	0.38	0.21	0.45	0.45
Sat Flow, veh/h	1781	3554	1551	1781	1870	1585	1781	1870	1585	1753	1720	102
Grp Volume(v), veh/h	55	732	294	78	489	402	226	104	42	356	0	589
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1781	1870	1585	1781	1870	1585	1753	0	1822
Q Serve(g_s), s	4.5	30.2	27.2	6.5	34.6	34.6	18.8	5.4	2.5	30.3	0.0	39.4
Cycle Q Clear(g_c), s	4.5	30.2	27.2	6.5	34.6	34.6	18.8	5.4	2.5	30.3	0.0	39.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	85	794	347	98	431	365	249	717	608	362	0	821
V/C Ratio(X)	0.64	0.92	0.85	0.80	1.13	1.10	0.91	0.14	0.07	0.98	0.00	0.72
Avail Cap(c_a), veh/h	368	806	351	368	431	365	368	717	608	362	0	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.1	57.0	55.8	70.1	57.7	57.7	63.6	30.2	29.3	59.2	0.0	33.5
Incr Delay (d2), s/veh	3.0	16.3	18.4	5.5	85.5	77.0	15.1	0.4	0.2	42.4	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	15.2	12.3	3.1	26.1	21.4	9.4	2.5	1.0	17.4	0.0	18.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	73.2	74.2	75.6	143.2	134.7	78.7	30.6	29.5	101.6	0.0	38.8
LnGrp LOS	E	E	E	E	F	F	E	C	C	F	A	D
Approach Vol, veh/h		1081			969			372			945	
Approach Delay, s/veh		73.5			134.2			59.7			62.5	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	73.3	11.2	40.6	35.0	63.2	12.2	39.5
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	31.0	34.3	31.0	34.0
Max Q Clear Time (g_c+I1), s	20.8	41.4	6.5	36.6	32.3	7.4	8.5	32.2
Green Ext Time (p_c), s	0.2	0.0	0.1	0.0	0.0	0.6	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	86.3
HCM 6th LOS	F

19: Fowler Avenue & Teague Avenue

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↱		↰	↑	↱
Traffic Vol, veh/h	26	10	20	30	8	43	7	211	19	135	778	54
Future Vol, veh/h	26	10	20	30	8	43	7	211	19	135	778	54
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	3	3	3	1	1	1
Mvmt Flow	28	11	22	33	9	47	8	229	21	147	846	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1426	1406	846	1442	1455	242	905	0	0	250	0	0
Stage 1	1140	1140	-	256	256	-	-	-	-	-	-	-
Stage 2	286	266	-	1186	1199	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.13	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.227	-	-	2.209	-	-
Pot Cap-1 Maneuver	114	140	365	111	131	802	747	-	-	1321	-	-
Stage 1	247	278	-	753	699	-	-	-	-	-	-	-
Stage 2	726	692	-	232	261	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	92	123	365	88	115	800	747	-	-	1321	-	-
Mov Cap-2 Maneuver	92	123	-	88	115	-	-	-	-	-	-	-
Stage 1	244	247	-	745	691	-	-	-	-	-	-	-
Stage 2	666	684	-	185	232	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	52.5	45.2	0.3	1.1
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	747	-	-	134	174	1321	-	-
HCM Lane V/C Ratio	0.01	-	-	0.454	0.506	0.111	-	-
HCM Control Delay (s)	9.9	-	-	52.5	45.2	8.1	-	-
HCM Lane LOS	A	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2	2.5	0.4	-	-

HCM 6th Signalized Intersection Summary
20: Fowler Avenue & Nees Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	21	271	106	96	308	39	156	165	66	96	645	80
Future Volume (veh/h)	21	271	106	96	308	39	156	165	66	96	645	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	23	295	115	104	335	42	170	179	72	104	701	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	28	416	158	129	417	351	197	1010	856	129	939	795
Arrive On Green	0.02	0.17	0.17	0.07	0.22	0.22	0.11	0.54	0.54	0.07	0.50	0.50
Sat Flow, veh/h	1795	2514	954	1795	1885	1587	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	23	208	202	104	335	42	170	179	72	104	701	87
Grp Sat Flow(s),veh/h/ln	1795	1791	1677	1795	1885	1587	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	1.5	13.2	13.7	6.8	20.2	2.5	11.2	5.8	2.6	6.8	35.7	3.5
Cycle Q Clear(g_c), s	1.5	13.2	13.7	6.8	20.2	2.5	11.2	5.8	2.6	6.8	35.7	3.5
Prop In Lane	1.00		0.57	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	28	296	277	129	417	351	197	1010	856	129	939	795
V/C Ratio(X)	0.81	0.70	0.73	0.81	0.80	0.12	0.86	0.18	0.08	0.81	0.75	0.11
Avail Cap(c_a), veh/h	239	518	485	239	545	459	239	1010	856	239	939	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	47.3	47.5	54.9	44.2	37.4	52.5	14.3	13.5	54.9	24.1	16.0
Incr Delay (d2), s/veh	18.0	4.7	5.7	4.4	6.1	0.1	20.1	0.4	0.2	4.4	5.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.1	6.0	3.2	9.8	1.0	6.0	2.5	0.9	3.2	15.9	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	52.0	53.2	59.3	50.3	37.5	72.6	14.7	13.7	59.3	29.5	16.3
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	C	B
Approach Vol, veh/h		433			481			421			892	
Approach Delay, s/veh		53.9			51.1			37.9			31.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	65.0	5.9	31.9	12.6	69.6	12.6	25.1
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	16.0	34.7	16.0	34.7	16.0	34.7	16.0	34.7
Max Q Clear Time (g_c+I1), s	13.2	37.7	3.5	22.2	8.8	7.8	8.8	15.7
Green Ext Time (p_c), s	0.1	0.0	0.0	1.3	0.1	1.3	0.1	3.2

Intersection Summary	
HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	137	0	33	539	469	0	0	462	533
Future Volume (veh/h)	0	0	0	137	0	33	539	469	0	0	462	533
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1885	0	1885	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				140	0	34	550	479	0	0	471	544
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				1	0	1	1	1	0	0	1	1
Cap, veh/h				186	0	166	614	2741	0	0	952	850
Arrive On Green				0.10	0.00	0.10	0.29	1.00	0.00	0.00	0.53	0.53
Sat Flow, veh/h				1795	0	1598	3483	3676	0	0	1885	1598
Grp Volume(v), veh/h				140	0	34	550	479	0	0	471	544
Grp Sat Flow(s),veh/h/ln				1795	0	1598	1742	1791	0	0	1791	1598
Q Serve(g_s), s				7.6	0.0	1.9	15.1	0.0	0.0	0.0	16.7	24.2
Cycle Q Clear(g_c), s				7.6	0.0	1.9	15.1	0.0	0.0	0.0	16.7	24.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				186	0	166	614	2741	0	0	952	850
V/C Ratio(X)				0.75	0.00	0.21	0.90	0.17	0.00	0.00	0.49	0.64
Avail Cap(c_a), veh/h				429	0	382	742	2741	0	0	952	850
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.6	0.0	41.0	34.4	0.0	0.0	0.0	14.9	16.6
Incr Delay (d2), s/veh				12.2	0.0	1.3	9.9	0.1	0.0	0.0	1.8	3.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	0.0	0.8	6.1	0.0	0.0	0.0	6.5	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				55.7	0.0	42.3	44.2	0.1	0.0	0.0	16.7	20.3
LnGrp LOS				E	A	D	D	A	A	A	B	C
Approach Vol, veh/h					174			1029			1015	
Approach Delay, s/veh					53.1			23.7			18.6	
Approach LOS					D			C			B	

Timer - Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		83.3			23.3	60.0		16.7
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3
Max Green Setting (Gmax), s		63.0			* 21	36.0		23.9
Max Q Clear Time (g_c+I1), s		2.0			17.1	26.2		9.6
Green Ext Time (p_c), s		5.8			0.5	6.7		0.9

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
22: Fowler Avenue & SR-168 EB Ramps

Shepherd

Cumulative Year (2046) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	161	0	384	0	0	0	0	847	101	15	584	0
Future Volume (veh/h)	161	0	384	0	0	0	0	847	101	15	584	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1856				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	169	0	404				0	892	106	16	615	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	3				0	1	1	2	2	0
Cap, veh/h	945	0	433				0	1662	198	38	2116	0
Arrive On Green	0.28	0.00	0.28				0.00	0.52	0.52	0.03	0.79	0.00
Sat Flow, veh/h	3428	0	1572				0	3310	382	1781	3647	0
Grp Volume(v), veh/h	169	0	404				0	497	501	16	615	0
Grp Sat Flow(s),veh/h/ln	1714	0	1572				0	1791	1807	1781	1777	0
Q Serve(g_s), s	3.8	0.0	25.0				0.0	18.5	18.5	0.9	4.7	0.0
Cycle Q Clear(g_c), s	3.8	0.0	25.0				0.0	18.5	18.5	0.9	4.7	0.0
Prop In Lane	1.00		1.00				0.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	945	0	433				0	926	934	38	2116	0
V/C Ratio(X)	0.18	0.00	0.93				0.00	0.54	0.54	0.42	0.29	0.00
Avail Cap(c_a), veh/h	967	0	443				0	926	934	285	2116	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.78	0.78	0.00
Uniform Delay (d), s/veh	27.6	0.0	35.3				0.0	16.1	16.1	48.0	4.7	0.0
Incr Delay (d2), s/veh	0.2	0.0	27.3				0.0	2.2	2.2	2.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	12.5				0.0	7.4	7.4	0.4	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	0.0	62.6				0.0	18.4	18.4	50.0	5.0	0.0
LnGrp LOS	C	A	E				A	B	B	D	A	A
Approach Vol, veh/h		573						998			631	
Approach Delay, s/veh		52.4						18.4			6.1	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.9	58.5		33.7		66.3
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 16	37.2		28.2		58.9
Max Q Clear Time (g_c+I1), s	2.9	20.5		27.0		6.7
Green Ext Time (p_c), s	0.0	10.4		0.5		7.9

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱		↱			↰
Traffic Vol, veh/h	19	0	382	7	0	1148
Future Vol, veh/h	19	0	382	7	0	1148
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	9	12	12
Mvmt Flow	21	0	415	8	0	1248

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1667	419	0	0	423	0
Stage 1	419	-	-	-	-	-
Stage 2	1248	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.22	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.308	-
Pot Cap-1 Maneuver	107	638	-	-	1085	-
Stage 1	668	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	107	638	-	-	1085	-
Mov Cap-2 Maneuver	107	-	-	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	273	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	46.5	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	107	1085	-
HCM Lane V/C Ratio	-	-	0.193	-	-
HCM Control Delay (s)	-	-	46.5	0	-
HCM Lane LOS	-	-	E	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0	-

Intersection	
Int Delay, s/veh	7.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	85	0	388	19	0	1167
Future Vol, veh/h	85	0	388	19	0	1167
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	9	12	12
Mvmt Flow	92	0	422	21	0	1268

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1701	433	0	0	443	0
Stage 1	433	-	-	-	-	-
Stage 2	1268	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.22	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.308	-
Pot Cap-1 Maneuver	102	627	-	-	1066	-
Stage 1	658	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	102	627	-	-	1066	-
Mov Cap-2 Maneuver	102	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	267	-	-	-	-	-

Approach	WB		NB		SB	
HCM Control Delay, s	140.9		0		0	
HCM LOS	F					

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	102	1066	-
HCM Lane V/C Ratio	-	-	0.906	-	-
HCM Control Delay (s)	-	-	140.9	0	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	5.3	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑	↑↱			↱
Traffic Vol, veh/h	57	1100	754	16	0	164
Future Vol, veh/h	57	1100	754	16	0	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	62	1196	820	17	0	178

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	837	0	-	0	-	419
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.219	-	-	-	-	3.3
Pot Cap-1 Maneuver	795	-	-	-	0	589
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	795	-	-	-	-	589
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	795	-	-	-	589
HCM Lane V/C Ratio	0.078	-	-	-	0.303
HCM Control Delay (s)	9.9	-	-	-	13.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.3

26: Project Driveway 4/Stanford Avenue & Perrin Road

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	16	0	10	0	0	0	28	19	0	0	1	16
Future Vol, veh/h	16	0	10	0	0	0	28	19	0	0	1	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	7	2	7	2	2	2	0	0	2	2	7	7
Mvmt Flow	17	0	11	0	0	0	30	21	0	0	1	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	11	0	0	50	41	6	51	46	1
Stage 1	-	-	-	-	-	-	40	40	-	1	1	-
Stage 2	-	-	-	-	-	-	10	1	-	50	45	-
Critical Hdwy	4.17	-	-	4.12	-	-	7.1	6.5	6.22	7.12	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.57	-
Follow-up Hdwy	2.263	-	-	2.218	-	-	3.5	4	3.318	3.518	4.063	3.363
Pot Cap-1 Maneuver	1589	-	-	1608	-	-	955	855	1077	948	836	1069
Stage 1	-	-	-	-	-	-	980	866	-	1022	885	-
Stage 2	-	-	-	-	-	-	1016	899	-	963	848	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1589	-	-	1608	-	-	931	846	1077	922	827	1069
Mov Cap-2 Maneuver	-	-	-	-	-	-	931	846	-	922	827	-
Stage 1	-	-	-	-	-	-	969	856	-	1011	885	-
Stage 2	-	-	-	-	-	-	998	899	-	929	839	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.5	0	9.3	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	895	1589	-	-	1608	-	-	1051
HCM Lane V/C Ratio	0.057	0.011	-	-	-	-	-	0.018
HCM Control Delay (s)	9.3	7.3	0	-	0	-	-	8.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary
1: Willow Avenue & Behymer Avenue

Shepherd

Cumulative Year (2046) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↑↑	↱	↰	↑↑↑	↱
Traffic Volume (veh/h)	13	121	134	128	142	52	179	785	180	118	701	13
Future Volume (veh/h)	13	121	134	128	142	52	179	785	180	118	701	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	14	132	146	139	154	57	195	853	196	128	762	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	1	1	0	0	0	1	1	1
Cap, veh/h	44	216	183	163	221	82	184	2836	881	152	2727	827
Arrive On Green	0.02	0.11	0.11	0.09	0.17	0.17	0.10	0.55	0.55	0.08	0.53	0.53
Sat Flow, veh/h	1810	1900	1610	1795	1312	486	1810	5187	1610	1795	5147	1560
Grp Volume(v), veh/h	14	132	146	139	0	211	195	853	196	128	762	14
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	0	1798	1810	1729	1610	1795	1716	1560
Q Serve(g_s), s	1.0	8.9	11.9	10.3	0.0	14.9	13.7	12.0	8.5	9.5	11.0	0.6
Cycle Q Clear(g_c), s	1.0	8.9	11.9	10.3	0.0	14.9	13.7	12.0	8.5	9.5	11.0	0.6
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	216	183	163	0	303	184	2836	881	152	2727	827
V/C Ratio(X)	0.32	0.61	0.80	0.85	0.00	0.70	1.06	0.30	0.22	0.84	0.28	0.02
Avail Cap(c_a), veh/h	185	612	519	205	0	579	184	2836	881	182	2727	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.37	0.37	0.37	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	57.0	58.3	60.5	0.0	52.8	60.7	16.6	15.8	60.9	17.5	15.0
Incr Delay (d2), s/veh	1.5	3.3	9.1	19.9	0.0	6.3	57.8	0.1	0.2	21.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.4	5.3	5.5	0.0	7.2	9.1	4.5	3.1	5.1	4.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.3	60.3	67.4	80.3	0.0	59.1	118.5	16.7	16.0	82.8	17.8	15.1
LnGrp LOS	E	E	E	F	A	E	F	B	B	F	B	B
Approach Vol, veh/h		292			350			1244			904	
Approach Delay, s/veh		64.1			67.6			32.5			26.9	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	77.2	9.5	29.3	16.7	79.5	16.9	21.9
Change Period (Y+Rc), s	5.3	5.7	6.2	6.5	5.3	5.7	4.6	6.5
Max Green Setting (Gmax), s	13.7	40.3	13.8	43.5	13.7	40.3	15.4	43.5
Max Q Clear Time (g_c+I1), s	15.7	13.0	3.0	16.9	11.5	14.0	12.3	13.9
Green Ext Time (p_c), s	0.0	11.3	0.0	2.3	0.0	14.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	38.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
2: Willow Avenue & Shepherd Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	265	719	387	357	621	318	293	1451	495	344	1051	207
Future Volume (veh/h)	265	719	387	357	621	318	293	1451	495	344	1051	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	282	765	412	380	661	338	312	1544	527	366	1118	220
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	333	1051	469	425	1175	524	361	1542	478	412	1609	492
Arrive On Green	0.09	0.29	0.29	0.12	0.33	0.33	0.10	0.30	0.30	0.12	0.31	0.31
Sat Flow, veh/h	3510	3610	1610	3510	3610	1609	3510	5187	1609	3483	5147	1574
Grp Volume(v), veh/h	282	765	412	380	661	338	312	1544	527	366	1118	220
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1609	1755	1729	1609	1742	1716	1574
Q Serve(g_s), s	11.5	27.6	35.3	15.5	21.9	26.0	12.7	43.1	43.1	15.0	27.7	16.2
Cycle Q Clear(g_c), s	11.5	27.6	35.3	15.5	21.9	26.0	12.7	43.1	43.1	15.0	27.7	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	1051	469	425	1175	524	361	1542	478	412	1609	492
V/C Ratio(X)	0.85	0.73	0.88	0.89	0.56	0.65	0.86	1.00	1.10	0.89	0.69	0.45
Avail Cap(c_a), veh/h	470	1090	486	441	1175	524	453	1542	478	449	1609	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	64.6	46.2	49.0	62.8	40.4	41.7	64.0	51.0	51.0	63.0	43.8	39.8
Incr Delay (d2), s/veh	7.2	3.2	17.9	2.3	0.1	0.3	11.4	23.3	72.0	16.0	2.3	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	12.7	16.3	6.9	9.5	10.2	6.1	21.3	26.5	7.4	11.7	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.8	49.4	66.8	65.1	40.4	42.0	75.4	74.2	122.9	79.0	46.1	42.5
LnGrp LOS	E	D	E	E	D	D	E	F	F	E	D	D
Approach Vol, veh/h		1459			1379			2383			1704	
Approach Delay, s/veh		58.7			47.6			85.2			52.7	
Approach LOS		E			D			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.2	51.0	19.3	53.4	23.5	48.8	24.3	48.4				
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2				
Max Green Setting (Gmax), s	18.7	39.3	19.4	43.8	18.7	39.3	18.2	43.8				
Max Q Clear Time (g_c+I1), s	14.7	29.7	13.5	28.0	17.0	45.1	17.5	37.3				
Green Ext Time (p_c), s	0.2	7.9	0.3	6.3	0.1	0.0	0.1	4.9				
Intersection Summary												
HCM 6th Ctrl Delay			64.1									
HCM 6th LOS			E									

Intersection	
Intersection Delay, s/veh	254.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	7	374	101	18	218	160	149	430	28	203	254	3
Future Vol, veh/h	7	374	101	18	218	160	149	430	28	203	254	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	1	1	1
Mvmt Flow	8	407	110	20	237	174	162	467	30	221	276	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	226.8	133.3	386.5	215.3
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	1%	5%	44%
Vol Thru, %	71%	78%	55%	55%
Vol Right, %	5%	21%	40%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	607	482	396	460
LT Vol	149	7	18	203
Through Vol	430	374	218	254
RT Vol	28	101	160	3
Lane Flow Rate	660	524	430	500
Geometry Grp	1	1	1	1
Degree of Util (X)	1.766	1.381	1.12	1.347
Departure Headway (Hd)	12.358	13.246	14.275	13.85
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	303	278	258	265
Service Time	10.358	11.246	12.275	11.85
HCM Lane V/C Ratio	2.178	1.885	1.667	1.887
HCM Control Delay	386.5	226.8	133.3	215.3
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	33.6	20	12.4	18.4

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

AGENDA ITEM NO. 6.

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	144	1022	218	108	907	211	313	681	154	159	504	108
Future Volume (veh/h)	144	1022	218	108	907	211	313	681	154	159	504	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	155	1099	234	116	975	227	337	732	166	171	542	116
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	181	999	446	151	497	421	290	705	598	197	608	515
Arrive On Green	0.10	0.28	0.28	0.08	0.26	0.26	0.16	0.37	0.37	0.11	0.32	0.32
Sat Flow, veh/h	1795	3582	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Grp Volume(v), veh/h	155	1099	234	116	975	227	337	732	166	171	542	116
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1810	1900	1610	1795	1885	1598	1795	1885	1598
Q Serve(g_s), s	11.0	36.3	16.1	8.2	34.0	15.8	21.0	48.6	9.4	12.2	35.6	6.9
Cycle Q Clear(g_c), s	11.0	36.3	16.1	8.2	34.0	15.8	21.0	48.6	9.4	12.2	35.6	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	999	446	151	497	421	290	705	598	197	608	515
V/C Ratio(X)	0.86	1.10	0.52	0.77	1.96	0.54	1.16	1.04	0.28	0.87	0.89	0.23
Avail Cap(c_a), veh/h	290	999	446	292	497	421	290	705	598	290	608	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	46.9	39.6	58.4	48.0	41.3	54.5	40.7	28.4	56.9	41.9	32.2
Incr Delay (d2), s/veh	3.9	53.1	0.8	3.1	440.2	2.0	104.1	44.1	1.2	12.2	17.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	22.8	6.2	3.8	76.2	6.3	17.6	30.1	3.7	6.1	18.9	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	100.0	40.4	61.5	488.2	43.3	158.6	84.8	29.6	69.1	59.8	33.2
LnGrp LOS	E	F	D	E	F	D	F	F	C	E	E	C
Approach Vol, veh/h		1488			1318			1235			829	
Approach Delay, s/veh		86.6			374.0			97.5			58.0	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	47.9	17.1	40.0	18.3	54.6	14.8	42.3
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	34.0	21.0	34.0	21.0	34.0	21.0	34.0
Max Q Clear Time (g_c+I1), s	13.0	37.6	13.0	36.0	14.2	50.6	10.2	38.3
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	162.3
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
5: Clovis Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	191	899	163	287	914	147	222	676	366	136	273	161
Future Volume (veh/h)	191	899	163	287	914	147	222	676	366	136	273	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	201	946	172	302	962	155	234	712	385	143	287	169
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	254	870	387	357	980	437	258	1147	511	612	1261	562
Arrive On Green	0.07	0.24	0.24	0.10	0.27	0.27	0.14	0.32	0.32	0.17	0.35	0.35
Sat Flow, veh/h	3483	3582	1594	3510	3610	1610	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	201	946	172	302	962	155	234	712	385	143	287	169
Grp Sat Flow(s),veh/h/ln	1742	1791	1594	1755	1805	1610	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	7.9	34.0	12.8	11.8	37.0	10.9	17.8	23.5	30.0	4.9	7.9	10.7
Cycle Q Clear(g_c), s	7.9	34.0	12.8	11.8	37.0	10.9	17.8	23.5	30.0	4.9	7.9	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	870	387	357	980	437	258	1147	511	612	1261	562
V/C Ratio(X)	0.79	1.09	0.44	0.85	0.98	0.35	0.91	0.62	0.75	0.23	0.23	0.30
Avail Cap(c_a), veh/h	607	870	387	612	980	437	315	1147	511	612	1261	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	53.0	45.0	61.8	50.6	41.1	59.1	40.6	42.8	49.8	32.2	33.1
Incr Delay (d2), s/veh	2.1	57.1	1.2	2.2	24.2	0.7	20.4	2.2	8.5	0.9	0.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	21.6	5.1	5.2	19.4	4.3	9.5	10.5	12.7	2.2	3.5	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.9	110.1	46.2	64.0	74.9	41.8	79.5	42.8	51.3	50.6	32.6	34.5
LnGrp LOS	E	F	D	E	E	D	E	D	D	D	C	C
Approach Vol, veh/h		1319			1419			1331			599	
Approach Delay, s/veh		95.0			68.9			51.7			37.4	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.6	54.6	15.8	44.0	30.0	50.2	19.8	40.0
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	24.4	34.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	19.8	12.7	9.9	39.0	6.9	32.0	13.8	36.0
Green Ext Time (p_c), s	0.1	6.2	0.3	0.0	0.2	1.8	0.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	67.4
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
6: Clovis Avenue & Teague Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑↑	↑↑	↱
Traffic Volume (veh/h)	161	108	165	1192	630	77
Future Volume (veh/h)	161	108	165	1192	630	77
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1900	1900
Adj Flow Rate, veh/h	175	117	179	1296	685	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	0	0
Cap, veh/h	220	196	148	2713	2267	1011
Arrive On Green	0.12	0.12	0.08	0.76	0.63	0.63
Sat Flow, veh/h	1795	1598	1795	3676	3705	1610
Grp Volume(v), veh/h	175	117	179	1296	685	84
Grp Sat Flow(s),veh/h/ln	1795	1598	1795	1791	1805	1610
Q Serve(g_s), s	8.1	5.9	7.0	11.7	7.4	1.7
Cycle Q Clear(g_c), s	8.1	5.9	7.0	11.7	7.4	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	220	196	148	2713	2267	1011
V/C Ratio(X)	0.80	0.60	1.21	0.48	0.30	0.08
Avail Cap(c_a), veh/h	530	472	148	2713	2267	1011
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.88	0.88
Uniform Delay (d), s/veh	36.3	35.3	39.0	3.9	7.3	6.2
Incr Delay (d2), s/veh	2.5	1.1	141.6	0.6	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	2.2	8.7	2.4	2.3	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.7	36.4	180.6	4.5	7.6	6.3
LnGrp LOS	D	D	F	A	A	A
Approach Vol, veh/h	292			1475	769	
Approach Delay, s/veh	37.8			25.9	7.4	
Approach LOS	D			C	A	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	58.7				69.7	15.3
Change Period (Y+Rc), s	4.0	5.3				5.3	4.9
Max Green Setting (Gmax), s	7.0	38.7				49.7	25.1
Max Q Clear Time (g_c+I1), s	9.0	9.4				13.7	10.1
Green Ext Time (p_c), s	0.0	6.4				14.2	0.4

Intersection Summary			
HCM 6th Ctrl Delay			21.7
HCM 6th LOS			C

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	101	594	413	54	471	351	328	915	48	110	584	50
Future Volume (veh/h)	101	594	413	54	471	351	328	915	48	110	584	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	107	632	439	57	501	373	349	973	51	117	621	53
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	0	0	0
Cap, veh/h	130	503	426	98	467	395	311	1718	749	140	1385	602
Arrive On Green	0.07	0.26	0.26	0.05	0.25	0.25	0.17	0.48	0.48	0.08	0.38	0.38
Sat Flow, veh/h	1810	1900	1610	1795	1885	1596	1795	3582	1561	1810	3610	1570
Grp Volume(v), veh/h	107	632	439	57	501	373	349	973	51	117	621	53
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	1885	1596	1795	1791	1561	1810	1805	1570
Q Serve(g_s), s	8.8	39.7	39.7	4.7	37.1	34.4	26.0	29.1	2.6	9.6	19.2	3.2
Cycle Q Clear(g_c), s	8.8	39.7	39.7	4.7	37.1	34.4	26.0	29.1	2.6	9.6	19.2	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	503	426	98	467	395	311	1718	749	140	1385	602
V/C Ratio(X)	0.83	1.26	1.03	0.58	1.07	0.94	1.12	0.57	0.07	0.84	0.45	0.09
Avail Cap(c_a), veh/h	374	503	426	311	467	395	311	1718	749	314	1385	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.32	0.32	0.32	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.7	55.1	55.1	69.3	56.4	55.4	62.0	27.9	21.0	68.3	34.4	29.5
Incr Delay (d2), s/veh	5.0	131.0	51.5	2.0	62.8	31.6	68.3	0.4	0.1	5.0	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	36.8	21.8	2.2	25.4	17.0	17.5	12.2	1.0	4.6	8.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.7	186.2	106.7	71.3	119.3	87.0	130.3	28.3	21.0	73.3	35.5	29.8
LnGrp LOS	E	F	F	E	F	F	F	C	C	E	D	C
Approach Vol, veh/h		1178			931			1373			791	
Approach Delay, s/veh		146.3			103.4			54.0			40.7	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	62.8	14.7	42.4	15.6	77.3	12.2	45.0
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	26.0	39.7	31.0	34.7	26.0	39.7	26.0	39.7
Max Q Clear Time (g_c+I1), s	28.0	21.2	10.8	39.1	11.6	31.1	6.7	41.7
Green Ext Time (p_c), s	0.0	5.6	0.1	0.0	0.1	5.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	87.7
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Shepherd

Cumulative Year (2046) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	23	404	185	38	338	122	261	1212	90	125	901	32
Future Volume (veh/h)	23	404	185	38	338	122	261	1212	90	125	901	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	439	201	41	367	133	284	1317	98	136	979	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	83	482	408	109	509	432	304	1473	109	172	1279	46
Arrive On Green	0.05	0.26	0.26	0.06	0.27	0.27	0.17	0.43	0.43	0.10	0.36	0.36
Sat Flow, veh/h	1795	1885	1596	1795	1885	1598	1810	3401	252	1810	3552	127
Grp Volume(v), veh/h	25	439	201	41	367	133	284	697	718	136	498	516
Grp Sat Flow(s),veh/h/ln	1795	1885	1596	1795	1885	1598	1810	1805	1848	1810	1805	1874
Q Serve(g_s), s	1.7	28.2	13.4	2.7	22.1	8.3	19.4	44.6	45.0	9.2	30.4	30.4
Cycle Q Clear(g_c), s	1.7	28.2	13.4	2.7	22.1	8.3	19.4	44.6	45.0	9.2	30.4	30.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.07
Lane Grp Cap(c), veh/h	83	482	408	109	509	432	304	782	800	172	650	675
V/C Ratio(X)	0.30	0.91	0.49	0.38	0.72	0.31	0.93	0.89	0.90	0.79	0.77	0.77
Avail Cap(c_a), veh/h	158	593	502	158	593	502	304	782	800	232	650	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	57.6	45.1	39.6	56.4	41.3	36.3	51.3	32.7	32.8	55.3	35.3	35.3
Incr Delay (d2), s/veh	0.7	15.3	0.6	0.8	3.7	0.4	34.3	14.6	14.8	6.7	6.5	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	14.8	5.2	1.2	10.5	3.2	11.4	21.5	22.2	4.4	14.0	14.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.4	60.4	40.2	57.2	45.0	36.7	85.6	47.3	47.7	62.0	41.8	41.6
LnGrp LOS	E	E	D	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		665			541			1699			1150	
Approach Delay, s/veh		54.2			43.9			53.9			44.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	50.7	9.8	39.5	15.9	59.8	11.6	37.7
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	21.0	34.3	11.0	39.3	16.0	39.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	21.4	32.4	3.7	24.1	11.2	47.0	4.7	30.2
Green Ext Time (p_c), s	0.0	1.1	0.0	2.3	0.1	0.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	49.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↱		↑↑↑↱	↱				↰↰		↱↱
Traffic Volume (veh/h)	0	1853	609	0	2291	829	0	0	0	77	0	406
Future Volume (veh/h)	0	1853	609	0	2291	829	0	0	0	77	0	406
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885				1885	0	1885
Adj Flow Rate, veh/h	0	1872	615	0	2624	0				78	0	410
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	1	1	0	1	1				1	0	1
Cap, veh/h	0	3326	819	0	3868					664	0	536
Arrive On Green	0.00	0.51	0.51	0.00	0.51	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	6749	1598	0	7541	1598				3483	0	2812
Grp Volume(v), veh/h	0	1872	615	0	2624	0				78	0	410
Grp Sat Flow(s),veh/h/ln	0	1621	1598	0	1885	1598				1742	0	1406
Q Serve(g_s), s	0.0	26.1	40.2	0.0	34.3	0.0				2.4	0.0	18.2
Cycle Q Clear(g_c), s	0.0	26.1	40.2	0.0	34.3	0.0				2.4	0.0	18.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3326	819	0	3868					664	0	536
V/C Ratio(X)	0.00	0.56	0.75	0.00	0.68					0.12	0.00	0.77
Avail Cap(c_a), veh/h	0	3341	823	0	3885					1317	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.83	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.0	25.5	0.0	24.0	0.0				44.2	0.0	50.6
Incr Delay (d2), s/veh	0.0	0.7	6.3	0.0	0.8	0.0				0.2	0.0	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.5	15.7	0.0	14.6	0.0				1.1	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.7	31.7	0.0	24.8	0.0				44.4	0.0	56.2
LnGrp LOS	A	C	C	A	C					D	A	E
Approach Vol, veh/h		2487			2624						488	
Approach Delay, s/veh		24.9			24.8						54.3	
Approach LOS		C			C						D	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	74.5	32.5	74.5
Change Period (Y+Rc), s	6.8	7.3	6.8
Max Green Setting (Gmax), s	68.0	49.9	68.0
Max Q Clear Time (g_c+I1), s	42.2	20.2	36.3
Green Ext Time (p_c), s	25.2	4.9	31.4

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑↑↑	↱	↰↰↰		↱↱			
Traffic Volume (veh/h)	0	1533	397	0	2332	214	788	0	1019	0	0	0
Future Volume (veh/h)	0	1533	397	0	2332	214	788	0	1019	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1885	1885	0	1885	1885	1885	0	1885			
Adj Flow Rate, veh/h	0	1580	0	0	2404	221	812	0	1051			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	1	1	0	1	1	1	0	1			
Cap, veh/h	0	2930		0	4346	909	1651	0	917			
Arrive On Green	0.00	0.57	0.00	0.00	0.57	0.57	0.33	0.00	0.33			
Sat Flow, veh/h	0	5316	1598	0	7993	1598	5063	0	2812			
Grp Volume(v), veh/h	0	1580	0	0	2404	221	812	0	1051			
Grp Sat Flow(s),veh/h/ln	0	1716	1598	0	1527	1598	1688	0	1406			
Q Serve(g_s), s	0.0	24.8	0.0	0.0	25.7	9.0	16.7	0.0	42.4			
Cycle Q Clear(g_c), s	0.0	24.8	0.0	0.0	25.7	9.0	16.7	0.0	42.4			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2930		0	4346	909	1651	0	917			
V/C Ratio(X)	0.00	0.54		0.00	0.55	0.24	0.49	0.00	1.15			
Avail Cap(c_a), veh/h	0	2930		0	4346	909	1651	0	917			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.92	0.00	0.00	0.17	0.17	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	17.4	0.0	0.0	17.6	14.0	35.2	0.0	43.8			
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.1	0.1	1.0	0.0	78.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	9.3	0.0	0.0	8.4	3.1	7.0	0.0	24.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	18.1	0.0	0.0	17.7	14.1	36.2	0.0	122.4			
LnGrp LOS	A	B		A	B	B	D	A	F			
Approach Vol, veh/h		1580			2625			1863				
Approach Delay, s/veh		18.1			17.4			84.8				
Approach LOS		B			B			F				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		80.8				80.8		49.2				
Change Period (Y+Rc), s		6.8				6.8		6.8				
Max Green Setting (Gmax), s		74.0				74.0		42.4				
Max Q Clear Time (g_c+I1), s		26.8				27.7		44.4				
Green Ext Time (p_c), s		38.1				45.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			38.3									
HCM 6th LOS			D									

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	703	1499	349	326	1423	212	609	614	320	331	378	514
Future Volume (veh/h)	703	1499	349	326	1423	212	609	614	320	331	378	514
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	732	1561	364	340	1482	221	634	640	333	345	394	535
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	562	1560	484	389	1305	405	673	1146	524	396	1305	703
Arrive On Green	0.16	0.30	0.30	0.11	0.25	0.25	0.19	0.33	0.33	0.11	0.25	0.25
Sat Flow, veh/h	3483	5147	1598	3483	5147	1596	3510	3458	1581	3483	5147	2773
Grp Volume(v), veh/h	732	1561	364	340	1482	221	634	640	333	345	394	535
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1742	1716	1596	1755	1729	1581	1742	1716	1387
Q Serve(g_s), s	25.0	47.0	31.9	14.9	39.3	18.6	27.6	23.5	27.6	15.1	9.6	27.7
Cycle Q Clear(g_c), s	25.0	47.0	31.9	14.9	39.3	18.6	27.6	23.5	27.6	15.1	9.6	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	562	1560	484	389	1305	405	673	1146	524	396	1305	703
V/C Ratio(X)	1.30	1.00	0.75	0.87	1.14	0.55	0.94	0.56	0.64	0.87	0.30	0.76
Avail Cap(c_a), veh/h	562	1560	484	562	1305	405	679	1146	524	674	1305	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	54.0	48.7	67.8	57.8	50.1	61.8	42.5	43.9	67.6	46.8	53.5
Incr Delay (d2), s/veh	143.5	17.0	5.9	7.7	70.9	5.2	21.2	2.0	5.8	3.0	0.6	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.1	22.2	13.2	6.9	25.2	7.9	14.1	10.2	11.5	6.8	4.1	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	208.5	71.0	54.6	75.5	128.8	55.3	83.0	44.5	49.7	70.6	47.4	61.1
LnGrp LOS	F	F	D	E	F	E	F	D	D	E	D	E
Approach Vol, veh/h		2657			2043			1607			1274	
Approach Delay, s/veh		106.6			112.0			60.7			59.4	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	45.3	22.6	57.1	22.3	53.0	34.7	45.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	25.0	39.0	30.0	39.3	25.0	39.0	30.0	39.3
Max Q Clear Time (g_c+I1), s	27.0	41.3	17.1	29.6	16.9	49.0	29.6	29.7
Green Ext Time (p_c), s	0.0	0.0	0.5	2.8	0.4	0.0	0.1	3.6

Intersection Summary			
HCM 6th Ctrl Delay			90.4
HCM 6th LOS			F

12: Behymer Avenue & Sunnyside Avenue

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		⅄	
Traffic Vol, veh/h	0	240	236	0	0	0
Future Vol, veh/h	0	240	236	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	261	257	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	257	0	-	0	518	257
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	261	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1320	-	-	-	521	787
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	787	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1320	-	-	-	521	787
Mov Cap-2 Maneuver	-	-	-	-	521	-
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	787	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1320	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	1111.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↱			✥			✥	
Traffic Vol, veh/h	428	922	168	64	955	334	192	300	76	168	187	386
Future Vol, veh/h	428	922	168	64	955	334	192	300	76	168	187	386
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	0	0	0	0	0	0	0	0	0
Mvmt Flow	455	981	179	68	1016	355	204	319	81	179	199	411
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	1571.4	1186.4	408.6	571.2
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	34%	28%	100%	0%	23%
Vol Thru, %	53%	61%	0%	74%	25%
Vol Right, %	13%	11%	0%	26%	52%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	568	1518	64	1289	741
LT Vol	192	428	64	0	168
Through Vol	300	922	0	955	187
RT Vol	76	168	0	334	386
Lane Flow Rate	604	1615	68	1371	788
Geometry Grp	2	5	7	7	2
Degree of Util (X)	1.608	4.352	0.193	3.625	2.042
Departure Headway (Hd)	43.977	26.429	26.203	25.467	36.413
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	91	161	138	165	110
Service Time	41.977	24.429	23.903	23.167	34.413
HCM Lane V/C Ratio	6.637	10.031	0.493	8.309	7.164
HCM Control Delay	408.6	1571.4	35.1	1243.6	571.2
HCM Lane LOS	F	F	E	F	F
HCM 95th-tile Q	10.8	60.7	0.7	50.2	17.3

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Vol, veh/h	2	1	3	28	3	37	0	386	41	37	240	1
Future Vol, veh/h	2	1	3	28	3	37	0	386	41	37	240	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	9	9	9	0	0	0	0	0	0	1	1	1
Mvmt Flow	2	1	3	30	3	40	0	420	45	40	261	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	806	807	262	787	785	443	262	0	0	465	0	0
Stage 1	342	342	-	443	443	-	-	-	-	-	-	-
Stage 2	464	465	-	344	342	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.1	6.5	6.2	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	292	307	760	312	327	619	1314	-	-	1102	-	-
Stage 1	659	626	-	598	579	-	-	-	-	-	-	-
Stage 2	565	551	-	676	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	262	294	760	300	313	619	1314	-	-	1102	-	-
Mov Cap-2 Maneuver	262	294	-	300	313	-	-	-	-	-	-	-
Stage 1	659	600	-	598	579	-	-	-	-	-	-	-
Stage 2	525	551	-	644	615	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	14.1			15.5			0			1.1		
HCM LOS	B			C								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1314	-	-	400	418	1102	-	-
HCM Lane V/C Ratio	-	-	-	0.016	0.177	0.036	-	-
HCM Control Delay (s)	0	-	-	14.1	15.5	8.4	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.6	0.1	-	-

AGENDA ITEM NO. 6.

Intersection	
Intersection Delay, s/veh	217.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰↑	↱		↰↑↱	
Traffic Vol, veh/h	54	494	140	50	483	28	227	309	54	20	187	50
Future Vol, veh/h	54	494	140	50	483	28	227	309	54	20	187	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	1	1	1
Mvmt Flow	59	537	152	54	525	30	247	336	59	22	203	54
Number of Lanes	1	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	3
HCM Control Delay	75.8	312.6	358.3	67.1
HCM LOS	F	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	42%	0%	100%	0%	0%	100%	0%	8%
Vol Thru, %	58%	0%	0%	100%	54%	0%	95%	73%
Vol Right, %	0%	100%	0%	0%	46%	0%	5%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	536	54	54	329	305	50	511	257
LT Vol	227	0	54	0	0	50	0	20
Through Vol	309	0	0	329	165	0	483	187
RT Vol	0	54	0	0	140	0	28	50
Lane Flow Rate	583	59	59	358	331	54	555	279
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	1.779	0.164	0.172	0.998	0.894	0.17	1.659	0.86
Departure Headway (Hd)	12.651	11.68	13.78	13.239	12.891	13.407	12.821	14.551
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	291	309	262	276	285	270	289	251
Service Time	10.351	9.38	11.48	10.939	10.591	11.107	10.521	12.251
HCM Lane V/C Ratio	2.003	0.191	0.225	1.297	1.161	0.2	1.92	1.112
HCM Control Delay	392.7	16.7	19.3	92.6	67.6	18.8	341.4	67.1
HCM Lane LOS	F	C	C	F	F	C	F	F
HCM 95th-tile Q	33.4	0.6	0.6	10.1	8	0.6	29.1	7

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	8	4	237	4	5	1	201	90	3	1	71	5
Future Vol, veh/h	8	4	237	4	5	1	201	90	3	1	71	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	9	4	258	4	5	1	218	98	3	1	77	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	8.4	11.3	8.6
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	68%	3%	40%	1%
Vol Thru, %	31%	2%	50%	92%
Vol Right, %	1%	95%	10%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	294	249	10	77
LT Vol	201	8	4	1
Through Vol	90	4	5	71
RT Vol	3	237	1	5
Lane Flow Rate	320	271	11	84
Geometry Grp	1	1	1	1
Degree of Util (X)	0.422	0.325	0.016	0.114
Departure Headway (Hd)	4.757	4.328	5.235	4.916
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	754	828	680	724
Service Time	2.809	2.365	3.299	2.979
HCM Lane V/C Ratio	0.424	0.327	0.016	0.116
HCM Control Delay	11.3	9.5	8.4	8.6
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.1	1.4	0	0.4

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰↱			↰↑	↑↱	
Traffic Vol, veh/h	5	17	9	286	300	6
Future Vol, veh/h	5	17	9	286	300	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	2	2
Mvmt Flow	5	18	10	311	326	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	661	330	333	0	-	0
Stage 1	330	-	-	-	-	-
Stage 2	331	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	431	716	1238	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	732	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	427	716	1238	-	-	-
Mov Cap-2 Maneuver	427	-	-	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1238	-	621	-	-
HCM Lane V/C Ratio	0.008	-	0.039	-	-
HCM Control Delay (s)	7.9	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th Signalized Intersection Summary
18: Fowler Avenue & Shepherd Avenue

Shepherd I

Cumulative Year (2046) WP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	54	613	169	72	690	282	333	370	108	155	241	38
Future Volume (veh/h)	54	613	169	72	690	282	333	370	108	155	241	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	57	645	178	76	726	297	351	389	114	163	254	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	87	794	354	96	427	362	370	923	782	186	616	97
Arrive On Green	0.05	0.22	0.22	0.05	0.23	0.23	0.21	0.49	0.49	0.10	0.39	0.39
Sat Flow, veh/h	1795	3582	1598	1795	1885	1598	1795	1885	1597	1795	1590	250
Grp Volume(v), veh/h	57	645	178	76	726	297	351	389	114	163	0	294
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1795	1885	1598	1795	1885	1597	1795	0	1840
Q Serve(g_s), s	4.7	25.6	14.6	6.3	34.0	26.5	28.9	19.9	5.9	13.4	0.0	17.5
Cycle Q Clear(g_c), s	4.7	25.6	14.6	6.3	34.0	26.5	28.9	19.9	5.9	13.4	0.0	17.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	87	794	354	96	427	362	370	923	782	186	0	713
V/C Ratio(X)	0.66	0.81	0.50	0.79	1.70	0.82	0.95	0.42	0.15	0.87	0.00	0.41
Avail Cap(c_a), veh/h	371	812	362	371	427	362	371	923	782	371	0	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.1	55.4	51.1	70.2	58.0	55.1	58.7	24.6	21.0	66.2	0.0	33.5
Incr Delay (d2), s/veh	3.1	6.8	2.1	5.5	324.5	15.0	33.0	1.4	0.4	5.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	12.2	6.0	3.0	54.2	12.0	16.3	9.0	2.3	6.3	0.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.3	62.2	53.2	75.7	382.5	70.1	91.8	26.0	21.4	71.2	0.0	35.3
LnGrp LOS	E	E	D	E	F	E	F	C	C	E	A	D
Approach Vol, veh/h		880			1099			854			457	
Approach Delay, s/veh		61.1			276.8			52.4			48.1	
Approach LOS		E			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.9	63.8	11.3	40.0	19.6	79.2	12.0	39.3
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	31.0	34.3	31.0	34.0	31.0	34.3	31.0	34.0
Max Q Clear Time (g_c+I1), s	30.9	19.5	6.7	36.0	15.4	21.9	8.3	27.6
Green Ext Time (p_c), s	0.0	1.3	0.1	0.0	0.2	2.0	0.1	3.6

Intersection Summary	
HCM 6th Ctrl Delay	129.1
HCM 6th LOS	F

HCM 6th TWSC
19: Fowler Avenue & Teague Avenue

Intersection	
Int Delay, s/veh	10.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↱		↰	↑	↱
Traffic Vol, veh/h	53	3	14	18	28	105	24	720	22	23	422	42
Future Vol, veh/h	53	3	14	18	28	105	24	720	22	23	422	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	260	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	9	9	9	4	4	4	1	1	1	2	2	2
Mvmt Flow	55	3	15	19	29	109	25	750	23	24	440	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1369	1311	440	1331	1344	762	484	0	0	773	0	0
Stage 1	488	488	-	812	812	-	-	-	-	-	-	-
Stage 2	881	823	-	519	532	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.59	6.29	7.14	6.54	6.24	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.59	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.081	3.381	3.536	4.036	3.336	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	120	154	603	130	150	402	1084	-	-	842	-	-
Stage 1	548	538	-	370	389	-	-	-	-	-	-	-
Stage 2	332	378	-	536	522	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	71	146	603	120	142	402	1084	-	-	842	-	-
Mov Cap-2 Maneuver	71	146	-	120	142	-	-	-	-	-	-	-
Stage 1	535	522	-	361	380	-	-	-	-	-	-	-
Stage 2	218	369	-	505	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	133.5	41.7	0.3	0.4
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1084	-	-	89	248	842	-	-
HCM Lane V/C Ratio	0.023	-	-	0.819	0.634	0.028	-	-
HCM Control Delay (s)	8.4	-	-	133.5	41.7	9.4	-	-
HCM Lane LOS	A	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.3	3.9	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑	↱	↰	↑	↱
Traffic Volume (veh/h)	73	348	142	57	369	106	166	554	65	60	331	61
Future Volume (veh/h)	73	348	142	57	369	106	166	554	65	60	331	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	79	378	154	62	401	115	180	602	71	65	360	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	3	3	3
Cap, veh/h	101	620	249	80	444	376	207	955	809	83	813	689
Arrive On Green	0.06	0.25	0.25	0.04	0.24	0.24	0.12	0.51	0.51	0.05	0.44	0.44
Sat Flow, veh/h	1810	2514	1010	1795	1885	1598	1795	1885	1598	1767	1856	1572
Grp Volume(v), veh/h	79	270	262	62	401	115	180	602	71	65	360	66
Grp Sat Flow(s),veh/h/ln	1810	1805	1718	1795	1885	1598	1795	1885	1598	1767	1856	1572
Q Serve(g_s), s	5.2	15.9	16.3	4.1	24.8	7.1	11.8	27.8	2.8	4.4	16.2	3.0
Cycle Q Clear(g_c), s	5.2	15.9	16.3	4.1	24.8	7.1	11.8	27.8	2.8	4.4	16.2	3.0
Prop In Lane	1.00		0.59	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	445	423	80	444	376	207	955	809	83	813	689
V/C Ratio(X)	0.78	0.61	0.62	0.77	0.90	0.31	0.87	0.63	0.09	0.78	0.44	0.10
Avail Cap(c_a), veh/h	271	522	497	269	545	462	254	955	809	250	813	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	40.1	40.2	56.7	44.6	37.8	52.2	21.5	15.3	56.5	23.5	19.8
Incr Delay (d2), s/veh	4.9	2.3	2.6	5.8	15.9	0.4	19.8	3.2	0.2	5.8	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	7.1	7.0	1.9	13.1	2.8	6.3	12.3	1.0	2.0	7.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	42.3	42.8	62.5	60.5	38.2	71.9	24.6	15.5	62.3	25.2	20.0
LnGrp LOS	E	D	D	E	E	D	E	C	B	E	C	C
Approach Vol, veh/h		611			578			853			491	
Approach Delay, s/veh		44.9			56.3			33.8			29.4	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	57.9	10.7	33.5	9.7	66.1	9.4	34.9
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	17.0	31.7	18.0	34.7	17.0	31.7	18.0	34.7
Max Q Clear Time (g_c+I1), s	13.8	18.2	7.2	26.8	6.4	29.8	6.1	18.3
Green Ext Time (p_c), s	0.1	2.0	0.1	1.4	0.0	0.8	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	40.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
21: Fowler Avenue & SR-168 WB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↱	↰↰	↑↑			↑↱	
Traffic Volume (veh/h)	0	0	0	171	0	18	464	882	0	0	496	240
Future Volume (veh/h)	0	0	0	171	0	18	464	882	0	0	496	240
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1856	0	1856	1885	1885	0	0	1885	1885
Adj Flow Rate, veh/h				180	0	19	488	928	0	0	522	253
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				3	0	3	1	1	0	0	1	1
Cap, veh/h				226	0	201	551	2655	0	0	1232	595
Arrive On Green				0.13	0.00	0.13	0.32	1.00	0.00	0.00	0.53	0.53
Sat Flow, veh/h				1767	0	1572	3483	3676	0	0	2436	1131
Grp Volume(v), veh/h				180	0	19	488	928	0	0	399	376
Grp Sat Flow(s),veh/h/ln				1767	0	1572	1742	1791	0	0	1791	1682
Q Serve(g_s), s				9.9	0.0	1.1	13.3	0.0	0.0	0.0	13.6	13.7
Cycle Q Clear(g_c), s				9.9	0.0	1.1	13.3	0.0	0.0	0.0	13.6	13.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.67
Lane Grp Cap(c), veh/h				226	0	201	551	2655	0	0	942	885
V/C Ratio(X)				0.80	0.00	0.09	0.89	0.35	0.00	0.00	0.42	0.43
Avail Cap(c_a), veh/h				422	0	376	707	2655	0	0	942	885
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.69	0.69	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				42.3	0.0	38.5	33.3	0.0	0.0	0.0	14.4	14.5
Incr Delay (d2), s/veh				12.7	0.0	0.4	6.7	0.3	0.0	0.0	1.4	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.0	0.0	0.4	4.9	0.1	0.0	0.0	5.3	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				55.0	0.0	38.9	40.0	0.3	0.0	0.0	15.8	16.0
LnGrp LOS				E	A	D	D	A	A	A	B	B
Approach Vol, veh/h					199			1416			775	
Approach Delay, s/veh					53.5			14.0			15.9	
Approach LOS					D			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		80.9			21.5	59.4		19.1				
Change Period (Y+Rc), s		6.8			* 5.7	6.8		6.3				
Max Green Setting (Gmax), s		63.0			* 20	37.0		23.9				
Max Q Clear Time (g_c+I1), s		2.0			15.3	15.7		11.9				
Green Ext Time (p_c), s		14.1			0.5	8.8		0.9				

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰		↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	389	0	635	0	0	0	0	957	311	29	637	0
Future Volume (veh/h)	389	0	635	0	0	0	0	957	311	29	637	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	405	0	661				0	997	324	30	664	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	1	1	2	2	0
Cap, veh/h	1006	0	461				0	1302	420	60	2061	0
Arrive On Green	0.29	0.00	0.29				0.00	0.49	0.49	0.03	0.58	0.00
Sat Flow, veh/h	3456	0	1585				0	2757	859	1781	3647	0
Grp Volume(v), veh/h	405	0	661				0	668	653	30	664	0
Grp Sat Flow(s),veh/h/ln	1728	0	1585				0	1791	1731	1781	1777	0
Q Serve(g_s), s	9.4	0.0	29.1				0.0	30.4	30.9	1.7	9.7	0.0
Cycle Q Clear(g_c), s	9.4	0.0	29.1				0.0	30.4	30.9	1.7	9.7	0.0
Prop In Lane	1.00		1.00				0.00		0.50	1.00		0.00
Lane Grp Cap(c), veh/h	1006	0	461				0	876	846	60	2061	0
V/C Ratio(X)	0.40	0.00	1.43				0.00	0.76	0.77	0.50	0.32	0.00
Avail Cap(c_a), veh/h	1006	0	461				0	876	846	201	2061	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	28.5	0.0	35.4				0.0	20.8	21.0	47.5	10.8	0.0
Incr Delay (d2), s/veh	0.6	0.0	207.0				0.0	6.3	6.7	2.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	37.3				0.0	12.8	12.7	0.7	3.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	0.0	242.5				0.0	27.1	27.7	49.5	11.2	0.0
LnGrp LOS	C	A	F				A	C	C	D	B	A
Approach Vol, veh/h		1066						1321			694	
Approach Delay, s/veh		161.4						27.4			12.9	
Approach LOS		F						C			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.1	55.7		35.2		64.8						
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8						
Max Green Setting (Gmax), s	* 11	41.0		29.1		58.0						
Max Q Clear Time (g_c+I1), s	3.7	32.9		31.1		11.7						
Green Ext Time (p_c), s	0.0	6.9		0.0		8.5						

Intersection Summary		
HCM 6th Ctrl Delay		70.5
HCM 6th LOS		E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	13	0	980	21	0	670
Future Vol, veh/h	13	0	980	21	0	670
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	0	1065	23	0	728

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1805	1077	0	0	1088	0
Stage 1	1077	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	88	269	-	-	649	-
Stage 1	330	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	88	269	-	-	649	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	330	-	-	-	-	-
Stage 2	482	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	53.6	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	88	649	-
HCM Lane V/C Ratio	-	-	0.161	-	-
HCM Control Delay (s)	-	-	53.6	0	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection	
Int Delay, s/veh	4.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	57	0	1002	61	0	683
Future Vol, veh/h	57	0	1002	61	0	683
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	0	1089	66	0	742

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1864	1122	0	0	1155	0
Stage 1	1122	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	81	253	-	-	612	-
Stage 1	314	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	81	253	-	-	612	-
Mov Cap-2 Maneuver	81	-	-	-	-	-
Stage 1	314	-	-	-	-	-
Stage 2	474	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	131.1	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	81	612	-
HCM Lane V/C Ratio	-	-	0.765	-	-
HCM Control Delay (s)	-	-	131.1	0	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	3.8	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑	↑↱			↱
Traffic Vol, veh/h	186	980	1243	54	0	110
Future Vol, veh/h	186	980	1243	54	0	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	0	0	0	0
Mvmt Flow	202	1065	1351	59	0	120

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1410	0	-	0	-	705
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.115	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.2095	-	-	-	-	3.3
Pot Cap-1 Maneuver	486	-	-	-	0	383
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	486	-	-	-	-	383
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	18.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	486	-	-	-	383
HCM Lane V/C Ratio	0.416	-	-	-	0.312
HCM Control Delay (s)	17.6	-	-	-	18.6
HCM Lane LOS	C	-	-	-	C
HCM 95th %tile Q(veh)	2	-	-	-	1.3

HCM 6th TWSC
26: Project Driveway 4/Stanford Avenue & Perrin Road

Shepherd

Cumulative Year (2046) WP - PM Peak Hour

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Vol, veh/h	14	0	32	0	0	0	19	13	0	0	4	13
Future Vol, veh/h	14	0	32	0	0	0	19	13	0	0	4	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	2	2	2	0	0	2	2	0	0
Mvmt Flow	15	0	35	0	0	0	21	14	0	0	4	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	35	0	0	58	49	18	56	66	1
Stage 1	-	-	-	-	-	-	48	48	-	1	1	-
Stage 2	-	-	-	-	-	-	10	1	-	55	65	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.22	7.12	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.318	3.518	4	3.3
Pot Cap-1 Maneuver	1635	-	-	1576	-	-	944	846	1061	941	829	1090
Stage 1	-	-	-	-	-	-	971	859	-	1022	899	-
Stage 2	-	-	-	-	-	-	1016	899	-	957	845	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1635	-	-	1576	-	-	921	838	1061	922	822	1090
Mov Cap-2 Maneuver	-	-	-	-	-	-	921	838	-	922	822	-
Stage 1	-	-	-	-	-	-	962	851	-	1013	899	-
Stage 2	-	-	-	-	-	-	998	899	-	933	837	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0	9.2	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	885	1635	-	-	1576	-	-	1012
HCM Lane V/C Ratio	0.039	0.009	-	-	-	-	-	0.018
HCM Control Delay (s)	9.2	7.2	0	-	0	-	-	8.6
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary
3: Minnewawa Avenue & Behymer Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	3	115	44	12	148	297	41	212	8	123	225	3
Future Volume (veh/h)	3	115	44	12	148	297	41	212	8	123	225	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1841	1841	1841	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	4	139	53	14	178	358	49	255	10	148	271	4
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	2	2	2
Cap, veh/h	64	475	177	67	206	395	151	715	26	307	529	7
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	9	1284	479	16	557	1067	170	1489	55	471	1101	15
Grp Volume(v), veh/h	196	0	0	550	0	0	314	0	0	423	0	0
Grp Sat Flow(s),veh/h/ln	1772	0	0	1640	0	0	1713	0	0	1587	0	0
Q Serve(g_s), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
Cycle Q Clear(g_c), s	4.7	0.0	0.0	19.1	0.0	0.0	6.5	0.0	0.0	10.1	0.0	0.0
Prop In Lane	0.02		0.27	0.03		0.65	0.16		0.03	0.35		0.01
Lane Grp Cap(c), veh/h	716	0	0	668	0	0	892	0	0	843	0	0
V/C Ratio(X)	0.27	0.00	0.00	0.82	0.00	0.00	0.35	0.00	0.00	0.50	0.00	0.00
Avail Cap(c_a), veh/h	783	0	0	731	0	0	892	0	0	843	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.4	0.0	0.0	17.9	0.0	0.0	9.8	0.0	0.0	10.6	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	7.1	0.0	0.0	1.1	0.0	0.0	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	7.1	0.0	0.0	2.2	0.0	0.0	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	0.0	25.0	0.0	0.0	10.9	0.0	0.0	12.7	0.0	0.0
LnGrp LOS	B	A	A	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h		196			550			314			423	
Approach Delay, s/veh		13.6			25.0			10.9			12.7	
Approach LOS		B			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.3		26.7		33.3		26.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		24.5		26.5		24.5				
Max Q Clear Time (g_c+I1), s		8.5		6.7		12.1		21.1				
Green Ext Time (p_c), s		1.6		0.9		2.2		1.1				

Intersection Summary			
HCM 6th Ctrl Delay			17.0
HCM 6th LOS			B

Notes

User approved pedestrian interval to be less than phase max green.

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↑↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	31	371	106	63	503	11	54	15	38	24	58	75
Future Volume (veh/h)	31	371	106	63	503	11	54	15	38	24	58	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885	1752	1752	1752	1722	1722	1722
Adj Flow Rate, veh/h	32	379	108	64	513	11	55	15	39	24	59	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	1	1	1	10	10	10	12	12	12
Cap, veh/h	54	427	122	82	1164	25	69	180	469	41	273	356
Arrive On Green	0.03	0.31	0.31	0.05	0.32	0.32	0.04	0.42	0.42	0.03	0.40	0.40
Sat Flow, veh/h	1767	1380	393	1795	3583	77	1668	430	1119	1640	678	884
Grp Volume(v), veh/h	32	0	487	64	256	268	55	0	54	24	0	136
Grp Sat Flow(s),veh/h/ln	1767	0	1773	1795	1791	1869	1668	0	1549	1640	0	1562
Q Serve(g_s), s	1.6	0.0	23.5	3.2	10.1	10.2	2.9	0.0	1.9	1.3	0.0	5.1
Cycle Q Clear(g_c), s	1.6	0.0	23.5	3.2	10.1	10.2	2.9	0.0	1.9	1.3	0.0	5.1
Prop In Lane	1.00		0.22	1.00		0.04	1.00		0.72	1.00		0.57
Lane Grp Cap(c), veh/h	54	0	549	82	582	607	69	0	650	41	0	630
V/C Ratio(X)	0.59	0.00	0.89	0.78	0.44	0.44	0.79	0.00	0.08	0.58	0.00	0.22
Avail Cap(c_a), veh/h	175	0	778	110	718	750	139	0	650	108	0	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.1	0.0	29.6	42.5	23.9	23.9	42.8	0.0	15.7	43.4	0.0	17.6
Incr Delay (d2), s/veh	9.9	0.0	9.0	21.1	0.5	0.5	18.1	0.0	0.3	12.4	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	10.4	1.8	4.1	4.3	1.5	0.0	0.7	0.7	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	0.0	38.6	63.6	24.4	24.4	60.9	0.0	16.0	55.8	0.0	18.4
LnGrp LOS	D	A	D	E	C	C	E	A	B	E	A	B
Approach Vol, veh/h		519			588			109			160	
Approach Delay, s/veh		39.5			28.7			38.6			24.0	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	42.3	8.6	32.4	8.2	40.8	7.3	33.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.9	21.1	5.5	39.5	7.5	19.5	8.9	36.1
Max Q Clear Time (g_c+I1), s	3.3	3.9	5.2	25.5	4.9	7.1	3.6	12.2
Green Ext Time (p_c), s	0.0	0.2	0.0	2.3	0.0	0.5	0.0	2.9

Intersection Summary			
HCM 6th Ctrl Delay			33.0
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
15: Sunnyside Avenue & Nees Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰↑	↱		↰↑↱	
Traffic Volume (veh/h)	12	269	85	25	367	14	137	72	17	22	159	66
Future Volume (veh/h)	12	269	85	25	367	14	137	72	17	22	159	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1752	1752	1752	1796	1796	1796
Adj Flow Rate, veh/h	13	283	89	26	386	15	144	76	18	23	167	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	10	10	10	7	7	7
Cap, veh/h	381	1177	362	500	796	31	221	95	606	65	279	101
Arrive On Green	0.44	0.44	0.44	0.30	0.30	0.30	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	983	2666	820	1017	1802	70	297	232	1485	0	683	248
Grp Volume(v), veh/h	13	187	185	26	0	401	220	0	18	259	0	0
Grp Sat Flow(s),veh/h/ln	983	1777	1709	1017	0	1872	529	0	1485	931	0	0
Q Serve(g_s), s	0.6	3.9	4.1	1.2	0.0	10.6	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.2	3.9	4.1	5.2	0.0	10.6	24.5	0.0	0.4	24.5	0.0	0.0
Prop In Lane	1.00		0.48	1.00		0.04	0.65		1.00	0.09		0.27
Lane Grp Cap(c), veh/h	381	785	755	500	0	827	315	0	606	445	0	0
V/C Ratio(X)	0.03	0.24	0.25	0.05	0.00	0.48	0.70	0.00	0.03	0.58	0.00	0.00
Avail Cap(c_a), veh/h	381	785	755	500	0	827	315	0	606	445	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.68	0.00	0.68	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.4	10.4	10.5	15.2	0.0	15.5	16.8	0.0	10.6	13.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.7	0.8	0.1	0.0	1.4	6.6	0.0	0.0	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	1.4	0.3	0.0	4.3	2.9	0.0	0.1	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	11.2	11.3	15.3	0.0	16.9	23.4	0.0	10.7	15.3	0.0	0.0
LnGrp LOS	B	B	B	B	A	B	C	A	B	B	A	A
Approach Vol, veh/h		385			427			238			259	
Approach Delay, s/veh		11.4			16.8			22.4			15.3	
Approach LOS		B			B			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		29.0		31.0		29.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		24.5		26.5		24.5				
Max Q Clear Time (g_c+I1), s		13.2		26.5		12.6		26.5				
Green Ext Time (p_c), s		1.6		0.0		1.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		15.9
HCM 6th LOS		B

HCM 6th Signalized Intersection Summary
18: Fowler Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	20	303	51	36	287	370	157	92	34	185	141	18
Future Volume (veh/h)	20	303	51	36	287	370	157	92	34	185	141	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	21	316	53	38	299	385	164	96	35	193	147	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	4	4
Cap, veh/h	65	948	414	97	533	452	178	616	522	229	575	74
Arrive On Green	0.04	0.27	0.27	0.05	0.28	0.28	0.10	0.33	0.33	0.13	0.36	0.36
Sat Flow, veh/h	1781	3554	1551	1781	1870	1585	1781	1870	1585	1753	1597	206
Grp Volume(v), veh/h	21	316	53	38	299	385	164	96	35	193	0	166
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1781	1870	1585	1781	1870	1585	1753	0	1804
Q Serve(g_s), s	1.0	6.4	2.3	1.9	12.2	20.6	8.2	3.3	1.4	9.7	0.0	5.8
Cycle Q Clear(g_c), s	1.0	6.4	2.3	1.9	12.2	20.6	8.2	3.3	1.4	9.7	0.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	65	948	414	97	533	452	178	616	522	229	0	649
V/C Ratio(X)	0.32	0.33	0.13	0.39	0.56	0.85	0.92	0.16	0.07	0.84	0.00	0.26
Avail Cap(c_a), veh/h	158	1185	517	158	623	528	178	616	522	448	0	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.3	26.6	25.0	41.1	27.4	30.4	40.1	21.4	20.7	38.2	0.0	20.3
Incr Delay (d2), s/veh	1.1	0.4	0.3	1.0	1.7	13.0	44.6	0.5	0.2	3.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	0.9	0.8	5.3	9.0	5.6	1.4	0.5	4.1	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	26.9	25.3	42.1	29.1	43.4	84.7	21.9	21.0	41.4	0.0	21.3
LnGrp LOS	D	C	C	D	C	D	F	C	C	D	A	C
Approach Vol, veh/h		390			722			295			359	
Approach Delay, s/veh		27.6			37.4			56.7			32.1	
Approach LOS		C			D			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	38.1	7.3	31.6	15.8	35.3	8.9	30.0
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	9.0	23.3	8.0	30.0	23.0	9.3	8.0	30.0
Max Q Clear Time (g_c+I1), s	10.2	7.8	3.0	22.6	11.7	5.3	3.9	8.4
Green Ext Time (p_c), s	0.0	0.6	0.0	3.0	0.2	0.2	0.0	3.5

Intersection Summary			
HCM 6th Ctrl Delay			37.4
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
22: Fowler Avenue & SR-168 EB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰		↱↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	152	0	332	0	0	0	0	778	92	14	457	0
Future Volume (veh/h)	152	0	332	0	0	0	0	778	92	14	457	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1856				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	160	0	349				0	819	97	15	481	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	3				0	1	1	2	2	0
Cap, veh/h	291	0	455				0	1620	192	39	2205	0
Arrive On Green	0.16	0.00	0.16				0.00	0.50	0.50	0.02	0.62	0.00
Sat Flow, veh/h	1767	0	2768				0	3311	381	1781	3647	0
Grp Volume(v), veh/h	160	0	349				0	456	460	15	481	0
Grp Sat Flow(s),veh/h/ln	1767	0	1384				0	1791	1807	1781	1777	0
Q Serve(g_s), s	5.0	0.0	7.2				0.0	10.2	10.2	0.5	3.6	0.0
Cycle Q Clear(g_c), s	5.0	0.0	7.2				0.0	10.2	10.2	0.5	3.6	0.0
Prop In Lane	1.00		1.00				0.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	291	0	455				0	902	910	39	2205	0
V/C Ratio(X)	0.55	0.00	0.77				0.00	0.51	0.51	0.38	0.22	0.00
Avail Cap(c_a), veh/h	321	0	503				0	902	910	181	2205	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.90	0.90	0.00
Uniform Delay (d), s/veh	23.0	0.0	24.0				0.0	9.9	9.9	28.9	5.0	0.0
Incr Delay (d2), s/veh	3.5	0.0	8.1				0.0	2.0	2.0	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	2.7				0.0	3.4	3.4	0.2	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	0.0	32.1				0.0	11.9	11.9	30.9	5.2	0.0
LnGrp LOS	C	A	C				A	B	B	C	A	A
Approach Vol, veh/h		509						916			496	
Approach Delay, s/veh		30.3						11.9			6.0	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.0	37.0		16.0		44.0
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 6.1	24.4		10.9		36.2
Max Q Clear Time (g_c+I1), s	2.5	12.2		9.2		5.6
Green Ext Time (p_c), s	0.0	7.6		0.6		5.3

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Traffic Volume (veh/h)	3	73	30	6	88	99	46	205	6	95	190	2
Future Volume (veh/h)	3	73	30	6	88	99	46	205	6	95	190	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	3	83	34	7	100	112	52	233	7	108	216	2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	64	212	85	66	138	148	231	996	28	397	760	7
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	14	1269	507	22	824	885	235	1458	42	464	1112	10
Grp Volume(v), veh/h	120	0	0	219	0	0	292	0	0	326	0	0
Grp Sat Flow(s),veh/h/ln	1790	0	0	1730	0	0	1735	0	0	1586	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.6	0.0	0.0	7.2	0.0	0.0	3.5	0.0	0.0	4.0	0.0	0.0
Prop In Lane	0.02		0.28	0.03		0.51	0.18		0.02	0.33		0.01
Lane Grp Cap(c), veh/h	361	0	0	351	0	0	1255	0	0	1163	0	0
V/C Ratio(X)	0.33	0.00	0.00	0.62	0.00	0.00	0.23	0.00	0.00	0.28	0.00	0.00
Avail Cap(c_a), veh/h	699	0	0	679	0	0	1255	0	0	1163	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.3	0.0	0.0	23.8	0.0	0.0	3.6	0.0	0.0	3.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.8	0.0	0.0	0.4	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	2.8	0.0	0.0	0.7	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	0.0	25.6	0.0	0.0	4.0	0.0	0.0	4.3	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		120			219			292			326	
Approach Delay, s/veh		22.8			25.6			4.0			4.3	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		45.5		14.5		45.5		14.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		29.5		21.5		29.5		21.5				
Max Q Clear Time (g_c+I1), s		5.5		5.6		6.0		9.2				
Green Ext Time (p_c), s		1.6		0.5		1.8		0.9				

Intersection Summary			
HCM 6th Ctrl Delay			11.4
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↑↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	84	492	70	50	385	31	80	25	67	19	43	54
Future Volume (veh/h)	84	492	70	50	385	31	80	25	67	19	43	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	89	523	74	53	410	33	85	27	71	20	46	57
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	113	805	114	94	1648	132	271	69	183	271	116	143
Arrive On Green	0.06	0.50	0.50	0.05	0.49	0.49	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1795	1615	229	1810	3385	271	1810	463	1218	1810	772	956
Grp Volume(v), veh/h	89	0	597	53	218	225	85	0	98	20	0	103
Grp Sat Flow(s),veh/h/ln	1795	0	1844	1810	1805	1851	1810	0	1681	1810	0	1728
Q Serve(g_s), s	5.9	0.0	28.8	3.4	8.5	8.5	5.0	0.0	6.3	1.1	0.0	6.5
Cycle Q Clear(g_c), s	5.9	0.0	28.8	3.4	8.5	8.5	5.0	0.0	6.3	1.1	0.0	6.5
Prop In Lane	1.00		0.12	1.00		0.15	1.00		0.72	1.00		0.55
Lane Grp Cap(c), veh/h	113	0	919	94	879	901	271	0	252	271	0	259
V/C Ratio(X)	0.79	0.00	0.65	0.57	0.25	0.25	0.31	0.00	0.39	0.07	0.00	0.40
Avail Cap(c_a), veh/h	262	0	919	113	879	901	271	0	252	271	0	259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.96	0.96	0.96	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.4	0.0	22.3	55.6	18.0	18.0	45.5	0.0	46.0	43.8	0.0	46.1
Incr Delay (d2), s/veh	11.3	0.0	3.6	5.0	0.6	0.6	3.0	0.0	4.5	0.5	0.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	12.3	1.7	3.6	3.7	2.4	0.0	2.9	0.6	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	0.0	25.9	60.6	18.6	18.6	48.5	0.0	50.5	44.4	0.0	50.6
LnGrp LOS	E	A	C	E	B	B	D	A	D	D	A	D
Approach Vol, veh/h		686			496			183			123	
Approach Delay, s/veh		31.2			23.1			49.6			49.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	64.3	22.5	22.5	12.1	62.9	22.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.5	58.5	18.0	18.0	17.5	48.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	5.4	30.8	7.0	8.5	7.9	10.5	3.1	8.3
Green Ext Time (p_c), s	0.0	3.7	0.1	0.3	0.1	2.6	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✢	
Traffic Volume (veh/h)	24	364	74	32	337	15	115	148	35	17	120	40
Future Volume (veh/h)	24	364	74	32	337	15	115	148	35	17	120	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	28	418	85	37	387	17	132	170	40	20	138	46
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	213	800	161	254	483	21	446	545	935	120	736	230
Arrive On Green	0.27	0.27	0.27	0.54	0.54	0.54	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	989	2969	599	903	1792	79	621	940	1610	94	1267	396
Grp Volume(v), veh/h	28	251	252	37	0	404	302	0	40	204	0	0
Grp Sat Flow(s),veh/h/ln	989	1791	1777	903	0	1871	1560	0	1610	1758	0	0
Q Serve(g_s), s	1.6	7.1	7.2	1.9	0.0	10.5	2.1	0.0	0.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.1	7.1	7.2	9.1	0.0	10.5	5.3	0.0	0.6	3.2	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.04	0.44		1.00	0.10		0.23
Lane Grp Cap(c), veh/h	213	483	479	254	0	504	992	0	935	1086	0	0
V/C Ratio(X)	0.13	0.52	0.53	0.15	0.00	0.80	0.30	0.00	0.04	0.19	0.00	0.00
Avail Cap(c_a), veh/h	351	731	726	380	0	764	992	0	935	1086	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.00	0.71	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.3	18.6	18.7	15.0	0.0	12.5	6.3	0.0	5.4	6.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.9	0.9	0.2	0.0	2.6	0.8	0.0	0.1	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.6	2.6	0.3	0.0	2.9	1.4	0.0	0.2	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	19.5	19.6	15.2	0.0	15.1	7.1	0.0	5.5	6.3	0.0	0.0
LnGrp LOS	C	B	B	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		531			441			342			204	
Approach Delay, s/veh		19.8			15.1			6.9			6.3	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		39.3		20.7		39.3		20.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		24.5		26.5		24.5				
Max Q Clear Time (g_c+I1), s		7.3		14.1		5.2		12.5				
Green Ext Time (p_c), s		1.4		2.1		1.0		1.9				
Intersection Summary												
HCM 6th Ctrl Delay			13.7									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
18: Fowler Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑↱	
Traffic Volume (veh/h)	23	291	75	47	265	128	163	119	73	110	123	14
Future Volume (veh/h)	23	291	75	47	265	128	163	119	73	110	123	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	24	306	79	49	279	135	172	125	77	116	129	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	70	620	276	107	365	309	205	913	773	155	757	88
Arrive On Green	0.04	0.17	0.17	0.06	0.19	0.19	0.11	0.48	0.48	0.09	0.46	0.46
Sat Flow, veh/h	1795	3582	1598	1795	1885	1598	1795	1885	1597	1795	1658	193
Grp Volume(v), veh/h	24	306	79	49	279	135	172	125	77	116	0	144
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1795	1885	1598	1795	1885	1597	1795	0	1850
Q Serve(g_s), s	1.3	7.7	4.3	2.6	14.0	7.4	9.4	3.7	2.6	6.3	0.0	4.6
Cycle Q Clear(g_c), s	1.3	7.7	4.3	2.6	14.0	7.4	9.4	3.7	2.6	6.3	0.0	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	70	620	276	107	365	309	205	913	773	155	0	844
V/C Ratio(X)	0.34	0.49	0.29	0.46	0.76	0.44	0.84	0.14	0.10	0.75	0.00	0.17
Avail Cap(c_a), veh/h	144	1289	575	162	698	591	341	913	773	180	0	844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.8	37.4	36.0	45.5	38.2	35.5	43.4	14.3	14.0	44.6	0.0	16.0
Incr Delay (d2), s/veh	1.1	1.1	1.0	1.1	6.1	1.8	3.8	0.3	0.3	10.9	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.4	1.7	1.2	6.7	3.0	4.2	1.5	0.9	3.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	38.5	37.0	46.6	44.3	37.3	47.2	14.6	14.2	55.6	0.0	16.5
LnGrp LOS	D	D	D	D	D	D	D	B	B	E	A	B
Approach Vol, veh/h		409			463			374			260	
Approach Delay, s/veh		38.8			42.5			29.5			33.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	51.3	7.9	25.4	12.6	54.1	9.9	23.3
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	19.0	16.3	8.0	37.0	10.0	25.3	9.0	36.0
Max Q Clear Time (g_c+I1), s	11.4	6.6	3.3	16.0	8.3	5.7	4.6	9.7
Green Ext Time (p_c), s	0.1	0.4	0.0	3.3	0.0	0.7	0.0	3.8

Intersection Summary			
HCM 6th Ctrl Delay			36.8
HCM 6th LOS			D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰		↱↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	347	0	585	0	0	0	0	871	294	23	538	0
Future Volume (veh/h)	347	0	585	0	0	0	0	871	294	23	538	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	361	0	609				0	907	306	24	560	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	0	2				0	1	1	2	2	0
Cap, veh/h	449	0	703				0	1276	429	55	2086	0
Arrive On Green	0.25	0.00	0.25				0.00	0.48	0.48	0.03	0.59	0.00
Sat Flow, veh/h	1781	0	2790				0	2726	885	1781	3647	0
Grp Volume(v), veh/h	361	0	609				0	616	597	24	560	0
Grp Sat Flow(s),veh/h/ln	1781	0	1395				0	1791	1726	1781	1777	0
Q Serve(g_s), s	15.2	0.0	16.7				0.0	21.6	21.8	1.1	6.2	0.0
Cycle Q Clear(g_c), s	15.2	0.0	16.7				0.0	21.6	21.8	1.1	6.2	0.0
Prop In Lane	1.00		1.00				0.00		0.51	1.00		0.00
Lane Grp Cap(c), veh/h	449	0	703				0	868	836	55	2086	0
V/C Ratio(X)	0.80	0.00	0.87				0.00	0.71	0.71	0.43	0.27	0.00
Avail Cap(c_a), veh/h	465	0	729				0	868	836	136	2086	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	28.1	0.0	28.6				0.0	16.2	16.2	38.1	8.1	0.0
Incr Delay (d2), s/veh	11.1	0.0	11.5				0.0	4.9	5.2	1.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	0.0	6.4				0.0	8.6	8.4	0.5	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	0.0	40.1				0.0	21.1	21.4	39.9	8.4	0.0
LnGrp LOS	D	A	D				A	C	C	D	A	A
Approach Vol, veh/h		970						1213			584	
Approach Delay, s/veh		39.8						21.2			9.7	
Approach LOS		D						C			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	8.2	45.6	26.3	53.7
Change Period (Y+Rc), s	* 5.7	6.8	6.1	6.8
Max Green Setting (Gmax), s	* 6.1	34.4	20.9	46.2
Max Q Clear Time (g_c+I1), s	3.1	23.8	18.7	8.2
Green Ext Time (p_c), s	0.0	8.4	1.4	6.7

Intersection Summary	
HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
3: Minnewawa Avenue & Behymer Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣		↰	↱			✣	
Traffic Volume (veh/h)	3	126	46	17	167	306	45	256	11	126	250	3
Future Volume (veh/h)	3	126	46	17	167	306	45	256	11	126	250	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1841	1841	1841	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	4	152	55	20	201	369	54	308	13	152	301	4
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	2	2	2
Cap, veh/h	64	503	178	71	227	395	517	815	34	254	467	6
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	8	1307	464	24	591	1027	1057	1752	74	374	1003	12
Grp Volume(v), veh/h	211	0	0	590	0	0	54	0	321	457	0	0
Grp Sat Flow(s),veh/h/ln	1779	0	0	1642	0	0	1057	0	1826	1389	0	0
Q Serve(g_s), s	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	6.8	10.1	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	0.0	20.7	0.0	0.0	2.6	0.0	6.8	16.9	0.0	0.0
Prop In Lane	0.02		0.26	0.03		0.63	1.00		0.04	0.33		0.01
Lane Grp Cap(c), veh/h	745	0	0	694	0	0	517	0	849	726	0	0
V/C Ratio(X)	0.28	0.00	0.00	0.85	0.00	0.00	0.10	0.00	0.38	0.63	0.00	0.00
Avail Cap(c_a), veh/h	763	0	0	710	0	0	517	0	849	726	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	17.7	0.0	0.0	9.3	0.0	10.4	13.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	9.5	0.0	0.0	0.4	0.0	1.3	4.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	8.0	0.0	0.0	0.4	0.0	2.4	4.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.1	0.0	0.0	27.2	0.0	0.0	9.7	0.0	11.7	17.3	0.0	0.0
LnGrp LOS	B	A	A	C	A	A	A	A	B	B	A	A
Approach Vol, veh/h		211			590			375			457	
Approach Delay, s/veh		13.1			27.2			11.4			17.3	
Approach LOS		B			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.4		27.6		32.4		27.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		27.3		23.7		27.3		23.7				
Max Q Clear Time (g_c+I1), s		8.8		7.0		18.9		22.7				
Green Ext Time (p_c), s		1.8		1.0		1.8		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			19.0									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	84	668	241	148	724	133	191	257	89	205	459	117
Future Volume (veh/h)	84	668	241	148	724	133	191	257	89	205	459	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	99	786	284	174	852	156	225	302	105	241	540	138
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	123	948	416	200	921	169	306	977	430	321	1007	449
Arrive On Green	0.07	0.26	0.26	0.11	0.31	0.31	0.17	0.28	0.28	0.18	0.28	0.28
Sat Flow, veh/h	1795	3582	1574	1767	2975	545	1781	3554	1563	1781	3554	1585
Grp Volume(v), veh/h	99	786	284	174	505	503	225	302	105	241	540	138
Grp Sat Flow(s),veh/h/ln	1795	1791	1574	1767	1763	1757	1781	1777	1563	1781	1777	1585
Q Serve(g_s), s	6.5	24.8	12.7	11.6	33.2	33.2	14.4	8.1	4.6	15.4	15.4	6.5
Cycle Q Clear(g_c), s	6.5	24.8	12.7	11.6	33.2	33.2	14.4	8.1	4.6	15.4	15.4	6.5
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	948	416	200	546	544	306	977	430	321	1007	449
V/C Ratio(X)	0.81	0.83	0.68	0.87	0.92	0.92	0.73	0.31	0.24	0.75	0.54	0.31
Avail Cap(c_a), veh/h	135	955	420	221	558	557	306	977	430	321	1007	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	41.6	16.9	52.3	40.1	40.1	47.1	34.5	17.9	46.6	36.3	21.0
Incr Delay (d2), s/veh	24.4	6.5	5.1	25.3	21.7	21.7	7.8	0.8	1.3	8.5	2.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	11.3	4.8	6.4	16.9	16.9	6.9	3.5	2.4	7.4	6.8	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.5	48.0	21.9	77.6	61.7	61.8	54.9	35.3	19.3	55.1	38.4	22.7
LnGrp LOS	E	D	C	E	E	E	D	D	B	E	D	C
Approach Vol, veh/h		1169			1182			632			919	
Approach Delay, s/veh		44.4			64.1			39.6			40.4	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.6	40.0	12.2	43.2	25.6	39.0	17.6	37.8
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	19.0	34.0	9.0	38.0	20.0	33.0	15.0	32.0
Max Q Clear Time (g_c+I1), s	16.4	17.4	8.5	35.2	17.4	10.1	13.6	26.8
Green Ext Time (p_c), s	0.1	4.8	0.0	1.9	0.1	2.2	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	48.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	108	684	134	213	649	113	111	193	132	152	380	201
Future Volume (veh/h)	108	684	134	213	649	113	111	193	132	152	380	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	130	824	161	257	782	136	134	233	159	183	458	242
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	2	2	2	7	7	7	5	5	5
Cap, veh/h	243	856	377	311	930	415	157	1124	501	588	1429	637
Arrive On Green	0.07	0.24	0.24	0.09	0.26	0.26	0.09	0.33	0.33	0.17	0.41	0.41
Sat Flow, veh/h	3428	3526	1552	3456	3554	1585	1711	3413	1522	3374	3469	1546
Grp Volume(v), veh/h	130	824	161	257	782	136	134	233	159	183	458	242
Grp Sat Flow(s),veh/h/ln	1714	1763	1552	1728	1777	1585	1711	1706	1522	1687	1735	1546
Q Serve(g_s), s	5.1	32.3	12.3	10.2	29.2	9.7	10.8	6.9	10.9	6.6	12.5	15.3
Cycle Q Clear(g_c), s	5.1	32.3	12.3	10.2	29.2	9.7	10.8	6.9	10.9	6.6	12.5	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	856	377	311	930	415	157	1124	501	588	1429	637
V/C Ratio(X)	0.53	0.96	0.43	0.83	0.84	0.33	0.85	0.21	0.32	0.31	0.32	0.38
Avail Cap(c_a), veh/h	598	856	377	602	930	415	298	1124	501	588	1429	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	52.4	44.8	62.6	48.9	41.7	62.6	33.8	35.1	50.5	27.9	28.7
Incr Delay (d2), s/veh	0.7	22.1	1.1	2.2	7.3	0.7	4.9	0.4	1.6	1.4	0.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	16.4	4.7	4.5	13.4	3.8	4.8	2.9	4.2	2.9	5.2	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.5	74.5	45.9	64.8	56.2	42.4	67.5	34.2	36.8	51.8	28.5	30.4
LnGrp LOS	E	E	D	E	E	D	E	C	D	D	C	C
Approach Vol, veh/h		1115			1175			526			883	
Approach Delay, s/veh		69.1			56.5			43.5			33.9	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	63.4	15.5	42.6	30.0	51.8	18.2	40.0
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	24.4	34.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	12.8	17.3	7.1	31.2	8.6	12.9	12.2	34.3
Green Ext Time (p_c), s	0.1	8.4	0.2	1.7	0.3	3.7	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.0
HCM 6th LOS	D

AGENDA ITEM NO. 6.

HCM 6th Signalized Intersection Summary

7: Clovis Avenue & Nees Avenue

Near Term WP MIT- AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	41	352	341	67	399	180	153	462	20	70	823	72
Future Volume (veh/h)	41	352	341	67	399	180	153	462	20	70	823	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	47	405	392	77	459	207	176	531	23	80	946	83
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	2	2	2
Cap, veh/h	117	526	445	143	557	465	194	1315	560	143	1220	531
Arrive On Green	0.07	0.28	0.28	0.08	0.30	0.30	0.11	0.37	0.37	0.08	0.34	0.34
Sat Flow, veh/h	1781	1870	1580	1795	1885	1576	1767	3526	1500	1781	3554	1548
Grp Volume(v), veh/h	47	405	392	77	459	207	176	531	23	80	946	83
Grp Sat Flow(s),veh/h/ln	1781	1870	1580	1795	1885	1576	1767	1763	1500	1781	1777	1548
Q Serve(g_s), s	2.5	19.9	23.7	4.1	22.7	10.7	9.8	11.1	1.0	4.3	23.8	3.7
Cycle Q Clear(g_c), s	2.5	19.9	23.7	4.1	22.7	10.7	9.8	11.1	1.0	4.3	23.8	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	117	526	445	143	557	465	194	1315	560	143	1220	531
V/C Ratio(X)	0.40	0.77	0.88	0.54	0.82	0.45	0.91	0.40	0.04	0.56	0.78	0.16
Avail Cap(c_a), veh/h	160	574	485	162	579	484	194	1315	560	178	1220	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	33.0	34.3	44.3	32.8	28.6	44.0	23.1	20.0	44.3	29.4	22.8
Incr Delay (d2), s/veh	0.8	6.5	17.0	1.2	9.7	1.0	36.3	0.9	0.1	1.3	4.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.4	10.6	1.8	11.2	3.9	6.1	4.5	0.3	1.9	10.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	39.5	51.3	45.5	42.6	29.6	80.3	24.0	20.1	45.6	34.3	23.4
LnGrp LOS	D	D	D	D	D	C	F	C	C	D	C	C
Approach Vol, veh/h		844			743			730			1109	
Approach Delay, s/veh		45.3			39.2			37.5			34.3	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	39.6	10.6	34.8	12.0	42.6	11.9	33.4
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	11.0	30.7	9.0	30.7	10.0	31.7	9.0	30.7
Max Q Clear Time (g_c+I1), s	11.8	25.8	4.5	24.7	6.3	13.1	6.1	25.7
Green Ext Time (p_c), s	0.0	3.2	0.0	2.4	0.0	4.6	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	38.7
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
11: Clovis Avenue & Herndon Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	356	887	249	152	1063	177	250	307	122	197	410	724
Future Volume (veh/h)	356	887	249	152	1063	177	250	307	122	197	410	724
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	383	954	268	163	1143	190	269	330	131	212	441	778
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	1	1	1
Cap, veh/h	400	1929	796	219	1672	519	432	1156	430	203	1287	1031
Arrive On Green	0.23	0.76	0.76	0.06	0.33	0.33	0.13	0.32	0.32	0.06	0.25	0.25
Sat Flow, veh/h	3428	5066	1572	3456	5106	1585	3456	3649	1358	3483	5147	2812
Grp Volume(v), veh/h	383	954	268	163	1143	190	269	306	155	212	441	778
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1728	1702	1585	1728	1702	1604	1742	1716	1406
Q Serve(g_s), s	13.2	8.6	1.3	5.6	23.3	8.5	8.9	8.1	8.8	7.0	8.4	17.3
Cycle Q Clear(g_c), s	13.2	8.6	1.3	5.6	23.3	8.5	8.9	8.1	8.8	7.0	8.4	17.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	400	1929	796	219	1672	519	432	1078	508	203	1287	1031
V/C Ratio(X)	0.96	0.49	0.34	0.75	0.68	0.37	0.62	0.28	0.30	1.04	0.34	0.75
Avail Cap(c_a), veh/h	400	1929	796	288	1672	519	432	1078	508	203	1287	1031
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	9.9	2.5	55.3	35.0	18.6	49.8	30.8	31.0	56.5	36.9	14.1
Incr Delay (d2), s/veh	31.3	0.8	1.0	4.7	2.3	2.0	2.1	0.7	1.5	75.0	0.7	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	2.4	0.9	2.5	9.6	3.3	3.9	3.3	3.5	5.1	3.5	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.0	10.7	3.5	59.9	37.2	20.6	51.9	31.4	32.6	131.5	37.6	19.3
LnGrp LOS	E	B	A	E	D	C	D	C	C	F	D	B
Approach Vol, veh/h		1605			1496			730			1431	
Approach Delay, s/veh		25.3			37.6			39.2			41.6	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	45.3	12.0	43.7	12.6	51.7	20.0	35.7
Change Period (Y+Rc), s	5.0	6.0	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	14.0	39.3	7.0	38.0	10.0	43.3	15.0	30.0
Max Q Clear Time (g_c+I1), s	15.2	25.3	9.0	10.8	7.6	10.6	10.9	19.3
Green Ext Time (p_c), s	0.0	6.0	0.0	1.7	0.1	8.3	0.2	5.0

Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
13: Sunnyside Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑	↱	↰	↱		↰	↑	↱
Traffic Volume (veh/h)	63	741	195	67	721	11	110	15	49	24	58	99
Future Volume (veh/h)	63	741	195	67	721	11	110	15	49	24	58	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885	1752	1752	1752	1722	1722	1722
Adj Flow Rate, veh/h	64	756	199	68	736	11	112	15	50	24	59	101
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	1	1	1	10	10	10	12	12	12
Cap, veh/h	82	794	658	88	1541	672	138	106	352	41	414	350
Arrive On Green	0.05	0.43	0.43	0.05	0.43	0.43	0.08	0.30	0.30	0.03	0.24	0.24
Sat Flow, veh/h	1767	1856	1537	1795	3582	1561	1668	355	1182	1640	1722	1458
Grp Volume(v), veh/h	64	756	199	68	736	11	112	0	65	24	59	101
Grp Sat Flow(s),veh/h/ln	1767	1856	1537	1795	1791	1561	1668	0	1537	1640	1722	1458
Q Serve(g_s), s	3.2	35.4	7.7	3.4	13.3	0.4	5.9	0.0	2.8	1.3	2.4	5.1
Cycle Q Clear(g_c), s	3.2	35.4	7.7	3.4	13.3	0.4	5.9	0.0	2.8	1.3	2.4	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	82	794	658	88	1541	672	138	0	458	41	414	350
V/C Ratio(X)	0.78	0.95	0.30	0.78	0.48	0.02	0.81	0.00	0.14	0.58	0.14	0.29
Avail Cap(c_a), veh/h	175	814	674	110	1541	672	139	0	458	108	414	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	24.8	16.9	42.3	18.4	14.7	40.6	0.0	23.1	43.4	26.9	27.9
Incr Delay (d2), s/veh	14.4	20.5	0.3	23.4	0.2	0.0	28.9	0.0	0.6	12.4	0.7	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	17.9	2.5	2.0	5.1	0.1	3.4	0.0	1.0	0.7	1.1	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	45.3	17.2	65.7	18.6	14.7	69.5	0.0	23.8	55.8	27.6	30.0
LnGrp LOS	E	D	B	E	B	B	E	A	C	E	C	C
Approach Vol, veh/h		1019			815			177			184	
Approach Delay, s/veh		40.5			22.5			52.7			32.6	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	31.3	8.9	43.0	12.0	26.1	8.7	43.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.9	21.1	5.5	39.5	7.5	19.5	8.9	36.1
Max Q Clear Time (g_c+I1), s	3.3	4.8	5.4	37.4	7.9	7.1	5.2	15.3
Green Ext Time (p_c), s	0.0	0.2	0.0	1.1	0.0	0.4	0.0	4.8

Intersection Summary	
HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
15: Sunnyside Avenue & Nees Avenue

Shepherd
Near Term WP MIT- AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱			↰	↱		✥	
Traffic Volume (veh/h)	17	281	85	25	373	14	137	88	17	22	211	80
Future Volume (veh/h)	17	281	85	25	373	14	137	88	17	22	211	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1752	1752	1752	1796	1796	1796
Adj Flow Rate, veh/h	18	296	89	26	393	15	144	93	18	23	222	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	10	10	10	7	7	7
Cap, veh/h	338	1146	338	474	767	29	211	112	631	64	297	102
Arrive On Green	0.43	0.43	0.43	0.14	0.14	0.14	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	977	2696	794	1005	1804	69	270	263	1485	0	699	240
Grp Volume(v), veh/h	18	193	192	26	0	408	237	0	18	329	0	0
Grp Sat Flow(s),veh/h/ln	977	1777	1714	1005	0	1873	533	0	1485	938	0	0
Q Serve(g_s), s	0.9	4.2	4.4	1.4	0.0	12.1	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.0	4.2	4.4	5.7	0.0	12.1	25.5	0.0	0.4	25.5	0.0	0.0
Prop In Lane	1.00		0.46	1.00		0.04	0.61		1.00	0.07		0.26
Lane Grp Cap(c), veh/h	338	755	728	474	0	796	323	0	631	463	0	0
V/C Ratio(X)	0.05	0.26	0.26	0.05	0.00	0.51	0.73	0.00	0.03	0.71	0.00	0.00
Avail Cap(c_a), veh/h	338	755	728	474	0	796	323	0	631	463	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.67	0.00	0.67	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.4	11.1	11.2	19.2	0.0	20.0	16.4	0.0	10.0	13.4	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.8	0.9	0.1	0.0	1.6	8.4	0.0	0.0	5.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.5	0.3	0.0	5.8	3.2	0.0	0.1	3.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	11.9	12.1	19.4	0.0	21.6	24.8	0.0	10.1	18.4	0.0	0.0
LnGrp LOS	B	B	B	B	A	C	C	A	B	B	A	A
Approach Vol, veh/h		403			434			255			329	
Approach Delay, s/veh		12.3			21.5			23.7			18.4	
Approach LOS		B			C			C			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		25.5		25.5		25.5		25.5				
Max Q Clear Time (g_c+I1), s		15.0		27.5		14.1		27.5				
Green Ext Time (p_c), s		1.5		0.0		1.8		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		18.6
HCM 6th LOS		B

HCM 6th Signalized Intersection Summary
18: Fowler Avenue & Shepherd Avenue

Shepherd

Near Term WP MIT- AM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	32	574	140	37	447	370	208	97	38	185	142	27
Future Volume (veh/h)	32	574	140	37	447	370	208	97	38	185	142	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	33	598	146	39	466	385	217	101	40	193	148	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	4	4
Cap, veh/h	89	1034	451	99	554	470	178	569	482	229	504	95
Arrive On Green	0.05	0.29	0.29	0.06	0.30	0.30	0.10	0.30	0.30	0.13	0.33	0.33
Sat Flow, veh/h	1781	3554	1551	1781	1870	1585	1781	1870	1585	1753	1505	285
Grp Volume(v), veh/h	33	598	146	39	466	385	217	101	40	193	0	176
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1781	1870	1585	1781	1870	1585	1753	0	1789
Q Serve(g_s), s	1.6	12.9	6.6	1.9	21.0	20.3	9.0	3.6	1.6	9.7	0.0	6.5
Cycle Q Clear(g_c), s	1.6	12.9	6.6	1.9	21.0	20.3	9.0	3.6	1.6	9.7	0.0	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	89	1034	451	99	554	470	178	569	482	229	0	599
V/C Ratio(X)	0.37	0.58	0.32	0.40	0.84	0.82	1.22	0.18	0.08	0.84	0.00	0.29
Avail Cap(c_a), veh/h	158	1185	517	158	623	528	178	569	482	448	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.4	27.2	25.0	41.1	29.7	29.4	40.5	23.0	22.4	38.2	0.0	22.1
Incr Delay (d2), s/veh	1.0	1.0	0.8	1.0	10.5	10.4	138.3	0.7	0.3	3.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.3	2.4	0.8	10.2	8.6	10.6	1.6	0.6	4.1	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.3	28.2	25.7	42.0	40.1	39.9	178.8	23.7	22.7	41.4	0.0	23.3
LnGrp LOS	D	C	C	D	D	D	F	C	C	D	A	C
Approach Vol, veh/h		777			890			358			369	
Approach Delay, s/veh		28.3			40.1			117.6			32.8	
Approach LOS		C			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.8	8.5	32.7	15.8	33.1	9.0	32.2
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	9.0	23.3	8.0	30.0	23.0	9.3	8.0	30.0
Max Q Clear Time (g_c+I1), s	11.0	8.5	3.6	23.0	11.7	5.6	3.9	14.9
Green Ext Time (p_c), s	0.0	0.7	0.0	3.7	0.2	0.2	0.0	6.1

Intersection Summary			
HCM 6th Ctrl Delay			46.7
HCM 6th LOS			D

AGENDA ITEM NO. 6.

HCM 6th Signalized Intersection Summary
22: Fowler Avenue & SR-168 EB Ramps

Shepherd
Near Term WP MIT- AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰		↱↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	159	0	338	0	0	0	0	807	96	14	479	0
Future Volume (veh/h)	159	0	338	0	0	0	0	807	96	14	479	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1856				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	167	0	356				0	849	101	15	504	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	3				0	1	1	2	2	0
Cap, veh/h	294	0	460				0	1613	192	39	2199	0
Arrive On Green	0.17	0.00	0.17				0.00	0.50	0.50	0.02	0.62	0.00
Sat Flow, veh/h	1767	0	2768				0	3309	382	1781	3647	0
Grp Volume(v), veh/h	167	0	356				0	473	477	15	504	0
Grp Sat Flow(s),veh/h/ln	1767	0	1384				0	1791	1807	1781	1777	0
Q Serve(g_s), s	5.2	0.0	7.4				0.0	10.7	10.7	0.5	3.8	0.0
Cycle Q Clear(g_c), s	5.2	0.0	7.4				0.0	10.7	10.7	0.5	3.8	0.0
Prop In Lane	1.00		1.00				0.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	294	0	460				0	898	906	39	2199	0
V/C Ratio(X)	0.57	0.00	0.77				0.00	0.53	0.53	0.38	0.23	0.00
Avail Cap(c_a), veh/h	321	0	503				0	898	906	181	2199	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.88	0.88	0.00
Uniform Delay (d), s/veh	23.0	0.0	23.9				0.0	10.1	10.1	28.9	5.1	0.0
Incr Delay (d2), s/veh	3.8	0.0	8.5				0.0	2.2	2.2	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	2.7				0.0	3.6	3.6	0.2	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	0.0	32.4				0.0	12.3	12.3	30.9	5.3	0.0
LnGrp LOS	C	A	C				A	B	B	C	A	A
Approach Vol, veh/h		523						950			519	
Approach Delay, s/veh		30.6						12.3			6.0	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.0	36.9		16.1		43.9
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 6.1	24.4		10.9		36.2
Max Q Clear Time (g_c+I1), s	2.5	12.7		9.4		5.8
Green Ext Time (p_c), s	0.0	7.6		0.6		5.6

Intersection Summary			
HCM 6th Ctrl Delay			15.5
HCM 6th LOS			B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	112	419	286	311	645	254	390	916	321	263	1334	211
Future Volume (veh/h)	112	419	286	311	645	254	390	916	321	263	1334	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	122	455	311	338	701	276	424	996	349	286	1450	229
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3	3	3	3	1	1	1
Cap, veh/h	272	748	334	384	859	383	442	2071	818	335	1936	591
Arrive On Green	0.08	0.21	0.21	0.11	0.24	0.24	0.13	0.41	0.41	0.10	0.38	0.38
Sat Flow, veh/h	3456	3554	1585	3428	3526	1571	3428	5066	1571	3483	5147	1570
Grp Volume(v), veh/h	122	455	311	338	701	276	424	996	349	286	1450	229
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1714	1763	1571	1714	1689	1571	1742	1716	1570
Q Serve(g_s), s	4.9	16.8	20.3	14.1	27.2	17.7	17.8	21.0	5.8	11.7	35.5	11.4
Cycle Q Clear(g_c), s	4.9	16.8	20.3	14.1	27.2	17.7	17.8	21.0	5.8	11.7	35.5	11.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	272	748	334	384	859	383	442	2071	818	335	1936	591
V/C Ratio(X)	0.45	0.61	0.93	0.88	0.82	0.72	0.96	0.48	0.43	0.85	0.75	0.39
Avail Cap(c_a), veh/h	462	1073	479	430	1065	474	442	2071	818	449	1936	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	63.8	51.8	29.7	63.4	51.8	29.0	62.8	31.5	7.8	64.5	39.3	17.9
Incr Delay (d2), s/veh	0.4	1.9	26.2	16.1	4.6	4.8	32.1	0.8	1.6	7.7	2.3	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	9.4	22.1	7.7	14.7	18.0	10.5	13.5	16.4	6.1	19.9	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	53.7	55.9	79.5	56.3	33.8	94.9	32.3	9.4	72.2	41.5	19.5
LnGrp LOS	E	D	E	E	E	C	F	C	A	E	D	B
Approach Vol, veh/h		888			1315			1769			1965	
Approach Delay, s/veh		55.9			57.5			42.8			43.4	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	60.2	18.2	41.5	20.3	65.0	23.0	36.7
Change Period (Y+Rc), s	6.3	5.7	6.8	* 6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	18.7	39.3	19.4	* 44	18.7	39.3	18.2	43.8
Max Q Clear Time (g_c+I1), s	19.8	37.5	6.9	29.2	13.7	23.0	16.1	22.3
Green Ext Time (p_c), s	0.0	1.7	0.1	6.1	0.2	12.3	0.2	8.0

Intersection Summary	
HCM 6th Ctrl Delay	48.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
3: Minnewawa Avenue & Behymer Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	3	133	96	43	526	380	115	269	12	166	589	8
Future Volume (veh/h)	3	133	96	43	526	380	115	269	12	166	589	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1841	1841	1841	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	3	145	104	47	572	413	125	292	13	180	640	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	4	4	4	4	4	4	2	2	2
Cap, veh/h	94	354	254	331	649	550	110	732	33	207	869	12
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.06	0.42	0.42	0.12	0.47	0.47
Sat Flow, veh/h	567	1005	721	1113	1841	1560	1753	1747	78	1781	1839	26
Grp Volume(v), veh/h	3	0	249	47	572	413	125	0	305	180	0	649
Grp Sat Flow(s),veh/h/ln	567	0	1726	1113	1841	1560	1753	0	1825	1781	0	1865
Q Serve(g_s), s	0.6	0.0	13.1	4.0	35.0	28.0	7.5	0.0	14.0	11.9	0.0	33.8
Cycle Q Clear(g_c), s	35.6	0.0	13.1	17.1	35.0	28.0	7.5	0.0	14.0	11.9	0.0	33.8
Prop In Lane	1.00		0.42	1.00		1.00	1.00		0.04	1.00		0.01
Lane Grp Cap(c), veh/h	94	0	608	331	649	550	110	0	764	207	0	882
V/C Ratio(X)	0.03	0.00	0.41	0.14	0.88	0.75	1.14	0.00	0.40	0.87	0.00	0.74
Avail Cap(c_a), veh/h	176	0	856	490	913	773	110	0	764	230	0	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.00	0.96	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.3	0.0	29.4	35.9	36.5	34.2	56.3	0.0	24.3	52.1	0.0	25.6
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.2	7.5	2.6	128.8	0.0	1.6	26.2	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	8.4	1.6	20.4	23.1	7.6	0.0	10.5	7.5	0.0	22.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	0.0	29.8	36.1	44.0	36.8	185.1	0.0	25.9	78.4	0.0	31.0
LnGrp LOS	D	A	C	D	D	D	F	A	C	E	A	C
Approach Vol, veh/h		252			1032			430			829	
Approach Delay, s/veh		30.1			40.8			72.2			41.3	
Approach LOS		C			D			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.5	54.8		46.8	12.0	61.2		46.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	15.5	31.5		59.5	7.5	39.5		59.5				
Max Q Clear Time (g_c+I1), s	13.9	16.0		37.6	9.5	35.8		37.0				
Green Ext Time (p_c), s	0.1	1.4		1.4	0.0	1.4		5.2				

Intersection Summary				
HCM 6th Ctrl Delay			45.2	
HCM 6th LOS			D	

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	88	699	364	152	754	140	218	310	92	331	892	123
Future Volume (veh/h)	88	699	364	152	754	140	218	310	92	331	892	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	760	396	165	820	152	237	337	100	360	970	134
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	111	927	661	188	900	167	283	784	345	492	1201	536
Arrive On Green	0.06	0.26	0.26	0.11	0.30	0.30	0.16	0.22	0.22	0.28	0.34	0.34
Sat Flow, veh/h	1795	3582	1573	1767	2969	550	1781	3554	1563	1781	3554	1585
Grp Volume(v), veh/h	96	760	396	165	487	485	237	337	100	360	970	134
Grp Sat Flow(s),veh/h/ln	1795	1791	1573	1767	1763	1756	1781	1777	1563	1781	1777	1585
Q Serve(g_s), s	7.7	28.9	6.5	13.3	38.5	38.5	18.7	11.8	6.0	26.6	36.0	7.1
Cycle Q Clear(g_c), s	7.7	28.9	6.5	13.3	38.5	38.5	18.7	11.8	6.0	26.6	36.0	7.1
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	927	661	188	535	533	283	784	345	492	1201	536
V/C Ratio(X)	0.86	0.82	0.60	0.88	0.91	0.91	0.84	0.43	0.29	0.73	0.81	0.25
Avail Cap(c_a), veh/h	111	927	661	280	559	557	283	784	345	492	1201	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.4	50.5	15.6	63.8	48.6	48.6	59.2	48.6	28.2	47.6	43.7	22.3
Incr Delay (d2), s/veh	43.9	6.2	1.9	13.4	19.3	19.4	18.5	1.7	2.1	4.9	5.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	16.1	18.4	7.3	22.5	22.4	11.0	7.0	6.7	15.2	20.5	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.3	56.8	17.5	77.2	67.9	68.0	77.6	50.4	30.4	52.5	49.6	23.5
LnGrp LOS	F	E	B	E	E	E	E	D	C	D	D	C
Approach Vol, veh/h		1252			1137			674			1464	
Approach Delay, s/veh		48.5			69.3			57.0			47.9	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	55.0	13.0	50.0	44.0	38.0	19.4	43.5
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	21.0	49.0	9.0	46.0	38.0	32.0	23.0	32.0
Max Q Clear Time (g_c+I1), s	20.7	38.0	9.7	40.5	28.6	13.8	15.3	30.9
Green Ext Time (p_c), s	0.0	6.3	0.0	3.4	0.4	2.3	0.1	0.8

Intersection Summary	
HCM 6th Ctrl Delay	54.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
5: Clovis Avenue & Shepherd Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	110	716	210	317	675	166	117	197	173	159	597	286
Future Volume (veh/h)	110	716	210	317	675	166	117	197	173	159	597	286
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	120	778	228	345	734	180	127	214	188	173	649	311
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	2	2	2	7	7	7	5	5	5
Cap, veh/h	243	841	370	399	1007	449	150	1052	469	588	1370	610
Arrive On Green	0.07	0.24	0.24	0.12	0.28	0.28	0.09	0.31	0.31	0.17	0.39	0.39
Sat Flow, veh/h	3428	3526	1552	3456	3554	1585	1711	3413	1522	3374	3469	1546
Grp Volume(v), veh/h	120	778	228	345	734	180	127	214	188	173	649	311
Grp Sat Flow(s),veh/h/ln	1714	1763	1552	1728	1777	1585	1711	1706	1522	1687	1735	1546
Q Serve(g_s), s	4.7	30.2	18.4	13.7	26.1	12.9	10.2	6.5	13.6	6.2	19.5	21.3
Cycle Q Clear(g_c), s	4.7	30.2	18.4	13.7	26.1	12.9	10.2	6.5	13.6	6.2	19.5	21.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	841	370	399	1007	449	150	1052	469	588	1370	610
V/C Ratio(X)	0.49	0.93	0.62	0.86	0.73	0.40	0.85	0.20	0.40	0.29	0.47	0.51
Avail Cap(c_a), veh/h	598	856	377	602	1007	449	298	1052	469	588	1370	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	52.1	47.6	60.8	45.3	40.6	62.9	35.7	38.2	50.3	31.5	32.1
Incr Delay (d2), s/veh	0.6	15.8	3.5	5.7	3.0	0.9	4.9	0.4	2.5	1.3	1.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	17.0	16.0	7.0	14.7	12.1	5.1	4.2	12.7	3.5	12.8	19.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	67.8	51.1	66.5	48.3	41.4	67.8	36.2	40.7	51.6	32.7	35.1
LnGrp LOS	E	E	D	E	D	D	E	D	D	D	C	D
Approach Vol, veh/h		1126			1259			529			1133	
Approach Delay, s/veh		64.0			52.3			45.4			36.3	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	61.0	15.5	45.7	30.0	48.8	21.8	39.4
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	24.4	34.3	24.4	34.0	24.4	34.3	24.4	34.0
Max Q Clear Time (g_c+I1), s	12.2	23.3	6.7	28.1	8.2	15.6	15.7	32.2
Green Ext Time (p_c), s	0.1	7.8	0.2	3.2	0.2	3.5	0.4	1.2

Intersection Summary	
HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	71	400	358	69	471	233	161	467	21	115	852	136
Future Volume (veh/h)	71	400	358	69	471	233	161	467	21	115	852	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	77	435	389	75	512	253	175	508	23	125	926	148
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	2	2	2
Cap, veh/h	141	554	468	141	557	466	194	1240	527	155	1169	509
Arrive On Green	0.08	0.30	0.30	0.08	0.30	0.30	0.11	0.35	0.35	0.09	0.33	0.33
Sat Flow, veh/h	1781	1870	1580	1795	1885	1576	1767	3526	1498	1781	3554	1548
Grp Volume(v), veh/h	77	435	389	75	512	253	175	508	23	125	926	148
Grp Sat Flow(s),veh/h/ln	1781	1870	1580	1795	1885	1576	1767	1763	1498	1781	1777	1548
Q Serve(g_s), s	4.2	21.3	23.0	4.0	26.3	13.5	9.8	10.9	1.0	6.9	23.6	7.1
Cycle Q Clear(g_c), s	4.2	21.3	23.0	4.0	26.3	13.5	9.8	10.9	1.0	6.9	23.6	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	554	468	141	557	466	194	1240	527	155	1169	509
V/C Ratio(X)	0.54	0.79	0.83	0.53	0.92	0.54	0.90	0.41	0.04	0.80	0.79	0.29
Avail Cap(c_a), veh/h	160	574	485	162	579	484	194	1240	527	178	1169	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	32.3	32.9	44.3	34.1	29.6	44.0	24.5	21.3	44.8	30.4	24.9
Incr Delay (d2), s/veh	1.2	7.5	12.0	1.1	20.0	1.6	34.9	0.9	0.1	17.9	5.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	13.2	20.0	2.1	17.3	12.2	6.7	7.2	1.1	4.2	13.7	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	39.7	44.9	45.4	54.0	31.2	78.9	25.5	21.5	62.7	36.0	26.3
LnGrp LOS	D	D	D	D	D	C	E	C	C	E	D	C
Approach Vol, veh/h		901			840			706			1199	
Approach Delay, s/veh		42.4			46.4			38.6			37.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	38.2	11.9	34.9	12.7	40.5	11.9	34.9
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	11.0	30.7	9.0	30.7	10.0	31.7	9.0	30.7
Max Q Clear Time (g_c+I1), s	11.8	25.6	6.2	28.3	8.9	12.9	6.0	25.0
Green Ext Time (p_c), s	0.0	3.4	0.0	1.3	0.0	4.4	0.0	2.8

Intersection Summary			
HCM 6th Ctrl Delay			41.0
HCM 6th LOS			D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	16	292	193	46	419	109	279	523	91	162	1164	63
Future Volume (veh/h)	16	292	193	46	419	109	279	523	91	162	1164	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	17	317	210	50	455	118	303	568	99	176	1265	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	1	1	1
Cap, veh/h	62	366	309	172	488	414	297	1301	226	204	1312	70
Arrive On Green	0.04	0.20	0.20	0.10	0.26	0.26	0.17	0.43	0.43	0.11	0.38	0.38
Sat Flow, veh/h	1739	1826	1545	1781	1870	1585	1767	2992	520	1795	3452	185
Grp Volume(v), veh/h	17	317	210	50	455	118	303	334	333	176	655	678
Grp Sat Flow(s),veh/h/ln	1739	1826	1545	1781	1870	1585	1767	1763	1749	1795	1791	1847
Q Serve(g_s), s	1.2	21.0	10.9	3.3	29.7	5.5	21.0	16.5	16.6	12.0	44.7	44.9
Cycle Q Clear(g_c), s	1.2	21.0	10.9	3.3	29.7	5.5	21.0	16.5	16.6	12.0	44.7	44.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		0.10
Lane Grp Cap(c), veh/h	62	366	309	172	488	414	297	766	760	204	681	702
V/C Ratio(X)	0.27	0.87	0.68	0.29	0.93	0.29	1.02	0.44	0.44	0.86	0.96	0.97
Avail Cap(c_a), veh/h	223	574	486	172	513	435	297	766	760	345	681	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	58.7	48.4	22.2	52.5	45.1	20.3	52.0	24.6	24.7	54.5	37.9	37.9
Incr Delay (d2), s/veh	0.9	6.8	1.8	0.3	23.6	0.4	57.6	1.8	1.8	3.5	20.2	20.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	11.7	11.5	1.8	19.0	6.4	15.1	12.0	11.9	6.3	26.5	27.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	55.2	24.0	52.8	68.7	20.7	109.6	26.4	26.5	57.9	58.0	58.2
LnGrp LOS	E	E	C	D	E	C	F	C	C	E	E	E
Approach Vol, veh/h		544			623			970			1509	
Approach Delay, s/veh		43.3			58.3			52.4			58.1	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	53.2	8.5	38.3	18.2	60.0	16.1	30.7
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	21.0	34.3	16.0	34.3	24.0	31.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	23.0	46.9	3.2	31.7	14.0	18.6	5.3	23.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.2	3.7	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	54.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
11: Clovis Avenue & Herndon Avenue

Shepherd
Cumulative Year (2046) WP MIT- AM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	410	936	364	196	1112	186	380	454	158	206	479	752
Future Volume (veh/h)	410	936	364	196	1112	186	380	454	158	206	479	752
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	441	1006	391	211	1196	200	409	488	170	222	515	809
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	1	1	1
Cap, veh/h	546	1952	839	264	1504	467	513	1100	369	276	1148	1075
Arrive On Green	0.16	0.39	0.39	0.08	0.29	0.29	0.15	0.29	0.29	0.08	0.22	0.22
Sat Flow, veh/h	3428	5066	1572	3456	5106	1585	3456	3763	1263	3483	5147	2812
Grp Volume(v), veh/h	441	1006	391	211	1196	200	409	440	218	222	515	809
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1728	1702	1585	1728	1702	1622	1742	1716	1406
Q Serve(g_s), s	16.1	19.8	4.9	7.8	28.0	13.2	14.9	13.6	14.3	8.1	11.2	11.7
Cycle Q Clear(g_c), s	16.1	19.8	4.9	7.8	28.0	13.2	14.9	13.6	14.3	8.1	11.2	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	546	1952	839	264	1504	467	513	995	474	276	1148	1075
V/C Ratio(X)	0.81	0.52	0.47	0.80	0.80	0.43	0.80	0.44	0.46	0.81	0.45	0.75
Avail Cap(c_a), veh/h	546	1952	839	346	1504	467	611	995	474	375	1148	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	30.6	7.3	59.1	42.2	37.0	53.5	37.4	37.6	58.9	43.6	34.8
Incr Delay (d2), s/veh	6.9	0.8	1.6	7.2	4.4	2.9	5.1	1.4	3.2	6.3	1.3	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	12.2	16.1	4.1	15.0	12.7	7.7	8.1	8.3	4.2	6.3	18.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	31.5	8.9	66.3	46.7	39.9	58.6	38.8	40.8	65.2	44.9	39.7
LnGrp LOS	E	C	A	E	D	D	E	D	D	E	D	D
Approach Vol, veh/h		1838			1607			1067			1546	
Approach Delay, s/veh		33.4			48.4			46.8			45.1	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.7	44.3	15.3	43.7	14.9	56.1	24.3	34.7
Change Period (Y+Rc), s	6.0	* 6	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	18.0	* 38	14.0	38.0	13.0	43.3	23.0	29.0
Max Q Clear Time (g_c+I1), s	18.1	30.0	10.1	16.3	9.8	21.8	16.9	13.7
Green Ext Time (p_c), s	0.0	4.5	0.1	2.4	0.1	8.3	0.5	6.7

Intersection Summary	
HCM 6th Ctrl Delay	42.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
13: Sunnyside Avenue & Shepherd Avenue

Shepherd

Cumulative Year (2046) WP MIT- AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰	↑↑	↱	↰	↱		↰↰	↑	↱
Traffic Volume (veh/h)	222	774	204	69	750	99	115	86	51	332	441	479
Future Volume (veh/h)	222	774	204	69	750	99	115	86	51	332	441	479
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885	1752	1752	1752	1722	1722	1722
Adj Flow Rate, veh/h	227	790	208	70	765	101	117	88	52	339	450	489
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	1	1	1	10	10	10	12	12	12
Cap, veh/h	297	973	423	92	861	378	146	310	183	421	595	504
Arrive On Green	0.09	0.28	0.28	0.05	0.24	0.24	0.09	0.30	0.30	0.13	0.35	0.35
Sat Flow, veh/h	3428	3526	1534	1795	3582	1574	1668	1032	610	3182	1722	1458
Grp Volume(v), veh/h	227	790	208	70	765	101	117	0	140	339	450	489
Grp Sat Flow(s),veh/h/ln	1714	1763	1534	1795	1791	1574	1668	0	1641	1591	1722	1458
Q Serve(g_s), s	4.9	15.7	8.5	2.9	15.5	3.9	5.2	0.0	4.9	7.8	17.4	24.8
Cycle Q Clear(g_c), s	4.9	15.7	8.5	2.9	15.5	3.9	5.2	0.0	4.9	7.8	17.4	24.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	297	973	423	92	861	378	146	0	494	421	595	504
V/C Ratio(X)	0.76	0.81	0.49	0.76	0.89	0.27	0.80	0.00	0.28	0.81	0.76	0.97
Avail Cap(c_a), veh/h	297	973	423	120	884	388	167	0	494	462	595	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	25.3	22.7	35.1	27.5	23.1	33.6	0.0	20.0	31.6	21.7	24.2
Incr Delay (d2), s/veh	11.2	5.3	0.9	18.7	10.8	0.4	21.6	0.0	1.4	9.3	8.7	33.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	8.9	7.6	1.9	9.3	3.7	3.3	0.0	3.1	4.1	10.8	21.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.7	30.7	23.6	53.8	38.3	23.5	55.2	0.0	21.5	41.0	30.4	57.5
LnGrp LOS	D	C	C	D	D	C	E	A	C	D	C	E
Approach Vol, veh/h		1225			936			257			1278	
Approach Delay, s/veh		32.1			37.9			36.8			43.6	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	27.1	8.3	25.2	11.0	30.4	11.0	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.9	21.1	5.0	20.0	7.5	24.5	6.5	18.5
Max Q Clear Time (g_c+I1), s	9.8	6.9	4.9	17.7	7.2	26.8	6.9	17.5
Green Ext Time (p_c), s	0.2	0.5	0.0	1.3	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
15: Sunnyside Avenue & Nees Avenue

Shepherd

Cumulative Year (2046) WP MIT- AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	18	328	162	52	462	19	152	92	20	43	405	95
Future Volume (veh/h)	18	328	162	52	462	19	152	92	20	43	405	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1752	1752	1752	1796	1796	1796
Adj Flow Rate, veh/h	19	345	171	55	486	20	160	97	21	45	426	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	10	10	10	7	7	7
Cap, veh/h	229	804	390	326	627	26	197	503	109	113	434	102
Arrive On Green	0.35	0.35	0.35	0.46	0.46	0.46	0.12	0.36	0.36	0.07	0.31	0.31
Sat Flow, veh/h	892	2306	1120	891	1798	74	1668	1395	302	1711	1407	330
Grp Volume(v), veh/h	19	264	252	55	0	506	160	0	118	45	0	526
Grp Sat Flow(s),veh/h/ln	892	1777	1648	891	0	1871	1668	0	1697	1711	0	1737
Q Serve(g_s), s	1.1	6.8	7.0	2.8	0.0	13.6	5.6	0.0	2.9	1.5	0.0	18.0
Cycle Q Clear(g_c), s	14.7	6.8	7.0	9.8	0.0	13.6	5.6	0.0	2.9	1.5	0.0	18.0
Prop In Lane	1.00		0.68	1.00		0.04	1.00		0.18	1.00		0.19
Lane Grp Cap(c), veh/h	229	619	575	326	0	652	197	0	612	113	0	536
V/C Ratio(X)	0.08	0.43	0.44	0.17	0.00	0.78	0.81	0.00	0.19	0.40	0.00	0.98
Avail Cap(c_a), veh/h	229	619	575	326	0	652	209	0	612	214	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.72	0.00	0.72	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	15.0	15.0	15.8	0.0	14.1	25.8	0.0	13.2	26.9	0.0	20.6
Incr Delay (d2), s/veh	0.7	2.1	2.4	0.8	0.0	6.5	20.3	0.0	0.7	2.3	0.0	34.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.8	4.6	1.0	0.0	9.6	3.8	0.0	2.1	0.8	0.0	13.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	17.1	17.4	16.6	0.0	20.6	46.1	0.0	13.9	29.1	0.0	55.3
LnGrp LOS	C	B	B	B	A	C	D	A	B	C	A	E
Approach Vol, veh/h		535			561			278			571	
Approach Delay, s/veh		17.5			20.2			32.4			53.3	
Approach LOS		B			C			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.4	11.6	23.0		25.4	8.5	26.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	7.5	18.5		20.5	7.5	18.5				
Max Q Clear Time (g_c+I1), s		16.7	7.6	20.0		15.6	3.5	4.9				
Green Ext Time (p_c), s		1.1	0.0	0.0		1.4	0.0	0.4				

Intersection Summary			
HCM 6th Ctrl Delay			30.9
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
18: Fowler Avenue & Shepherd Avenue

Shepherd

Cumulative Year (2046) WP MIT- AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↑↱	
Traffic Volume (veh/h)	53	703	282	75	469	386	217	100	40	342	534	32
Future Volume (veh/h)	53	703	282	75	469	386	217	100	40	342	534	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	55	732	294	78	489	402	226	104	42	356	556	33
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	4	4	4
Cap, veh/h	112	999	436	126	541	458	214	431	366	387	570	34
Arrive On Green	0.06	0.28	0.28	0.07	0.29	0.29	0.12	0.23	0.23	0.22	0.33	0.33
Sat Flow, veh/h	1781	3554	1551	1781	1870	1585	1781	1870	1585	1753	1720	102
Grp Volume(v), veh/h	55	732	294	78	489	402	226	104	42	356	0	589
Grp Sat Flow(s),veh/h/ln	1781	1777	1551	1781	1870	1585	1781	1870	1585	1753	0	1822
Q Serve(g_s), s	3.0	18.7	16.8	4.3	25.2	24.2	12.0	4.5	2.1	19.9	0.0	31.9
Cycle Q Clear(g_c), s	3.0	18.7	16.8	4.3	25.2	24.2	12.0	4.5	2.1	19.9	0.0	31.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	112	999	436	126	541	458	214	431	366	387	0	604
V/C Ratio(X)	0.49	0.73	0.67	0.62	0.90	0.88	1.06	0.24	0.11	0.92	0.00	0.98
Avail Cap(c_a), veh/h	143	1066	465	143	561	476	214	431	366	438	0	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	32.6	31.9	45.1	34.2	33.8	44.0	31.3	30.4	38.1	0.0	33.0
Incr Delay (d2), s/veh	1.3	3.0	4.6	3.8	18.6	17.4	77.5	1.3	0.6	21.9	0.0	31.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	10.6	14.6	2.3	16.4	21.3	10.5	3.0	2.1	12.2	0.0	21.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.6	35.6	36.5	48.9	52.8	51.2	121.5	32.7	31.0	60.1	0.0	64.2
LnGrp LOS	D	D	D	D	D	D	F	C	C	E	A	E
Approach Vol, veh/h		1081			969			372			945	
Approach Delay, s/veh		36.4			51.8			86.4			62.7	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	38.8	10.3	34.9	26.1	28.8	11.1	34.1
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	12.0	30.3	8.0	30.0	25.0	17.3	8.0	30.0
Max Q Clear Time (g_c+I1), s	14.0	33.9	5.0	27.2	21.9	6.5	6.3	20.7
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.2	0.4	0.0	5.7

Intersection Summary	
HCM 6th Ctrl Delay	53.7
HCM 6th LOS	D

AGENDA ITEM NO. 6.

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↱		↰	↑	↱
Traffic Volume (veh/h)	26	10	20	30	8	43	7	211	19	135	778	54
Future Volume (veh/h)	26	10	20	30	8	43	7	211	19	135	778	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	28	11	22	33	9	47	8	229	21	147	846	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	3	3	3	1	1	1
Cap, veh/h	141	42	54	126	25	76	486	1274	117	987	1435	1216
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	0.76	0.76	0.76
Sat Flow, veh/h	603	478	610	488	279	858	646	1674	154	1139	1885	1598
Grp Volume(v), veh/h	61	0	0	89	0	0	8	0	250	147	846	59
Grp Sat Flow(s),veh/h/ln	1691	0	0	1625	0	0	646	0	1828	1139	1885	1598
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.2	0.0	0.0	2.1	11.7	0.5
Cycle Q Clear(g_c), s	1.9	0.0	0.0	3.0	0.0	0.0	11.9	0.0	0.0	2.1	11.7	0.5
Prop In Lane	0.46		0.36	0.37		0.53	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	238	0	0	227	0	0	486	0	1391	987	1435	1216
V/C Ratio(X)	0.26	0.00	0.00	0.39	0.00	0.00	0.02	0.00	0.18	0.15	0.59	0.05
Avail Cap(c_a), veh/h	558	0	0	550	0	0	486	0	1391	987	1435	1216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	0.0	0.0	26.2	0.0	0.0	1.5	0.0	0.0	2.0	3.1	1.8
Incr Delay (d2), s/veh	0.6	0.0	0.0	1.1	0.0	0.0	0.1	0.0	0.3	0.3	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	1.6	0.0	0.0	0.1	0.0	4.3	2.5	14.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	0.0	0.0	27.4	0.0	0.0	1.6	0.0	0.3	2.3	4.9	1.9
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		61			89			258			1052	
Approach Delay, s/veh		26.4			27.4			0.3			4.4	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.2		9.8		50.2		9.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		33.0		18.0		33.0		18.0
Max Q Clear Time (g_c+I1), s		13.9		3.9		13.7		5.0
Green Ext Time (p_c), s		1.2		0.2		6.4		0.3

Intersection Summary			
HCM 6th Ctrl Delay			6.0
HCM 6th LOS			A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	✥	↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	161	0	384	0	0	0	0	847	101	15	584	0
Future Volume (veh/h)	161	0	384	0	0	0	0	847	101	15	584	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	113	0	464				0	892	106	16	615	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3				0	1	1	2	2	0
Cap, veh/h	315	0	561				0	1572	187	42	2156	0
Arrive On Green	0.18	0.00	0.18				0.00	0.49	0.49	0.02	0.61	0.00
Sat Flow, veh/h	1767	0	3145				0	3313	383	1781	3647	0
Grp Volume(v), veh/h	113	0	464				0	496	502	16	615	0
Grp Sat Flow(s),veh/h/ln	1767	0	1572				0	1791	1811	1781	1777	0
Q Serve(g_s), s	3.4	0.0	8.5				0.0	11.8	11.8	0.5	4.9	0.0
Cycle Q Clear(g_c), s	3.4	0.0	8.5				0.0	11.8	11.8	0.5	4.9	0.0
Prop In Lane	1.00		1.00				0.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	315	0	561				0	874	884	42	2156	0
V/C Ratio(X)	0.36	0.00	0.83				0.00	0.57	0.57	0.38	0.29	0.00
Avail Cap(c_a), veh/h	321	0	571				0	874	884	181	2156	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.78	0.78	0.00
Uniform Delay (d), s/veh	21.6	0.0	23.8				0.0	10.9	10.9	28.9	5.6	0.0
Incr Delay (d2), s/veh	1.5	0.0	10.8				0.0	2.7	2.6	1.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	4.7				0.0	8.9	9.0	0.3	5.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	0.0	34.5				0.0	13.5	13.5	30.5	5.9	0.0
LnGrp LOS	C	A	C				A	B	B	C	A	A
Approach Vol, veh/h		577						998			631	
Approach Delay, s/veh		32.3						13.5			6.5	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.1	36.1		16.8		43.2
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 6.1	24.4		10.9		36.2
Max Q Clear Time (g_c+I1), s	2.5	13.8		10.5		6.9
Green Ext Time (p_c), s	0.0	7.3		0.2		7.0

Intersection Summary			
HCM 6th Ctrl Delay			16.4
HCM 6th LOS			B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

AGENDA ITEM NO. 6.

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	19	0	382	7	0	1148
Future Vol, veh/h	19	0	382	7	0	1148
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	9	12	12
Mvmt Flow	21	0	415	8	0	1248

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1667	419	0	0	423	0
Stage 1	419	-	-	-	-	-
Stage 2	1248	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.22	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.308	-
Pot Cap-1 Maneuver	107	638	-	-	1085	-
Stage 1	668	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	107	638	-	-	1085	-
Mov Cap-2 Maneuver	215	-	-	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	273	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	215	1085	-
HCM Lane V/C Ratio	-	-	0.096	-	-
HCM Control Delay (s)	-	-	23.5	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰↱		↑	↱		↰
Traffic Vol, veh/h	85	0	388	19	0	1167
Future Vol, veh/h	85	0	388	19	0	1167
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	9	12	12
Mvmt Flow	92	0	422	21	0	1268

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1690	422	0	0	443	0
Stage 1	422	-	-	-	-	-
Stage 2	1268	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.22	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.308	-
Pot Cap-1 Maneuver	104	636	-	-	1066	-
Stage 1	666	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	104	636	-	-	1066	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	267	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	210	1066	-
HCM Lane V/C Ratio	-	-	0.44	-	-
HCM Control Delay (s)	-	-	35	0	-
HCM Lane LOS	-	-	E	A	-
HCM 95th %tile Q(veh)	-	-	2.1	0	-

HCM 6th Signalized Intersection Summary

2: Willow Avenue & Shepherd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱
Traffic Volume (veh/h)	265	719	387	357	621	318	293	1451	495	344	1051	207
Future Volume (veh/h)	265	719	387	357	621	318	293	1451	495	344	1051	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	282	765	412	380	661	338	312	1544	527	366	1118	220
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	332	971	599	416	1088	485	362	1702	719	389	1733	530
Arrive On Green	0.09	0.27	0.27	0.12	0.30	0.30	0.10	0.33	0.33	0.11	0.34	0.34
Sat Flow, veh/h	3510	3610	1610	3510	3610	1609	3510	5187	1609	3483	5147	1575
Grp Volume(v), veh/h	282	765	412	380	661	338	312	1544	527	366	1118	220
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1755	1805	1609	1755	1729	1609	1742	1716	1575
Q Serve(g_s), s	11.5	28.5	31.3	15.5	22.7	26.9	12.7	41.3	39.1	15.1	26.7	15.6
Cycle Q Clear(g_c), s	11.5	28.5	31.3	15.5	22.7	26.9	12.7	41.3	39.1	15.1	26.7	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	971	599	416	1088	485	362	1702	719	389	1733	530
V/C Ratio(X)	0.85	0.79	0.69	0.91	0.61	0.70	0.86	0.91	0.73	0.94	0.65	0.41
Avail Cap(c_a), veh/h	438	1021	621	416	1088	485	477	1702	719	389	1733	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	64.6	49.1	38.4	63.2	43.3	44.8	64.0	46.6	33.0	63.9	40.7	37.1
Incr Delay (d2), s/veh	9.3	4.9	4.3	23.6	1.1	4.7	9.7	8.6	6.5	28.8	1.7	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	13.3	12.9	8.1	10.0	11.2	6.0	18.4	16.1	8.1	11.2	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.0	54.1	42.7	86.8	44.4	49.5	73.7	55.2	39.5	92.8	42.5	39.3
LnGrp LOS	E	D	D	F	D	D	E	E	D	F	D	D
Approach Vol, veh/h		1459			1379			2383			1704	
Approach Delay, s/veh		54.7			57.4			54.1			52.9	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.3	54.5	19.3	49.9	22.5	53.3	24.0	45.2
Change Period (Y+Rc), s	6.3	5.7	5.6	6.2	6.3	5.7	6.8	6.2
Max Green Setting (Gmax), s	19.7	42.1	18.1	41.3	16.2	45.6	17.2	41.0
Max Q Clear Time (g_c+I1), s	14.7	28.7	13.5	28.9	17.1	43.3	17.5	33.3
Green Ext Time (p_c), s	0.3	10.5	0.2	5.5	0.0	2.3	0.0	5.7

Intersection Summary	
HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
3: Minnewawa Avenue & Behymer Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	7	374	101	18	218	160	149	430	28	203	254	3
Future Volume (veh/h)	7	374	101	18	218	160	149	430	28	203	254	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	8	407	110	20	237	174	162	467	30	221	276	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	326	441	119	150	586	496	209	570	37	254	652	7
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.12	0.32	0.32	0.14	0.35	0.35
Sat Flow, veh/h	983	1429	386	898	1900	1610	1795	1752	113	1795	1861	20
Grp Volume(v), veh/h	8	0	517	20	237	174	162	0	497	221	0	279
Grp Sat Flow(s),veh/h/ln	983	0	1816	898	1900	1610	1795	0	1865	1795	0	1882
Q Serve(g_s), s	0.4	0.0	16.5	1.3	5.9	5.0	5.3	0.0	14.7	7.2	0.0	6.8
Cycle Q Clear(g_c), s	6.3	0.0	16.5	17.8	5.9	5.0	5.3	0.0	14.7	7.2	0.0	6.8
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.06	1.00		0.01
Lane Grp Cap(c), veh/h	326	0	560	150	586	496	209	0	606	254	0	659
V/C Ratio(X)	0.02	0.00	0.92	0.13	0.40	0.35	0.77	0.00	0.82	0.87	0.00	0.42
Avail Cap(c_a), veh/h	326	0	560	150	586	496	224	0	606	254	0	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.00	0.89	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	20.1	28.7	16.4	16.1	25.7	0.0	18.6	25.2	0.0	14.9
Incr Delay (d2), s/veh	0.0	0.0	19.4	0.4	0.5	0.4	14.5	0.0	11.8	25.9	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	8.9	0.3	2.2	1.6	2.8	0.0	7.2	4.5	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	0.0	39.5	29.1	16.8	16.5	40.3	0.0	30.4	51.1	0.0	16.9
LnGrp LOS	B	A	D	C	B	B	D	A	C	D	A	B
Approach Vol, veh/h		525			431			659			500	
Approach Delay, s/veh		39.2			17.3			32.9			32.0	
Approach LOS		D			B			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	24.0		23.0	11.5	25.5		23.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	19.5		18.5	7.5	20.5		18.5				
Max Q Clear Time (g_c+I1), s	9.2	16.7		18.5	7.3	8.8		19.8				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	1.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			31.1									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
4: Minnewawa Avenue & Shepherd Avenue

Shepherd

Cumulative Year (2046) WP MIT- PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	144	1022	218	108	907	211	313	681	154	159	504	108
Future Volume (veh/h)	144	1022	218	108	907	211	313	681	154	159	504	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	155	1099	234	116	975	227	337	732	166	171	542	116
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	161	1307	892	138	983	228	347	2799	1249	194	2494	1113
Arrive On Green	0.09	0.36	0.36	0.08	0.34	0.34	0.19	0.78	0.78	0.11	0.70	0.70
Sat Flow, veh/h	1795	3582	1598	1810	2908	676	1795	3582	1598	1795	3582	1598
Grp Volume(v), veh/h	155	1099	234	116	604	598	337	732	166	171	542	116
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1810	1805	1778	1795	1791	1598	1795	1791	1598
Q Serve(g_s), s	12.5	40.8	11.0	9.2	48.3	48.6	27.0	8.1	3.7	13.6	7.8	6.8
Cycle Q Clear(g_c), s	12.5	40.8	11.0	9.2	48.3	48.6	27.0	8.1	3.7	13.6	7.8	6.8
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	1307	892	138	610	601	347	2799	1249	194	2494	1113
V/C Ratio(X)	0.96	0.84	0.26	0.84	0.99	0.99	0.97	0.26	0.13	0.88	0.22	0.10
Avail Cap(c_a), veh/h	161	1307	892	150	610	601	347	2799	1249	223	2494	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.8	42.2	16.6	66.1	47.8	47.9	58.1	4.3	3.9	63.8	7.9	28.1
Incr Delay (d2), s/veh	59.4	5.3	0.2	28.5	34.1	35.2	40.5	0.2	0.2	26.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	18.2	3.9	5.2	26.5	26.5	15.9	2.5	1.0	7.5	2.8	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.1	47.5	16.8	94.6	81.8	83.1	98.7	4.6	4.1	90.3	8.1	28.3
LnGrp LOS	F	D	B	F	F	F	F	A	A	F	A	C
Approach Vol, veh/h		1488			1318			1235			829	
Approach Delay, s/veh		50.8			83.5			30.2			27.9	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	109.0	19.0	55.0	19.7	121.3	15.1	58.9
Change Period (Y+Rc), s	4.0	6.0	6.0	* 6	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	28.0	35.0	13.0	* 49	18.0	45.0	12.0	50.0
Max Q Clear Time (g_c+I1), s	29.0	9.8	14.5	50.6	15.6	10.1	11.2	42.8
Green Ext Time (p_c), s	0.0	5.5	0.0	0.0	0.1	6.3	0.0	5.2

Intersection Summary	
HCM 6th Ctrl Delay	50.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
5: Clovis Avenue & Shepherd Avenue

Shepherd

Cumulative Year (2046) WP MIT- PM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	191	899	163	287	914	147	222	676	366	136	273	161
Future Volume (veh/h)	191	899	163	287	914	147	222	676	366	136	273	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	201	946	172	302	962	155	234	712	385	143	287	169
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	302	1016	452	317	1037	463	242	1226	547	305	1057	471
Arrive On Green	0.09	0.28	0.28	0.09	0.29	0.29	0.13	0.34	0.34	0.09	0.29	0.29
Sat Flow, veh/h	3483	3582	1594	3510	3610	1610	1810	3610	1610	3510	3610	1610
Grp Volume(v), veh/h	201	946	172	302	962	155	234	712	385	143	287	169
Grp Sat Flow(s),veh/h/ln	1742	1791	1594	1755	1805	1610	1810	1805	1610	1755	1805	1610
Q Serve(g_s), s	6.4	29.6	10.0	9.8	29.8	8.7	14.8	18.7	23.9	4.5	7.0	9.5
Cycle Q Clear(g_c), s	6.4	29.6	10.0	9.8	29.8	8.7	14.8	18.7	23.9	4.5	7.0	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	302	1016	452	317	1037	463	242	1226	547	305	1057	471
V/C Ratio(X)	0.66	0.93	0.38	0.95	0.93	0.33	0.97	0.58	0.70	0.47	0.27	0.36
Avail Cap(c_a), veh/h	303	1028	457	317	1048	468	242	1226	547	305	1057	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	40.1	33.1	52.0	39.8	32.3	49.5	31.2	32.9	50.0	31.2	32.1
Incr Delay (d2), s/veh	4.4	14.5	0.8	37.3	13.8	0.6	43.6	1.7	6.3	5.1	0.6	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	14.3	3.8	5.8	14.4	3.3	9.4	8.1	9.7	2.1	3.1	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	54.6	33.8	89.4	53.6	32.9	93.1	32.9	39.3	55.1	31.9	34.3
LnGrp LOS	E	D	C	F	D	C	F	C	D	E	C	C
Approach Vol, veh/h		1319			1419			1331			599	
Approach Delay, s/veh		52.0			59.0			45.4			38.1	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	39.4	15.6	39.0	15.6	44.8	16.0	38.6
Change Period (Y+Rc), s	5.6	5.7	5.6	6.0	5.6	5.7	5.6	6.0
Max Green Setting (Gmax), s	15.4	33.3	10.0	33.4	10.0	38.7	10.4	33.0
Max Q Clear Time (g_c+I1), s	16.8	11.5	8.4	31.8	6.5	25.9	11.8	31.6
Green Ext Time (p_c), s	0.0	6.2	0.1	1.2	0.1	8.0	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	101	594	413	54	471	351	328	915	48	110	584	50
Future Volume (veh/h)	101	594	413	54	471	351	328	915	48	110	584	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1885	1885	1885	1900	1900	1900
Adj Flow Rate, veh/h	107	632	439	57	501	373	349	973	51	117	621	53
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	1	1	1	1	1	1	0	0	0
Cap, veh/h	132	629	533	115	606	513	344	1331	580	143	934	405
Arrive On Green	0.07	0.33	0.33	0.06	0.32	0.32	0.19	0.37	0.37	0.08	0.26	0.26
Sat Flow, veh/h	1810	1900	1610	1795	1885	1596	1795	3582	1560	1810	3610	1567
Grp Volume(v), veh/h	107	632	439	57	501	373	349	973	51	117	621	53
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	1885	1596	1795	1791	1560	1810	1805	1567
Q Serve(g_s), s	7.0	39.7	30.1	3.7	29.5	24.8	23.0	28.1	2.5	7.6	18.5	3.1
Cycle Q Clear(g_c), s	7.0	39.7	30.1	3.7	29.5	24.8	23.0	28.1	2.5	7.6	18.5	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	629	533	115	606	513	344	1331	580	143	934	405
V/C Ratio(X)	0.81	1.01	0.82	0.50	0.83	0.73	1.01	0.73	0.09	0.82	0.66	0.13
Avail Cap(c_a), veh/h	151	629	533	135	608	515	344	1331	580	166	934	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.32	0.32	0.32	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	40.2	36.9	54.3	37.6	36.0	48.5	32.5	24.5	54.4	39.8	34.1
Incr Delay (d2), s/veh	21.7	37.2	10.7	1.2	9.6	5.6	31.0	1.2	0.1	20.9	3.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	24.1	12.9	1.7	14.6	10.1	12.9	11.8	0.9	4.2	8.4	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.5	77.4	47.6	55.6	47.1	41.6	79.5	33.7	24.6	75.3	43.6	34.8
LnGrp LOS	E	F	D	E	D	D	F	C	C	E	D	C
Approach Vol, veh/h		1178			931			1373			791	
Approach Delay, s/veh		66.2			45.4			45.0			47.7	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	36.3	12.7	43.9	13.5	49.9	11.7	45.0
Change Period (Y+Rc), s	4.0	5.3	4.0	5.3	4.0	5.3	4.0	5.3
Max Green Setting (Gmax), s	23.0	29.7	10.0	38.7	11.0	41.7	9.0	39.7
Max Q Clear Time (g_c+I1), s	25.0	20.5	9.0	31.5	9.6	30.1	5.7	41.7
Green Ext Time (p_c), s	0.0	3.7	0.0	3.5	0.0	6.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
8: Clovis Avenue & Alluvial Avenue

Shepherd
Cumulative Year (2046) WP MIT- PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	23	404	185	38	338	122	261	1212	90	125	901	32
Future Volume (veh/h)	23	404	185	38	338	122	261	1212	90	125	901	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	439	201	41	367	133	284	1317	98	136	979	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	83	482	408	109	509	432	304	1473	109	172	1279	46
Arrive On Green	0.05	0.26	0.26	0.06	0.27	0.27	0.17	0.43	0.43	0.10	0.36	0.36
Sat Flow, veh/h	1795	1885	1596	1795	1885	1598	1810	3401	252	1810	3552	127
Grp Volume(v), veh/h	25	439	201	41	367	133	284	697	718	136	498	516
Grp Sat Flow(s),veh/h/ln	1795	1885	1596	1795	1885	1598	1810	1805	1848	1810	1805	1874
Q Serve(g_s), s	1.7	28.2	13.4	2.7	22.1	8.3	19.4	44.6	45.0	9.2	30.4	30.4
Cycle Q Clear(g_c), s	1.7	28.2	13.4	2.7	22.1	8.3	19.4	44.6	45.0	9.2	30.4	30.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.07
Lane Grp Cap(c), veh/h	83	482	408	109	509	432	304	782	800	172	650	675
V/C Ratio(X)	0.30	0.91	0.49	0.38	0.72	0.31	0.93	0.89	0.90	0.79	0.77	0.77
Avail Cap(c_a), veh/h	158	593	502	158	593	502	304	782	800	232	650	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.74	0.74
Uniform Delay (d), s/veh	57.6	45.1	39.6	56.4	41.3	36.3	51.3	32.7	32.8	55.3	35.3	35.3
Incr Delay (d2), s/veh	0.7	15.3	0.6	0.8	3.7	0.4	34.3	14.6	14.8	6.5	6.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	14.8	5.2	1.2	10.5	3.2	11.4	21.5	22.2	4.4	13.9	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.4	60.4	40.2	57.2	45.0	36.7	85.6	47.3	47.7	61.9	41.6	41.4
LnGrp LOS	E	E	D	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		665			541			1699			1150	
Approach Delay, s/veh		54.2			43.9			53.9			43.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	50.7	9.8	39.5	15.9	59.8	11.6	37.7
Change Period (Y+Rc), s	4.0	5.7	4.0	5.7	4.0	5.7	4.0	5.7
Max Green Setting (Gmax), s	21.0	34.3	11.0	39.3	16.0	39.3	11.0	39.3
Max Q Clear Time (g_c+I1), s	21.4	32.4	3.7	24.1	11.2	47.0	4.7	30.2
Green Ext Time (p_c), s	0.0	1.1	0.0	2.3	0.1	0.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	49.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑↱		↰↰	↑↑↑	↱↱
Traffic Volume (veh/h)	703	1499	349	326	1423	212	609	614	320	331	378	514
Future Volume (veh/h)	703	1499	349	326	1423	212	609	614	320	331	378	514
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	732	1561	364	340	1482	221	634	640	333	345	394	535
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	1098	2531	1174	388	1445	448	853	939	429	348	662	1242
Arrive On Green	0.42	0.65	0.65	0.11	0.28	0.28	0.24	0.27	0.27	0.10	0.13	0.13
Sat Flow, veh/h	3483	5147	1598	3483	5147	1596	3510	3458	1579	3483	5147	2768
Grp Volume(v), veh/h	732	1561	364	340	1482	221	634	640	333	345	394	535
Grp Sat Flow(s),veh/h/ln	1742	1716	1598	1742	1716	1596	1755	1729	1579	1742	1716	1384
Q Serve(g_s), s	23.7	24.6	4.6	13.5	39.3	16.2	23.4	23.2	27.3	13.9	10.1	0.0
Cycle Q Clear(g_c), s	23.7	24.6	4.6	13.5	39.3	16.2	23.4	23.2	27.3	13.9	10.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1098	2531	1174	388	1445	448	853	939	429	348	662	1242
V/C Ratio(X)	0.67	0.62	0.31	0.88	1.03	0.49	0.74	0.68	0.78	0.99	0.60	0.43
Avail Cap(c_a), veh/h	1098	2531	1174	423	1445	448	853	939	429	348	662	1242
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	16.6	2.9	61.3	50.4	42.0	49.0	45.6	47.1	62.9	57.6	26.7
Incr Delay (d2), s/veh	0.6	0.5	0.3	16.4	30.5	3.8	3.2	4.0	13.0	45.5	3.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	7.7	1.0	6.7	20.4	6.7	10.4	10.2	12.0	8.2	4.5	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	17.1	3.2	77.6	80.8	45.9	52.1	49.6	60.0	108.4	61.5	27.8
LnGrp LOS	D	B	A	E	F	D	D	D	E	F	E	C
Approach Vol, veh/h		2657			2043			1607			1274	
Approach Delay, s/veh		20.2			76.5			52.8			60.1	
Approach LOS		C			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	50.1	45.3	19.0	43.7	20.6	74.9	39.0	23.7
Change Period (Y+Rc), s	6.0	* 6	5.0	5.7	5.0	6.0	5.0	5.7
Max Green Setting (Gmax), s	27.0	* 39	14.0	38.0	17.0	49.3	34.0	18.0
Max Q Clear Time (g_c+I1), s	25.7	41.3	15.9	29.3	15.5	26.6	25.4	12.1
Green Ext Time (p_c), s	0.3	0.0	0.0	2.7	0.1	13.0	0.9	2.6

Intersection Summary	
HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

AGENDA ITEM NO. 6.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰	↑↑	↱	↰	↱		↰↰	↑	↱
Traffic Volume (veh/h)	428	922	168	64	955	334	192	300	76	168	187	386
Future Volume (veh/h)	428	922	168	64	955	334	192	300	76	168	187	386
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	455	981	179	68	1016	355	204	319	81	179	199	411
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	0	0	0	0	0	0
Cap, veh/h	469	1350	602	105	1083	483	285	362	92	565	477	405
Arrive On Green	0.13	0.38	0.38	0.06	0.30	0.30	0.16	0.25	0.25	0.16	0.25	0.25
Sat Flow, veh/h	3483	3582	1598	1810	3610	1610	1810	1462	371	3510	1900	1610
Grp Volume(v), veh/h	455	981	179	68	1016	355	204	0	400	179	199	411
Grp Sat Flow(s),veh/h/ln	1742	1791	1598	1810	1805	1610	1810	0	1833	1755	1900	1610
Q Serve(g_s), s	15.0	27.0	9.0	4.2	31.5	22.8	12.3	0.0	24.1	5.2	10.1	28.9
Cycle Q Clear(g_c), s	15.0	27.0	9.0	4.2	31.5	22.8	12.3	0.0	24.1	5.2	10.1	28.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	469	1350	602	105	1083	483	285	0	454	565	477	405
V/C Ratio(X)	0.97	0.73	0.30	0.65	0.94	0.73	0.72	0.00	0.88	0.32	0.42	1.02
Avail Cap(c_a), veh/h	469	1350	602	354	1083	483	285	0	454	565	477	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	30.7	25.1	53.0	39.2	36.1	46.0	0.0	41.6	42.7	36.0	43.0
Incr Delay (d2), s/veh	33.6	3.4	1.3	6.6	16.0	9.6	14.3	0.0	21.0	1.5	2.7	48.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	11.5	3.5	2.1	15.9	9.8	6.5	0.0	13.1	2.4	5.0	16.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.1	34.2	26.4	59.7	55.2	45.7	60.4	0.0	62.6	44.1	38.7	91.8
LnGrp LOS	F	C	C	E	E	D	E	A	E	D	D	F
Approach Vol, veh/h		1615			1439			604			789	
Approach Delay, s/veh		47.1			53.1			61.8			67.6	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	47.9	22.6	33.4	20.0	39.0	23.0	33.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	22.5	27.5	18.1	28.9	15.5	34.5	18.5	28.5
Max Q Clear Time (g_c+I1), s	6.2	29.0	14.3	30.9	17.0	33.5	7.2	26.1
Green Ext Time (p_c), s	0.1	0.0	0.2	0.0	0.0	0.7	0.4	0.5

Intersection Summary	
HCM 6th Ctrl Delay	54.7
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
15: Sunnyside Avenue & Nees Avenue

Shepherd

Cumulative Year (2046) WP MIT- PM Peak Hour

	⤴	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↱		↰	↱		↰	↱	
Traffic Volume (veh/h)	54	494	140	50	483	28	227	309	54	20	187	50
Future Volume (veh/h)	54	494	140	50	483	28	227	309	54	20	187	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	59	537	152	54	525	30	247	336	59	22	203	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	152	912	257	239	584	33	264	667	117	68	453	120
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.15	0.42	0.42	0.04	0.32	0.32
Sat Flow, veh/h	860	2759	778	760	1766	101	1810	1574	276	1795	1435	382
Grp Volume(v), veh/h	59	348	341	54	0	555	247	0	395	22	0	257
Grp Sat Flow(s),veh/h/ln	860	1791	1745	760	0	1867	1810	0	1850	1795	0	1816
Q Serve(g_s), s	3.1	10.5	10.6	4.1	0.0	18.4	8.8	0.0	10.2	0.8	0.0	7.3
Cycle Q Clear(g_c), s	21.5	10.5	10.6	14.7	0.0	18.4	8.8	0.0	10.2	0.8	0.0	7.3
Prop In Lane	1.00		0.45	1.00		0.05	1.00		0.15	1.00		0.21
Lane Grp Cap(c), veh/h	152	592	577	239	0	618	264	0	784	68	0	573
V/C Ratio(X)	0.39	0.59	0.59	0.23	0.00	0.90	0.93	0.00	0.50	0.32	0.00	0.45
Avail Cap(c_a), veh/h	152	592	577	239	0	618	264	0	784	207	0	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.59	0.00	0.59	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.4	18.1	18.1	24.2	0.0	20.7	27.4	0.0	13.7	30.5	0.0	17.7
Incr Delay (d2), s/veh	1.6	1.5	1.6	0.3	0.0	10.4	37.9	0.0	2.3	2.7	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.9	3.9	0.7	0.0	8.5	6.2	0.0	3.9	0.4	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	19.6	19.7	24.5	0.0	31.2	65.4	0.0	16.0	33.2	0.0	20.3
LnGrp LOS	C	B	B	C	A	C	E	A	B	C	A	C
Approach Vol, veh/h		748			609			642			279	
Approach Delay, s/veh		20.7			30.6			35.0			21.3	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	32.0		26.0	14.0	25.0		26.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	22.5		21.5	9.5	20.5		21.5				
Max Q Clear Time (g_c+I1), s	2.8	12.2		23.5	10.8	9.3		20.4				
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	1.0		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			27.4									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑	↱	↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	54	613	169	72	690	282	333	370	108	155	241	38
Future Volume (veh/h)	54	613	169	72	690	282	333	370	108	155	241	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	57	645	178	76	726	297	351	389	114	163	254	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	114	1301	580	126	698	591	341	508	430	180	285	45
Arrive On Green	0.06	0.36	0.36	0.07	0.37	0.37	0.19	0.27	0.27	0.10	0.18	0.18
Sat Flow, veh/h	1795	3582	1598	1795	1885	1598	1795	1885	1596	1795	1589	250
Grp Volume(v), veh/h	57	645	178	76	726	297	351	389	114	163	0	294
Grp Sat Flow(s),veh/h/ln	1795	1791	1598	1795	1885	1598	1795	1885	1596	1795	0	1839
Q Serve(g_s), s	3.1	14.0	8.0	4.1	37.0	14.4	19.0	19.0	5.6	9.0	0.0	15.6
Cycle Q Clear(g_c), s	3.1	14.0	8.0	4.1	37.0	14.4	19.0	19.0	5.6	9.0	0.0	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	114	1301	580	126	698	591	341	508	430	180	0	330
V/C Ratio(X)	0.50	0.50	0.31	0.60	1.04	0.50	1.03	0.77	0.27	0.91	0.00	0.89
Avail Cap(c_a), veh/h	144	1301	580	162	698	591	341	508	430	180	0	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	24.7	22.8	45.1	31.5	24.4	40.5	33.6	28.7	44.5	0.0	40.1
Incr Delay (d2), s/veh	1.3	0.5	0.6	1.7	45.1	1.2	56.4	10.5	1.5	41.2	0.0	28.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	5.7	3.0	1.8	23.9	5.4	13.3	9.7	2.3	5.9	0.0	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	25.3	23.4	46.8	76.6	25.6	96.9	44.2	30.2	85.7	0.0	68.3
LnGrp LOS	D	C	C	D	F	C	F	D	C	F	A	E
Approach Vol, veh/h		880			1099			854			457	
Approach Delay, s/veh		26.3			60.8			64.0			74.5	
Approach LOS		C			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	23.6	10.4	43.0	14.0	32.6	11.0	42.3
Change Period (Y+Rc), s	4.0	5.7	4.0	6.0	4.0	5.7	4.0	6.0
Max Green Setting (Gmax), s	19.0	16.3	8.0	37.0	10.0	25.3	9.0	36.0
Max Q Clear Time (g_c+I1), s	21.0	17.6	5.1	39.0	11.0	21.0	6.1	16.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.0	0.0	7.9

Intersection Summary	
HCM 6th Ctrl Delay	54.3
HCM 6th LOS	D

AGENDA ITEM NO. 6.

19: Fowler Avenue & Teague Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥		↰	↱		↰	↑	↱
Traffic Volume (veh/h)	53	3	14	18	28	105	24	720	22	23	422	42
Future Volume (veh/h)	53	3	14	18	28	105	24	720	22	23	422	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1841	1841	1841	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	55	3	15	19	29	109	25	750	23	24	440	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	9	9	9	4	4	4	1	1	1	2	2	2
Cap, veh/h	230	22	38	82	50	148	698	1304	40	590	1340	1136
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.95	0.95	0.95	0.72	0.72	0.72
Sat Flow, veh/h	937	161	284	113	377	1112	919	1819	56	697	1870	1585
Grp Volume(v), veh/h	73	0	0	157	0	0	25	0	773	24	440	44
Grp Sat Flow(s),veh/h/ln	1382	0	0	1602	0	0	919	0	1875	697	1870	1585
Q Serve(g_s), s	0.0	0.0	0.0	2.3	0.0	0.0	0.3	0.0	2.6	0.7	5.2	0.5
Cycle Q Clear(g_c), s	2.7	0.0	0.0	5.6	0.0	0.0	5.5	0.0	2.6	3.3	5.2	0.5
Prop In Lane	0.75		0.21	0.12		0.69	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	290	0	0	281	0	0	698	0	1344	590	1340	1136
V/C Ratio(X)	0.25	0.00	0.00	0.56	0.00	0.00	0.04	0.00	0.58	0.04	0.33	0.04
Avail Cap(c_a), veh/h	500	0	0	547	0	0	698	0	1344	590	1340	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.76	0.00	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	0.0	24.9	0.0	0.0	1.0	0.0	0.5	3.3	3.2	2.5
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.7	0.0	0.0	0.1	0.0	1.4	0.1	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.6	0.1	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	0.0	0.0	26.7	0.0	0.0	1.0	0.0	1.8	3.4	3.8	2.5
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		73			157			798			508	
Approach Delay, s/veh		24.1			26.7			1.8			3.7	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		47.5		12.5		47.5		12.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		32.9		18.1		32.9		18.1
Max Q Clear Time (g_c+I1), s		7.5		4.7		7.2		7.6
Green Ext Time (p_c), s		5.3		0.2		2.8		0.6

Intersection Summary			
HCM 6th Ctrl Delay			6.0
HCM 6th LOS			A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	✣	↱					↑↱		↰	↑↑	
Traffic Volume (veh/h)	389	0	635	0	0	0	0	957	311	29	637	0
Future Volume (veh/h)	389	0	635	0	0	0	0	957	311	29	637	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	270	0	806				0	997	324	30	664	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	1	1	2	2	0
Cap, veh/h	465	0	828				0	1251	404	65	2052	0
Arrive On Green	0.26	0.00	0.26				0.00	0.47	0.47	0.04	0.58	0.00
Sat Flow, veh/h	1781	0	3170				0	2757	859	1781	3647	0
Grp Volume(v), veh/h	270	0	806				0	668	653	30	664	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1791	1731	1781	1777	0
Q Serve(g_s), s	10.6	0.0	20.1				0.0	25.3	25.7	1.3	7.8	0.0
Cycle Q Clear(g_c), s	10.6	0.0	20.1				0.0	25.3	25.7	1.3	7.8	0.0
Prop In Lane	1.00		1.00				0.00		0.50	1.00		0.00
Lane Grp Cap(c), veh/h	465	0	828				0	841	813	65	2052	0
V/C Ratio(X)	0.58	0.00	0.97				0.00	0.79	0.80	0.46	0.32	0.00
Avail Cap(c_a), veh/h	465	0	828				0	841	813	136	2052	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	25.7	0.0	29.3				0.0	17.9	18.1	37.8	8.8	0.0
Incr Delay (d2), s/veh	2.9	0.0	25.0				0.0	7.6	8.2	1.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	10.1				0.0	10.6	10.5	0.6	2.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	0.0	54.2				0.0	25.6	26.3	39.4	9.1	0.0
LnGrp LOS	C	A	D				A	C	C	D	A	A
Approach Vol, veh/h		1076						1321			694	
Approach Delay, s/veh		47.8						25.9			10.4	
Approach LOS		D						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.6	44.4		27.0		53.0
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 6.1	34.4		20.9		46.2
Max Q Clear Time (g_c+I1), s	3.3	27.7		22.1		9.8
Green Ext Time (p_c), s	0.0	5.8		0.0		8.1

Intersection Summary			
HCM 6th Ctrl Delay			30.1
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↱			↰
Traffic Vol, veh/h	13	0	980	21	0	670
Future Vol, veh/h	13	0	980	21	0	670
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	0	1065	23	0	728

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1805	1077	0	0	1088	0
Stage 1	1077	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	*~ 4	*234	-	-	*351	-
Stage 1	*221	-	-	-	-	-
Stage 2	*482	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*~ 4	*234	-	-	*351	-
Mov Cap-2 Maneuver	*184	-	-	-	-	-
Stage 1	*221	-	-	-	-	-
Stage 2	*482	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.2	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	184	* 351	-
HCM Lane V/C Ratio	-	-	0.077	-	-
HCM Control Delay (s)	-	-	26.2	0	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AGENDA ITEM NO. 6.

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑	↱		↰↑
Traffic Vol, veh/h	57	0	1002	61	0	683
Future Vol, veh/h	57	0	1002	61	0	683
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	62	0	1089	66	0	742

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1831	1089	0	0	1155	0
Stage 1	1089	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	*~ 3	*234	-	-	*351	-
Stage 1	*221	-	-	-	-	-
Stage 2	*474	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*~ 3	*234	-	-	*351	-
Mov Cap-2 Maneuver	*183	-	-	-	-	-
Stage 1	*221	-	-	-	-	-
Stage 2	*474	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.4	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	183	* 351	-
HCM Lane V/C Ratio	-	-	0.339	-	-
HCM Control Delay (s)	-	-	34.4	0	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	1.4	0	-

Notes

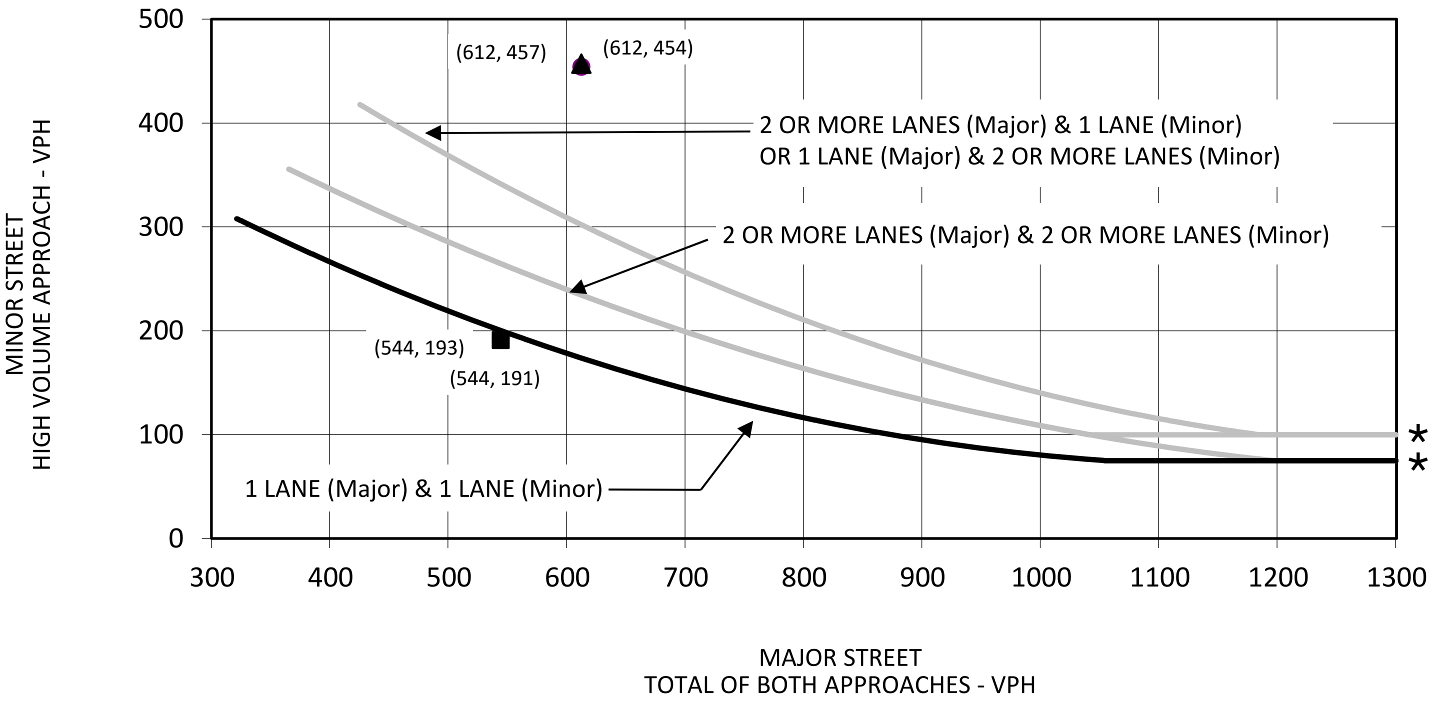
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

APPENDIX F

SIGNAL WARRANT ANALYSIS WORKSHEETS

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 3-A

● Without Project AM Peak Hour ▲ Plus Project AM Peak Hour

■ Without Project PM Peak Hour ◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Shepherd North Project

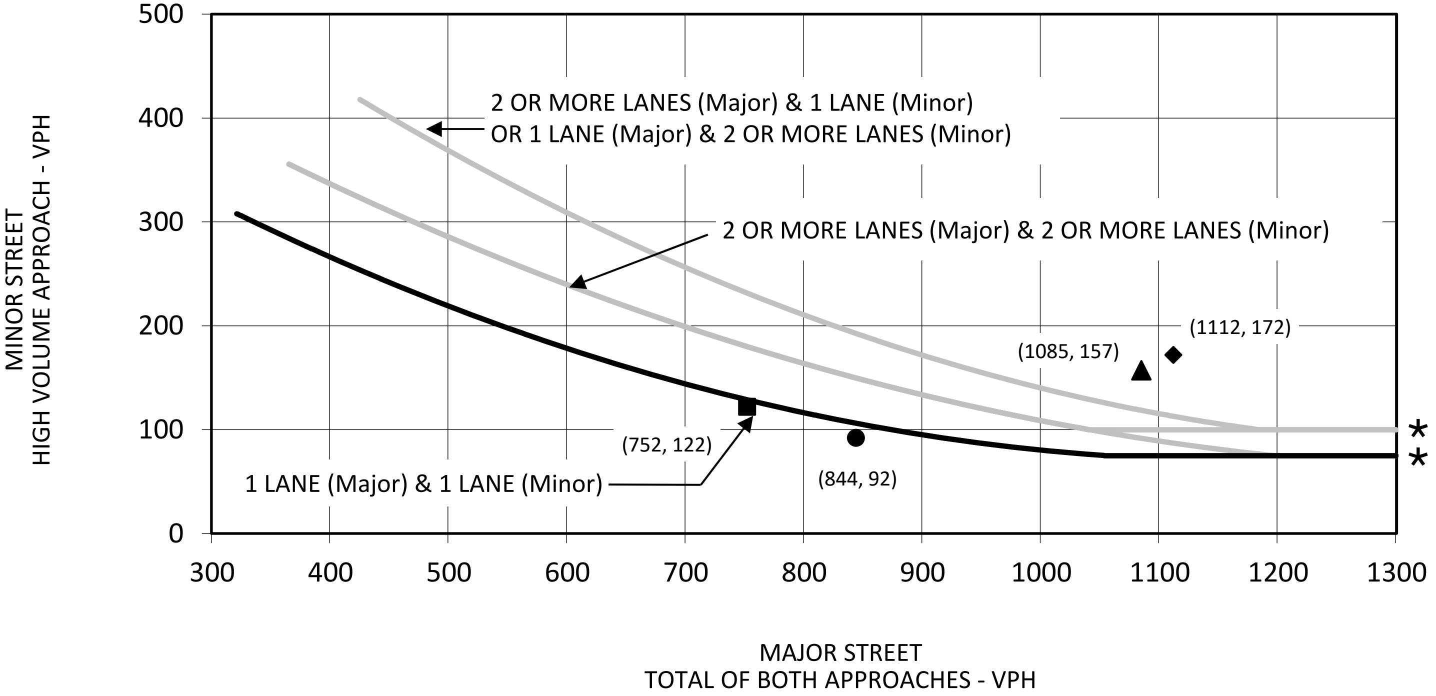
Transportation Impact Analysis

Existing Year - Minnewawa Avenue/Behymer Avenue

P:\DNV2201\Traffic\Warrants\Existing\2022_Int03.xlsx (2/10/2023)

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 13-A

●	Without Project AM Peak Hour	▲	Plus Project AM Peak Hour
■	Without Project PM Peak Hour	◆	Plus Project PM Peak Hour

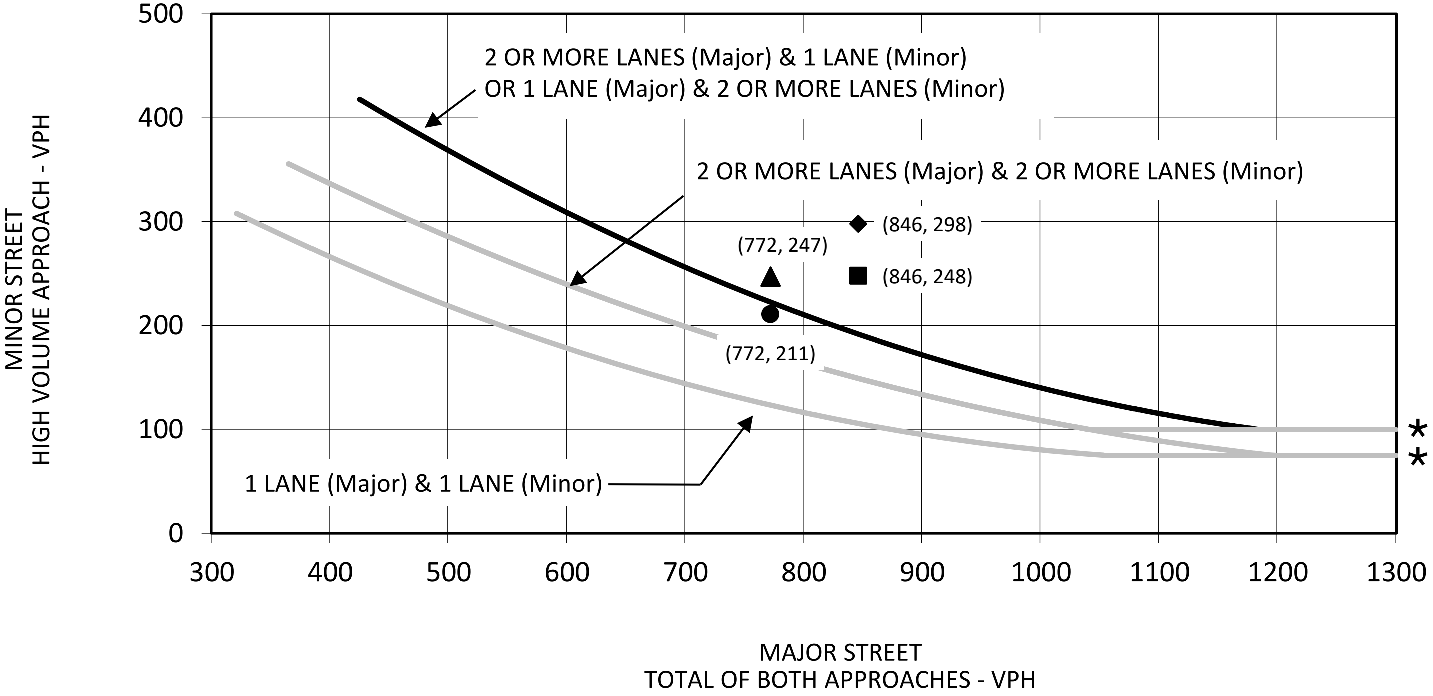
SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Shepherd North Project
Transportation Impact Analysis
Existing Year - Sunnyside Avenue/Shepherd Avenue

P:\DNV2201\Traffic\March_2023\Warrants\Existing\2022_Int13.xlsx (4/29/2023)

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

FIGURE 15-A

● Without Project AM Peak Hour ▲ Plus Project AM Peak Hour

■ Without Project PM Peak Hour ◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Shepherd North Project

Transportation Impact Analysis

Existing Year - Sunnyside Avenue/Nees Avenue

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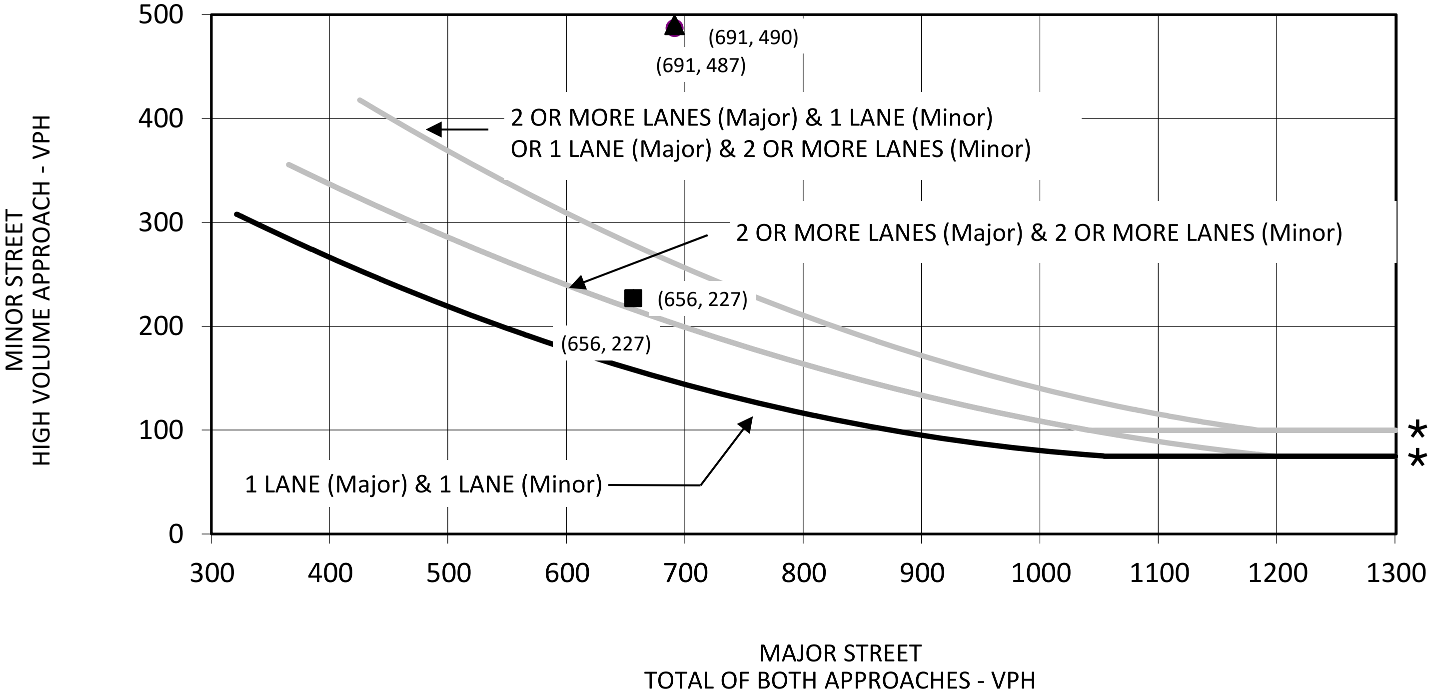
WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

FIGURE 3-B

● Without Project AM Peak Hour ▲ Plus Project AM Peak Hour

■ Without Project PM Peak Hour ◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Shepherd North Project

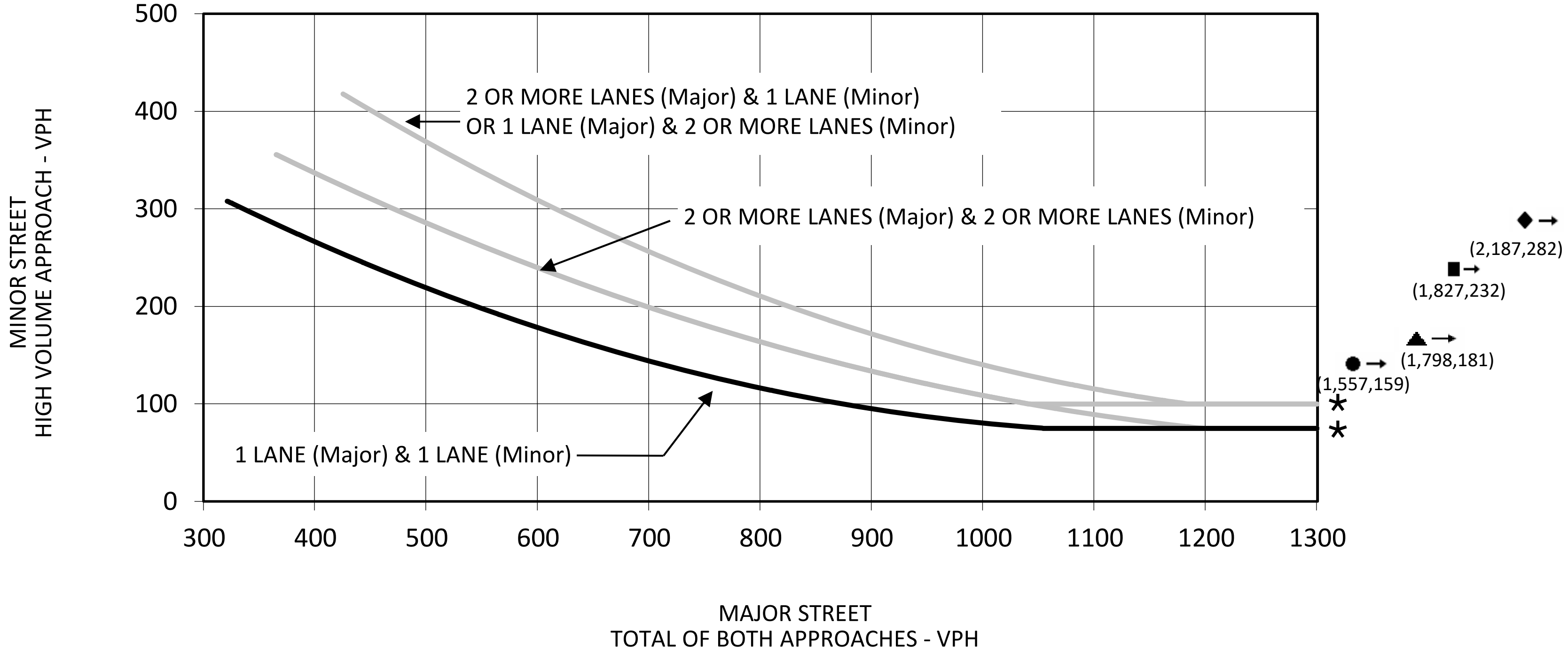
Transportation Impact Analysis

Near Term Year (2028) - Minnewawa Avenue/Behymer Avenue

P:\DNV2201\Traffic\Warrants\Near Term\2028_Int03.xlsx (2/10/2023)

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

FIGURE 13-B

LSA

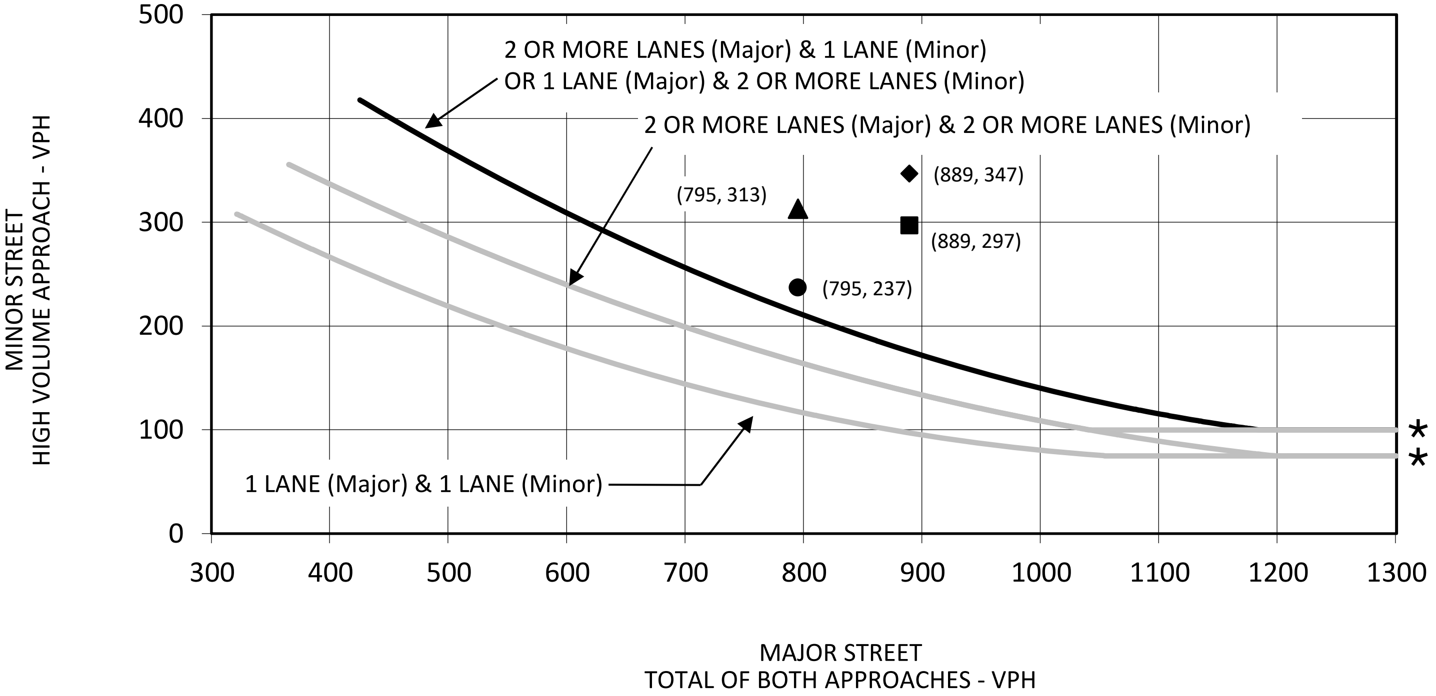
●	Without Project AM Peak Hour	▲	Plus Project AM Peak Hour
■	Without Project PM Peak Hour	◆	Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Shepherd North Project
Transportation Impact Analysis
Near Term Year (2028) - Sunnyside Avenue/Shepherd Avenue

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 15-B

●	Without Project AM Peak Hour	▲	Plus Project AM Peak Hour
■	Without Project PM Peak Hour	◆	Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Shepherd North Project
Transportation Impact Analysis
Near Term Year (2028) - Sunnyside Avenue/Nees Avenue

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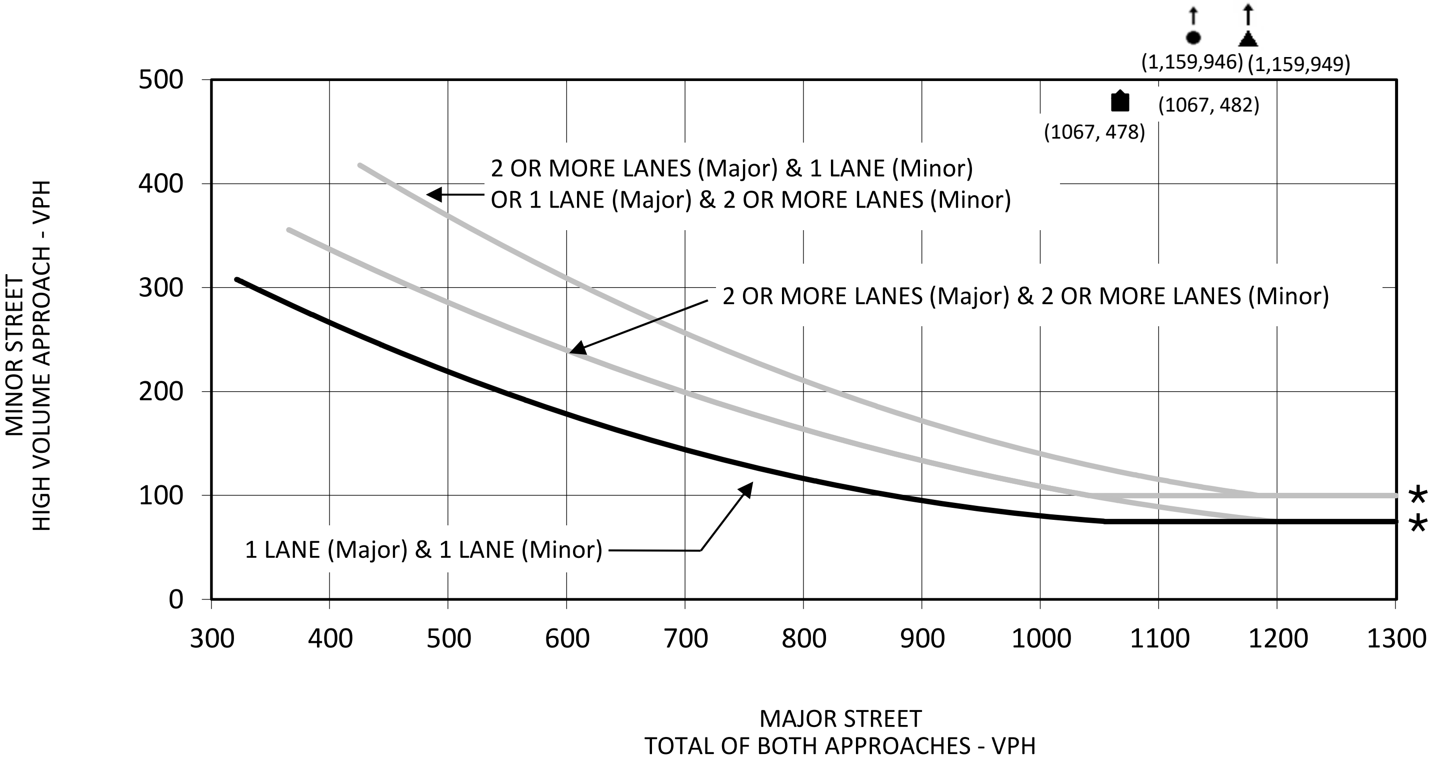
WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 3-C

● Without Project AM Peak Hour
▲ Plus Project AM Peak Hour
■ Without Project PM Peak Hour
◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

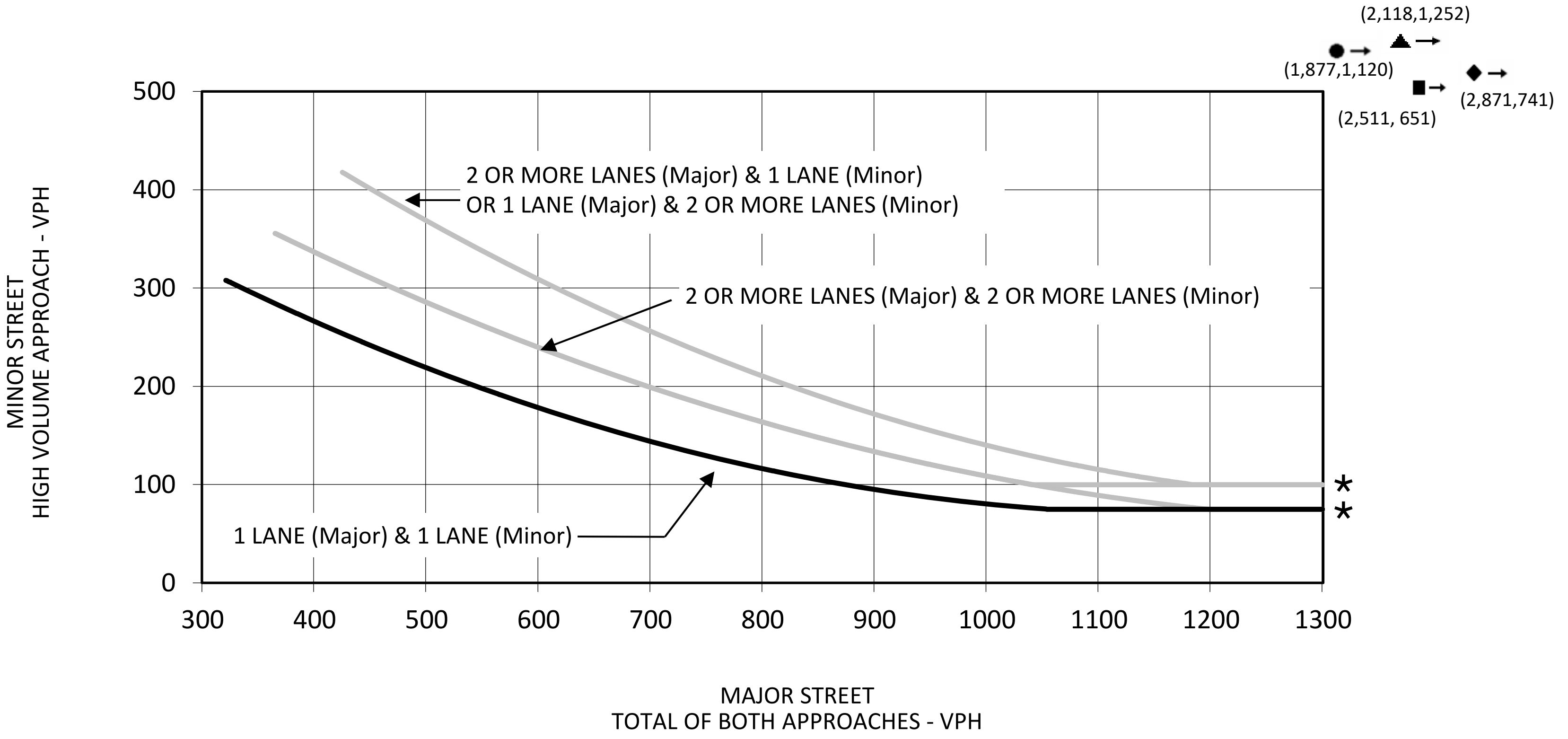
Shepherd North Project
Transportation Impact Analysis

Cumulative Year (2046) - Minnewawa Avenue/Behymer Avenue

P:\DNV2201\Traffic\Warrants\2046 Cum\2046_Int03.xlsx (2/10/2023)

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

FIGURE 13-C

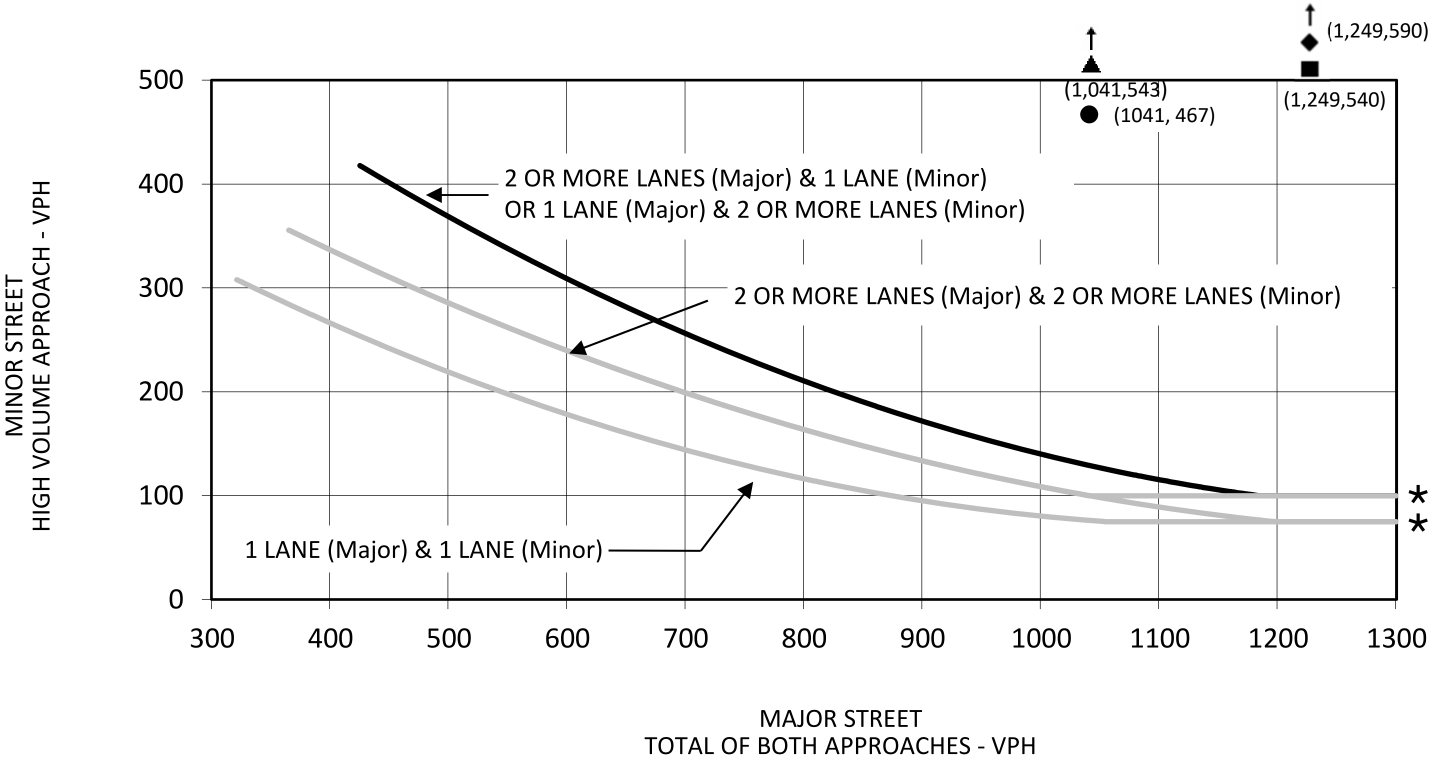
● Without Project AM Peak Hour
▲ Plus Project AM Peak Hour
■ Without Project PM Peak Hour
◆ Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Shepherd North Project
Transportation Impact Analysis
Cumulative Year (2046) - Sunnyside Avenue/Shepherd Avenue

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

FIGURE 15-C

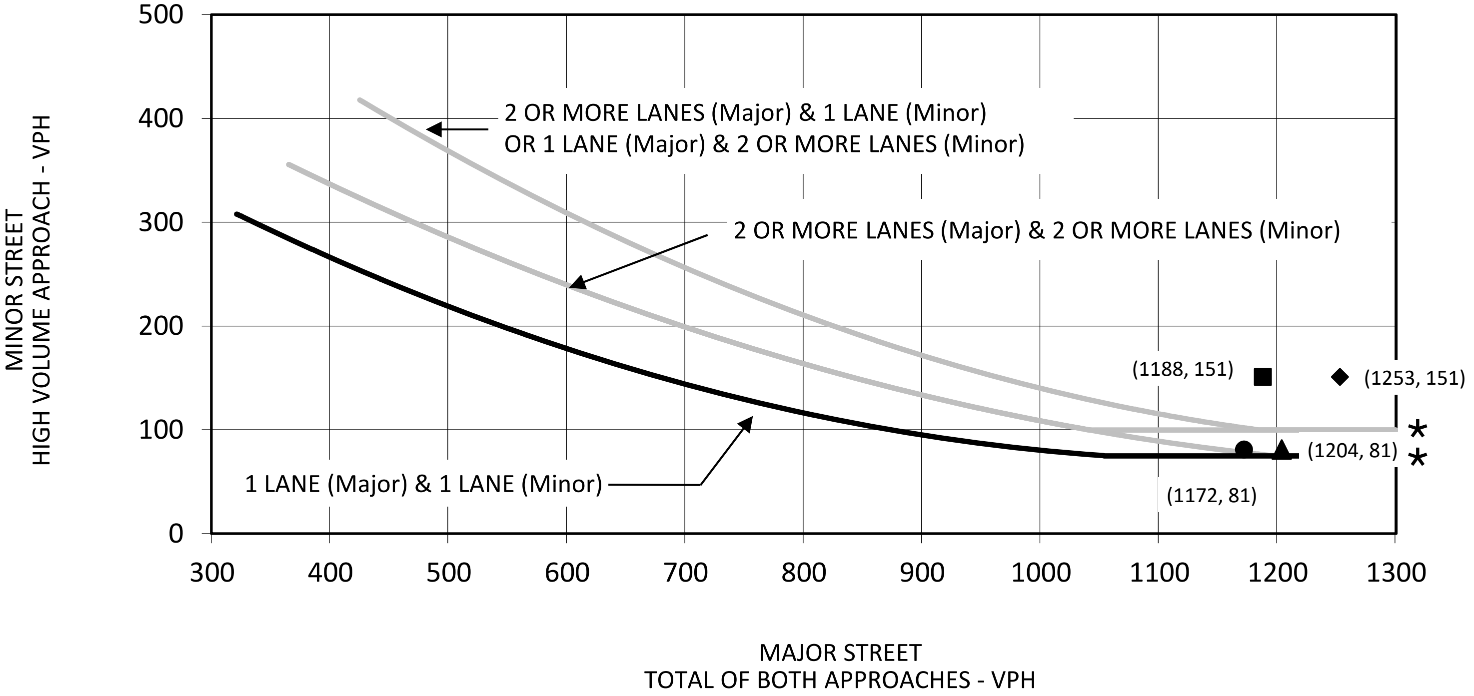
●	Without Project AM Peak Hour	▲	Plus Project AM Peak Hour
■	Without Project PM Peak Hour	◆	Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Shepherd North Project
Transportation Impact Analysis
Cumulative Year (2046) - Sunnyside Avenue/Nees Avenue

WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 mph ON MAJOR STREET)



* 100 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 75 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 19-C

●	Without Project AM Peak Hour	▲	Plus Project AM Peak Hour
■	Without Project PM Peak Hour	◆	Plus Project PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-4

Shepherd North Project
Transportation Impact Analysis
Cumulative Year (2046) - Fowler Avenue/Teague Avenue

APPENDIX G

QUEUING ANALYSIS WORKSHEETS

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	85	158	257	20	216	106	699	20	56	729	94
v/c Ratio	0.60	0.35	0.45	0.19	0.69	0.65	0.26	0.02	0.45	0.29	0.12
Control Delay	77.0	44.8	7.0	64.9	60.7	76.4	20.1	0.1	71.5	23.3	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.0	44.8	7.0	64.9	60.7	76.4	20.1	0.1	71.5	23.3	2.5
Queue Length 50th (ft)	73	122	0	17	170	91	123	0	48	137	0
Queue Length 95th (ft)	111	150	35	40	206	129	160	0	81	179	10
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	180	600	684	199	580	199	2666	887	194	2473	808
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.26	0.38	0.10	0.37	0.53	0.26	0.02	0.29	0.29	0.12

Intersection Summary

2: Willow Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	276	165	50	339	111	182	667	56	183	841	57
v/c Ratio	0.17	0.59	0.47	0.26	0.61	0.32	0.64	0.23	0.06	0.64	0.28	0.06
Control Delay	67.7	64.1	12.0	69.2	61.8	9.8	74.7	16.5	0.1	74.3	17.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.7	64.1	12.0	69.2	61.8	9.8	74.7	16.5	0.1	74.3	17.2	0.1
Queue Length 50th (ft)	15	131	0	23	162	0	87	113	0	88	148	0
Queue Length 95th (ft)	33	170	61	45	204	44	123	154	0	123	197	0
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	459	1069	593	426	1058	550	438	2903	944	447	2958	955
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.26	0.28	0.12	0.32	0.20	0.42	0.23	0.06	0.41	0.28	0.06

Intersection Summary

4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	404	181	52	346	108	151	179	49	123	189	35
v/c Ratio	0.26	0.49	0.41	0.35	0.81	0.25	0.71	0.22	0.07	0.65	0.24	0.05
Control Delay	60.4	44.5	21.3	62.7	61.3	10.9	72.1	26.8	0.7	71.1	28.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	44.5	21.3	62.7	61.3	10.9	72.1	26.8	0.7	71.1	28.5	0.1
Queue Length 50th (ft)	31	155	58	42	276	11	125	95	0	102	104	0
Queue Length 95th (ft)	64	176	104	79	327	46	175	165	0	150	178	0
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	957	491	283	496	489	286	827	744	285	802	734
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.42	0.37	0.18	0.70	0.22	0.53	0.22	0.07	0.43	0.24	0.05

Intersection Summary

Queues
5: Clovis Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	406	142	131	354	58	96	71	104	23	86	81
v/c Ratio	0.16	0.70	0.41	0.50	0.52	0.15	0.62	0.09	0.23	0.02	0.05	0.10
Control Delay	62.8	61.6	18.2	68.6	53.8	0.8	77.8	41.2	7.5	32.5	20.0	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	61.6	18.2	68.6	53.8	0.8	77.8	41.2	7.5	32.5	20.0	2.0
Queue Length 50th (ft)	17	185	27	60	158	0	86	26	0	7	20	0
Queue Length 95th (ft)	34	212	72	86	181	0	131	44	33	17	38	10
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	592	851	457	598	859	466	294	826	453	1165	1726	817
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.48	0.31	0.22	0.41	0.12	0.33	0.09	0.23	0.02	0.05	0.10

Intersection Summary

Queues
6: Clovis Avenue & Teague Avenue

Shepherd

Existing (2022) NP - AM Peak Hour

	↗	↘	↖	↑	↓	↙
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	96	292	346	275	359	241
v/c Ratio	0.46	0.67	0.74	0.10	0.22	0.30
Control Delay	41.8	12.4	38.6	2.9	16.0	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	12.4	38.6	2.9	16.0	3.8
Queue Length 50th (ft)	49	0	167	14	58	0
Queue Length 95th (ft)	76	33	196	25	87	25
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	527	667	471	2702	1602	791
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.44	0.73	0.10	0.22	0.30

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	352	223	40	417	207	80	338	23	80	478	48
v/c Ratio	0.31	0.68	0.38	0.36	0.80	0.39	0.58	0.20	0.03	0.58	0.28	0.06
Control Delay	75.0	55.1	6.3	76.3	61.8	17.0	83.3	25.4	0.1	83.1	26.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.0	55.1	6.3	76.3	61.8	17.0	83.3	25.4	0.1	83.1	26.6	0.1
Queue Length 50th (ft)	33	305	0	38	377	55	77	103	0	77	153	0
Queue Length 95th (ft)	68	386	53	76	463	114	127	152	0	127	215	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	365	531	603	309	525	535	362	1665	746	306	1679	802
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.66	0.37	0.13	0.79	0.39	0.22	0.20	0.03	0.26	0.28	0.06

Intersection Summary

Queues

8: Clovis Avenue & Alluvial Avenue

	↗	→	↘	↙	←	↖	↖	↑	↘	↓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	302	172	49	457	100	143	386	142	685
v/c Ratio	0.11	0.67	0.37	0.34	0.84	0.18	0.67	0.27	0.71	0.46
Control Delay	55.5	49.7	12.6	61.0	55.1	3.2	68.0	25.1	72.7	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	49.7	12.6	61.0	55.1	3.2	68.0	25.1	72.7	30.5
Queue Length 50th (ft)	11	234	29	38	333	0	113	94	112	196
Queue Length 95th (ft)	34	289	79	79	455	22	174	162	180	323
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	151	572	564	155	593	578	294	1456	228	1477
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.53	0.30	0.32	0.77	0.17	0.49	0.27	0.62	0.46

Intersection Summary

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1018	522	1774	386	70	776
v/c Ratio	0.26	0.44	0.48	0.41	0.07	0.94
Control Delay	11.6	2.1	14.0	8.0	35.1	62.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	2.1	14.0	8.0	35.1	62.3
Queue Length 50th (ft)	107	0	288	145	22	339
Queue Length 95th (ft)	126	42	321	229	41	#477
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	3943	1174	3663	938	957	824
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.44	0.48	0.41	0.07	0.94

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
10: SR-168 EB Ramps & Herndon Avenue

	→	↘	←	↖	↰	↱
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	900	237	1751	88	504	532
v/c Ratio	0.31	0.23	0.40	0.09	0.32	0.51
Control Delay	12.9	1.6	15.3	2.5	34.7	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.9	1.6	15.3	2.5	34.7	20.3
Queue Length 50th (ft)	110	0	187	0	115	106
Queue Length 95th (ft)	128	25	208	22	148	168
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2972	1023	4454	971	1551	1039
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.23	0.39	0.09	0.32	0.51

Intersection Summary

Queues
11: Clovis Avenue & Herndon Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	261	895	230	159	1098	169	249	403	173	304	432
v/c Ratio	0.72	0.54	0.35	0.54	0.71	0.31	0.70	0.23	0.54	0.17	0.35
Control Delay	78.4	44.4	5.8	74.8	51.0	20.9	77.4	28.9	73.7	36.4	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.4	44.4	5.8	74.8	51.0	20.9	77.4	28.9	73.7	36.4	3.9
Queue Length 50th (ft)	134	271	0	80	361	58	128	84	88	78	0
Queue Length 95th (ft)	179	325	63	119	434	129	172	116	127	109	43
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	548	1643	666	553	1557	547	664	1755	671	1759	1247
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.54	0.35	0.29	0.71	0.31	0.38	0.23	0.26	0.17	0.35

Intersection Summary

18: Fowler Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	21	293	53	38	291	385	147	96	35	193	149
v/c Ratio	0.22	0.40	0.14	0.37	0.68	0.83	0.74	0.11	0.04	0.79	0.16
Control Delay	73.5	51.4	3.8	77.8	60.2	50.7	85.5	27.8	0.1	84.5	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.5	51.4	3.8	77.8	60.2	50.7	85.5	27.8	0.1	84.5	24.6
Queue Length 50th (ft)	20	127	0	37	262	248	142	54	0	185	80
Queue Length 95th (ft)	50	161	16	76	334	349	212	115	0	262	156
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	365	869	439	365	465	494	365	888	796	358	907
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.34	0.12	0.10	0.63	0.78	0.40	0.11	0.04	0.54	0.16

Intersection Summary

Queues
20: Fowler Avenue & Nees Avenue

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	315	79	296	35	121	134	40	30	234	35
v/c Ratio	0.24	0.53	0.55	0.76	0.09	0.65	0.12	0.04	0.31	0.24	0.04
Control Delay	60.7	40.2	66.5	57.6	0.4	67.5	14.8	0.1	62.0	20.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	40.2	66.5	57.6	0.4	67.5	14.8	0.1	62.0	20.4	0.1
Queue Length 50th (ft)	17	97	60	222	0	92	48	0	23	100	0
Queue Length 95th (ft)	44	135	108	297	0	149	102	0	54	197	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	238	1018	238	543	529	242	1114	985	238	965	866
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.31	0.33	0.55	0.07	0.50	0.12	0.04	0.13	0.24	0.04

Intersection Summary

Queues
21: Fowler Avenue & SR-168 WB Ramps

	↙	↖	↖	↑	↓
Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	137	32	507	427	728
v/c Ratio	0.52	0.10	0.78	0.17	0.42
Control Delay	45.7	0.6	52.4	4.0	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	0.6	52.4	4.0	10.7
Queue Length 50th (ft)	82	0	173	32	77
Queue Length 95th (ft)	135	0	231	45	149
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	427	461	802	2576	1732
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.07	0.63	0.17	0.42

Intersection Summary

	↗	↘	↑	↘	↓
Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	148	349	912	15	467
v/c Ratio	0.33	0.68	0.38	0.14	0.18
Control Delay	40.1	11.6	8.5	53.2	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.1	11.6	8.5	53.2	7.6
Queue Length 50th (ft)	44	0	86	10	54
Queue Length 95th (ft)	68	75	227	m26	77
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	989	703	2426	283	2613
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.50	0.38	0.05	0.18

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: Willow Avenue & Behymer Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	51	92	35	121	136	513	27	42	402	11
v/c Ratio	0.12	0.25	0.33	0.32	0.51	0.69	0.15	0.02	0.37	0.13	0.01
Control Delay	63.0	56.5	7.8	68.0	58.2	75.7	11.0	0.0	69.3	14.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	56.5	7.8	68.0	58.2	75.7	11.0	0.0	69.3	14.4	0.0
Queue Length 50th (ft)	11	43	0	30	90	117	60	0	36	53	0
Queue Length 95th (ft)	34	79	28	65	150	177	103	0	73	94	0
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	184	612	598	203	596	217	3409	1103	194	3048	972
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.08	0.15	0.17	0.20	0.63	0.15	0.02	0.22	0.13	0.01

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	38	344	120	36	335	154	259	699	95	135	494	33
v/c Ratio	0.20	0.65	0.36	0.19	0.61	0.41	0.71	0.23	0.10	0.55	0.18	0.04
Control Delay	68.0	64.1	11.7	67.9	61.8	10.7	73.9	16.5	1.5	73.5	18.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	64.1	11.7	67.9	61.8	10.7	73.9	16.5	1.5	73.5	18.5	0.1
Queue Length 50th (ft)	18	163	1	17	157	0	124	119	0	64	87	0
Queue Length 95th (ft)	38	210	58	37	203	62	167	164	16	98	126	0
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	468	1090	570	439	1090	588	453	2987	970	447	2787	911
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.32	0.21	0.08	0.31	0.26	0.57	0.23	0.10	0.30	0.18	0.04

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	419	87	20	368	91	112	163	28	82	153	14
v/c Ratio	0.15	0.44	0.18	0.13	0.80	0.20	0.61	0.18	0.03	0.50	0.18	0.02
Control Delay	57.7	40.7	6.9	57.4	59.7	7.4	69.9	24.1	0.1	66.7	25.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	40.7	6.9	57.4	59.7	7.4	69.9	24.1	0.1	66.7	25.3	0.1
Queue Length 50th (ft)	17	134	0	16	294	0	93	84	0	67	80	0
Queue Length 95th (ft)	46	194	36	43	377	40	152	157	0	119	153	0
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	1037	529	291	515	505	288	892	807	288	872	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.40	0.16	0.07	0.71	0.18	0.39	0.18	0.03	0.28	0.18	0.02

Intersection Summary

AGENDA ITEM NO. 6.

5: Clovis Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	361	108	81	320	7	147	46	74	11	25	27
v/c Ratio	0.14	0.68	0.33	0.32	0.46	0.02	0.72	0.05	0.15	0.01	0.01	0.03
Control Delay	62.4	62.6	11.4	65.6	53.1	0.1	79.1	40.8	2.8	30.0	20.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	62.6	11.4	65.6	53.1	0.1	79.1	40.8	2.8	30.0	20.7	0.1
Queue Length 50th (ft)	15	165	0	36	144	0	131	16	0	3	5	0
Queue Length 95th (ft)	34	212	53	64	188	0	198	34	14	10	16	0
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	604	867	464	610	877	473	314	884	479	1297	1813	866
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.42	0.23	0.13	0.36	0.01	0.47	0.05	0.15	0.01	0.01	0.03

Intersection Summary

Queues
6: Clovis Avenue & Teague Avenue

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	83	107	193	358	275	74
v/c Ratio	0.43	0.40	0.68	0.12	0.13	0.07
Control Delay	42.1	11.9	45.6	2.5	9.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	11.9	45.6	2.5	9.6	3.3
Queue Length 50th (ft)	43	0	98	18	32	0
Queue Length 95th (ft)	75	34	137	31	57	17
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	527	547	381	2910	2153	993
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.20	0.51	0.12	0.13	0.07

Intersection Summary

Queues

7: Clovis Avenue & Nees Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	23	441	265	23	410	79	132	426	49	46	269	29
v/c Ratio	0.21	0.83	0.44	0.21	0.78	0.15	0.72	0.23	0.06	0.40	0.16	0.04
Control Delay	72.1	63.7	10.8	72.3	59.7	0.7	85.7	22.8	0.1	77.3	26.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	63.7	10.8	72.3	59.7	0.7	85.7	22.8	0.1	77.3	26.8	0.1
Queue Length 50th (ft)	22	404	36	22	369	0	127	129	0	44	84	0
Queue Length 95th (ft)	54	504	106	54	464	2	195	191	0	88	136	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	373	553	624	309	533	542	369	1867	862	312	1684	802
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.80	0.42	0.07	0.77	0.15	0.36	0.23	0.06	0.15	0.16	0.04

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	372	190	39	328	84	159	680	84	507
v/c Ratio	0.11	0.83	0.40	0.27	0.67	0.16	0.70	0.39	0.47	0.32
Control Delay	55.5	60.5	15.3	59.4	47.6	2.1	67.9	23.9	61.8	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	60.5	15.3	59.4	47.6	2.1	67.9	23.9	61.8	26.6
Queue Length 50th (ft)	12	287	40	30	208	0	125	196	66	146
Queue Length 95th (ft)	36	368	97	68	319	12	191	293	118	234
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	157	591	583	157	604	600	304	1764	231	1596
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.63	0.33	0.25	0.54	0.14	0.52	0.39	0.36	0.32

Intersection Summary

9: SR-168 WB Ramps & Herndon Avenue

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1670	534	1651	360	67	345
v/c Ratio	0.36	0.41	0.38	0.35	0.11	0.67
Control Delay	7.5	1.6	7.6	1.7	44.7	51.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	1.6	7.6	1.7	44.7	51.2
Queue Length 50th (ft)	136	0	144	0	25	141
Queue Length 95th (ft)	193	36	204	39	43	186
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	4670	1302	4333	1034	1310	1088
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.41	0.38	0.35	0.05	0.32

Intersection Summary

Queues
10: SR-168 EB Ramps & Herndon Avenue

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1401	371	1540	190	512	698
v/c Ratio	0.49	0.35	0.36	0.19	0.30	0.70
Control Delay	18.1	2.2	16.1	2.2	32.7	38.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	2.2	16.1	2.2	32.7	38.2
Queue Length 50th (ft)	245	0	165	0	114	267
Queue Length 95th (ft)	283	42	186	32	146	347
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2923	1070	4336	992	1704	997
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.35	0.36	0.19	0.30	0.70

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	381	1425	315	329	1106	138	365	707	282	273	277
v/c Ratio	0.81	0.96	0.52	0.77	0.78	0.27	0.79	0.42	0.73	0.17	0.26
Control Delay	79.0	68.5	19.1	78.4	56.5	18.9	77.6	34.6	77.7	39.5	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.0	68.5	19.1	78.4	56.5	18.9	77.6	34.6	77.7	39.5	4.9
Queue Length 50th (ft)	195	521	88	169	381	37	187	170	145	73	0
Queue Length 95th (ft)	248	#682	196	217	453	100	236	221	191	105	39
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	559	1490	610	559	1424	502	677	1691	671	1617	1063
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.96	0.52	0.59	0.78	0.27	0.54	0.42	0.42	0.17	0.26

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	291	79	49	253	135	115	125	77	116	133
v/c Ratio	0.25	0.50	0.24	0.44	0.72	0.37	0.68	0.12	0.08	0.69	0.13
Control Delay	74.3	59.3	11.9	79.9	68.6	25.1	85.2	19.0	4.4	85.3	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.3	59.3	11.9	79.9	68.6	25.1	85.2	19.0	4.4	85.3	18.5
Queue Length 50th (ft)	23	136	1	47	238	48	111	58	0	112	60
Queue Length 95th (ft)	55	176	47	92	317	107	174	117	30	176	120
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	369	810	422	369	429	424	369	1060	936	369	1042
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.36	0.19	0.13	0.59	0.32	0.31	0.12	0.08	0.31	0.13

Intersection Summary

Queues
20: Fowler Avenue & Nees Avenue

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	421	41	244	36	179	297	68	37	221	40
v/c Ratio	0.33	0.67	0.38	0.69	0.09	0.74	0.26	0.07	0.36	0.24	0.05
Control Delay	62.5	45.5	63.4	55.2	0.5	67.1	15.3	1.8	63.3	21.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.5	45.5	63.4	55.2	0.5	67.1	15.3	1.8	63.3	21.8	0.1
Queue Length 50th (ft)	25	142	31	182	0	135	115	0	28	98	0
Queue Length 95th (ft)	59	184	68	255	0	202	214	14	63	193	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	270	1035	268	543	529	283	1131	999	262	910	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.41	0.15	0.45	0.07	0.63	0.26	0.07	0.14	0.24	0.05

Intersection Summary

Queues
21: Fowler Avenue & SR-168 WB Ramps

Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	167	16	453	777	609
v/c Ratio	0.58	0.05	0.75	0.31	0.37
Control Delay	45.9	0.3	41.9	7.7	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	0.3	41.9	7.7	16.4
Queue Length 50th (ft)	99	0	132	54	107
Queue Length 95th (ft)	157	0	206	217	180
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	418	453	797	2513	1652
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.04	0.57	0.31	0.37

Intersection Summary

	↗	↘	↑	↘	↓
Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	324	609	1199	24	552
v/c Ratio	0.35	0.92	0.63	0.21	0.26
Control Delay	29.9	37.8	18.5	65.8	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	37.8	18.5	65.8	10.9
Queue Length 50th (ft)	82	193	229	14	58
Queue Length 95th (ft)	121	#414	403	m44	76
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	999	685	1907	283	2122
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.89	0.63	0.08	0.26

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: Willow Avenue & Behymer Avenue

	↗	→	↘	↙	←	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	78	171	272	108	580	149	847	22	63	866	86
v/c Ratio	0.57	0.27	0.38	0.68	0.94	0.83	0.48	0.04	0.49	0.56	0.16
Control Delay	75.5	34.0	5.2	80.1	65.2	94.0	36.6	0.1	72.5	41.9	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	34.0	5.2	80.1	65.2	94.0	36.6	0.1	72.5	41.9	2.7
Queue Length 50th (ft)	67	108	0	93	477	129	217	0	54	237	0
Queue Length 95th (ft)	120	175	63	154	#752	#240	273	0	101	284	18
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	180	643	724	199	620	192	1765	628	194	1534	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.27	0.38	0.54	0.94	0.78	0.48	0.04	0.32	0.56	0.16

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	122	441	311	332	660	241	424	996	347	274	1450	229
v/c Ratio	0.53	0.68	0.64	0.83	0.78	0.52	0.75	0.47	0.44	0.73	0.78	0.36
Control Delay	73.4	60.5	19.6	80.8	58.3	25.8	66.3	33.0	12.2	73.8	45.7	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	60.5	19.6	80.8	58.3	25.8	66.3	33.0	12.2	73.8	45.7	18.8
Queue Length 50th (ft)	58	207	60	159	305	93	198	250	63	131	452	70
Queue Length 95th (ft)	92	250	155	#221	360	172	252	339	175	175	#631	162
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	459	1069	644	426	1058	553	565	2110	787	454	1856	645
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.41	0.48	0.78	0.62	0.44	0.75	0.47	0.44	0.60	0.78	0.36

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	96	730	396	121	734	152	237	337	85	360	970	134
v/c Ratio	0.56	0.65	0.69	0.65	1.22	0.26	0.89	0.69	0.18	1.26	1.91	0.27
Control Delay	68.4	42.0	34.7	71.2	151.2	15.1	86.8	51.9	7.1	187.4	446.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.4	42.0	34.7	71.2	151.2	15.1	86.8	51.9	7.1	187.4	446.8	15.2
Queue Length 50th (ft)	80	275	207	100	~742	35	196	257	0	~380	~1272	27
Queue Length 95th (ft)	134	367	349	160	#1043	94	#333	367	37	#576	#1527	81
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	1129	577	283	602	574	285	487	476	285	507	497
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.65	0.69	0.43	1.22	0.26	0.83	0.69	0.18	1.26	1.91	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

5: Clovis Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	120	734	228	260	603	180	127	214	159	173	649	311
v/c Ratio	0.48	0.89	0.51	0.93	0.70	0.36	0.73	0.16	0.23	0.40	0.45	0.45
Control Delay	68.7	65.0	27.9	102.2	53.2	11.5	84.6	28.5	4.8	59.3	31.4	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.7	65.0	27.9	102.2	53.2	11.5	84.6	28.5	4.8	59.3	31.4	20.9
Queue Length 50th (ft)	55	339	93	123	262	18	114	66	0	76	225	126
Queue Length 95th (ft)	88	#427	179	#210	334	83	183	96	46	115	292	219
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	276	851	457	279	876	508	209	1308	682	435	1429	698
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.86	0.50	0.93	0.69	0.35	0.61	0.16	0.23	0.40	0.45	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

6: Clovis Avenue & Teague Avenue

	↗	↘	↖	↑	↓	↙
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	90	254	308	468	987	321
v/c Ratio	0.45	0.63	0.61	0.17	0.64	0.45
Control Delay	41.9	12.4	32.6	3.0	21.5	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	12.4	32.6	3.0	21.5	12.6
Queue Length 50th (ft)	46	0	145	25	199	62
Queue Length 95th (ft)	88	64	224	48	304	150
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	527	640	503	2714	1541	706
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.40	0.61	0.17	0.64	0.45

Intersection Summary

Queues
7: Clovis Avenue & Nees Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	77	434	389	40	509	253	175	480	23	125	848	148
v/c Ratio	0.57	0.59	0.48	0.36	0.75	0.39	0.77	0.41	0.04	0.71	0.78	0.26
Control Delay	82.7	41.3	8.8	76.3	50.5	18.6	84.9	40.1	0.1	86.0	53.5	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	41.3	8.8	76.3	50.5	18.6	84.9	40.1	0.1	86.0	53.5	9.6
Queue Length 50th (ft)	74	343	43	38	433	82	168	190	0	121	397	10
Queue Length 95th (ft)	128	475	136	79	606	168	243	257	0	187	#545	68
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	365	731	806	309	680	654	362	1185	561	306	1092	568
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.59	0.48	0.13	0.75	0.39	0.48	0.41	0.04	0.41	0.78	0.26

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	↗	→	↘	↙	←	↖	↖	↑	↘	↓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	316	210	50	452	118	303	640	176	1220
v/c Ratio	0.12	0.70	0.43	0.35	0.82	0.22	0.84	0.45	0.81	1.05
Control Delay	55.8	50.7	14.7	61.3	53.6	5.3	68.6	29.4	80.4	80.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.8	50.7	14.7	61.3	53.6	5.3	68.6	29.4	80.4	80.1
Queue Length 50th (ft)	13	245	44	39	324	0	227	188	138	~590
Queue Length 95th (ft)	37	308	103	80	456	37	#444	286	#252	#790
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	151	571	575	155	595	579	362	1421	232	1167
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.55	0.37	0.32	0.76	0.20	0.84	0.45	0.76	1.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

9: SR-168 WB Ramps & Herndon Avenue

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1313	956	2221	487	83	837
v/c Ratio	0.33	0.71	0.61	0.50	0.09	1.04
Control Delay	12.4	4.1	15.8	8.9	35.3	87.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	4.1	15.8	8.9	35.3	87.4
Queue Length 50th (ft)	146	0	407	208	26	~421
Queue Length 95th (ft)	168	49	447	332	47	#563
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	3943	1341	3641	976	957	802
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.71	0.61	0.50	0.09	1.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

10: SR-168 EB Ramps & Herndon Avenue

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1172	254	2239	101	528	663
v/c Ratio	0.39	0.25	0.50	0.10	0.35	0.70
Control Delay	13.5	1.6	16.4	2.4	35.4	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	1.6	16.4	2.4	35.4	35.9
Queue Length 50th (ft)	161	0	260	0	121	226
Queue Length 95th (ft)	182	26	285	24	155	305
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2972	1030	4454	976	1520	941
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.25	0.50	0.10	0.35	0.70

Intersection Summary

	↗	→	↘	↙	←	↖	↖	↑	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	418	1006	391	211	1196	199	409	655	218	505	711
v/c Ratio	0.85	0.63	0.52	0.65	0.88	0.40	0.81	0.38	0.64	0.33	0.58
Control Delay	81.3	47.4	8.1	77.3	62.7	26.0	76.9	35.4	76.1	43.5	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.3	47.4	8.1	77.3	62.7	26.0	76.9	35.4	76.1	43.5	12.3
Queue Length 50th (ft)	214	316	20	108	431	81	209	164	112	146	71
Queue Length 95th (ft)	273	382	114	150	#525	163	260	211	154	191	152
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	548	1602	746	553	1364	497	664	1734	671	1541	1228
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.63	0.52	0.38	0.88	0.40	0.62	0.38	0.32	0.33	0.58

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	55	709	294	78	480	402	209	104	42	356	573
v/c Ratio	0.48	0.58	0.50	0.58	0.69	0.63	0.80	0.24	0.10	0.95	1.06
Control Delay	81.0	42.6	31.5	83.8	46.8	35.8	83.8	49.0	1.1	93.7	103.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	42.6	31.5	83.8	46.8	35.8	83.8	49.0	1.1	93.7	103.1
Queue Length 50th (ft)	53	298	167	75	406	264	201	84	0	345	~603
Queue Length 95th (ft)	100	376	269	129	553	395	279	140	4	#563	#965
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	365	1225	587	365	694	643	365	430	427	373	543
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.58	0.50	0.21	0.69	0.63	0.57	0.24	0.10	0.95	1.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

20: Fowler Avenue & Nees Avenue

Cumulative Year (2046) NP - AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	23	410	104	335	41	170	163	72	101	687	87
v/c Ratio	0.25	0.67	0.62	0.74	0.09	0.72	0.18	0.09	0.61	0.81	0.11
Control Delay	60.9	46.2	67.4	52.5	0.4	66.0	20.8	3.0	67.2	40.4	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.9	46.2	67.4	52.5	0.4	66.0	20.8	3.0	67.2	40.4	5.3
Queue Length 50th (ft)	18	141	79	253	0	128	68	0	76	447	0
Queue Length 95th (ft)	45	183	133	328	0	194	142	20	131	#867	33
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	238	1016	238	543	529	262	920	830	238	844	769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.40	0.44	0.62	0.08	0.65	0.18	0.09	0.42	0.81	0.11

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
21: Fowler Avenue & SR-168 WB Ramps

Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	140	34	550	463	1002
v/c Ratio	0.52	0.10	0.79	0.18	0.59
Control Delay	45.7	0.6	50.4	5.6	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	0.6	50.4	5.6	15.6
Queue Length 50th (ft)	83	0	193	35	159
Queue Length 95th (ft)	137	0	247	88	270
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	427	461	810	2571	1694
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.07	0.68	0.18	0.59

Intersection Summary

22: Fowler Avenue & SR-168 EB Ramps

Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	158	404	993	16	601
v/c Ratio	0.26	0.78	0.44	0.15	0.25
Control Delay	34.1	22.3	12.3	60.9	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	22.3	12.3	60.9	7.8
Queue Length 50th (ft)	45	71	121	11	60
Queue Length 95th (ft)	63	160	310	m22	83
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	989	656	2255	283	2441
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.62	0.44	0.06	0.25

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

1: Willow Avenue & Behymer Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	132	146	139	208	195	830	196	124	723	14
v/c Ratio	0.13	0.59	0.46	0.78	0.53	0.67	0.31	0.22	0.69	0.31	0.02
Control Delay	63.2	65.9	12.3	86.3	49.4	64.6	20.9	8.9	76.8	25.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	65.9	12.3	86.3	49.4	64.6	20.9	8.9	76.8	25.3	0.1
Queue Length 50th (ft)	12	112	0	119	143	163	151	31	107	146	0
Queue Length 95th (ft)	35	171	60	#206	235	242	223	92	169	208	0
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	184	612	619	203	592	292	2671	892	209	2334	773
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.22	0.24	0.68	0.35	0.67	0.31	0.22	0.59	0.31	0.02

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	282	719	412	376	634	316	312	1544	519	328	1118	220
v/c Ratio	0.74	0.77	0.74	0.88	0.63	0.56	0.78	0.90	0.76	0.80	0.65	0.36
Control Delay	74.4	55.6	33.1	84.9	48.5	23.7	76.2	55.1	33.1	77.1	44.7	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.4	55.6	33.1	84.9	48.5	23.7	76.2	55.1	33.1	77.1	44.7	18.4
Queue Length 50th (ft)	135	333	196	181	275	117	149	518	261	156	334	62
Queue Length 95th (ft)	181	384	306	#264	332	213	200	#700	#487	210	420	149
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	468	1090	623	439	1090	598	453	1707	679	453	1712	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.66	0.66	0.86	0.58	0.53	0.69	0.90	0.76	0.72	0.65	0.36

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	155	1003	234	86	918	227	337	732	116	171	542	116
v/c Ratio	0.72	0.85	0.40	0.51	1.60	0.41	1.17	1.31	0.22	0.76	1.10	0.24
Control Delay	72.8	48.9	22.4	67.0	311.0	24.5	154.4	191.1	11.9	75.2	116.5	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.8	48.9	22.4	67.0	311.0	24.5	154.4	191.1	11.9	75.2	116.5	12.4
Queue Length 50th (ft)	128	407	88	71	~1103	88	~337	~798	15	141	~518	15
Queue Length 95th (ft)	195	#553	170	123	#1424	174	#528	#1091	64	214	#742	64
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	1179	589	291	573	551	288	557	538	288	491	486
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.85	0.40	0.30	1.60	0.41	1.17	1.31	0.22	0.59	1.10	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

5: Clovis Avenue & Shepherd Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	201	803	172	246	877	155	234	712	292	143	287	169
v/c Ratio	0.64	0.76	0.32	0.69	0.80	0.27	0.86	0.81	0.61	0.21	0.28	0.31
Control Delay	70.6	50.5	16.4	71.1	50.9	13.6	85.0	57.8	34.6	49.2	40.9	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.6	50.5	16.4	71.1	50.9	13.6	85.0	57.8	34.6	49.2	40.9	16.6
Queue Length 50th (ft)	92	347	42	113	381	30	208	323	147	57	109	38
Queue Length 95th (ft)	131	434	107	155	471	88	#319	400	251	91	157	105
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	604	1054	541	610	1102	567	314	884	479	683	1040	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.76	0.32	0.40	0.80	0.27	0.75	0.81	0.61	0.21	0.28	0.31

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

6: Clovis Avenue & Teague Avenue

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	167	117	179	1207	632	79
v/c Ratio	0.64	0.35	0.55	0.46	0.35	0.09
Control Delay	44.7	9.1	38.8	5.7	14.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	9.1	38.8	5.7	14.1	6.1
Queue Length 50th (ft)	85	0	88	110	101	6
Queue Length 95th (ft)	139	42	153	187	157	32
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	527	554	325	2619	1818	840
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.21	0.55	0.46	0.35	0.09

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	107	628	439	35	499	373	349	886	51	117	569	53
v/c Ratio	0.66	0.84	0.56	0.32	0.76	0.59	0.96	0.72	0.08	0.69	0.67	0.11
Control Delay	84.4	53.6	17.8	75.1	52.9	30.0	97.6	47.8	0.3	85.2	56.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.4	53.6	17.8	75.1	52.9	30.0	97.6	47.8	0.3	85.2	56.8	0.5
Queue Length 50th (ft)	103	569	142	33	432	193	340	397	0	113	270	0
Queue Length 95th (ft)	164	#805	260	73	#642	323	#538	506	0	177	337	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	373	747	787	309	654	635	369	1227	602	312	849	470
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.84	0.56	0.11	0.76	0.59	0.95	0.72	0.08	0.38	0.67	0.11

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
8: Clovis Avenue & Alluvial Avenue

Shepherd

Cumulative Year (2046) NP - PM Peak Hour

	↗	→	↘	↙	←	↖	↖	↑	↘	↓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	435	201	41	365	133	284	1326	136	938
v/c Ratio	0.18	0.87	0.39	0.29	0.67	0.24	0.86	0.91	0.68	0.77
Control Delay	56.9	61.7	15.3	59.7	45.6	6.9	73.9	46.2	70.2	44.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	61.7	15.3	59.7	45.6	6.9	73.9	46.2	70.2	44.5
Queue Length 50th (ft)	19	335	45	32	268	3	216	544	108	387
Queue Length 95th (ft)	49	434	105	70	354	49	#401	#816	175	#526
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	157	593	585	157	608	603	335	1463	231	1211
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.73	0.34	0.26	0.60	0.22	0.85	0.91	0.59	0.77

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
9: SR-168 WB Ramps & Herndon Avenue

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1865	615	2544	546	78	410
v/c Ratio	0.42	0.47	0.61	0.51	0.11	0.70
Control Delay	9.5	2.0	11.9	2.6	41.8	51.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	2.0	11.9	2.6	41.8	51.6
Queue Length 50th (ft)	183	0	323	0	28	173
Queue Length 95th (ft)	246	41	428	50	47	221
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	4492	1298	4179	1065	1310	1083
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.47	0.61	0.51	0.06	0.38

Intersection Summary

10: SR-168 EB Ramps & Herndon Avenue

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1573	409	2341	221	812	988
v/c Ratio	0.54	0.38	0.54	0.22	0.49	1.04
Control Delay	18.2	2.2	18.0	2.1	36.4	81.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	2.2	18.0	2.1	36.4	81.5
Queue Length 50th (ft)	288	0	290	0	194	~496
Queue Length 95th (ft)	330	44	315	35	236	#643
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2923	1086	4336	1005	1643	948
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.38	0.54	0.22	0.49	1.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	↗	→	↘	↙	←	↖	↖	↑	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	661	1561	364	340	1482	217	634	961	343	388	472
v/c Ratio	1.18	1.06	0.59	0.78	1.15	0.47	0.95	0.59	0.78	0.29	0.44
Control Delay	153.4	92.5	23.4	78.2	126.3	32.1	86.6	42.4	78.0	47.2	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	153.4	92.5	23.4	78.2	126.3	32.1	86.6	42.4	78.0	47.2	5.0
Queue Length 50th (ft)	~412	~632	127	174	~642	109	329	274	176	117	0
Queue Length 95th (ft)	#540	#793	252	222	#739	196	#445	341	224	151	48
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	559	1474	613	559	1292	463	677	1619	671	1319	1064
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	1.06	0.59	0.61	1.15	0.47	0.94	0.59	0.51	0.29	0.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	57	629	178	76	700	297	294	389	114	163	282
v/c Ratio	0.49	0.49	0.29	0.58	0.97	0.45	0.89	0.66	0.20	0.76	0.61
Control Delay	81.3	39.5	20.8	83.4	72.5	28.4	87.9	51.8	10.4	85.1	56.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.3	39.5	20.8	83.4	72.5	28.4	87.9	51.8	10.4	85.1	56.2
Queue Length 50th (ft)	55	250	67	73	~684	161	280	330	10	157	246
Queue Length 95th (ft)	102	326	136	126	#1007	262	#415	480	60	229	354
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	369	1283	623	369	721	661	369	592	571	369	464
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.49	0.29	0.21	0.97	0.45	0.80	0.66	0.20	0.44	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
20: Fowler Avenue & Nees Avenue

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	79	532	62	401	111	180	548	71	63	351	66
v/c Ratio	0.55	0.56	0.49	0.84	0.23	0.78	0.62	0.09	0.50	0.48	0.10
Control Delay	66.5	35.9	65.6	57.6	9.6	72.8	32.6	3.3	65.9	34.1	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	35.9	65.6	57.6	9.6	72.8	32.6	3.3	65.9	34.1	3.3
Queue Length 50th (ft)	60	170	47	296	10	135	330	0	48	208	0
Queue Length 95th (ft)	108	203	91	377	50	#216	#644	21	93	363	18
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	270	1075	268	557	540	271	880	798	262	731	678
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.49	0.23	0.72	0.21	0.66	0.62	0.09	0.24	0.48	0.10

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	180	19	488	876	767
v/c Ratio	0.60	0.05	0.77	0.35	0.48
Control Delay	45.8	0.3	39.4	9.6	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	0.3	39.4	9.6	19.1
Queue Length 50th (ft)	107	0	148	104	152
Queue Length 95th (ft)	166	0	219	256	246
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	418	453	797	2488	1599
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.04	0.61	0.35	0.48

Intersection Summary

AGENDA ITEM NO. 6.

22: Fowler Avenue & SR-168 EB Ramps

Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	368	661	1306	30	655
v/c Ratio	0.37	1.04	0.74	0.25	0.32
Control Delay	29.5	69.0	23.6	67.4	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	69.0	23.6	67.4	10.6
Queue Length 50th (ft)	95	~334	351	20	63
Queue Length 95th (ft)	136	#556	468	m44	80
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	999	637	1754	283	2052
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	1.04	0.74	0.11	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	85	158	257	20	220	106	739	20	57	743	94
v/c Ratio	0.66	0.36	0.45	0.19	0.70	0.65	0.27	0.02	0.46	0.30	0.12
Control Delay	84.3	45.9	7.3	64.9	60.5	76.4	19.6	0.1	71.7	22.7	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.3	45.9	7.3	64.9	60.5	76.4	19.6	0.1	71.7	22.7	2.3
Queue Length 50th (ft)	73	122	0	17	172	91	132	0	49	141	0
Queue Length 95th (ft)	114	154	36	40	209	129	164	0	82	176	10
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	141	600	684	160	580	199	2690	894	194	2499	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.26	0.38	0.13	0.38	0.53	0.27	0.02	0.29	0.30	0.12

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	291	165	57	382	148	182	667	58	195	841	57
v/c Ratio	0.17	0.57	0.45	0.30	0.64	0.40	0.64	0.24	0.06	0.65	0.29	0.06
Control Delay	67.7	62.0	11.2	69.8	61.1	14.3	74.7	17.8	0.1	74.4	18.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.7	62.0	11.2	69.8	61.1	14.3	74.7	17.8	0.1	74.4	18.2	0.1
Queue Length 50th (ft)	15	136	0	27	183	14	87	118	0	93	153	0
Queue Length 95th (ft)	33	175	60	50	224	72	123	163	0	129	206	0
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	459	1069	593	426	1058	558	438	2827	922	447	2898	938
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.27	0.28	0.13	0.36	0.27	0.42	0.24	0.06	0.44	0.29	0.06

Intersection Summary

Queues
4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	436	181	101	440	108	151	179	65	123	189	35
v/c Ratio	0.26	0.47	0.38	0.58	0.80	0.20	0.71	0.25	0.10	0.65	0.28	0.05
Control Delay	60.4	41.4	19.8	69.2	53.5	9.1	72.6	32.5	3.2	71.1	34.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	41.4	19.8	69.2	53.5	9.1	72.6	32.5	3.2	71.1	34.3	0.2
Queue Length 50th (ft)	31	155	56	83	341	10	125	106	0	102	116	0
Queue Length 95th (ft)	64	190	107	129	404	43	176	175	13	150	188	0
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	1022	515	283	554	536	285	705	649	285	682	637
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.43	0.35	0.36	0.79	0.20	0.53	0.25	0.10	0.43	0.28	0.05

Intersection Summary

5: Clovis Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	455	142	225	499	58	96	71	136	23	86	81
v/c Ratio	0.16	0.73	0.39	0.67	0.62	0.13	0.62	0.09	0.29	0.02	0.05	0.11
Control Delay	62.8	61.4	17.3	71.0	52.5	0.6	77.8	41.2	8.1	36.8	23.2	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	61.4	17.3	71.0	52.5	0.6	77.8	41.2	8.1	36.8	23.2	2.3
Queue Length 50th (ft)	17	209	26	103	225	0	86	26	0	7	21	0
Queue Length 95th (ft)	34	233	71	132	237	0	131	44	41	18	42	10
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	592	851	457	598	883	476	294	826	472	1054	1612	770
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.53	0.31	0.38	0.57	0.12	0.33	0.09	0.29	0.02	0.05	0.11

Intersection Summary

Queues
6: Clovis Avenue & Teague Avenue

	↗	↘	↖	↑	↓	↙
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	99	292	346	308	454	249
v/c Ratio	0.47	0.66	0.71	0.11	0.29	0.33
Control Delay	42.1	12.3	36.2	3.0	17.0	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	12.3	36.2	3.0	17.0	6.1
Queue Length 50th (ft)	51	0	166	16	77	14
Queue Length 95th (ft)	78	33	194	27	110	44
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	527	667	487	2699	1558	753
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.44	0.71	0.11	0.29	0.33

Intersection Summary

Queues
7: Clovis Avenue & Nees Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	353	223	77	421	207	80	367	23	80	561	48
v/c Ratio	0.31	0.73	0.39	0.57	0.77	0.38	0.58	0.23	0.03	0.58	0.34	0.06
Control Delay	75.0	59.9	6.9	82.5	58.8	16.6	83.3	26.4	0.1	83.1	28.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.0	59.9	6.9	82.5	58.8	16.6	83.3	26.4	0.1	83.1	28.2	0.1
Queue Length 50th (ft)	33	309	0	74	378	54	77	114	0	77	186	0
Queue Length 95th (ft)	68	401	55	124	465	113	127	165	0	127	255	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	377	516	592	309	546	552	362	1622	729	306	1636	785
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.68	0.38	0.25	0.77	0.38	0.22	0.23	0.03	0.26	0.34	0.06

Intersection Summary

8: Clovis Avenue & Alluvial Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	303	172	49	461	100	143	414	142	802
v/c Ratio	0.11	0.67	0.37	0.34	0.84	0.19	0.69	0.28	0.71	0.54
Control Delay	55.5	49.7	13.3	61.0	55.6	7.9	70.5	25.6	72.7	31.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	49.7	13.3	61.0	55.6	7.9	70.5	25.6	72.7	31.6
Queue Length 50th (ft)	11	235	32	38	336	4	113	103	112	240
Queue Length 95th (ft)	34	291	82	79	459	42	178	175	180	378
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	151	572	561	155	593	554	252	1456	228	1489
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.53	0.31	0.32	0.78	0.18	0.57	0.28	0.62	0.54

Intersection Summary

Queues
9: SR-168 WB Ramps & Herndon Avenue

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1020	522	1848	408	70	776
v/c Ratio	0.25	0.44	0.50	0.43	0.08	0.97
Control Delay	11.1	2.1	13.9	8.1	36.0	68.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.1	2.1	13.9	8.1	36.0	68.4
Queue Length 50th (ft)	104	0	304	159	22	342
Queue Length 95th (ft)	123	41	338	251	42	#488
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	4002	1184	3705	954	925	800
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.44	0.50	0.43	0.08	0.97

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

10: SR-168 EB Ramps & Herndon Avenue

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	902	237	1852	88	504	553
v/c Ratio	0.30	0.23	0.42	0.09	0.33	0.54
Control Delay	12.7	1.6	15.2	2.5	35.2	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	1.6	15.2	2.5	35.2	21.6
Queue Length 50th (ft)	113	0	201	0	115	117
Queue Length 95th (ft)	131	25	223	22	148	180
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2972	1023	4454	971	1520	1023
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.23	0.42	0.09	0.33	0.54

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	284	895	230	159	1098	170	249	406	176	314	530
v/c Ratio	0.75	0.54	0.35	0.54	0.72	0.31	0.70	0.23	0.55	0.18	0.40
Control Delay	78.8	44.4	5.8	74.8	52.0	21.3	77.4	29.0	73.9	36.4	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.8	44.4	5.8	74.8	52.0	21.3	77.4	29.0	73.9	36.4	3.8
Queue Length 50th (ft)	146	271	0	80	364	58	128	85	89	80	0
Queue Length 95th (ft)	192	325	63	119	439	131	172	117	129	112	46
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	548	1643	666	553	1529	540	664	1754	671	1759	1312
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.54	0.35	0.29	0.72	0.31	0.38	0.23	0.26	0.18	0.40

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	21	316	53	38	299	385	164	96	35	193	166
v/c Ratio	0.22	0.42	0.14	0.37	0.70	0.83	0.76	0.11	0.04	0.80	0.19
Control Delay	73.5	51.7	3.8	77.8	60.6	50.9	85.2	27.9	0.1	84.8	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.5	51.7	3.8	77.8	60.6	50.9	85.2	27.9	0.1	84.8	26.0
Queue Length 50th (ft)	20	138	0	37	270	250	158	55	0	186	93
Queue Length 95th (ft)	50	173	16	76	344	351	230	115	0	263	177
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	365	872	440	365	467	492	365	885	794	325	888
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.36	0.12	0.10	0.64	0.78	0.45	0.11	0.04	0.59	0.19

Intersection Summary

Queues

20: Fowler Avenue & Nees Avenue

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	315	79	296	36	121	150	40	34	248	35
v/c Ratio	0.24	0.53	0.55	0.76	0.09	0.64	0.13	0.04	0.34	0.26	0.04
Control Delay	60.7	40.3	66.5	57.9	0.4	66.3	15.0	0.1	62.6	20.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	40.3	66.5	57.9	0.4	66.3	15.0	0.1	62.6	20.6	0.1
Queue Length 50th (ft)	17	97	60	222	0	91	54	0	26	108	0
Queue Length 95th (ft)	44	136	108	298	0	149	114	0	59	208	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	282	990	268	512	504	205	1112	983	238	963	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.32	0.29	0.58	0.07	0.59	0.13	0.04	0.14	0.26	0.04

Intersection Summary

Queues

21: Fowler Avenue & SR-168 WB Ramps

Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	137	32	507	442	741
v/c Ratio	0.52	0.10	0.78	0.17	0.43
Control Delay	45.7	0.6	50.0	4.0	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	0.6	50.0	4.0	10.9
Queue Length 50th (ft)	82	0	152	33	81
Queue Length 95th (ft)	135	0	230	50	154
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	427	461	753	2576	1736
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.07	0.67	0.17	0.43

Intersection Summary

22: Fowler Avenue & SR-168 EB Ramps

	↗	↘	↑	↘	↓
Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	160	349	916	15	481
v/c Ratio	0.35	0.68	0.38	0.14	0.18
Control Delay	40.3	11.4	8.6	54.9	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	11.4	8.6	54.9	5.5
Queue Length 50th (ft)	48	0	87	10	40
Queue Length 95th (ft)	73	75	228	m25	66
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	948	689	2418	235	2604
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.51	0.38	0.06	0.18

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	13
95th Queue (ft)	37
Link Distance (ft)	420
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	56
Average Queue (ft)	34
95th Queue (ft)	57
Link Distance (ft)	439
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	SB
Directions Served	L	R
Maximum Queue (ft)	54	61
Average Queue (ft)	20	35
95th Queue (ft)	48	55
Link Distance (ft)		361
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	200	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	31	55	49
Average Queue (ft)	1	26	9
95th Queue (ft)	11	48	33
Link Distance (ft)	439	369	209
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	51	92	35	124	136	536	27	47	443	11
v/c Ratio	0.12	0.25	0.33	0.32	0.52	0.67	0.16	0.02	0.40	0.15	0.01
Control Delay	63.0	56.2	7.8	68.0	57.9	73.0	11.2	0.0	70.3	14.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	56.2	7.8	68.0	57.9	73.0	11.2	0.0	70.3	14.8	0.0
Queue Length 50th (ft)	11	43	0	30	91	116	63	0	41	60	0
Queue Length 95th (ft)	34	78	28	65	153	177	109	0	79	104	0
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	184	612	598	203	595	211	3395	1099	194	3021	965
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.08	0.15	0.17	0.21	0.64	0.16	0.02	0.24	0.15	0.01

Intersection Summary

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	38	389	120	40	362	177	259	699	102	173	494	33
v/c Ratio	0.20	0.67	0.34	0.21	0.60	0.44	0.71	0.24	0.11	0.62	0.18	0.04
Control Delay	68.0	63.1	10.9	68.2	59.8	12.2	73.9	18.5	2.2	74.4	19.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	63.1	10.9	68.2	59.8	12.2	73.9	18.5	2.2	74.4	19.7	0.1
Queue Length 50th (ft)	18	184	1	19	168	10	124	126	0	82	90	0
Queue Length 95th (ft)	38	231	56	39	213	75	167	176	22	121	131	0
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	468	1090	570	439	1090	596	453	2867	936	447	2717	891
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.36	0.21	0.09	0.33	0.30	0.57	0.24	0.11	0.39	0.18	0.04

Intersection Summary

Queues

4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	515	87	51	425	91	112	163	77	82	153	14
v/c Ratio	0.15	0.55	0.18	0.33	0.79	0.17	0.61	0.20	0.10	0.50	0.19	0.02
Control Delay	57.7	43.2	6.3	62.3	53.7	6.6	69.9	27.5	4.5	66.7	28.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	43.2	6.3	62.3	53.7	6.6	69.9	27.5	4.5	66.7	28.8	0.1
Queue Length 50th (ft)	17	194	0	41	336	0	93	89	0	67	85	0
Queue Length 95th (ft)	46	229	34	85	423	38	152	165	28	119	161	0
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	1027	525	291	559	540	288	812	742	288	792	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.50	0.17	0.18	0.76	0.17	0.39	0.20	0.10	0.28	0.19	0.02

Intersection Summary

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	504	108	137	405	7	147	46	167	11	25	27
v/c Ratio	0.14	0.75	0.26	0.51	0.47	0.01	0.68	0.05	0.32	0.01	0.02	0.03
Control Delay	62.4	60.7	3.4	68.7	48.2	0.0	74.5	40.8	7.5	35.2	25.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	60.7	3.4	68.7	48.2	0.0	74.5	40.8	7.5	35.2	25.2	0.1
Queue Length 50th (ft)	15	231	0	63	180	0	130	16	0	3	6	0
Queue Length 95th (ft)	34	280	17	97	217	0	199	34	59	12	18	0
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	604	867	497	610	923	526	221	884	521	1141	1628	789
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.58	0.22	0.22	0.44	0.01	0.67	0.05	0.32	0.01	0.02	0.03

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	91	107	193	459	336	79
v/c Ratio	0.46	0.39	0.67	0.16	0.16	0.08
Control Delay	42.5	11.6	44.6	2.7	9.9	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	11.6	44.6	2.7	9.9	3.3
Queue Length 50th (ft)	47	0	98	24	41	0
Queue Length 95th (ft)	79	34	137	40	70	18
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	527	547	313	2898	2130	985
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.20	0.62	0.16	0.16	0.08

Intersection Summary

Queues
7: Clovis Avenue & Nees Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	23	446	265	46	412	79	132	513	49	46	321	29
v/c Ratio	0.21	0.82	0.43	0.40	0.71	0.14	0.68	0.29	0.06	0.40	0.20	0.04
Control Delay	72.1	62.6	11.0	77.4	52.9	3.0	82.3	25.9	0.1	77.3	29.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	62.6	11.0	77.4	52.9	3.0	82.3	25.9	0.1	77.3	29.4	0.1
Queue Length 50th (ft)	22	408	38	44	369	0	125	161	0	44	106	0
Queue Length 95th (ft)	54	502	106	88	444	20	#216	243	0	88	160	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	373	560	626	333	588	565	193	1771	823	312	1568	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.80	0.42	0.14	0.70	0.14	0.68	0.29	0.06	0.15	0.20	0.04

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	376	190	39	330	84	159	769	84	584
v/c Ratio	0.11	0.83	0.41	0.27	0.67	0.17	0.71	0.44	0.47	0.36
Control Delay	55.5	60.4	18.3	59.4	47.4	6.1	70.0	25.0	61.8	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	60.4	18.3	59.4	47.4	6.1	70.0	25.0	61.8	27.1
Queue Length 50th (ft)	12	290	52	30	208	0	125	231	66	174
Queue Length 95th (ft)	36	371	110	68	321	32	194	341	118	266
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	157	591	571	157	605	577	263	1760	231	1600
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.64	0.33	0.25	0.55	0.15	0.60	0.44	0.36	0.36

Intersection Summary

Queues
9: SR-168 WB Ramps & Herndon Avenue

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1677	534	1705	368	67	345
v/c Ratio	0.36	0.41	0.39	0.35	0.11	0.67
Control Delay	7.5	1.6	7.6	1.7	44.7	51.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	1.6	7.6	1.7	44.7	51.2
Queue Length 50th (ft)	138	0	149	0	25	141
Queue Length 95th (ft)	194	36	211	39	43	186
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	4670	1302	4319	1037	1310	1088
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.41	0.39	0.35	0.05	0.32

Intersection Summary

Queues

10: SR-168 EB Ramps & Herndon Avenue

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1408	371	1603	190	512	761
v/c Ratio	0.49	0.35	0.38	0.19	0.30	0.77
Control Delay	18.0	2.2	16.2	2.2	32.8	41.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	2.2	16.2	2.2	32.8	41.3
Queue Length 50th (ft)	246	0	174	0	114	303
Queue Length 95th (ft)	284	42	195	32	146	390
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2923	1070	4336	992	1697	994
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.35	0.37	0.19	0.30	0.77

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	452	1425	315	329	1106	142	365	718	284	279	341
v/c Ratio	0.87	0.96	0.52	0.77	0.82	0.30	0.79	0.43	0.73	0.17	0.31
Control Delay	82.3	68.5	19.1	78.4	59.7	20.1	77.6	35.1	77.7	39.6	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.3	68.5	19.1	78.4	59.7	20.1	77.6	35.1	77.7	39.6	4.6
Queue Length 50th (ft)	231	521	88	169	393	42	187	175	146	75	0
Queue Length 95th (ft)	295	#682	196	217	453	104	236	226	192	106	42
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	559	1490	610	559	1352	481	677	1688	671	1617	1107
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.96	0.52	0.59	0.82	0.30	0.54	0.43	0.42	0.17	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	306	79	49	279	135	172	125	77	116	144
v/c Ratio	0.25	0.49	0.23	0.44	0.75	0.36	0.77	0.12	0.08	0.69	0.15
Control Delay	74.3	57.7	11.3	79.9	68.8	24.1	84.9	20.0	4.6	85.3	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.3	57.7	11.3	79.9	68.8	24.1	84.9	20.0	4.6	85.3	22.3
Queue Length 50th (ft)	23	141	1	47	262	47	166	60	0	112	73
Queue Length 95th (ft)	55	181	46	92	344	105	239	120	30	176	143
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	369	811	422	369	434	429	369	1039	919	369	966
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.38	0.19	0.13	0.64	0.31	0.47	0.12	0.08	0.31	0.15

Intersection Summary

Queues
20: Fowler Avenue & Nees Avenue

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	421	41	244	41	179	352	68	40	230	40
v/c Ratio	0.33	0.67	0.38	0.69	0.10	0.67	0.32	0.07	0.38	0.26	0.05
Control Delay	62.5	45.5	63.4	55.2	0.5	59.9	16.7	0.1	63.8	22.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.5	45.5	63.4	55.2	0.5	59.9	16.7	0.1	63.8	22.8	0.1
Queue Length 50th (ft)	25	142	31	182	0	132	142	0	30	107	0
Queue Length 95th (ft)	59	184	68	255	0	203	258	0	66	200	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	270	1035	268	543	554	269	1097	987	277	882	799
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.41	0.15	0.45	0.07	0.67	0.32	0.07	0.14	0.26	0.05

Intersection Summary

Queues
21: Fowler Avenue & SR-168 WB Ramps

	↙	↖	↖	↑	↓
Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	167	16	453	829	617
v/c Ratio	0.58	0.05	0.76	0.33	0.37
Control Delay	45.9	0.3	41.3	8.0	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	0.3	41.3	8.0	16.4
Queue Length 50th (ft)	99	0	123	61	108
Queue Length 95th (ft)	157	0	198	245	182
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	418	453	713	2513	1657
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.04	0.64	0.33	0.37

Intersection Summary

	↗	↘	↑	↘	↓
Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	361	609	1213	24	560
v/c Ratio	0.38	0.92	0.64	0.21	0.27
Control Delay	30.3	38.2	18.7	68.1	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	38.2	18.7	68.1	8.3
Queue Length 50th (ft)	93	197	233	16	46
Queue Length 95th (ft)	134	#419	410	m42	66
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	999	681	1899	200	2111
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.89	0.64	0.12	0.27

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	7
95th Queue (ft)	27
Link Distance (ft)	420
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	24
95th Queue (ft)	45
Link Distance (ft)	439
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	WB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	74	53	71
Average Queue (ft)	34	3	32
95th Queue (ft)	68	22	61
Link Distance (ft)		1184	361
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	200		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	56	30
Average Queue (ft)	21	13
95th Queue (ft)	47	37
Link Distance (ft)	369	209
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	87	168	301	27	248	165	981	24	62	975	95
v/c Ratio	0.61	0.35	0.48	0.25	0.73	0.70	0.38	0.03	0.48	0.45	0.13
Control Delay	77.3	43.0	6.6	66.5	60.0	71.4	23.4	0.1	72.5	30.6	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.3	43.0	6.6	66.5	60.0	71.4	23.4	0.1	72.5	30.6	3.1
Queue Length 50th (ft)	75	127	0	23	194	140	195	0	54	221	0
Queue Length 95th (ft)	113	155	34	48	229	181	241	0	87	269	12
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	180	600	714	199	578	242	2563	857	194	2173	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.28	0.42	0.14	0.43	0.68	0.38	0.03	0.32	0.45	0.13

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	122	461	170	338	702	277	210	991	242	285	1443	228
v/c Ratio	0.53	0.68	0.42	0.84	0.80	0.57	0.68	0.48	0.33	0.74	0.66	0.31
Control Delay	73.4	59.3	17.9	81.4	58.1	27.7	74.5	34.5	12.2	73.8	36.6	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	59.3	17.9	81.4	58.1	27.7	74.5	34.5	12.2	73.8	36.6	15.3
Queue Length 50th (ft)	58	218	37	162	330	118	100	250	43	136	392	60
Queue Length 95th (ft)	89	248	95	#214	366	191	138	338	123	176	512	141
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	459	1069	564	426	1058	560	438	2045	728	456	2189	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.43	0.30	0.79	0.66	0.49	0.48	0.48	0.33	0.63	0.66	0.31

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	100	795	287	176	862	158	227	306	106	244	546	139
v/c Ratio	0.57	0.76	0.54	0.78	1.44	0.28	0.87	0.61	0.21	0.90	1.06	0.28
Control Delay	68.7	47.9	31.0	77.0	240.8	15.9	84.6	48.0	7.7	88.1	103.2	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.7	47.9	31.0	77.0	240.8	15.9	84.6	48.0	7.7	88.1	103.2	15.9
Queue Length 50th (ft)	83	323	138	145	~970	39	186	229	0	203	~529	30
Queue Length 95th (ft)	129	380	217	203	#1162	87	#275	303	38	#306	#673	74
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	1049	527	283	599	571	285	502	498	285	513	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.76	0.54	0.62	1.44	0.28	0.80	0.61	0.21	0.86	1.06	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Clovis Avenue & Shepherd Avenue

Shepherd

Near Term (2028) WP - AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	130	824	161	257	782	136	134	233	159	183	458	242
v/c Ratio	0.50	0.83	0.31	0.71	0.70	0.24	0.72	0.28	0.34	0.27	0.40	0.42
Control Delay	68.7	54.7	15.4	71.2	45.9	10.3	80.0	44.0	12.5	49.9	38.8	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.7	54.7	15.4	71.2	45.9	10.3	80.0	44.0	12.5	49.9	38.8	23.3
Queue Length 50th (ft)	59	361	35	118	318	17	120	91	19	75	172	92
Queue Length 95th (ft)	86	407	82	147	356	55	169	119	64	104	221	162
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	592	998	518	598	1110	571	294	826	469	669	1149	581
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.83	0.31	0.43	0.70	0.24	0.46	0.28	0.34	0.27	0.40	0.42

Intersection Summary

Queues
6: Clovis Avenue & Teague Avenue

	↗	↘	↖	↑	↓	↙
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	107	293	349	514	942	266
v/c Ratio	0.50	0.66	0.74	0.19	0.60	0.38
Control Delay	42.9	12.1	38.3	3.3	21.0	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	12.1	38.3	3.3	21.0	12.7
Queue Length 50th (ft)	55	0	169	30	192	53
Queue Length 95th (ft)	83	33	197	45	239	99
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	527	667	475	2692	1583	707
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.44	0.73	0.19	0.60	0.38

Intersection Summary

Queues
7: Clovis Avenue & Nees Avenue

Shepherd
Near Term (2028) WP - AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	405	392	77	459	207	176	531	23	80	946	83
v/c Ratio	0.41	0.73	0.55	0.57	0.74	0.34	0.78	0.36	0.03	0.58	0.72	0.13
Control Delay	77.9	54.9	9.2	82.5	53.1	15.0	84.8	32.0	0.1	83.1	45.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.9	54.9	9.2	82.5	53.1	15.0	84.8	32.0	0.1	83.1	45.9	1.1
Queue Length 50th (ft)	45	353	32	74	406	52	169	184	0	77	418	0
Queue Length 95th (ft)	86	437	104	124	488	106	234	261	0	127	#615	2
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	365	566	715	309	617	606	362	1479	674	306	1309	655
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.72	0.55	0.25	0.74	0.34	0.49	0.36	0.03	0.26	0.72	0.13

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

8: Clovis Avenue & Alluvial Avenue

	↗	→	↘	↙	←	↖	↖	↑	↘	↓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	320	173	49	470	117	143	632	173	1302
v/c Ratio	0.12	0.70	0.36	0.34	0.84	0.21	0.67	0.44	0.80	0.89
Control Delay	55.7	50.4	12.5	61.0	55.4	5.1	68.0	29.6	80.1	44.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	50.4	12.5	61.0	55.4	5.1	68.0	29.6	80.1	44.4
Queue Length 50th (ft)	13	248	30	38	340	0	113	187	136	487
Queue Length 95th (ft)	37	307	80	79	470	35	174	280	#240	#841
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	151	572	564	155	596	580	294	1423	231	1463
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.56	0.31	0.32	0.79	0.20	0.49	0.44	0.75	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1116	544	2106	472	78	776
v/c Ratio	0.28	0.46	0.58	0.49	0.08	0.95
Control Delay	11.9	2.2	15.0	8.8	35.2	65.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	2.2	15.0	8.8	35.2	65.0
Queue Length 50th (ft)	120	0	374	200	25	344
Queue Length 95th (ft)	139	42	413	318	45	#486
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	3943	1183	3627	971	957	815
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.46	0.58	0.49	0.08	0.95

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

AGENDA ITEM NO. 6.

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	999	248	2172	92	514	664
v/c Ratio	0.34	0.24	0.49	0.09	0.34	0.67
Control Delay	12.9	1.6	16.1	2.5	35.3	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.9	1.6	16.1	2.5	35.3	30.5
Queue Length 50th (ft)	122	0	250	0	118	196
Queue Length 95th (ft)	147	26	274	23	151	272
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2972	1028	4454	973	1520	987
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.24	0.49	0.09	0.34	0.67

Intersection Summary

11: Clovis Avenue & Herndon Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	383	954	268	163	1143	190	269	461	212	441	778
v/c Ratio	0.82	0.58	0.39	0.55	0.82	0.37	0.72	0.27	0.63	0.25	0.57
Control Delay	79.6	45.3	6.3	75.0	58.4	24.2	77.7	31.7	75.9	38.1	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	45.3	6.3	75.0	58.4	24.2	77.7	31.7	75.9	38.1	10.4
Queue Length 50th (ft)	196	293	4	83	400	72	138	104	109	117	67
Queue Length 95th (ft)	250	350	73	122	473	152	183	141	151	156	147
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	548	1641	687	553	1400	507	664	1735	671	1735	1355
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.58	0.39	0.29	0.82	0.37	0.41	0.27	0.32	0.25	0.57

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	33	598	146	39	466	385	217	101	40	193	176
v/c Ratio	0.33	0.48	0.24	0.38	0.70	0.62	0.81	0.16	0.07	0.79	0.31
Control Delay	76.6	39.3	17.2	78.1	48.4	36.2	83.5	39.4	0.2	84.5	41.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.6	39.3	17.2	78.1	48.4	36.2	83.5	39.4	0.2	84.5	41.6
Queue Length 50th (ft)	32	244	46	38	401	254	208	70	0	185	125
Queue Length 95th (ft)	69	295	99	77	517	360	287	134	2	262	220
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	365	1255	599	365	663	617	365	616	577	358	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.48	0.24	0.11	0.70	0.62	0.59	0.16	0.07	0.54	0.31

Intersection Summary

Queues

20: Fowler Avenue & Nees Avenue

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	328	79	302	40	121	172	40	42	307	35
v/c Ratio	0.24	0.54	0.55	0.77	0.10	0.65	0.16	0.04	0.39	0.32	0.04
Control Delay	60.7	41.3	66.5	57.4	0.5	67.5	16.3	0.1	63.6	21.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	41.3	66.5	57.4	0.5	67.5	16.3	0.1	63.6	21.7	0.1
Queue Length 50th (ft)	17	104	60	227	0	92	64	0	32	138	0
Queue Length 95th (ft)	44	143	108	302	0	149	132	0	68	263	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	238	1017	238	543	529	242	1067	947	238	959	861
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.32	0.33	0.56	0.08	0.50	0.16	0.04	0.18	0.32	0.04

Intersection Summary

Queues
21: Fowler Avenue & SR-168 WB Ramps

	↙	↖	↰	↑	↓
Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	138	32	527	459	780
v/c Ratio	0.52	0.10	0.78	0.18	0.46
Control Delay	45.7	0.6	51.7	4.0	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	0.6	51.7	4.0	12.1
Queue Length 50th (ft)	82	0	183	34	95
Queue Length 95th (ft)	136	0	239	47	175
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	427	461	806	2574	1710
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.07	0.65	0.18	0.46

Intersection Summary

Lane Group	EBL	EBR	NBT	SBL	SBT
	↗	↘	↑	↘	↓
Lane Group Flow (vph)	167	356	950	15	504
v/c Ratio	0.35	0.68	0.40	0.14	0.20
Control Delay	39.7	11.1	9.1	54.2	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	11.1	9.1	54.2	7.4
Queue Length 50th (ft)	51	1	93	10	55
Queue Length 95th (ft)	74	76	246	m25	78
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	989	707	2397	283	2584
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.50	0.40	0.05	0.20

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	51
Average Queue (ft)	18
95th Queue (ft)	45
Link Distance (ft)	420
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	54
Average Queue (ft)	33
95th Queue (ft)	55
Link Distance (ft)	439
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	R
Maximum Queue (ft)	53	513	629	376
Average Queue (ft)	16	216	268	237
95th Queue (ft)	46	538	597	419
Link Distance (ft)		1184	1184	361
Upstream Blk Time (%)				26
Queuing Penalty (veh)				0
Storage Bay Dist (ft)	200			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	65	145	48	146	193	851	41	63	761	14
v/c Ratio	0.13	0.32	0.48	0.41	0.53	0.67	0.26	0.04	0.49	0.28	0.02
Control Delay	63.2	58.2	13.2	70.4	55.6	64.9	13.6	0.1	72.5	20.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	58.2	13.2	70.4	55.6	64.9	13.6	0.1	72.5	20.4	0.0
Queue Length 50th (ft)	12	55	0	41	108	161	113	0	54	128	0
Queue Length 95th (ft)	34	93	56	81	173	233	187	0	98	199	0
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	184	612	618	203	593	289	3258	1059	194	2675	868
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.11	0.23	0.24	0.25	0.67	0.26	0.04	0.32	0.28	0.02

Intersection Summary

Queues
2: Willow Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	268	733	131	362	632	323	297	1470	502	351	1065	210
v/c Ratio	0.72	0.79	0.26	0.86	0.63	0.57	0.76	0.87	0.74	0.81	0.61	0.34
Control Delay	74.0	56.7	9.3	82.7	48.5	23.7	75.7	53.0	31.3	76.7	43.1	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.0	56.7	9.3	82.7	48.5	23.7	75.7	53.0	31.3	76.7	43.1	17.2
Queue Length 50th (ft)	128	342	9	174	273	119	142	489	239	167	311	55
Queue Length 95th (ft)	172	392	59	#248	331	216	191	#647	#446	#233	396	137
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	468	1090	570	439	1090	602	451	1690	677	461	1744	619
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.67	0.23	0.82	0.58	0.54	0.66	0.87	0.74	0.76	0.61	0.34

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	147	1055	165	113	933	216	210	526	161	162	372	111
v/c Ratio	0.70	0.92	0.29	0.61	1.61	0.39	0.83	0.93	0.28	0.74	0.70	0.22
Control Delay	71.7	56.4	16.8	69.8	315.3	23.2	80.6	69.8	11.6	73.9	50.9	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.7	56.4	16.8	69.8	315.3	23.2	80.6	69.8	11.6	73.9	50.9	11.4
Queue Length 50th (ft)	121	445	43	93	~1122	79	172	432	21	133	286	12
Queue Length 95th (ft)	186	#633	106	152	#1449	163	#276	#713	81	203	408	60
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	1145	575	291	578	555	288	563	567	288	529	516
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.92	0.29	0.39	1.61	0.39	0.73	0.93	0.28	0.56	0.70	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

5: Clovis Avenue & Shepherd Avenue

Near Term (2028) WP - PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	908	163	173	920	149	214	413	184	138	279	164
v/c Ratio	0.63	0.76	0.27	0.59	0.78	0.25	0.83	0.47	0.38	0.23	0.28	0.31
Control Delay	70.6	47.1	13.9	70.1	48.4	12.4	82.9	47.1	20.2	50.8	41.7	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.6	47.1	13.9	70.1	48.4	12.4	82.9	47.1	20.2	50.8	41.7	15.9
Queue Length 50th (ft)	90	386	34	79	396	26	191	170	53	56	106	35
Queue Length 95th (ft)	129	485	94	117	499	82	276	223	124	88	152	100
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	604	1190	596	610	1181	601	314	884	479	611	995	528
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.76	0.27	0.28	0.78	0.25	0.68	0.47	0.38	0.23	0.28	0.31

Intersection Summary

Queues
6: Clovis Avenue & Teague Avenue

	↗	↘	↖	↑	↓	↙
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	111	110	194	1000	673	91
v/c Ratio	0.52	0.38	0.69	0.37	0.34	0.10
Control Delay	43.4	11.0	45.6	4.1	12.1	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	11.0	45.6	4.1	12.1	6.7
Queue Length 50th (ft)	57	0	99	70	95	10
Queue Length 95th (ft)	91	33	138	103	146	33
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	527	549	381	2716	2000	916
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.20	0.51	0.37	0.34	0.10

Intersection Summary

7: Clovis Avenue & Nees Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	59	502	418	46	478	79	332	938	49	46	588	51
v/c Ratio	0.48	0.75	0.55	0.40	0.73	0.12	0.90	0.61	0.07	0.40	0.61	0.10
Control Delay	79.7	51.0	13.4	77.4	50.5	0.6	84.7	37.1	0.2	77.3	52.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.7	51.0	13.4	77.4	50.5	0.6	84.7	37.1	0.2	77.3	52.4	0.4
Queue Length 50th (ft)	57	445	88	44	419	0	309	375	0	44	274	0
Queue Length 95th (ft)	105	570	192	88	545	2	#500	501	0	88	350	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	373	671	764	309	657	637	384	1529	725	312	969	518
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.75	0.55	0.15	0.73	0.12	0.86	0.61	0.07	0.15	0.61	0.10

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

8: Clovis Avenue & Alluvial Avenue

	↗	→	↘	↙	←	↖	↖	↑	↘	↓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	388	191	39	350	126	160	1338	116	958
v/c Ratio	0.17	0.84	0.39	0.27	0.75	0.26	0.70	0.82	0.60	0.61
Control Delay	56.7	60.1	14.9	59.4	53.5	6.5	68.0	37.2	66.1	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	60.1	14.9	59.4	53.5	6.5	68.0	37.2	66.1	32.8
Queue Length 50th (ft)	18	299	40	30	263	0	126	518	92	332
Queue Length 95th (ft)	47	381	97	68	339	43	192	#827	151	#542
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	157	592	584	157	592	591	304	1629	232	1566
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.66	0.33	0.25	0.59	0.21	0.53	0.82	0.50	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1773	551	1959	426	74	345
v/c Ratio	0.38	0.42	0.46	0.41	0.12	0.67
Control Delay	7.8	1.6	8.3	1.9	44.6	52.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	1.6	8.3	1.9	44.6	52.3
Queue Length 50th (ft)	150	0	184	0	27	145
Queue Length 95th (ft)	210	37	258	41	47	190
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	4651	1304	4279	1050	1310	1083
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.42	0.46	0.41	0.06	0.32

Intersection Summary

AGENDA ITEM NO. 6.

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1507	378	1878	205	536	1018
v/c Ratio	0.52	0.35	0.43	0.21	0.33	1.07
Control Delay	17.9	2.2	16.4	2.2	33.7	88.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	2.2	16.4	2.2	33.7	88.9
Queue Length 50th (ft)	271	0	214	0	120	~521
Queue Length 95th (ft)	312	42	237	34	153	#669
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2923	1073	4336	998	1643	953
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.35	0.43	0.21	0.33	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

11: Clovis Avenue & Herndon Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	705	1488	344	332	1184	211	405	875	329	376	504
v/c Ratio	1.26	1.00	0.56	0.78	0.92	0.44	0.81	0.53	0.77	0.24	0.42
Control Delay	182.1	77.8	21.2	78.3	68.0	26.9	76.9	40.6	78.2	41.8	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	182.1	77.8	21.2	78.3	68.0	26.9	76.9	40.6	78.2	41.8	4.4
Queue Length 50th (ft)	~459	~557	108	170	430	88	207	242	169	105	0
Queue Length 95th (ft)	#588	#732	225	218	#510	170	258	304	217	143	48
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	559	1486	615	559	1292	476	677	1639	671	1558	1193
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	1.00	0.56	0.59	0.92	0.44	0.60	0.53	0.49	0.24	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

18: Fowler Avenue & Shepherd Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	45	616	169	55	694	135	297	128	80	116	174
v/c Ratio	0.42	0.45	0.26	0.48	0.95	0.20	0.90	0.20	0.13	0.69	0.38
Control Delay	79.2	36.6	18.8	80.8	67.9	15.0	88.1	37.2	7.8	85.3	48.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.2	36.6	18.8	80.8	67.9	15.0	88.1	37.2	7.8	85.3	48.1
Queue Length 50th (ft)	44	239	59	53	666	36	282	89	0	112	137
Queue Length 95th (ft)	86	311	124	100	#975	89	#421	151	40	176	214
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	369	1374	662	369	731	668	369	640	597	369	459
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.45	0.26	0.15	0.95	0.20	0.80	0.20	0.13	0.31	0.38

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	↗	→	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	433	41	264	51	179	407	68	46	271	40
v/c Ratio	0.33	0.66	0.38	0.71	0.13	0.74	0.38	0.07	0.42	0.30	0.05
Control Delay	62.5	44.9	63.4	55.5	1.6	67.1	18.5	2.0	64.5	23.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.5	44.9	63.4	55.5	1.6	67.1	18.5	2.0	64.5	23.4	0.1
Queue Length 50th (ft)	25	146	31	196	0	135	176	0	35	127	0
Queue Length 95th (ft)	59	188	68	271	6	202	316	15	73	241	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	270	1035	268	543	529	283	1076	954	262	894	808
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.42	0.15	0.49	0.10	0.63	0.38	0.07	0.18	0.30	0.05

Intersection Summary

Queues
21: Fowler Avenue & SR-168 WB Ramps

	↙	↖	↖	↑	↓
Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	172	16	465	873	645
v/c Ratio	0.59	0.05	0.76	0.35	0.39
Control Delay	45.8	0.3	40.8	8.1	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	0.3	40.8	8.1	17.2
Queue Length 50th (ft)	102	0	132	59	117
Queue Length 95th (ft)	160	0	210	251	196
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	418	453	797	2503	1633
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.41	0.04	0.58	0.35	0.39

Intersection Summary

	↗	↘	↑	↘	↓
Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	383	630	1248	24	580
v/c Ratio	0.39	0.95	0.67	0.21	0.28
Control Delay	30.1	44.5	19.8	66.3	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	44.5	19.8	66.3	10.9
Queue Length 50th (ft)	100	228	245	16	60
Queue Length 95th (ft)	141	#462	430	m39	77
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	999	671	1866	283	2078
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.94	0.67	0.08	0.28

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	10
95th Queue (ft)	33
Link Distance (ft)	420
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	50
Average Queue (ft)	24
95th Queue (ft)	47
Link Distance (ft)	439
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	WB	WB	B78	B78	SB
Directions Served	L	T	TR	T	T	R
Maximum Queue (ft)	96	1274	1256	374	374	354
Average Queue (ft)	31	1027	1054	197	201	316
95th Queue (ft)	68	1624	1605	484	486	427
Link Distance (ft)		1184	1184	346	346	361
Upstream Blk Time (%)		58	60	11	16	83
Queuing Penalty (veh)		280	291	52	79	0
Storage Bay Dist (ft)	200					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	30
Average Queue (ft)	18	13
95th Queue (ft)	43	37
Link Distance (ft)	369	209
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queues

1: Willow Avenue & Behymer Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	78	171	272	108	583	149	882	22	64	878	86
v/c Ratio	0.57	0.27	0.38	0.68	0.94	0.83	0.50	0.04	0.49	0.57	0.16
Control Delay	75.5	34.0	5.2	80.1	66.1	94.0	37.1	0.1	72.6	42.0	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	34.0	5.2	80.1	66.1	94.0	37.1	0.1	72.6	42.0	2.7
Queue Length 50th (ft)	67	108	0	93	480	129	228	0	55	241	0
Queue Length 95th (ft)	120	175	63	154	#757	#240	286	0	103	289	18
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	180	643	724	199	620	192	1762	627	194	1534	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.27	0.38	0.54	0.94	0.78	0.50	0.04	0.33	0.57	0.16

Intersection Summary

\#   95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

AGENDA ITEM NO. 6.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	122	455	311	338	701	276	424	996	349	286	1450	229
v/c Ratio	0.53	0.67	0.64	0.84	0.80	0.57	0.76	0.49	0.45	0.74	0.80	0.36
Control Delay	73.4	59.1	19.9	81.4	58.2	27.9	67.0	34.5	12.8	73.6	47.1	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	59.1	19.9	81.4	58.2	27.9	67.0	34.5	12.8	73.6	47.1	19.3
Queue Length 50th (ft)	58	214	66	162	327	117	198	253	65	137	454	70
Queue Length 95th (ft)	92	254	160	#228	379	201	255	348	180	182	#638	163
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	459	1069	639	426	1058	560	560	2045	771	456	1817	634
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.43	0.49	0.79	0.66	0.49	0.76	0.49	0.45	0.63	0.80	0.36

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	96	760	396	165	820	152	237	337	100	360	970	134
v/c Ratio	0.56	0.72	0.73	0.75	1.36	0.26	0.89	0.69	0.21	1.26	1.91	0.27
Control Delay	68.4	46.0	38.5	75.1	208.6	15.1	86.8	51.9	8.0	187.4	446.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.4	46.0	38.5	75.1	208.6	15.1	86.8	51.9	8.0	187.4	446.8	15.2
Queue Length 50th (ft)	80	302	220	136	~893	35	196	257	0	~380	~1272	27
Queue Length 95th (ft)	134	395	#389	207	#1199	94	#333	367	44	#576	#1527	81
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	1062	546	283	602	574	285	487	482	285	507	497
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.72	0.73	0.58	1.36	0.26	0.83	0.69	0.21	1.26	1.91	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Clovis Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	120	778	228	345	734	180	127	214	188	173	649	311
v/c Ratio	0.48	0.93	0.50	1.24	0.84	0.37	0.73	0.16	0.27	0.41	0.46	0.45
Control Delay	68.7	69.3	27.7	184.4	59.7	16.3	84.6	28.5	4.7	59.7	31.7	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.7	69.3	27.7	184.4	59.7	16.3	84.6	28.5	4.7	59.7	31.7	21.0
Queue Length 50th (ft)	55	365	93	~200	333	38	114	66	0	76	225	126
Queue Length 95th (ft)	88	#481	179	#302	#420	107	183	96	49	115	292	219
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	276	851	457	279	878	488	209	1308	700	423	1416	693
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.91	0.50	1.24	0.84	0.37	0.61	0.16	0.27	0.41	0.46	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	92	254	308	496	1065	327
v/c Ratio	0.45	0.63	0.58	0.18	0.71	0.48
Control Delay	42.0	12.3	31.3	3.1	23.8	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	12.3	31.3	3.1	23.8	14.0
Queue Length 50th (ft)	47	0	144	27	226	71
Queue Length 95th (ft)	89	64	225	51	334	159
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	590	686	527	2712	1490	680
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.37	0.58	0.18	0.71	0.48

Intersection Summary

7: Clovis Avenue & Nees Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	77	435	389	75	512	253	175	508	23	125	926	148
v/c Ratio	0.57	0.64	0.51	0.56	0.75	0.39	0.77	0.42	0.04	0.75	0.85	0.26
Control Delay	82.7	45.6	9.9	82.4	50.8	18.6	84.7	39.6	0.1	92.7	57.3	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	45.6	9.9	82.4	50.8	18.6	84.7	39.6	0.1	92.7	57.3	9.7
Queue Length 50th (ft)	74	351	46	73	436	82	168	202	0	121	447	10
Queue Length 95th (ft)	128	498	147	126	610	168	242	263	0	192	#631	68
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	389	676	767	321	680	654	408	1205	569	200	1092	568
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.64	0.51	0.23	0.75	0.39	0.43	0.42	0.04	0.63	0.85	0.26

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	317	210	50	455	118	303	667	176	1333
v/c Ratio	0.12	0.70	0.43	0.35	0.82	0.22	0.84	0.47	0.81	1.14
Control Delay	55.8	50.6	14.6	61.3	53.8	5.2	68.8	29.8	81.0	114.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.8	50.6	14.6	61.3	53.8	5.2	68.8	29.8	81.0	114.1
Queue Length 50th (ft)	13	246	44	39	327	0	227	198	138	~693
Queue Length 95th (ft)	37	309	103	80	459	37	#444	300	#252	#893
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	151	572	576	155	596	580	361	1421	231	1165
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.55	0.36	0.32	0.76	0.20	0.84	0.47	0.76	1.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

9: SR-168 WB Ramps & Herndon Avenue

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1315	956	2300	506	83	837
v/c Ratio	0.33	0.71	0.62	0.51	0.09	1.08
Control Delay	11.8	4.0	16.0	9.0	36.2	97.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	4.0	16.0	9.0	36.2	97.7
Queue Length 50th (ft)	143	0	430	223	27	~432
Queue Length 95th (ft)	164	48	472	356	48	#575
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	4002	1347	3686	991	925	778
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.71	0.62	0.51	0.09	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

10: SR-168 EB Ramps & Herndon Avenue

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1174	254	2338	101	528	684
v/c Ratio	0.40	0.25	0.52	0.10	0.35	0.73
Control Delay	13.6	1.6	16.7	2.4	35.4	37.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	1.6	16.7	2.4	35.4	37.1
Queue Length 50th (ft)	152	0	278	0	121	238
Queue Length 95th (ft)	180	26	302	24	155	318
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2972	1030	4454	976	1520	940
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.25	0.52	0.10	0.35	0.73

Intersection Summary

Queues
11: Clovis Avenue & Herndon Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	441	1006	391	211	1196	200	409	658	222	515	809
v/c Ratio	0.87	0.63	0.52	0.65	0.89	0.41	0.81	0.38	0.65	0.33	0.66
Control Delay	82.4	47.4	8.1	77.3	64.4	26.4	76.9	35.5	76.3	43.6	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.4	47.4	8.1	77.3	64.4	26.4	76.9	35.5	76.3	43.6	17.6
Queue Length 50th (ft)	225	316	20	108	436	83	209	165	114	149	130
Queue Length 95th (ft)	288	382	114	150	#525	164	260	212	156	195	224
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	548	1602	746	553	1341	490	664	1730	671	1541	1228
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.63	0.52	0.38	0.89	0.41	0.62	0.38	0.33	0.33	0.66

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

AGENDA ITEM NO. 6.

18: Fowler Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	55	732	294	78	489	402	226	104	42	356	589
v/c Ratio	0.48	0.58	0.49	0.58	0.69	0.61	0.82	0.24	0.10	0.98	1.15
Control Delay	81.0	42.0	30.9	83.8	46.1	35.1	83.5	49.1	1.1	101.4	135.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	42.0	30.9	83.8	46.1	35.1	83.5	49.1	1.1	101.4	135.6
Queue Length 50th (ft)	53	305	164	75	409	260	217	84	0	350	~674
Queue Length 95th (ft)	100	390	269	129	566	396	297	140	4	#563	#1019
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	365	1256	600	365	711	655	365	426	423	362	511
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.58	0.49	0.21	0.69	0.61	0.62	0.24	0.10	0.98	1.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	23	410	104	335	42	170	179	72	104	701	87
v/c Ratio	0.25	0.67	0.62	0.74	0.09	0.72	0.20	0.09	0.62	0.83	0.11
Control Delay	60.9	46.2	67.4	52.5	0.4	66.0	21.1	3.0	67.3	41.5	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.9	46.2	67.4	52.5	0.4	66.0	21.1	3.0	67.3	41.5	5.3
Queue Length 50th (ft)	18	141	79	253	0	128	75	0	79	462	0
Queue Length 95th (ft)	45	183	133	328	0	194	156	20	133	#891	33
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	238	1016	238	543	529	262	917	827	238	844	769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.40	0.44	0.62	0.08	0.65	0.20	0.09	0.44	0.83	0.11

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
21: Fowler Avenue & SR-168 WB Ramps

Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	140	34	550	479	1015
v/c Ratio	0.52	0.10	0.79	0.19	0.60
Control Delay	45.7	0.6	50.8	5.2	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	0.6	50.8	5.2	15.8
Queue Length 50th (ft)	83	0	193	36	164
Queue Length 95th (ft)	137	0	247	83	275
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	427	461	768	2571	1696
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.07	0.72	0.19	0.60

Intersection Summary

	↗	↘	↑	↘	↓
Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	169	404	998	16	615
v/c Ratio	0.27	0.78	0.44	0.15	0.25
Control Delay	34.4	22.6	12.2	60.1	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	22.6	12.2	60.1	8.4
Queue Length 50th (ft)	48	72	123	11	65
Queue Length 95th (ft)	68	165	306	m22	87
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	958	643	2251	283	2437
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.63	0.44	0.06	0.25

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	55	903
Average Queue (ft)	25	878
95th Queue (ft)	52	900
Link Distance (ft)	420	840
Upstream Blk Time (%)		100
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	118	601
Average Queue (ft)	59	593
95th Queue (ft)	99	599
Link Distance (ft)	439	587
Upstream Blk Time (%)		47
Queuing Penalty (veh)		555
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	WB	WB	B78	B78	SB
Directions Served	L	T	TR	T	T	R
Maximum Queue (ft)	28	1274	1274	369	364	368
Average Queue (ft)	6	1000	1017	165	170	325
95th Queue (ft)	25	1643	1627	442	445	459
Link Distance (ft)		1184	1184	346	346	361
Upstream Blk Time (%)		55	57	10	17	84
Queuing Penalty (veh)		197	203	34	62	0
Storage Bay Dist (ft)	200					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	54	49
Average Queue (ft)	25	12
95th Queue (ft)	48	38
Link Distance (ft)	369	209
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	132	146	139	211	195	853	196	128	762	14
v/c Ratio	0.13	0.58	0.45	0.78	0.54	0.63	0.32	0.22	0.68	0.33	0.02
Control Delay	63.2	65.6	12.2	86.3	49.3	61.8	21.4	9.3	75.2	26.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	65.6	12.2	86.3	49.3	61.8	21.4	9.3	75.2	26.2	0.1
Queue Length 50th (ft)	12	112	0	119	144	162	157	32	110	156	0
Queue Length 95th (ft)	35	170	60	#206	237	242	232	94	173	221	0
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	90		250		105	250		200
Base Capacity (vph)	184	612	619	203	591	309	2645	884	206	2282	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.22	0.24	0.68	0.36	0.63	0.32	0.22	0.62	0.33	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	282	765	412	380	661	338	312	1544	527	366	1118	220
v/c Ratio	0.74	0.79	0.73	0.89	0.63	0.58	0.78	0.96	0.80	0.84	0.67	0.37
Control Delay	74.4	55.5	33.8	85.6	47.6	24.6	76.2	63.3	36.2	78.7	46.2	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.4	55.5	33.8	85.6	47.6	24.6	76.2	63.3	36.2	78.7	46.2	18.9
Queue Length 50th (ft)	135	351	202	184	282	130	149	~571	280	174	343	64
Queue Length 95th (ft)	181	412	319	#269	348	234	200	#700	#499	#250	420	149
Internal Link Dist (ft)		615			5383			562			5238	
Turn Bay Length (ft)	230		100	250		100	250		160	250		150
Base Capacity (vph)	468	1090	614	439	1091	603	453	1612	657	459	1658	595
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.70	0.67	0.87	0.61	0.56	0.69	0.96	0.80	0.80	0.67	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	155	1099	234	116	975	227	337	732	166	171	542	116
v/c Ratio	0.72	0.96	0.41	0.62	1.70	0.41	1.17	1.31	0.31	0.76	1.10	0.24
Control Delay	72.8	63.0	23.6	70.0	353.6	24.5	154.4	191.1	18.2	75.2	116.5	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.8	63.0	23.6	70.0	353.6	24.5	154.4	191.1	18.2	75.2	116.5	12.4
Queue Length 50th (ft)	128	474	90	96	~1203	88	~337	~798	45	141	~518	15
Queue Length 95th (ft)	195	#678	175	155	#1528	174	#528	#1091	111	214	#742	64
Internal Link Dist (ft)		5383			1263			627			5240	
Turn Bay Length (ft)	230		50	215		60	230		104	255		25
Base Capacity (vph)	288	1140	573	291	573	551	288	557	540	288	491	486
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.96	0.41	0.40	1.70	0.41	1.17	1.31	0.31	0.59	1.10	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

AGENDA ITEM NO. 6.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	201	946	172	302	962	155	234	712	385	143	287	169
v/c Ratio	0.64	0.88	0.31	0.74	0.82	0.26	0.86	0.81	0.80	0.23	0.30	0.33
Control Delay	70.6	57.6	16.9	70.5	50.3	13.3	85.0	57.8	48.8	50.9	42.6	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.6	57.6	16.9	70.5	50.3	13.3	85.0	57.8	48.8	50.9	42.6	17.0
Queue Length 50th (ft)	92	432	43	139	422	30	208	323	243	58	111	39
Queue Length 95th (ft)	131	#601	111	184	#537	88	#319	400	#399	91	157	105
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		50
Base Capacity (vph)	604	1072	548	610	1177	599	314	884	479	610	965	515
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.88	0.31	0.50	0.82	0.26	0.75	0.81	0.80	0.23	0.30	0.33

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
6: Clovis Avenue & Teague Avenue

Shepherd N

Cumulative Year (2046) WP - PM Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	175	117	179	1296	685	84
v/c Ratio	0.65	0.34	0.52	0.50	0.39	0.10
Control Delay	44.8	8.9	37.5	6.2	14.9	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	8.9	37.5	6.2	14.9	6.3
Queue Length 50th (ft)	89	0	87	125	114	8
Queue Length 95th (ft)	144	42	156	213	168	33
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		200			50
Base Capacity (vph)	527	554	345	2605	1762	816
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.21	0.52	0.50	0.39	0.10

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	107	632	439	57	501	373	349	973	51	117	621	53
v/c Ratio	0.66	0.86	0.56	0.47	0.77	0.61	1.13	0.79	0.08	0.69	0.65	0.11
Control Delay	84.4	56.1	18.6	79.7	53.1	34.0	145.0	50.6	0.3	85.2	52.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.4	56.1	18.6	79.7	53.1	34.0	145.0	50.6	0.3	85.2	52.8	0.4
Queue Length 50th (ft)	103	576	145	55	434	219	~394	452	0	113	286	0
Queue Length 95th (ft)	164	#850	271	102	#646	353	#599	#575	0	177	354	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			55		60	300		95	260		105
Base Capacity (vph)	373	735	777	309	654	616	309	1227	602	312	955	491
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.86	0.56	0.18	0.77	0.61	1.13	0.79	0.08	0.38	0.65	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

8: Clovis Avenue & Alluvial Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	439	201	41	367	133	284	1415	136	1014
v/c Ratio	0.18	0.87	0.39	0.29	0.67	0.24	0.86	0.97	0.68	0.84
Control Delay	56.9	61.4	15.1	59.7	45.3	6.8	74.1	55.5	70.2	47.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	61.4	15.1	59.7	45.3	6.8	74.1	55.5	70.2	47.9
Queue Length 50th (ft)	19	335	45	32	267	3	216	~653	108	~458
Queue Length 95th (ft)	49	440	105	70	354	49	#401	#897	175	#596
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		105	165		105	230		235	
Base Capacity (vph)	157	593	585	157	609	604	334	1455	231	1205
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.74	0.34	0.26	0.60	0.22	0.85	0.97	0.59	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1872	615	2590	561	78	410
v/c Ratio	0.42	0.47	0.62	0.52	0.11	0.70
Control Delay	9.5	2.0	12.1	2.6	41.8	51.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	2.0	12.1	2.6	41.8	51.6
Queue Length 50th (ft)	184	0	333	0	28	173
Queue Length 95th (ft)	247	41	441	50	47	221
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	280
Base Capacity (vph)	4492	1298	4173	1070	1310	1083
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.47	0.62	0.52	0.06	0.38

Intersection Summary

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1580	409	2404	221	812	1051
v/c Ratio	0.54	0.38	0.55	0.22	0.49	1.11
Control Delay	18.3	2.2	18.2	2.1	36.4	103.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	2.2	18.2	2.1	36.4	103.4
Queue Length 50th (ft)	290	0	301	0	194	~560
Queue Length 95th (ft)	332	44	327	35	236	#710
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2923	1086	4336	1005	1643	947
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.38	0.55	0.22	0.49	1.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	732	1561	364	340	1482	221	634	973	345	394	535
v/c Ratio	1.31	1.06	0.59	0.78	1.15	0.48	0.95	0.60	0.78	0.30	0.49
Control Delay	200.5	92.5	23.4	78.2	126.3	32.6	86.6	42.8	78.0	47.3	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	200.5	92.5	23.4	78.2	126.3	32.6	86.6	42.8	78.0	47.3	5.9
Queue Length 50th (ft)	~489	~632	127	174	~642	113	329	280	177	119	7
Queue Length 95th (ft)	#618	#793	252	222	#739	200	#445	347	225	153	57
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	240		240	245		150	200		230		185
Base Capacity (vph)	559	1474	613	559	1292	463	677	1617	671	1319	1098
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.31	1.06	0.59	0.61	1.15	0.48	0.94	0.60	0.51	0.30	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

18: Fowler Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	57	645	178	76	726	297	351	389	114	163	294
v/c Ratio	0.49	0.50	0.29	0.58	1.01	0.45	0.97	0.66	0.20	0.76	0.68
Control Delay	81.3	39.7	20.8	83.4	80.8	28.4	98.1	51.8	10.4	85.1	61.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.3	39.7	20.8	83.4	80.8	28.4	98.1	51.8	10.4	85.1	61.1
Queue Length 50th (ft)	55	258	67	73	~763	161	343	330	10	157	262
Queue Length 95th (ft)	102	335	136	126	#1062	262	#542	480	60	229	371
Internal Link Dist (ft)		329			709			846			4328
Turn Bay Length (ft)	115		50	260		55	150			200	
Base Capacity (vph)	369	1283	623	369	721	661	369	592	571	369	430
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.50	0.29	0.21	1.01	0.45	0.95	0.66	0.20	0.44	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	79	532	62	401	115	180	602	71	65	360	66
v/c Ratio	0.55	0.56	0.49	0.84	0.24	0.78	0.68	0.09	0.50	0.49	0.10
Control Delay	66.5	35.9	65.6	57.6	10.2	73.2	34.7	3.3	66.2	34.2	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	35.9	65.6	57.6	10.2	73.2	34.7	3.3	66.2	34.2	3.2
Queue Length 50th (ft)	60	170	47	296	12	135	378	0	49	216	0
Queue Length 95th (ft)	108	203	91	377	54	#233	#740	21	94	369	18
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		25	200			85		25
Base Capacity (vph)	270	1075	268	557	540	259	879	797	248	732	679
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.49	0.23	0.72	0.21	0.69	0.68	0.09	0.26	0.49	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
21: Fowler Avenue & SR-168 WB Ramps

	↙	↖	↖	↑	↓
Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	180	19	488	928	775
v/c Ratio	0.60	0.05	0.78	0.37	0.48
Control Delay	45.8	0.3	39.2	10.0	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	0.3	39.2	10.0	18.7
Queue Length 50th (ft)	107	0	132	122	153
Queue Length 95th (ft)	166	0	215	284	243
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	418	453	711	2488	1613
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.04	0.69	0.37	0.48

Intersection Summary

22: Fowler Avenue & SR-168 EB Ramps

	↗	↘	↑	↘	↓
Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	405	661	1321	30	664
v/c Ratio	0.41	1.04	0.75	0.25	0.32
Control Delay	30.0	70.7	23.8	68.3	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	70.7	23.8	68.3	8.3
Queue Length 50th (ft)	106	~339	357	21	51
Queue Length 95th (ft)	150	#561	475	m43	70
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	999	634	1756	200	2052
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.41	1.04	0.75	0.15	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	286	855
Average Queue (ft)	124	788
95th Queue (ft)	241	1082
Link Distance (ft)	420	840
Upstream Blk Time (%)		85
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	432	598
Average Queue (ft)	386	593
95th Queue (ft)	494	597
Link Distance (ft)	439	587
Upstream Blk Time (%)	0	34
Queuing Penalty (veh)	0	235
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	WB	WB	B78	B78	SB
Directions Served	L	T	TR	T	T	R
Maximum Queue (ft)	73	1274	1256	380	404	372
Average Queue (ft)	27	1242	1242	321	325	350
95th Queue (ft)	64	1352	1344	476	479	410
Link Distance (ft)		1184	1184	346	346	361
Upstream Blk Time (%)		93	93	27	41	92
Queuing Penalty (veh)		492	493	142	216	0
Storage Bay Dist (ft)	200					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	30
Average Queue (ft)	20	18
95th Queue (ft)	44	41
Link Distance (ft)	369	209
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

AGENDA ITEM NO. 6.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	85	158	257	20	220	106	739	20	57	743	94
v/c Ratio	0.60	0.35	0.45	0.19	0.70	0.65	0.28	0.02	0.46	0.30	0.12
Control Delay	77.0	44.5	7.0	64.9	60.5	76.4	20.4	0.1	71.7	23.5	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.0	44.5	7.0	64.9	60.5	76.4	20.4	0.1	71.7	23.5	2.5
Queue Length 50th (ft)	73	122	0	17	172	91	132	0	49	141	0
Queue Length 95th (ft)	111	149	35	40	209	129	170	0	82	183	10
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	210		250		105	250		200
Base Capacity (vph)	180	600	684	199	580	199	2654	884	194	2463	805
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.26	0.38	0.10	0.38	0.53	0.28	0.02	0.29	0.30	0.12

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	291	165	57	382	148	182	667	58	195	841	57
v/c Ratio	0.17	0.57	0.45	0.30	0.64	0.38	0.64	0.24	0.06	0.65	0.29	0.06
Control Delay	67.7	62.0	11.2	69.8	61.1	10.4	74.7	17.8	2.1	74.4	18.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.7	62.0	11.2	69.8	61.1	10.4	74.7	17.8	2.1	74.4	18.2	0.1
Queue Length 50th (ft)	15	136	0	27	183	0	87	118	0	93	153	0
Queue Length 95th (ft)	33	175	60	50	224	56	123	163	14	129	206	0
Internal Link Dist (ft)		615			4724			562			5238	
Turn Bay Length (ft)	230		175	280		200	260		225	280		165
Base Capacity (vph)	459	1069	593	426	1058	570	438	2827	1076	447	2898	938
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.27	0.28	0.13	0.36	0.26	0.42	0.24	0.05	0.44	0.29	0.06

Intersection Summary

3: Minnewawa Avenue & Behymer Avenue

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	196	550	314	423
v/c Ratio	0.34	0.84	0.36	0.54
Control Delay	12.6	24.2	8.8	14.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.6	24.2	8.8	14.2
Queue Length 50th (ft)	41	116	51	95
Queue Length 95th (ft)	66	171	154	177
Internal Link Dist (ft)	5395	5207	4586	912
Turn Bay Length (ft)				
Base Capacity (vph)	741	785	872	783
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.70	0.36	0.54

Intersection Summary

Queues
4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	431	179	100	435	107	149	176	65	121	187	34
v/c Ratio	0.32	0.55	0.40	0.61	0.82	0.21	0.71	0.23	0.09	0.65	0.25	0.05
Control Delay	60.3	43.2	12.9	67.2	53.5	7.7	69.1	27.7	0.2	60.4	28.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	43.2	12.9	67.2	53.5	7.7	69.1	27.7	0.2	60.4	28.1	0.2
Queue Length 50th (ft)	29	148	25	76	314	4	113	93	0	93	94	0
Queue Length 95th (ft)	62	184	74	123	393	39	166	159	0	m140	172	m0
Internal Link Dist (ft)		579			1263			627			574	
Turn Bay Length (ft)	250		50	215		130	230		105	255		25
Base Capacity (vph)	134	962	523	219	585	565	280	768	724	295	745	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.45	0.34	0.46	0.74	0.19	0.53	0.23	0.09	0.41	0.25	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

5: Clovis Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	39	455	142	225	499	58	96	71	136	23	86	81
v/c Ratio	0.16	0.73	0.39	0.67	0.62	0.13	0.62	0.09	0.29	0.02	0.05	0.11
Control Delay	62.8	61.4	17.3	71.0	52.5	0.6	77.8	41.2	8.1	36.8	23.2	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	61.4	17.3	71.0	52.5	0.6	77.8	41.2	8.1	36.8	23.2	2.3
Queue Length 50th (ft)	17	209	26	103	225	0	86	26	0	7	21	0
Queue Length 95th (ft)	34	233	71	132	237	0	131	44	41	18	42	10
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		270
Base Capacity (vph)	592	851	457	598	883	476	294	826	472	1054	1612	770
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.53	0.31	0.38	0.57	0.12	0.33	0.09	0.29	0.02	0.05	0.11

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	99	292	346	308	454	249
v/c Ratio	0.47	0.66	0.74	0.11	0.28	0.33
Control Delay	42.1	12.3	38.6	3.0	16.5	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	12.3	38.6	3.0	16.5	6.1
Queue Length 50th (ft)	51	0	167	16	76	15
Queue Length 95th (ft)	78	33	196	27	108	45
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		225			50
Base Capacity (vph)	527	667	471	2699	1600	766
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.44	0.73	0.11	0.28	0.33

Intersection Summary

Queues
7: Clovis Avenue & Nees Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	353	223	77	421	207	80	367	23	80	561	48
v/c Ratio	0.21	0.72	0.39	0.48	0.77	0.38	0.47	0.25	0.03	0.48	0.38	0.07
Control Delay	45.8	41.5	5.7	54.0	42.5	14.8	52.2	22.8	0.1	53.1	24.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	41.5	5.7	54.0	42.5	14.8	52.2	22.8	0.1	53.1	24.6	0.2
Queue Length 50th (ft)	20	197	0	47	245	46	49	89	0	49	145	0
Queue Length 95th (ft)	49	275	47	92	336	99	92	127	0	93	198	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			60		60	475		95	260		105
Base Capacity (vph)	159	571	633	160	593	573	192	1460	683	177	1464	705
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.62	0.35	0.48	0.71	0.36	0.42	0.25	0.03	0.45	0.38	0.07

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	303	172	49	461	100	143	414	142	802
v/c Ratio	0.11	0.67	0.37	0.34	0.84	0.18	0.67	0.28	0.71	0.54
Control Delay	55.5	49.7	12.4	61.0	55.6	3.2	68.0	25.6	72.7	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	49.7	12.4	61.0	55.6	3.2	68.0	25.6	72.7	32.1
Queue Length 50th (ft)	11	235	29	38	336	0	113	103	112	240
Queue Length 95th (ft)	34	291	78	79	459	22	174	175	180	388
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		110	165		105	420		215	
Base Capacity (vph)	151	572	565	155	593	578	294	1456	228	1476
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.53	0.30	0.32	0.78	0.17	0.49	0.28	0.62	0.54

Intersection Summary

Queues
9: SR-168 WB Ramps & Herndon Avenue

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1020	522	1848	408	70	776
v/c Ratio	0.26	0.44	0.51	0.43	0.07	0.94
Control Delay	11.6	2.1	14.0	8.2	35.1	62.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	2.1	14.0	8.2	35.1	62.6
Queue Length 50th (ft)	107	0	305	159	22	339
Queue Length 95th (ft)	126	42	340	251	41	#478
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	565
Base Capacity (vph)	3943	1174	3651	946	957	823
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.44	0.51	0.43	0.07	0.94

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	902	237	1852	88	504	553
v/c Ratio	0.30	0.23	0.42	0.09	0.33	0.54
Control Delay	12.6	1.6	15.2	2.5	35.2	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	1.6	15.2	2.5	35.2	21.6
Queue Length 50th (ft)	110	0	201	0	115	117
Queue Length 95th (ft)	128	25	223	22	148	180
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2972	1023	4454	971	1520	1023
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.23	0.42	0.09	0.33	0.54

Intersection Summary

Queues

11: Clovis Avenue & Herndon Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	284	895	230	159	1098	170	249	406	176	314	530
v/c Ratio	0.74	0.43	0.25	0.61	0.57	0.24	0.71	0.29	0.64	0.24	0.44
Control Delay	73.5	31.2	8.1	74.9	37.7	5.1	73.9	33.6	75.5	44.0	25.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.5	31.2	8.1	74.9	37.7	5.1	73.9	33.6	75.5	44.0	25.9
Queue Length 50th (ft)	136	218	48	76	300	0	119	88	84	86	164
Queue Length 95th (ft)	180	267	93	113	367	51	161	123	124	121	219
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	350			245		150	200		230		185
Base Capacity (vph)	633	2094	1031	331	1922	704	591	1403	334	1314	1406
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.43	0.22	0.48	0.57	0.24	0.42	0.29	0.53	0.24	0.38

Intersection Summary

Queues
13: Sunnyside Avenue & Shepherd Avenue

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	32	487	64	524	55	54	24	136
v/c Ratio	0.23	0.81	0.59	0.44	0.39	0.08	0.21	0.22
Control Delay	42.4	36.9	53.4	36.8	46.6	11.9	43.4	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	36.9	53.4	36.8	46.6	11.9	43.4	15.7
Queue Length 50th (ft)	17	240	38	150	30	5	13	28
Queue Length 95th (ft)	45	308	m#76	206	67	36	38	83
Internal Link Dist (ft)		426		912		2573		597
Turn Bay Length (ft)	250		250		250		250	
Base Capacity (vph)	173	790	109	1431	151	681	117	605
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.62	0.59	0.37	0.36	0.08	0.21	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

15: Sunnyside Avenue & Nees Avenue

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	13	372	26	401	220	18	259
v/c Ratio	0.03	0.19	0.05	0.37	0.80	0.04	0.54
Control Delay	8.2	5.8	12.8	19.5	40.7	4.4	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	5.8	12.8	19.5	40.7	4.4	18.9
Queue Length 50th (ft)	2	22	13	296	73	0	67
Queue Length 95th (ft)	10	52	m28	418	123	8	106
Internal Link Dist (ft)		388		2573	635		2575
Turn Bay Length (ft)	70		65				
Base Capacity (vph)	518	1994	573	1078	409	615	692
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.19	0.05	0.37	0.54	0.03	0.37

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	21	316	53	38	299	385	164	96	35	193	166
v/c Ratio	0.13	0.38	0.11	0.24	0.61	0.55	0.70	0.15	0.05	0.69	0.24
Control Delay	25.3	20.9	2.3	42.3	33.9	5.8	55.9	27.9	0.1	48.3	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.3	20.9	2.3	42.3	33.9	5.8	55.9	27.9	0.1	48.3	23.2
Queue Length 50th (ft)	9	94	0	21	141	0	87	36	0	105	62
Queue Length 95th (ft)	m16	124	m5	51	212	60	#209	98	0	164	130
Internal Link Dist (ft)		329			709			846			3571
Turn Bay Length (ft)	115		160	260		205	285			200	
Base Capacity (vph)	157	1179	635	157	621	784	233	650	671	443	682
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.27	0.08	0.24	0.48	0.49	0.70	0.15	0.05	0.44	0.24

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	315	79	296	36	121	150	40	34	248	35
v/c Ratio	0.24	0.53	0.55	0.76	0.09	0.65	0.14	0.04	0.34	0.26	0.04
Control Delay	59.6	39.3	66.5	57.6	0.4	67.5	15.0	0.1	62.6	20.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	39.3	66.5	57.6	0.4	67.5	15.0	0.1	62.6	20.6	0.1
Queue Length 50th (ft)	15	99	60	222	0	92	54	0	26	107	0
Queue Length 95th (ft)	40	148	108	297	0	149	114	0	59	209	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		60	220			125		50
Base Capacity (vph)	238	1018	238	543	529	242	1111	983	238	965	866
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.31	0.33	0.55	0.07	0.50	0.14	0.04	0.14	0.26	0.04

Intersection Summary

Queues
21: Fowler Avenue & SR-168 WB Ramps

Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	137	32	507	442	741
v/c Ratio	0.52	0.10	0.78	0.17	0.43
Control Delay	45.7	0.6	46.9	5.0	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	0.6	46.9	5.0	11.2
Queue Length 50th (ft)	82	0	159	40	83
Queue Length 95th (ft)	135	0	203	68	157
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	427	461	802	2576	1730
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.07	0.63	0.17	0.43

Intersection Summary

	↗	↘	↑	↘	↓
Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	160	349	916	15	481
v/c Ratio	0.53	0.46	0.45	0.08	0.22
Control Delay	29.3	5.2	9.2	25.7	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	5.2	9.2	25.7	5.7
Queue Length 50th (ft)	53	0	77	5	36
Queue Length 95th (ft)	103	32	185	20	55
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	318	786	2019	179	2163
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.44	0.45	0.08	0.22

Intersection Summary

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	13
95th Queue (ft)	38
Link Distance (ft)	420
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	72
Average Queue (ft)	31
95th Queue (ft)	52
Link Distance (ft)	434
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	SB
Directions Served	L	R
Maximum Queue (ft)	53	93
Average Queue (ft)	19	35
95th Queue (ft)	47	60
Link Distance (ft)		361
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	200	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB
Directions Served	LT
Maximum Queue (ft)	31
Average Queue (ft)	29
95th Queue (ft)	42
Link Distance (ft)	374
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queues
1: Willow Avenue & Behymer Avenue

Shepherd
Existing WP MIT - PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	51	92	35	124	136	536	27	47	443	11
v/c Ratio	0.12	0.25	0.33	0.32	0.52	0.69	0.16	0.02	0.40	0.15	0.01
Control Delay	63.0	56.2	7.8	68.0	57.9	75.7	11.2	0.0	70.3	14.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	56.2	7.8	68.0	57.9	75.7	11.2	0.0	70.3	14.6	0.0
Queue Length 50th (ft)	11	43	0	30	91	117	63	0	41	59	0
Queue Length 95th (ft)	34	78	28	65	153	177	109	0	79	104	0
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	210		250		105	250		200
Base Capacity (vph)	184	612	598	203	595	217	3395	1099	194	3042	970
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.08	0.15	0.17	0.21	0.63	0.16	0.02	0.24	0.15	0.01

Intersection Summary

2: Willow Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	38	389	120	40	362	177	259	699	102	173	494	33
v/c Ratio	0.20	0.68	0.21	0.21	0.54	0.40	0.71	0.25	0.11	0.62	0.19	0.04
Control Delay	68.0	63.6	6.0	68.2	57.1	9.4	73.9	19.2	2.6	74.4	20.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	63.6	6.0	68.2	57.1	9.4	73.9	19.2	2.6	74.4	20.4	0.1
Queue Length 50th (ft)	18	184	0	19	168	0	124	126	0	82	90	0
Queue Length 95th (ft)	38	233	43	39	214	64	167	174	27	121	130	0
Internal Link Dist (ft)		615			4724			562			5238	
Turn Bay Length (ft)	230		175	280		200	260		225	280		165
Base Capacity (vph)	437	1020	623	415	1028	580	475	2769	1066	387	2620	859
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.38	0.19	0.10	0.35	0.31	0.55	0.25	0.10	0.45	0.19	0.04

Intersection Summary

Queues
3: Minnewawa Avenue & Behymer Avenue

	→	←	↑	↓
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	120	220	292	326
v/c Ratio	0.37	0.59	0.25	0.31
Control Delay	18.7	19.1	5.2	5.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.7	19.1	5.2	5.5
Queue Length 50th (ft)	28	40	28	37
Queue Length 95th (ft)	60	84	137	89
Internal Link Dist (ft)	5395	5207	4586	912
Turn Bay Length (ft)				
Base Capacity (vph)	665	690	1166	1051
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.32	0.25	0.31

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	515	87	51	425	91	112	163	77	82	153	14
v/c Ratio	0.18	0.59	0.19	0.38	0.77	0.17	0.63	0.18	0.10	0.53	0.19	0.02
Control Delay	56.8	42.5	5.2	61.2	48.7	5.2	67.3	24.1	3.4	69.8	26.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	42.5	5.2	61.2	48.7	5.2	67.3	24.1	3.4	69.8	26.3	0.1
Queue Length 50th (ft)	16	198	0	39	299	0	85	69	0	64	64	0
Queue Length 95th (ft)	44	216	29	79	388	31	141	156	22	110	163	1
Internal Link Dist (ft)		579			1263			627			574	
Turn Bay Length (ft)	250		50	215		130	230		105	255		25
Base Capacity (vph)	178	1191	599	165	626	599	226	885	806	208	823	756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.43	0.15	0.31	0.68	0.15	0.50	0.18	0.10	0.39	0.19	0.02

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	34	504	108	137	405	7	147	46	167	11	25	27
v/c Ratio	0.11	0.70	0.25	0.45	0.44	0.01	0.67	0.04	0.26	0.02	0.02	0.04
Control Delay	49.4	47.7	5.1	54.8	38.2	0.0	62.9	25.8	5.1	42.5	25.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	47.7	5.1	54.8	38.2	0.0	62.9	25.8	5.1	42.5	25.4	0.1
Queue Length 50th (ft)	12	182	0	50	141	0	106	12	0	3	5	0
Queue Length 95th (ft)	28	230	30	83	182	0	167	25	47	12	17	0
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		270
Base Capacity (vph)	301	1025	546	316	1070	571	254	1214	654	610	1404	710
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.49	0.20	0.43	0.38	0.01	0.58	0.04	0.26	0.02	0.02	0.04

Intersection Summary

	↗	↘	↖	↑	↓	↙
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	91	107	193	459	336	79
v/c Ratio	0.46	0.39	0.68	0.16	0.16	0.08
Control Delay	42.5	11.6	45.6	2.7	9.9	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	11.6	45.6	2.7	9.9	3.3
Queue Length 50th (ft)	47	0	98	24	41	0
Queue Length 95th (ft)	79	34	137	40	70	18
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		225			50
Base Capacity (vph)	527	547	381	2898	2141	990
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.20	0.51	0.16	0.16	0.08

Intersection Summary

Queues
7: Clovis Avenue & Nees Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	23	446	265	46	412	79	132	513	49	46	321	29
v/c Ratio	0.17	0.83	0.41	0.34	0.72	0.14	0.66	0.32	0.06	0.33	0.23	0.04
Control Delay	55.3	53.2	5.4	58.3	55.4	5.3	66.4	24.8	0.6	58.9	27.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	53.2	5.4	58.3	55.4	5.3	66.4	24.8	0.6	58.9	27.7	0.1
Queue Length 50th (ft)	17	320	0	37	301	4	100	143	0	34	90	0
Queue Length 95th (ft)	44	422	59	m74	375	16	159	206	4	73	144	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			60		60	475		95	260		105
Base Capacity (vph)	150	628	711	134	629	614	342	1612	754	165	1426	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.71	0.37	0.34	0.66	0.13	0.39	0.32	0.06	0.28	0.23	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	376	190	39	330	84	159	769	84	584
v/c Ratio	0.11	0.83	0.40	0.27	0.67	0.16	0.70	0.44	0.47	0.37
Control Delay	55.5	60.4	15.2	59.4	47.4	2.0	67.9	25.0	61.8	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	60.4	15.2	59.4	47.4	2.0	67.9	25.0	61.8	27.5
Queue Length 50th (ft)	12	290	40	30	208	0	125	231	66	174
Queue Length 95th (ft)	36	371	97	68	321	12	191	341	118	272
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		110	165		105	420		215	
Base Capacity (vph)	157	591	583	157	605	601	304	1760	231	1588
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.64	0.33	0.25	0.55	0.14	0.52	0.44	0.36	0.37

Intersection Summary

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1677	534	1705	368	67	345
v/c Ratio	0.36	0.41	0.39	0.35	0.11	0.67
Control Delay	7.5	1.6	7.6	1.7	44.7	51.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	1.6	7.6	1.7	44.7	51.2
Queue Length 50th (ft)	138	0	149	0	25	141
Queue Length 95th (ft)	194	36	211	39	43	186
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	565
Base Capacity (vph)	4670	1302	4319	1037	1310	1088
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.41	0.39	0.35	0.05	0.32

Intersection Summary

AGENDA ITEM NO. 6.

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1408	371	1603	190	512	761
v/c Ratio	0.49	0.35	0.38	0.19	0.30	0.77
Control Delay	18.0	2.2	16.2	2.2	32.8	41.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	2.2	16.2	2.2	32.8	41.3
Queue Length 50th (ft)	246	0	174	0	114	303
Queue Length 95th (ft)	284	42	195	32	146	390
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2923	1070	4336	992	1697	994
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.35	0.37	0.19	0.30	0.77

Intersection Summary

AGENDA ITEM NO. 6.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	452	1425	315	329	1106	142	365	718	284	279	341
v/c Ratio	0.82	0.73	0.34	0.85	0.65	0.22	0.77	0.53	0.87	0.24	0.30
Control Delay	70.9	41.5	15.0	83.1	44.0	3.4	71.8	39.7	90.1	47.7	18.3
Queue Delay	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.9	42.0	15.0	83.1	44.0	3.4	71.8	39.7	90.1	47.7	18.3
Queue Length 50th (ft)	215	424	129	158	326	0	174	180	138	79	75
Queue Length 95th (ft)	264	483	177	#228	401	31	222	225	#214	114	115
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	350			245		150	200		230		185
Base Capacity (vph)	717	1950	1078	406	1703	637	845	1361	334	1149	1281
Starvation Cap Reductn	0	200	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.81	0.29	0.81	0.65	0.22	0.43	0.53	0.85	0.24	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

13: Sunnyside Avenue & Shepherd Avenue

	↗	→	↙	←	↖	↑	↘	↓
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	89	597	53	443	85	98	20	103
v/c Ratio	0.53	0.64	0.47	0.27	0.31	0.31	0.07	0.35
Control Delay	62.2	25.8	68.7	21.0	56.8	16.9	44.8	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	25.8	68.7	21.0	56.8	16.9	44.8	30.5
Queue Length 50th (ft)	67	336	40	107	65	15	13	41
Queue Length 95th (ft)	118	465	84	155	117	51	37	95
Internal Link Dist (ft)		426		912		2573		597
Turn Bay Length (ft)	250		250		250		250	
Base Capacity (vph)	260	940	112	1628	270	314	270	298
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.64	0.47	0.27	0.31	0.31	0.07	0.35

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	28	503	37	404	302	40	204
v/c Ratio	0.16	0.46	0.16	0.71	0.37	0.04	0.21
Control Delay	17.7	16.6	16.2	27.3	10.8	3.7	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	16.6	16.2	27.3	10.8	3.7	7.3
Queue Length 50th (ft)	13	117	11	185	56	0	30
Queue Length 95th (ft)	m19	132	m25	177	125	13	58
Internal Link Dist (ft)		388		2573	635		2575
Turn Bay Length (ft)	70		65				
Base Capacity (vph)	235	1451	305	765	820	902	973
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.35	0.12	0.53	0.37	0.04	0.21

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

AGENDA ITEM NO. 6.

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	306	79	49	279	135	172	125	77	116	144
v/c Ratio	0.17	0.44	0.18	0.33	0.61	0.26	0.69	0.15	0.10	0.57	0.19
Control Delay	46.0	36.7	0.9	49.7	39.0	4.3	54.5	21.8	1.9	52.3	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	36.7	0.9	49.7	39.0	4.3	54.5	21.8	1.9	52.3	23.6
Queue Length 50th (ft)	15	95	0	30	151	0	106	45	0	71	53
Queue Length 95th (ft)	40	117	0	67	229	31	166	110	13	123	129
Internal Link Dist (ft)		329			709			846			3571
Turn Bay Length (ft)	115		160	260		205	285			200	
Base Capacity (vph)	142	1286	678	160	695	692	340	820	765	212	761
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.24	0.12	0.31	0.40	0.20	0.51	0.15	0.10	0.55	0.19

Intersection Summary

	↗	→	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	421	41	244	41	179	352	68	40	230	40
v/c Ratio	0.33	0.67	0.38	0.69	0.11	0.74	0.32	0.07	0.38	0.25	0.05
Control Delay	51.7	55.0	63.4	55.2	0.6	67.1	16.7	1.9	63.8	21.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.7	55.0	63.4	55.2	0.6	67.1	16.7	1.9	63.8	21.9	0.1
Queue Length 50th (ft)	27	160	31	182	0	135	142	0	30	103	0
Queue Length 95th (ft)	63	212	68	255	0	202	258	14	66	200	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		60	220			125		50
Base Capacity (vph)	270	1035	268	543	529	283	1097	972	262	910	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.41	0.15	0.45	0.08	0.63	0.32	0.07	0.15	0.25	0.05

Intersection Summary

	↙	↖	↖	↑	↓
Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	167	16	453	829	617
v/c Ratio	0.58	0.05	0.75	0.33	0.37
Control Delay	45.9	0.3	47.4	6.6	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	0.3	47.4	6.6	16.6
Queue Length 50th (ft)	99	0	142	93	110
Queue Length 95th (ft)	157	0	186	147	184
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	418	453	797	2513	1652
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.04	0.57	0.33	0.37

Intersection Summary

Queues
22: Fowler Avenue & SR-168 EB Ramps

Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	361	609	1213	24	560
v/c Ratio	0.81	0.55	0.66	0.18	0.27
Control Delay	43.7	5.8	16.4	38.0	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.7	5.8	16.4	38.0	8.7
Queue Length 50th (ft)	167	13	176	12	67
Queue Length 95th (ft)	#299	57	336	34	94
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	462	1130	1846	134	2073
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.54	0.66	0.18	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	10
95th Queue (ft)	33
Link Distance (ft)	420
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	55
Average Queue (ft)	28
95th Queue (ft)	49
Link Distance (ft)	434
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	WB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	136	22	49
Average Queue (ft)	38	1	29
95th Queue (ft)	86	8	45
Link Distance (ft)		1184	361
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	200		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB
Directions Served	LT
Maximum Queue (ft)	55
Average Queue (ft)	20
95th Queue (ft)	48
Link Distance (ft)	374
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queues

1: Willow Avenue & Behymer Avenue

	↗	→	↘	↙	←	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	87	168	301	27	248	165	981	24	62	975	95
v/c Ratio	0.61	0.35	0.48	0.25	0.73	0.70	0.38	0.03	0.48	0.45	0.13
Control Delay	77.3	43.0	6.6	66.5	60.0	71.4	23.4	0.1	72.5	30.6	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.3	43.0	6.6	66.5	60.0	71.4	23.4	0.1	72.5	30.6	3.1
Queue Length 50th (ft)	75	127	0	23	194	140	195	0	54	221	0
Queue Length 95th (ft)	113	155	34	48	229	181	241	0	87	269	12
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	210		250		105	250		200
Base Capacity (vph)	180	600	714	199	578	242	2563	857	194	2173	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.28	0.42	0.14	0.43	0.68	0.38	0.03	0.32	0.45	0.13

Intersection Summary

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	122	461	170	338	702	277	210	991	242	285	1443	228
v/c Ratio	0.53	0.68	0.39	0.84	0.80	0.49	0.68	0.48	0.28	0.74	0.66	0.31
Control Delay	73.4	59.3	8.6	81.4	58.1	10.6	74.5	34.5	10.2	73.8	36.6	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	59.3	8.6	81.4	58.1	10.6	74.5	34.5	10.2	73.8	36.6	15.3
Queue Length 50th (ft)	58	218	0	162	330	27	100	250	52	136	392	60
Queue Length 95th (ft)	89	248	55	#214	366	93	138	338	122	176	512	141
Internal Link Dist (ft)		615			4724			562			5238	
Turn Bay Length (ft)	230		175	280		200	260		225	280		165
Base Capacity (vph)	459	1069	596	426	1058	634	438	2045	870	456	2189	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.43	0.29	0.79	0.66	0.44	0.48	0.48	0.28	0.63	0.66	0.31

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

3: Minnewawa Avenue & Behymer Avenue

	→	←	↰	↑	↓
Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	211	590	54	321	457
v/c Ratio	0.33	0.87	0.12	0.35	0.62
Control Delay	12.6	28.1	11.6	12.5	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	28.1	11.6	12.5	16.7
Queue Length 50th (ft)	42	130	10	67	121
Queue Length 95th (ft)	74	211	m20	m93	192
Internal Link Dist (ft)	5395	5207		4586	912
Turn Bay Length (ft)			250		
Base Capacity (vph)	717	752	452	919	735
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.78	0.12	0.35	0.62

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	99	786	284	174	1008	225	302	105	241	540	138
v/c Ratio	0.74	0.81	0.54	0.84	0.93	0.87	0.29	0.19	0.88	0.51	0.24
Control Delay	86.0	48.8	23.3	84.7	54.2	80.6	34.7	3.3	79.1	36.6	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.0	48.8	23.3	84.7	54.2	80.6	34.7	3.3	79.1	36.6	7.5
Queue Length 50th (ft)	77	302	96	133	389	170	97	0	185	175	6
Queue Length 95th (ft)	#152	351	168	#225	#445	#267	130	18	m#285	224	m38
Internal Link Dist (ft)		579			1263		627			574	
Turn Bay Length (ft)	250		50	215		230		105	255		25
Base Capacity (vph)	136	967	525	219	1100	280	1027	550	295	1056	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.81	0.54	0.79	0.92	0.80	0.29	0.19	0.82	0.51	0.24

Intersection Summary

#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
m	Volume for 95th percentile queue is metered by upstream signal.

Queues

5: Clovis Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	130	824	161	257	782	136	134	233	159	183	458	242
v/c Ratio	0.50	0.83	0.31	0.71	0.70	0.24	0.72	0.28	0.34	0.27	0.40	0.36
Control Delay	68.7	54.7	15.4	71.2	45.9	10.3	80.0	44.0	12.5	49.9	38.8	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.7	54.7	15.4	71.2	45.9	10.3	80.0	44.0	12.5	49.9	38.8	6.2
Queue Length 50th (ft)	59	361	35	118	318	17	120	91	19	75	172	0
Queue Length 95th (ft)	86	407	82	147	356	55	169	119	64	104	221	47
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		270
Base Capacity (vph)	592	998	518	598	1110	571	294	826	469	669	1149	668
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.83	0.31	0.43	0.70	0.24	0.46	0.28	0.34	0.27	0.40	0.36

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	107	293	349	514	942	266
v/c Ratio	0.50	0.66	0.74	0.19	0.60	0.38
Control Delay	42.9	12.1	38.3	3.3	21.0	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	12.1	38.3	3.3	21.0	12.7
Queue Length 50th (ft)	55	0	169	30	192	53
Queue Length 95th (ft)	83	33	197	45	239	99
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		225			50
Base Capacity (vph)	527	667	475	2692	1583	707
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.44	0.73	0.19	0.60	0.38

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	47	405	392	77	459	207	176	531	23	80	946	83
v/c Ratio	0.30	0.78	0.60	0.48	0.80	0.37	0.85	0.38	0.03	0.48	0.76	0.13
Control Delay	47.9	44.0	12.0	54.0	43.6	14.3	79.1	24.9	0.1	53.1	35.2	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.9	44.0	12.0	54.0	43.6	14.3	79.1	24.9	0.1	53.1	35.2	2.9
Queue Length 50th (ft)	29	228	46	47	267	45	113	140	0	49	298	0
Queue Length 95th (ft)	63	321	124	92	#377	99	#228	184	0	93	#364	18
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			60		60	475		95	260		105
Base Capacity (vph)	159	571	682	160	606	583	206	1409	663	177	1246	617
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.71	0.57	0.48	0.76	0.36	0.85	0.38	0.03	0.45	0.76	0.13

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	320	173	49	470	117	143	632	173	1302
v/c Ratio	0.12	0.70	0.36	0.34	0.84	0.21	0.67	0.44	0.80	0.89
Control Delay	55.7	50.4	12.5	61.0	55.4	5.1	68.0	29.6	80.1	44.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	50.4	12.5	61.0	55.4	5.1	68.0	29.6	80.1	44.4
Queue Length 50th (ft)	13	248	30	38	340	0	113	187	136	487
Queue Length 95th (ft)	37	307	80	79	470	35	174	280	#240	#841
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		110	165		105	420		215	
Base Capacity (vph)	151	572	564	155	596	580	294	1423	231	1463
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.56	0.31	0.32	0.79	0.20	0.49	0.44	0.75	0.89

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1116	544	2106	472	78	776
v/c Ratio	0.32	0.49	0.66	0.52	0.07	0.79
Control Delay	16.3	3.1	8.6	2.8	25.1	39.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	3.1	8.6	2.8	25.1	39.8
Queue Length 50th (ft)	136	0	108	11	20	289
Queue Length 95th (ft)	176	56	125	28	35	350
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	565
Base Capacity (vph)	3463	1105	3190	910	1349	1116
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.49	0.66	0.52	0.06	0.70

Intersection Summary

Queues

10: SR-168 EB Ramps & Herndon Avenue

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	999	248	2172	92	514	664
v/c Ratio	0.41	0.28	0.60	0.11	0.26	0.56
Control Delay	10.1	1.0	16.2	2.2	23.8	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	1.0	16.2	2.2	23.8	24.0
Queue Length 50th (ft)	57	0	202	2	91	181
Queue Length 95th (ft)	66	5	221	m6	118	246
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2423	884	3631	810	2006	1189
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.28	0.60	0.11	0.26	0.56

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	383	954	268	163	1143	190	269	461	212	441	778
v/c Ratio	0.97	0.52	0.32	0.62	0.69	0.30	0.63	0.29	1.05	0.34	0.69
Control Delay	99.2	22.8	3.8	64.4	37.6	7.5	57.0	25.3	131.1	37.8	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.2	22.8	3.8	64.4	37.6	7.5	57.0	25.3	131.1	37.8	18.3
Queue Length 50th (ft)	160	136	34	63	280	12	103	78	~92	102	153
Queue Length 95th (ft)	#259	176	50	100	333	65	148	109	#172	136	204
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	350			245		150	200		230		185
Base Capacity (vph)	396	1852	834	286	1665	630	429	1594	202	1284	1126
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.52	0.32	0.57	0.69	0.30	0.63	0.29	1.05	0.34	0.69

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	64	756	199	68	736	11	112	65	24	59	101
v/c Ratio	0.42	0.95	0.26	0.62	0.51	0.02	0.81	0.12	0.23	0.14	0.23
Control Delay	47.1	48.3	3.3	49.9	35.0	0.0	81.1	11.7	45.6	29.8	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	48.3	3.3	49.9	35.0	0.0	81.1	11.7	45.6	29.8	4.7
Queue Length 50th (ft)	35	396	0	31	227	0	64	6	13	27	0
Queue Length 95th (ft)	74	#637	37	m50	287	m0	#157	39	39	60	27
Internal Link Dist (ft)		426			912			2573		597	
Turn Bay Length (ft)	250			250		250	250		250		300
Base Capacity (vph)	173	809	784	109	1448	707	139	544	105	416	445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.93	0.25	0.62	0.51	0.02	0.81	0.12	0.23	0.14	0.23

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Queues

15: Sunnyside Avenue & Nees Avenue

	↗	→	↙	←	↑	↗	↓
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	18	385	26	408	237	18	329
v/c Ratio	0.04	0.20	0.05	0.39	0.87	0.04	0.63
Control Delay	9.2	6.8	13.9	22.0	49.4	4.0	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	6.8	13.9	22.0	49.4	4.0	20.8
Queue Length 50th (ft)	3	25	14	314	80	0	89
Queue Length 95th (ft)	14	59	m28	426	#138	8	132
Internal Link Dist (ft)		388		2573	635		2575
Turn Bay Length (ft)	70		65				
Base Capacity (vph)	482	1915	543	1034	387	639	726
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.20	0.05	0.39	0.61	0.03	0.45

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

18: Fowler Avenue & Shepherd Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	33	598	146	39	466	385	217	101	40	193	176
v/c Ratio	0.21	0.55	0.24	0.25	0.81	0.51	0.78	0.20	0.07	0.69	0.35
Control Delay	33.3	19.4	6.6	42.5	40.9	5.1	62.3	31.9	0.2	48.3	27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.3	19.4	6.6	42.5	40.9	5.1	62.3	31.9	0.2	48.3	27.4
Queue Length 50th (ft)	14	183	27	21	233	0	~154	49	0	105	77
Queue Length 95th (ft)	m19	m200	m32	52	#351	60	#292	102	0	164	136
Internal Link Dist (ft)		329			709			846			3571
Turn Bay Length (ft)	115		160	260		205	285			200	
Base Capacity (vph)	157	1179	635	157	621	784	277	517	570	443	509
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.51	0.23	0.25	0.75	0.49	0.78	0.20	0.07	0.44	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	22	328	79	302	40	121	172	40	42	307	35
v/c Ratio	0.24	0.54	0.55	0.77	0.10	0.65	0.16	0.04	0.39	0.32	0.04
Control Delay	60.9	40.3	66.5	57.4	0.5	67.5	16.3	0.1	63.6	21.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.9	40.3	66.5	57.4	0.5	67.5	16.3	0.1	63.6	21.7	0.1
Queue Length 50th (ft)	14	107	60	227	0	92	64	0	32	138	0
Queue Length 95th (ft)	m42	157	108	302	0	149	132	0	68	263	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		60	220			125		50
Base Capacity (vph)	238	1017	238	543	529	242	1067	947	238	959	861
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.32	0.33	0.56	0.08	0.50	0.16	0.04	0.18	0.32	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

	↙	↖	↖	↑	↓
Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	138	32	527	459	780
v/c Ratio	0.52	0.10	0.78	0.18	0.46
Control Delay	45.7	0.6	46.7	5.0	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	0.6	46.7	5.0	12.1
Queue Length 50th (ft)	82	0	165	42	95
Queue Length 95th (ft)	136	0	210	71	175
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	427	461	806	2574	1710
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.07	0.65	0.18	0.46

Intersection Summary

Queues
22: Fowler Avenue & SR-168 EB Ramps

Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	167	356	950	15	504
v/c Ratio	0.55	0.46	0.47	0.08	0.23
Control Delay	29.9	5.1	9.4	25.7	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	5.1	9.4	25.7	5.7
Queue Length 50th (ft)	55	0	81	5	38
Queue Length 95th (ft)	108	32	194	20	57
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	318	792	2017	179	2161
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.45	0.47	0.08	0.23

Intersection Summary

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	13
95th Queue (ft)	38
Link Distance (ft)	420
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	72
Average Queue (ft)	33
95th Queue (ft)	51
Link Distance (ft)	434
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	WB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	98	22	92
Average Queue (ft)	24	1	42
95th Queue (ft)	64	8	71
Link Distance (ft)		1184	361
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	200		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB
Directions Served	LT
Maximum Queue (ft)	31
Average Queue (ft)	24
95th Queue (ft)	45
Link Distance (ft)	374
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queues
1: Willow Avenue & Behymer Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	65	145	48	146	193	851	41	63	761	14
v/c Ratio	0.13	0.32	0.48	0.41	0.53	0.67	0.26	0.04	0.49	0.28	0.02
Control Delay	63.2	58.2	13.2	70.4	55.6	64.9	13.6	0.1	72.5	20.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	58.2	13.2	70.4	55.6	64.9	13.6	0.1	72.5	20.4	0.0
Queue Length 50th (ft)	12	55	0	41	108	161	113	0	54	128	0
Queue Length 95th (ft)	34	93	56	81	173	233	187	0	98	199	0
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	210		250		105	250		200
Base Capacity (vph)	184	612	618	203	593	289	3258	1059	194	2675	868
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.11	0.23	0.24	0.25	0.67	0.26	0.04	0.32	0.28	0.02

Intersection Summary

Queues
2: Willow Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	268	733	131	362	632	323	297	1470	502	351	1065	210
v/c Ratio	0.74	0.81	0.19	0.89	0.65	0.53	0.75	0.83	0.66	0.84	0.59	0.33
Control Delay	75.2	58.8	13.7	87.5	50.2	14.1	74.7	49.5	28.3	80.4	41.6	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.2	58.8	13.7	87.5	50.2	14.1	74.7	49.5	28.3	80.4	41.6	14.3
Queue Length 50th (ft)	128	342	40	176	276	55	142	487	302	165	306	44
Queue Length 95th (ft)	174	404	78	#260	340	149	189	552	428	#263	385	120
Internal Link Dist (ft)		615			4724			562			5238	
Turn Bay Length (ft)	230		175	280		200	260		225	280		165
Base Capacity (vph)	437	1020	727	415	1028	630	475	1770	762	421	1793	643
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.72	0.18	0.87	0.61	0.51	0.63	0.83	0.66	0.83	0.59	0.33

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

3: Minnewawa Avenue & Behymer Avenue

	→	←	↰	↑	↓
Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	151	257	56	296	393
v/c Ratio	0.40	0.64	0.08	0.24	0.39
Control Delay	18.4	22.0	8.7	8.6	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	22.0	8.7	8.6	7.2
Queue Length 50th (ft)	37	58	16	87	54
Queue Length 95th (ft)	70	105	m31	m133	126
Internal Link Dist (ft)	5395	5207		4586	912
Turn Bay Length (ft)			250		
Base Capacity (vph)	638	642	679	1222	1013
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.24	0.40	0.08	0.24	0.39

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	147	1055	165	113	1149	210	526	161	162	372	111
v/c Ratio	0.86	0.88	0.26	0.73	0.99	0.94	0.49	0.27	0.83	0.36	0.19
Control Delay	93.0	47.3	6.3	80.5	64.6	99.4	36.4	6.8	85.2	33.7	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.0	47.3	6.3	80.5	64.6	99.4	36.4	6.8	85.2	33.7	2.2
Queue Length 50th (ft)	114	405	5	86	457	164	177	3	115	113	1
Queue Length 95th (ft)	#227	#523	54	#170	#614	#315	233	54	#234	153	9
Internal Link Dist (ft)		579			1263		627			574	
Turn Bay Length (ft)	250		50	215		230		105	255		25
Base Capacity (vph)	178	1201	640	165	1157	223	1082	592	208	1025	582
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.88	0.26	0.68	0.99	0.94	0.49	0.27	0.78	0.36	0.19

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	908	163	173	920	149	214	413	184	138	279	164
v/c Ratio	0.65	0.90	0.30	0.56	0.90	0.27	0.91	0.34	0.29	0.42	0.26	0.27
Control Delay	61.7	52.3	10.0	57.7	51.9	8.4	89.5	29.6	9.9	54.0	31.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	52.3	10.0	57.7	51.9	8.4	89.5	29.6	9.9	54.0	31.8	6.0
Queue Length 50th (ft)	73	336	17	64	341	9	158	120	25	51	83	0
Queue Length 95th (ft)	113	#450	70	101	#450	58	#298	163	78	83	121	50
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		270
Base Capacity (vph)	301	1030	548	316	1048	562	241	1214	633	325	1079	598
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.88	0.30	0.55	0.88	0.27	0.89	0.34	0.29	0.42	0.26	0.27

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

AGENDA ITEM NO. 6.

6: Clovis Avenue & Teague Avenue

	↗	↘	↖	↑	↓	↙
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	111	110	194	1000	673	91
v/c Ratio	0.52	0.38	0.69	0.37	0.34	0.10
Control Delay	43.4	11.0	45.6	4.1	12.1	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	11.0	45.6	4.1	12.1	6.7
Queue Length 50th (ft)	57	0	99	70	95	10
Queue Length 95th (ft)	91	33	138	103	146	33
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		225			50
Base Capacity (vph)	527	549	381	2716	2000	916
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.20	0.51	0.37	0.34	0.10

Intersection Summary

Queues
7: Clovis Avenue & Nees Avenue

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	59	502	418	46	478	79	332	938	49	46	588	51
v/c Ratio	0.42	0.86	0.54	0.34	0.84	0.14	0.93	0.61	0.07	0.33	0.57	0.09
Control Delay	62.3	54.7	5.8	58.1	62.1	5.7	80.6	31.4	0.6	58.9	40.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.3	54.7	5.8	58.1	62.1	5.7	80.6	31.4	0.6	58.9	40.9	0.4
Queue Length 50th (ft)	44	354	4	38	318	3	257	325	0	34	216	0
Queue Length 95th (ft)	89	#498	76	m68	#443	m16	#443	414	4	73	279	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			60		60	475		95	260		105
Base Capacity (vph)	150	628	809	134	609	598	357	1533	722	165	1028	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.80	0.52	0.34	0.78	0.13	0.93	0.61	0.07	0.28	0.57	0.09

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

8: Clovis Avenue & Alluvial Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	388	191	39	350	126	160	1338	116	958
v/c Ratio	0.17	0.84	0.39	0.27	0.75	0.26	0.70	0.82	0.60	0.61
Control Delay	56.7	60.1	14.9	59.4	53.5	6.5	68.0	37.2	66.1	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	60.1	14.9	59.4	53.5	6.5	68.0	37.2	66.1	32.8
Queue Length 50th (ft)	18	299	40	30	263	0	126	518	92	332
Queue Length 95th (ft)	47	381	97	68	339	43	192	#827	151	#542
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		110	165		105	420		215	
Base Capacity (vph)	157	592	584	157	592	591	304	1629	232	1566
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.66	0.33	0.25	0.59	0.21	0.53	0.82	0.50	0.61

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
9: SR-168 WB Ramps & Herndon Avenue

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1773	551	1959	426	74	345
v/c Ratio	0.37	0.42	0.44	0.40	0.13	0.69
Control Delay	7.1	1.5	1.7	2.0	49.2	52.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	1.5	1.7	2.0	49.2	52.3
Queue Length 50th (ft)	147	0	24	11	30	141
Queue Length 95th (ft)	205	34	33	56	51	189
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	565
Base Capacity (vph)	4785	1326	4405	1068	933	802
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.42	0.44	0.40	0.08	0.43

Intersection Summary

Queues
10: SR-168 EB Ramps & Herndon Avenue

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1507	378	1878	205	536	1018
v/c Ratio	0.84	0.50	0.70	0.30	0.19	0.65
Control Delay	39.8	7.1	22.2	2.8	16.0	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	7.1	22.2	2.8	16.0	23.7
Queue Length 50th (ft)	464	28	372	12	84	346
Queue Length 95th (ft)	289	77	372	m19	105	427
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	1804	755	2677	687	2779	1565
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.50	0.70	0.30	0.19	0.65

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

	↗	→	↘	↙	←	↖	↖	↑	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	705	1488	344	332	1184	211	405	875	329	376	504
v/c Ratio	1.02	0.78	0.38	0.86	0.82	0.38	0.70	0.63	1.02	0.37	0.41
Control Delay	75.5	29.1	5.3	83.2	52.7	14.5	62.8	42.3	117.9	49.5	19.3
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	29.4	5.3	83.2	52.7	14.5	62.8	42.3	117.9	49.5	19.3
Queue Length 50th (ft)	~353	347	71	155	370	41	181	232	~163	109	120
Queue Length 95th (ft)	#472	376	m74	#231	429	112	240	281	#263	143	169
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	350			245		150	200		230		185
Base Capacity (vph)	693	1899	895	396	1441	551	575	1393	321	1027	1218
Starvation Cap Reductn	0	75	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.82	0.38	0.84	0.82	0.38	0.70	0.63	1.02	0.37	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	141	943	170	66	973	33	195	106	20	46	115
v/c Ratio	0.67	0.99	0.20	0.59	0.62	0.04	0.72	0.33	0.07	0.16	0.32
Control Delay	65.9	57.1	6.7	76.2	29.2	0.1	70.1	16.9	44.8	46.2	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.9	57.1	6.7	76.2	29.2	0.1	70.1	16.9	44.8	46.2	7.4
Queue Length 50th (ft)	106	~781	22	51	305	0	152	15	13	32	0
Queue Length 95th (ft)	171	#1031	60	#111	393	0	#252	61	37	68	38
Internal Link Dist (ft)		426			912			2573		597	
Turn Bay Length (ft)	250			250		250	250		250		300
Base Capacity (vph)	260	954	868	112	1559	774	270	320	270	285	357
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.99	0.20	0.59	0.62	0.04	0.72	0.33	0.07	0.16	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	↗	→	↙	←	↑	↱	↓
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	45	516	37	424	358	40	254
v/c Ratio	0.27	0.47	0.16	0.73	0.44	0.04	0.26
Control Delay	19.9	16.5	15.4	28.2	11.7	3.6	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	16.5	15.4	28.2	11.7	3.6	7.4
Queue Length 50th (ft)	21	121	10	202	71	0	47
Queue Length 95th (ft)	m27	142	m23	177	146	12	83
Internal Link Dist (ft)		388		2573	635		2575
Turn Bay Length (ft)	70		65				
Base Capacity (vph)	209	1392	287	734	821	894	968
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.37	0.13	0.58	0.44	0.04	0.26

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

18: Fowler Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	45	616	169	55	694	135	297	128	80	116	174
v/c Ratio	0.32	0.47	0.24	0.37	0.93	0.19	0.90	0.24	0.15	0.67	0.49
Control Delay	49.8	25.8	4.4	50.8	51.2	2.9	71.0	30.6	2.7	63.9	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	25.8	4.4	50.8	51.2	2.9	71.0	30.6	2.7	63.9	40.3
Queue Length 50th (ft)	28	155	0	34	435	0	186	66	0	72	96
Queue Length 95th (ft)	63	210	42	73	#682	27	#334	116	15	#148	166
Internal Link Dist (ft)		329			709			846			3571
Turn Bay Length (ft)	115		160	260		205	285			200	
Base Capacity (vph)	142	1338	704	160	744	729	342	524	532	178	355
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.46	0.24	0.34	0.93	0.19	0.87	0.24	0.15	0.65	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	⤴	→	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	33	433	41	264	51	179	407	68	46	271	40
v/c Ratio	0.33	0.66	0.38	0.71	0.13	0.74	0.38	0.07	0.42	0.30	0.05
Control Delay	51.1	54.1	63.4	55.5	1.6	67.1	18.5	2.0	64.5	23.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	54.1	63.4	55.5	1.6	67.1	18.5	2.0	64.5	23.4	0.1
Queue Length 50th (ft)	27	166	31	196	0	135	176	0	35	127	0
Queue Length 95th (ft)	63	217	68	271	6	202	316	15	73	241	0
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		60	220			125		50
Base Capacity (vph)	270	1035	268	543	529	283	1076	954	262	894	808
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.42	0.15	0.49	0.10	0.63	0.38	0.07	0.18	0.30	0.05

Intersection Summary

AGENDA ITEM NO. 6.

	↙	↖	↖	↑	↓
Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	172	16	465	873	645
v/c Ratio	0.59	0.05	0.76	0.35	0.39
Control Delay	45.8	0.3	47.3	6.8	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	0.3	47.3	6.8	17.2
Queue Length 50th (ft)	102	0	146	101	117
Queue Length 95th (ft)	160	0	189	159	196
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	418	453	797	2503	1633
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.41	0.04	0.58	0.35	0.39

Intersection Summary

Queues
22: Fowler Avenue & SR-168 EB Ramps

Lane Group	EBL	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	383	630	1248	24	580
v/c Ratio	0.84	0.57	0.68	0.18	0.28
Control Delay	46.5	7.2	17.2	38.0	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	7.2	17.2	38.0	8.9
Queue Length 50th (ft)	180	23	185	12	70
Queue Length 95th (ft)	#325	70	352	34	98
Internal Link Dist (ft)			367		513
Turn Bay Length (ft)	535			85	
Base Capacity (vph)	462	1112	1830	134	2055
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.83	0.57	0.68	0.18	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	12
95th Queue (ft)	37
Link Distance (ft)	420
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	55
Average Queue (ft)	29
95th Queue (ft)	53
Link Distance (ft)	434
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	WB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	116	37	66
Average Queue (ft)	63	4	29
95th Queue (ft)	103	19	58
Link Distance (ft)		1184	361
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	200		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB
Directions Served	LT
Maximum Queue (ft)	31
Average Queue (ft)	19
95th Queue (ft)	43
Link Distance (ft)	374
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

	↗	→	↘	↙	←	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	78	171	272	108	583	149	882	22	64	878	86
v/c Ratio	0.57	0.27	0.38	0.68	0.94	0.83	0.50	0.04	0.49	0.57	0.16
Control Delay	75.5	34.0	5.2	80.1	66.1	94.0	37.1	0.1	72.6	42.0	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	34.0	5.2	80.1	66.1	94.0	37.1	0.1	72.6	42.0	2.7
Queue Length 50th (ft)	67	108	0	93	480	129	228	0	55	241	0
Queue Length 95th (ft)	120	175	63	154	#757	#240	286	0	103	289	18
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	210		250		105	250		200
Base Capacity (vph)	180	643	724	199	620	192	1762	627	194	1534	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.27	0.38	0.54	0.94	0.78	0.50	0.04	0.33	0.57	0.16

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

2: Willow Avenue & Shepherd Avenue

Cumulative Year (2046) WP MIT- AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	122	455	311	338	701	276	424	996	349	286	1450	229
v/c Ratio	0.47	0.70	0.60	0.76	0.81	0.49	0.77	0.49	0.40	0.74	0.80	0.36
Control Delay	69.8	61.1	13.6	63.0	37.6	8.9	68.4	35.4	8.7	73.6	47.6	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.8	61.1	13.6	63.0	37.6	8.9	68.4	35.4	8.7	73.6	47.6	19.5
Queue Length 50th (ft)	57	214	29	172	358	68	198	256	63	137	458	71
Queue Length 95th (ft)	90	261	118	m198	m397	m87	260	356	122	182	#638	163
Internal Link Dist (ft)		615			4724			562			5238	
Turn Bay Length (ft)	230		175	280		200	260		225	280		165
Base Capacity (vph)	459	1069	670	468	1058	634	549	2016	880	456	1803	630
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.43	0.46	0.72	0.66	0.44	0.77	0.49	0.40	0.63	0.80	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

	↗	→	↙	←	↖	↖	↑	↘	↓
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	3	249	47	572	413	125	305	180	649
v/c Ratio	0.03	0.36	0.13	0.80	0.49	0.56	0.47	0.73	0.95
Control Delay	18.7	21.2	21.4	41.1	4.7	60.8	35.4	66.9	61.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	21.2	21.4	41.1	4.7	60.8	35.4	66.9	61.6
Queue Length 50th (ft)	1	110	23	386	12	91	185	133	498
Queue Length 95th (ft)	7	149	43	451	64	#221	308	#234	#786
Internal Link Dist (ft)		5395		5207			4586		912
Turn Bay Length (ft)	200		200		200			250	
Base Capacity (vph)	150	878	462	905	965	223	652	256	686
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.28	0.10	0.63	0.43	0.56	0.47	0.70	0.95

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
4: Minnewawa Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	96	760	396	165	972	237	337	100	360	970	134
v/c Ratio	0.87	0.86	0.55	0.77	0.91	0.94	0.41	0.21	0.79	0.78	0.21
Control Delay	123.5	53.1	11.6	84.9	60.6	105.0	49.5	1.5	63.2	48.1	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	123.5	53.1	11.6	84.9	60.6	105.0	49.5	1.5	63.2	48.1	9.1
Queue Length 50th (ft)	94	248	115	153	454	224	145	0	317	439	13
Queue Length 95th (ft)	m#200	#492	183	227	#553	#390	195	5	#441	527	62
Internal Link Dist (ft)		579			1263		627			574	
Turn Bay Length (ft)	250		50	215		230		105	255		25
Base Capacity (vph)	110	888	721	277	1096	256	822	484	463	1237	626
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.86	0.55	0.60	0.89	0.93	0.41	0.21	0.78	0.78	0.21

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

AGENDA ITEM NO. 6.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	120	778	228	345	734	180	127	214	188	173	649	311
v/c Ratio	0.47	0.86	0.47	0.77	0.66	0.31	0.70	0.26	0.38	0.26	0.56	0.43
Control Delay	68.2	59.7	25.8	70.1	44.3	12.4	79.6	43.6	10.3	49.7	41.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.2	59.7	25.8	70.1	44.3	12.4	79.6	43.6	10.3	49.7	41.8	6.0
Queue Length 50th (ft)	55	345	87	158	291	33	114	83	13	71	262	0
Queue Length 95th (ft)	87	#466	177	205	366	93	177	121	78	108	352	75
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		270
Base Capacity (vph)	592	917	485	598	1115	586	294	826	498	670	1162	718
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.85	0.47	0.58	0.66	0.31	0.43	0.26	0.38	0.26	0.56	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	92	254	308	496	1065	327
v/c Ratio	0.46	0.63	0.76	0.18	0.62	0.43
Control Delay	42.1	12.4	42.3	3.0	19.1	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	12.4	42.3	3.0	19.1	12.5
Queue Length 50th (ft)	47	0	153	27	206	66
Queue Length 95th (ft)	89	64	224	51	335	163
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		225			50
Base Capacity (vph)	527	640	429	2712	1731	769
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.40	0.72	0.18	0.62	0.43

Intersection Summary

7: Clovis Avenue & Nees Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	77	435	389	75	512	253	175	508	23	125	926	148
v/c Ratio	0.48	0.79	0.58	0.47	0.91	0.46	0.91	0.41	0.04	0.72	0.77	0.25
Control Delay	54.2	43.4	11.1	53.5	56.7	18.2	90.2	26.9	0.1	67.8	35.8	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	43.4	11.1	53.5	56.7	18.2	90.2	26.9	0.1	67.8	35.8	9.3
Queue Length 50th (ft)	48	250	43	46	310	68	112	135	0	79	290	16
Queue Length 95th (ft)	95	#373	133	93	#498	142	#238	184	0	#165	#378	62
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			60		60	475		95	260		105
Base Capacity (vph)	159	571	684	160	577	561	193	1242	597	177	1209	602
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.76	0.57	0.47	0.89	0.45	0.91	0.41	0.04	0.71	0.77	0.25

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	317	210	50	455	118	303	667	176	1333
v/c Ratio	0.12	0.75	0.45	0.32	0.87	0.23	0.79	0.47	0.73	1.15
Control Delay	54.1	56.0	15.2	59.3	61.1	11.5	61.8	30.3	68.5	117.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	56.0	15.2	59.3	61.1	11.5	61.8	30.3	68.5	117.3
Queue Length 50th (ft)	13	246	40	39	327	14	227	198	139	~692
Queue Length 95th (ft)	36	321	103	80	#544	63	#413	317	207	#893
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		110	165		105	420		215	
Base Capacity (vph)	220	569	580	162	540	524	385	1411	343	1157
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.56	0.36	0.31	0.84	0.23	0.79	0.47	0.51	1.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

9: SR-168 WB Ramps & Herndon Avenue

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1315	956	2300	506	83	837
v/c Ratio	0.38	0.74	0.72	0.55	0.07	0.86
Control Delay	16.4	5.0	9.7	3.4	26.3	45.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.4	5.0	9.7	3.4	26.3	45.1
Queue Length 50th (ft)	169	0	119	12	21	319
Queue Length 95th (ft)	197	61	128	55	39	411
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	565
Base Capacity (vph)	3484	1297	3216	928	1233	1023
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.74	0.72	0.55	0.07	0.82

Intersection Summary

10: SR-168 EB Ramps & Herndon Avenue

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1174	254	2338	101	528	684
v/c Ratio	0.48	0.28	0.63	0.12	0.27	0.60
Control Delay	11.2	1.0	23.9	3.6	24.5	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	1.0	23.9	3.6	24.5	27.6
Queue Length 50th (ft)	76	0	322	0	95	209
Queue Length 95th (ft)	87	8	355	29	124	278
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	2466	898	3695	827	1965	1142
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.28	0.63	0.12	0.27	0.60

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	441	1006	391	211	1196	200	409	658	222	515	809
v/c Ratio	0.94	0.56	0.46	0.69	0.76	0.33	0.73	0.45	0.69	0.45	0.66
Control Delay	84.1	35.4	10.4	69.6	44.7	10.0	60.0	34.4	68.2	45.1	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.1	35.4	10.4	69.6	44.7	10.0	60.0	34.4	68.2	45.1	27.7
Queue Length 50th (ft)	192	251	98	89	335	22	170	147	94	138	252
Queue Length 95th (ft)	#293	306	149	131	399	84	224	187	137	176	331
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	350			245		150	200		230		185
Base Capacity (vph)	470	1805	881	343	1570	601	607	1472	373	1145	1234
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.56	0.44	0.62	0.76	0.33	0.67	0.45	0.60	0.45	0.66

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	↗	→	↘	↙	←	↖	↖	↑	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	227	790	208	70	765	101	117	140	339	450	489
v/c Ratio	0.77	0.78	0.35	0.59	0.88	0.20	0.72	0.28	0.76	0.74	0.73
Control Delay	52.9	32.0	5.4	55.8	40.4	2.5	59.6	17.0	43.6	31.4	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	32.0	5.4	55.8	40.4	2.5	59.6	17.0	43.6	31.4	19.1
Queue Length 50th (ft)	54	183	0	32	179	0	54	36	78	190	101
Queue Length 95th (ft)	#107	#276	47	#88	#275	15	#132	80	#135	#341	#264
Internal Link Dist (ft)		426			451			2573		597	
Turn Bay Length (ft)	250		250	250		250	250		250		300
Base Capacity (vph)	294	1014	591	119	881	503	164	495	454	612	669
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.78	0.35	0.59	0.87	0.20	0.71	0.28	0.75	0.74	0.73

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	↗	→	↙	←	↖	↑	↘	↓
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	19	516	55	506	160	118	45	526
v/c Ratio	0.13	0.41	0.22	0.79	0.78	0.16	0.21	0.97
Control Delay	16.6	11.6	13.9	25.6	54.3	12.0	26.4	54.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	11.6	13.9	25.6	54.3	12.0	26.4	54.3
Queue Length 50th (ft)	5	49	16	153	57	17	15	179
Queue Length 95th (ft)	19	85	m39	314	#145	60	41	#360
Internal Link Dist (ft)		388		2573		635		2575
Turn Bay Length (ft)	70		65				200	
Base Capacity (vph)	143	1244	246	641	205	730	210	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.41	0.22	0.79	0.78	0.16	0.21	0.97

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

17: Fowler Avenue & Ticonderoga

	↗	↘	↖	↑	↓
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	11	26	10	614	369
v/c Ratio	0.06	0.15	0.05	0.37	0.23
Control Delay	24.7	12.9	23.8	2.5	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	12.9	23.8	2.5	3.9
Queue Length 50th (ft)	4	0	3	0	0
Queue Length 95th (ft)	16	19	15	110	123
Internal Link Dist (ft)	513			677	273
Turn Bay Length (ft)	100		300		
Base Capacity (vph)	576	532	221	1666	1571
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.05	0.37	0.23

Intersection Summary

Queues
18: Fowler Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	55	732	294	78	489	402	226	104	42	356	589
v/c Ratio	0.39	0.71	0.45	0.55	0.90	0.54	0.94	0.25	0.09	0.89	1.02
Control Delay	52.3	35.8	5.7	59.9	55.1	6.4	89.6	37.1	0.3	62.7	78.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	35.8	5.7	59.9	55.1	6.4	89.6	37.1	0.3	62.7	78.0
Queue Length 50th (ft)	34	215	1	49	295	6	~160	59	0	215	~418
Queue Length 95th (ft)	73	282	61	#104	#476	77	#308	109	0	#362	#632
Internal Link Dist (ft)		329			709			846			3571
Turn Bay Length (ft)	115		160	260		205	285			200	
Base Capacity (vph)	141	1061	668	141	558	747	241	418	482	434	578
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.69	0.44	0.55	0.88	0.54	0.94	0.25	0.09	0.82	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

19: Fowler Avenue & Teague Avenue

	→	←	↰	↑	↘	↓	↙
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	61	89	8	250	147	846	59
v/c Ratio	0.28	0.40	0.02	0.18	0.17	0.58	0.05
Control Delay	18.2	18.5	2.9	2.3	3.5	6.3	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	18.5	2.9	2.3	3.5	6.3	1.1
Queue Length 50th (ft)	14	14	1	17	12	107	0
Queue Length 95th (ft)	m27	47	5	67	34	248	8
Internal Link Dist (ft)	2567	739		2580		1659	
Turn Bay Length (ft)			100		260		
Base Capacity (vph)	491	478	395	1412	879	1456	1250
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.19	0.02	0.18	0.17	0.58	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	23	410	104	335	42	170	179	72	104	701	87
v/c Ratio	0.25	0.67	0.62	0.74	0.09	0.72	0.20	0.09	0.62	0.83	0.11
Control Delay	60.3	45.4	67.4	52.5	0.4	66.0	21.1	3.0	70.1	45.4	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	45.4	67.4	52.5	0.4	66.0	21.1	3.0	70.1	45.4	9.6
Queue Length 50th (ft)	17	128	79	253	0	128	75	0	86	533	2
Queue Length 95th (ft)	m44	141	133	328	0	194	156	20	123	#919	m42
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		60	220			125		50
Base Capacity (vph)	238	1016	238	543	529	262	917	827	238	844	769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.40	0.44	0.62	0.08	0.65	0.20	0.09	0.44	0.83	0.11

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

	↙	↖	↖	↑	↓
Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	140	34	550	479	1015
v/c Ratio	0.52	0.10	0.79	0.19	0.60
Control Delay	45.7	0.6	46.7	5.1	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	0.6	46.7	5.1	16.1
Queue Length 50th (ft)	83	0	173	44	166
Queue Length 95th (ft)	137	0	218	74	279
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	427	461	810	2571	1690
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.07	0.68	0.19	0.60

Intersection Summary

22: Fowler Avenue & SR-168 EB Ramps

	↗	→	↘	↑	↘	↓
Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	152	211	210	998	16	615
v/c Ratio	0.53	0.51	0.49	0.49	0.09	0.28
Control Delay	29.7	10.0	8.2	9.6	25.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	10.0	8.2	9.6	25.8	6.0
Queue Length 50th (ft)	52	5	0	87	5	48
Queue Length 95th (ft)	105	60	51	207	21	71
Internal Link Dist (ft)		884		367		513
Turn Bay Length (ft)	535				85	
Base Capacity (vph)	302	420	442	2021	179	2164
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.50	0.48	0.49	0.09	0.28

Intersection Summary

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	55	892
Average Queue (ft)	18	714
95th Queue (ft)	49	1236
Link Distance (ft)	414	840
Upstream Blk Time (%)		43
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	436	600
Average Queue (ft)	328	495
95th Queue (ft)	536	842
Link Distance (ft)	421	587
Upstream Blk Time (%)	51	17
Queuing Penalty (veh)	0	202
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	SB
Directions Served	L	R
Maximum Queue (ft)	65	69
Average Queue (ft)	19	34
95th Queue (ft)	47	54
Link Distance (ft)		361
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	200	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB
Directions Served	LT
Maximum Queue (ft)	31
Average Queue (ft)	20
95th Queue (ft)	44
Link Distance (ft)	374
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

	⤴	→	⤵	↙	←	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	14	132	146	139	211	195	853	196	128	762	14
v/c Ratio	0.13	0.58	0.45	0.78	0.54	0.67	0.32	0.22	0.69	0.33	0.02
Control Delay	63.2	65.6	12.2	86.3	49.3	64.6	21.3	9.3	76.2	25.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	65.6	12.2	86.3	49.3	64.6	21.3	9.3	76.2	25.6	0.1
Queue Length 50th (ft)	12	112	0	119	144	163	157	32	110	155	0
Queue Length 95th (ft)	35	170	60	#206	237	242	232	95	173	221	0
Internal Link Dist (ft)		1692			5395		5238			2310	
Turn Bay Length (ft)	235		240	210		250		105	250		200
Base Capacity (vph)	184	612	619	203	591	292	2652	886	211	2330	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.22	0.24	0.68	0.36	0.67	0.32	0.22	0.61	0.33	0.02

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
2: Willow Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	282	765	412	380	661	338	312	1544	527	366	1118	220
v/c Ratio	0.75	0.82	0.58	0.92	0.66	0.55	0.77	0.90	0.71	0.87	0.65	0.35
Control Delay	75.7	58.7	30.1	67.8	66.3	35.9	75.2	54.5	30.7	83.4	43.9	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.7	58.7	30.1	67.8	66.3	35.9	75.2	54.5	30.7	83.4	43.9	15.7
Queue Length 50th (ft)	135	357	249	181	346	173	149	522	327	175	333	52
Queue Length 95th (ft)	183	425	335	m187	m353	m179	198	#619	462	#279	408	131
Internal Link Dist (ft)		615			4724			562			5238	
Turn Bay Length (ft)	230		175	280		200	260		225	280		165
Base Capacity (vph)	437	1020	739	415	1029	628	475	1720	747	420	1731	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.75	0.56	0.92	0.64	0.54	0.66	0.90	0.71	0.87	0.65	0.35

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

3: Minnewawa Avenue & Behymer Avenue

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	517	20	237	174	162	497	221	279
v/c Ratio	0.03	0.92	0.16	0.42	0.29	0.73	0.81	0.85	0.43
Control Delay	14.9	44.2	18.9	19.2	4.5	46.9	31.2	57.4	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	44.2	18.9	19.2	4.5	46.9	31.2	57.4	17.6
Queue Length 50th (ft)	2	169	5	67	0	58	160	80	76
Queue Length 95th (ft)	10	#338	20	121	36	#140	#311	#189	135
Internal Link Dist (ft)		5395		5207			4586		912
Turn Bay Length (ft)	200		200		200			250	
Base Capacity (vph)	318	577	129	585	618	223	615	260	655
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.90	0.16	0.41	0.28	0.73	0.81	0.85	0.43

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

4: Minnewawa Avenue & Shepherd Avenue

	↗	→	↘	↙	←	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	155	1099	234	116	1202	337	732	166	171	542	116
v/c Ratio	0.97	0.88	0.24	0.82	1.00	0.98	0.64	0.28	0.85	0.63	0.23
Control Delay	101.6	37.0	4.2	104.3	73.3	100.5	45.4	11.5	95.8	53.0	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.6	37.0	4.2	104.3	73.3	100.5	45.4	11.5	95.8	53.0	3.0
Queue Length 50th (ft)	150	451	31	109	~592	320	316	25	159	242	0
Queue Length 95th (ft)	m#241	#519	m67	#214	#754	#520	388	84	#273	307	19
Internal Link Dist (ft)		579			1263		627			574	
Turn Bay Length (ft)	250		50	215		230		105	255		25
Base Capacity (vph)	160	1247	962	149	1199	345	1147	600	221	862	505
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.88	0.24	0.78	1.00	0.98	0.64	0.28	0.77	0.63	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

5: Clovis Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	201	946	172	302	962	155	234	712	385	143	287	169
v/c Ratio	0.67	0.93	0.32	0.96	0.93	0.28	0.96	0.59	0.60	0.46	0.27	0.29
Control Delay	62.5	56.2	10.8	76.5	37.4	6.5	96.8	33.9	23.7	55.0	32.4	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.5	56.2	10.8	76.5	37.4	6.5	96.8	33.9	23.7	55.0	32.4	6.0
Queue Length 50th (ft)	75	357	22	103	386	39	175	227	146	53	86	0
Queue Length 95th (ft)	115	#481	77	m#152	m#446	m49	#335	291	251	86	124	51
Internal Link Dist (ft)		1209			1573			1877			575	
Turn Bay Length (ft)	240		50	245		175	235		50	250		270
Base Capacity (vph)	301	1025	546	316	1048	562	245	1214	639	313	1045	587
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.92	0.32	0.96	0.92	0.28	0.96	0.59	0.60	0.46	0.27	0.29

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
6: Clovis Avenue & Teague Avenue

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	175	117	179	1296	685	84
v/c Ratio	0.65	0.34	0.67	0.50	0.36	0.10
Control Delay	44.8	8.9	45.6	6.2	13.7	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	8.9	45.6	6.2	13.7	7.7
Queue Length 50th (ft)	89	0	91	125	104	10
Queue Length 95th (ft)	144	42	147	213	185	40
Internal Link Dist (ft)	870			436	1877	
Turn Bay Length (ft)	250		225			50
Base Capacity (vph)	527	554	378	2605	1917	878
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.21	0.47	0.50	0.36	0.10

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	107	632	439	57	501	373	349	973	51	117	621	53
v/c Ratio	0.73	0.97	0.56	0.43	0.85	0.64	0.97	0.75	0.08	0.75	0.70	0.11
Control Delay	81.2	69.1	10.5	63.3	53.1	27.8	88.6	38.5	1.0	80.7	45.9	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.2	69.1	10.5	63.3	53.1	27.8	88.6	38.5	1.0	80.7	45.9	0.5
Queue Length 50th (ft)	82	~493	53	43	357	159	~281	353	0	90	231	0
Queue Length 95th (ft)	#169	#739	154	88	#531	267	#473	436	5	#178	297	0
Internal Link Dist (ft)		389			2634			2691			2832	
Turn Bay Length (ft)	230			60		60	475		95	260		105
Base Capacity (vph)	150	650	778	134	606	596	360	1292	624	165	893	486
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.97	0.56	0.43	0.83	0.63	0.97	0.75	0.08	0.71	0.70	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

8: Clovis Avenue & Alluvial Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	439	201	41	367	133	284	1415	136	1014
v/c Ratio	0.18	0.87	0.39	0.29	0.67	0.24	0.86	0.97	0.68	0.84
Control Delay	56.9	61.4	15.1	59.7	45.3	6.8	74.1	55.5	70.2	47.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	61.4	15.1	59.7	45.3	6.8	74.1	55.5	70.2	47.9
Queue Length 50th (ft)	19	335	45	32	267	3	216	~653	108	~458
Queue Length 95th (ft)	49	440	105	70	354	49	#401	#897	175	#596
Internal Link Dist (ft)		611			755			2017		2691
Turn Bay Length (ft)	150		110	165		105	420		215	
Base Capacity (vph)	157	593	585	157	609	604	334	1455	231	1205
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.74	0.34	0.26	0.60	0.22	0.85	0.97	0.59	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
9: SR-168 WB Ramps & Herndon Avenue

	→	↘	←	↖	↘	↙
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1872	615	2590	561	78	410
v/c Ratio	0.41	0.47	0.61	0.52	0.12	0.72
Control Delay	9.2	1.9	2.8	2.7	45.3	56.3
Queue Delay	0.0	0.0	0.3	0.3	0.0	0.0
Total Delay	9.2	1.9	3.0	3.0	45.3	56.3
Queue Length 50th (ft)	188	0	52	11	30	186
Queue Length 95th (ft)	248	40	m66	m33	51	236
Internal Link Dist (ft)	587		722			
Turn Bay Length (ft)		365			235	565
Base Capacity (vph)	4573	1310	4249	1079	884	739
Starvation Cap Reductn	0	0	790	124	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.47	0.75	0.59	0.09	0.55

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

	→	↘	←	↖	↖	↗
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1580	409	2404	221	812	1051
v/c Ratio	0.93	0.56	0.96	0.35	0.28	0.65
Control Delay	47.5	8.8	35.7	4.2	15.5	21.9
Queue Delay	1.9	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	8.8	35.7	4.2	15.5	21.9
Queue Length 50th (ft)	513	39	561	20	128	344
Queue Length 95th (ft)	#606	87	m569	m23	154	425
Internal Link Dist (ft)	722		551			
Turn Bay Length (ft)						
Base Capacity (vph)	1694	727	2514	632	2887	1624
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	46	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.56	0.96	0.35	0.28	0.65

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Queues

11: Clovis Avenue & Herndon Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	732	1561	364	340	1482	221	634	973	345	394	535
v/c Ratio	1.10	0.85	0.37	0.85	1.03	0.40	0.75	0.70	1.00	0.60	0.53
Control Delay	99.9	33.7	4.0	80.2	80.2	15.7	55.3	44.4	109.9	61.8	26.6
Queue Delay	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.9	34.8	4.0	80.2	80.2	15.7	55.3	44.4	109.9	61.8	26.6
Queue Length 50th (ft)	~398	439	59	157	~526	48	277	266	164	126	153
Queue Length 95th (ft)	m#482	m487	m56	#228	#624	123	347	319	#269	164	213
Internal Link Dist (ft)		551			830			361		659	
Turn Bay Length (ft)	350			245		150	200		230		185
Base Capacity (vph)	668	1837	995	420	1441	551	850	1394	346	660	1011
Starvation Cap Reductn	0	110	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.90	0.37	0.81	1.03	0.40	0.75	0.70	1.00	0.60	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	455	981	179	68	1016	355	204	400	179	199	411
v/c Ratio	0.97	0.74	0.26	0.44	0.94	0.50	0.74	0.86	0.32	0.41	0.63
Control Delay	84.4	25.4	2.7	57.9	55.7	7.4	64.1	59.4	44.5	38.6	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.4	25.4	2.7	57.9	55.7	7.4	64.1	59.4	44.5	38.6	13.2
Queue Length 50th (ft)	151	364	12	49	385	15	146	277	61	123	50
Queue Length 95th (ft)	m#228	m431	m27	93	#516	90	#254	#448	95	194	156
Internal Link Dist (ft)		426			451			2573		597	
Turn Bay Length (ft)	250		250	250		250	250		250		300
Base Capacity (vph)	467	1317	688	353	1083	712	274	465	563	487	655
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.74	0.26	0.19	0.94	0.50	0.74	0.86	0.32	0.41	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

15: Sunnyside Avenue & Nees Avenue

	↗	→	↙	←	↖	↑	↘	↓
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	59	689	54	555	247	395	22	257
v/c Ratio	0.51	0.60	0.34	0.92	0.89	0.42	0.11	0.43
Control Delay	36.9	19.2	23.4	44.8	64.3	13.0	27.2	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	19.2	23.4	44.8	64.3	13.0	27.2	18.9
Queue Length 50th (ft)	18	105	16	204	98	81	8	72
Queue Length 95th (ft)	#67	156	46	#383	#223	204	26	132
Internal Link Dist (ft)		388		2573		635		2575
Turn Bay Length (ft)	70		65				200	
Base Capacity (vph)	118	1183	165	620	276	941	206	592
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.58	0.33	0.90	0.89	0.42	0.11	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

17: Fowler Avenue & Ticonderoga

	↗	↘	↖	↑	↓
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	5	18	10	311	333
v/c Ratio	0.03	0.12	0.05	0.18	0.20
Control Delay	29.4	15.9	28.9	1.5	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	15.9	28.9	1.5	3.1
Queue Length 50th (ft)	2	0	4	0	0
Queue Length 95th (ft)	11	17	17	44	103
Internal Link Dist (ft)	513			677	273
Turn Bay Length (ft)	100		300		
Base Capacity (vph)	464	428	528	1731	1628
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.01	0.04	0.02	0.18	0.20

Intersection Summary

Queues
18: Fowler Avenue & Shepherd Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	57	645	178	76	726	297	351	389	114	163	294
v/c Ratio	0.40	0.46	0.24	0.50	0.98	0.39	1.04	0.82	0.23	0.92	0.96
Control Delay	52.6	25.0	4.3	55.6	61.0	8.5	99.4	50.8	6.4	94.7	85.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	25.0	4.3	55.6	61.0	8.5	99.4	50.8	6.4	94.7	85.3
Queue Length 50th (ft)	35	165	0	47	~504	34	~242	234	0	105	184
Queue Length 95th (ft)	76	221	43	94	#727	98	#417	#384	39	#228	#352
Internal Link Dist (ft)		329			709			846			3571
Turn Bay Length (ft)	115		160	260		205	285			200	
Base Capacity (vph)	142	1389	730	160	740	760	339	475	494	178	305
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.46	0.24	0.47	0.98	0.39	1.04	0.82	0.23	0.92	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

19: Fowler Avenue & Teague Avenue

	→	←	↰	↑	↳	↓	↲
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	73	157	25	773	24	440	44
v/c Ratio	0.47	0.50	0.04	0.54	0.06	0.31	0.04
Control Delay	29.1	14.6	4.5	11.9	3.8	4.3	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	14.6	4.5	11.9	3.8	4.3	1.5
Queue Length 50th (ft)	20	16	4	198	2	44	0
Queue Length 95th (ft)	51	58	m13	637	9	101	8
Internal Link Dist (ft)	2567	739		2580		1659	
Turn Bay Length (ft)			100		260		
Base Capacity (vph)	318	550	710	1422	432	1412	1211
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.29	0.04	0.54	0.06	0.31	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
Shepherd

20: Fowler Avenue & Nees Avenue

Cumulative Year (2046) WP MIT- PM Peak Hour

	↗	→	↙	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	79	532	62	401	115	180	602	71	65	360	66
v/c Ratio	0.55	0.56	0.49	0.84	0.24	0.78	0.68	0.09	0.50	0.49	0.10
Control Delay	66.5	35.9	65.6	57.6	10.2	72.8	34.7	3.3	65.3	41.5	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	35.9	65.6	57.6	10.2	72.8	34.7	3.3	65.3	41.5	9.3
Queue Length 50th (ft)	60	170	47	296	12	135	378	0	50	256	0
Queue Length 95th (ft)	108	203	91	377	54	#216	#740	21	81	#403	33
Internal Link Dist (ft)		2573		510			742			2580	
Turn Bay Length (ft)	230		140		60	220			125		50
Base Capacity (vph)	270	1075	268	557	540	271	879	797	262	731	678
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.49	0.23	0.72	0.21	0.66	0.68	0.09	0.25	0.49	0.10

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
21: Fowler Avenue & SR-168 WB Ramps

Lane Group	WBL	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	180	19	488	928	775
v/c Ratio	0.60	0.05	0.77	0.37	0.48
Control Delay	45.8	0.3	47.1	7.2	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	0.3	47.1	7.2	19.3
Queue Length 50th (ft)	107	0	153	111	154
Queue Length 95th (ft)	166	0	197	175	251
Internal Link Dist (ft)				513	2784
Turn Bay Length (ft)		380	260		
Base Capacity (vph)	418	453	797	2488	1598
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.04	0.61	0.37	0.48

Intersection Summary

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	364	352	350	1321	30	664
v/c Ratio	0.84	0.63	0.62	0.72	0.23	0.32
Control Delay	47.3	14.2	13.6	18.4	39.2	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.3	14.2	13.6	18.4	39.2	9.2
Queue Length 50th (ft)	181	47	44	204	14	83
Queue Length 95th (ft)	#331	142	132	#404	40	114
Internal Link Dist (ft)		884		367		513
Turn Bay Length (ft)	535				85	
Base Capacity (vph)	439	561	573	1829	134	2055
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.63	0.61	0.72	0.22	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection: 23: Sunnyside Avenue & Project Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	18
95th Queue (ft)	41
Link Distance (ft)	414
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Sunnyside Avenue & Project Driveway 2

Movement	WB	NB	NB
Directions Served	LR	T	R
Maximum Queue (ft)	68	605	616
Average Queue (ft)	34	80	22
95th Queue (ft)	64	404	211
Link Distance (ft)	421	580	580
Upstream Blk Time (%)		0	0
Queuing Penalty (veh)		1	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report

Intersection: 25: Shepherd Avenue & Project Driveway 3

Movement	EB	B27	B27	WB	SB
Directions Served	L	T		TR	R
Maximum Queue (ft)	178	540	469	22	91
Average Queue (ft)	77	156	16	5	44
95th Queue (ft)	141	531	152	19	80
Link Distance (ft)		451	451	1184	361
Upstream Blk Time (%)		1	0		
Queuing Penalty (veh)		9	1		
Storage Bay Dist (ft)	200				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report

Cumulative Year (2046) WP MIT- PM Peak Hour

Intersection: 26: Project Driveway 4/Stanford Avenue & Perrin Road

Movement	NB
Directions Served	LT
Maximum Queue (ft)	31
Average Queue (ft)	26
95th Queue (ft)	44
Link Distance (ft)	374
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

APPENDIX H

HCS WORKSHEETS

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1142	4688	0.24	64.4	8.9	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.971	1142	518	7200	4000	0.16	0.13	65.0	59.5	5.9	0.0	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	606	4702	0.13	65.1	4.7	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	721	115	4800	2000	0.15	0.06	66.3	66.3	5.4	6.0	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	726	4702	0.15	65.1	5.6	A

Facility Time Period Results

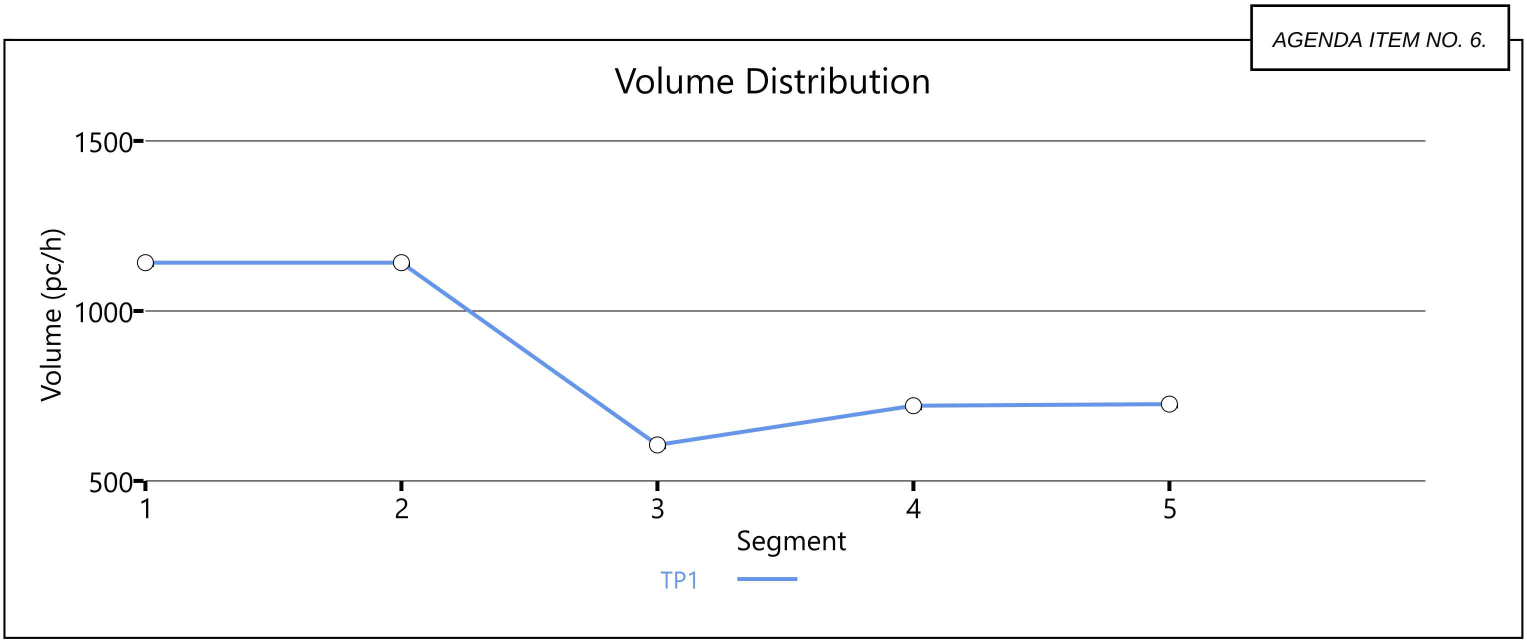
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.3	5.3	5.0	1.00	A

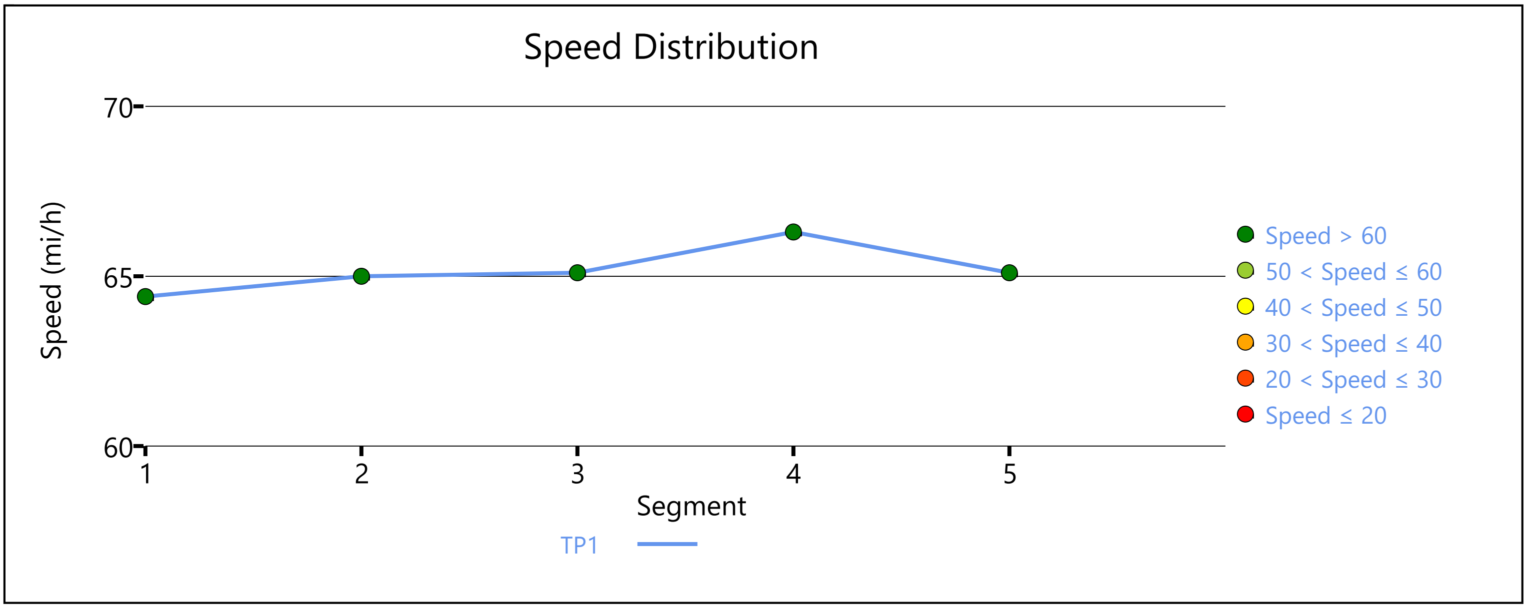
Facility Overall Results

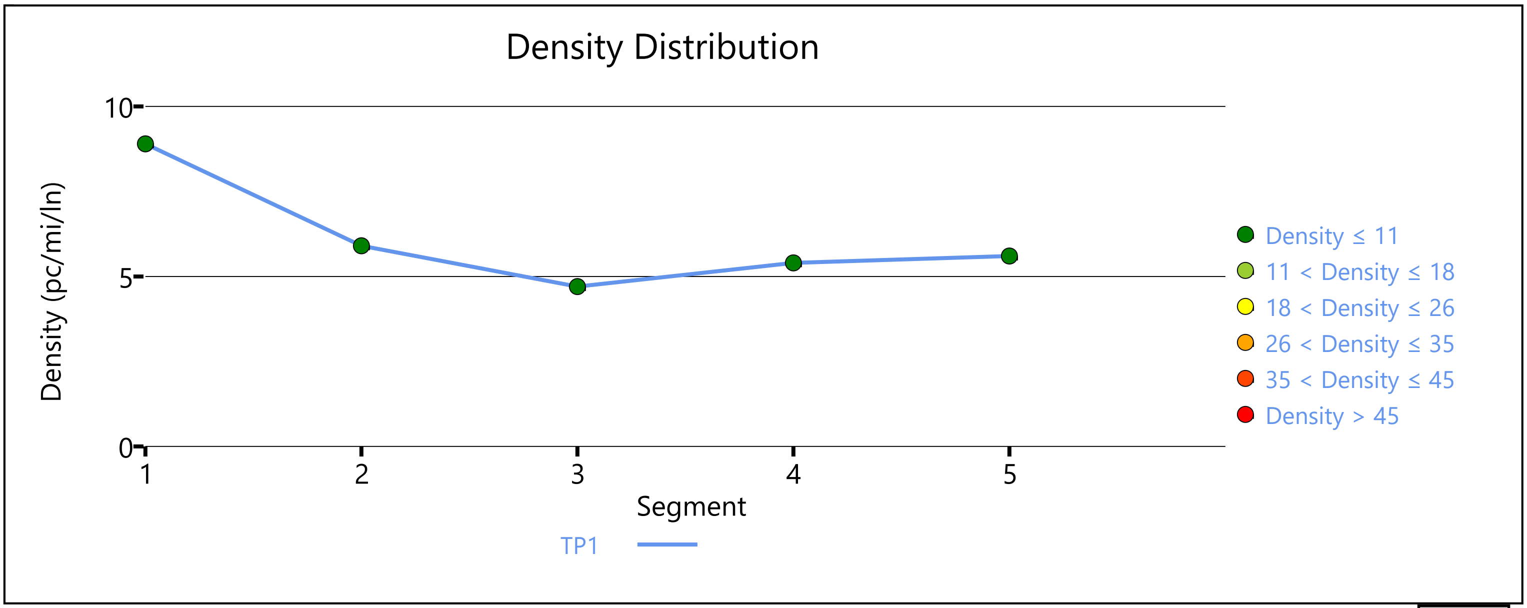
Space Mean Speed, mi/h	65.3	Density, veh/mi/ln	5.0
Average Travel Time, min	1.00	Density, pc/mi/ln	5.3

Messages

Comments


Volume Distribution


Speed Distribution


Density Distribution

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3565	4716	0.76	63.5	28.1	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.988	3565	178	4800	2000	0.74	0.09	60.6	60.6	29.4	33.5	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3377	4716	0.72	64.4	26.2	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.992	4327	950	4800	2000	0.90	0.48	56.9	56.9	38.0	33.3	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4382	4716	0.93	56.5	38.8	E

Facility Time Period Results

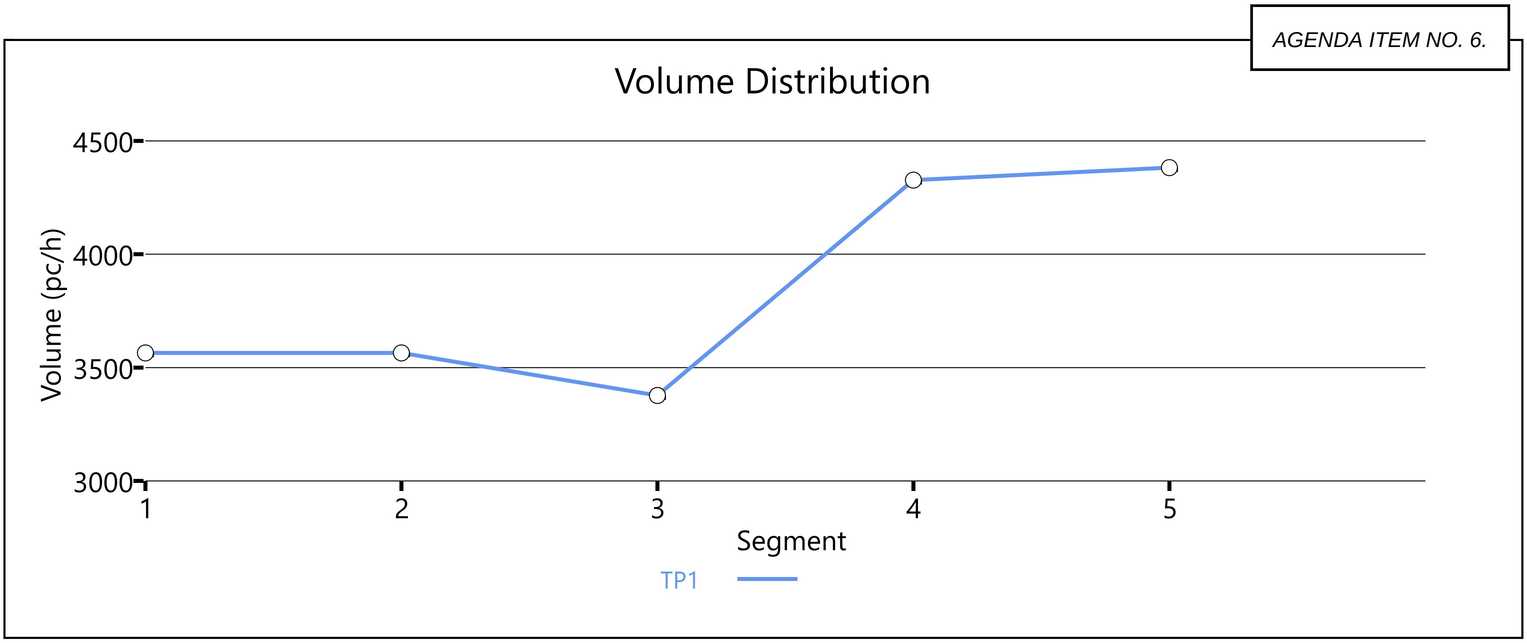
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	61.0	30.2	28.3	1.30	D

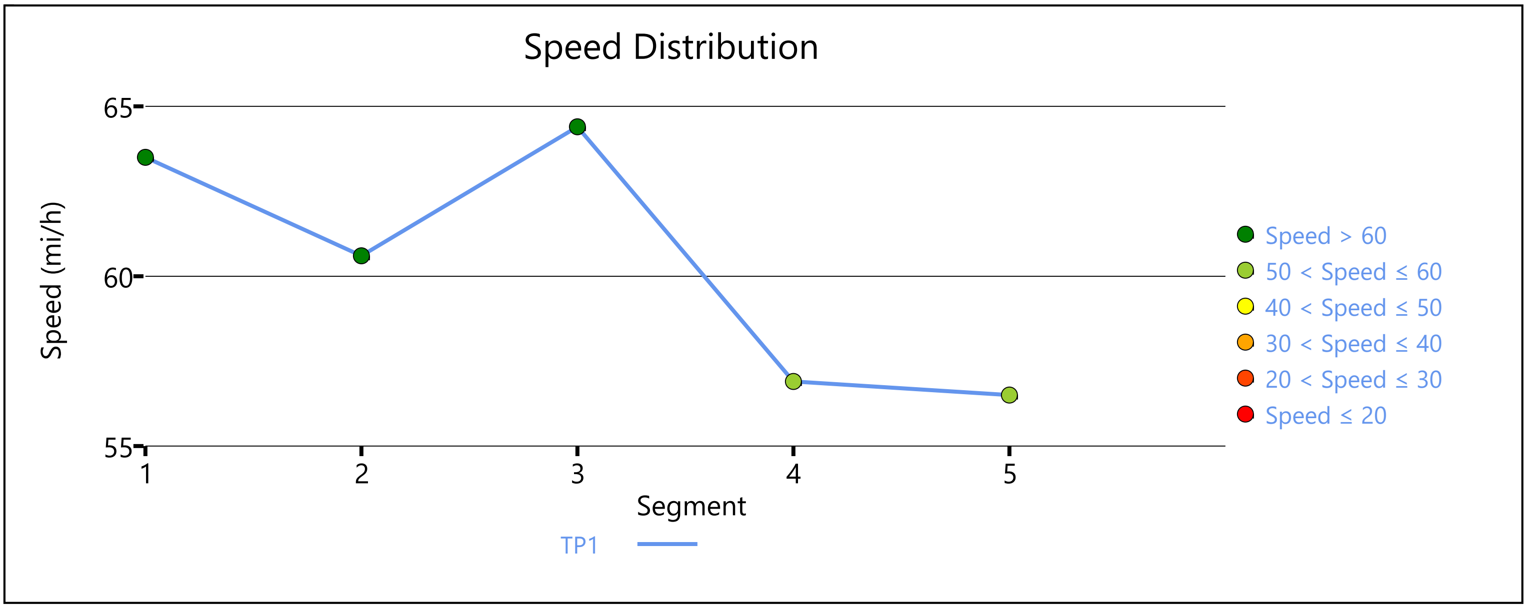
Facility Overall Results

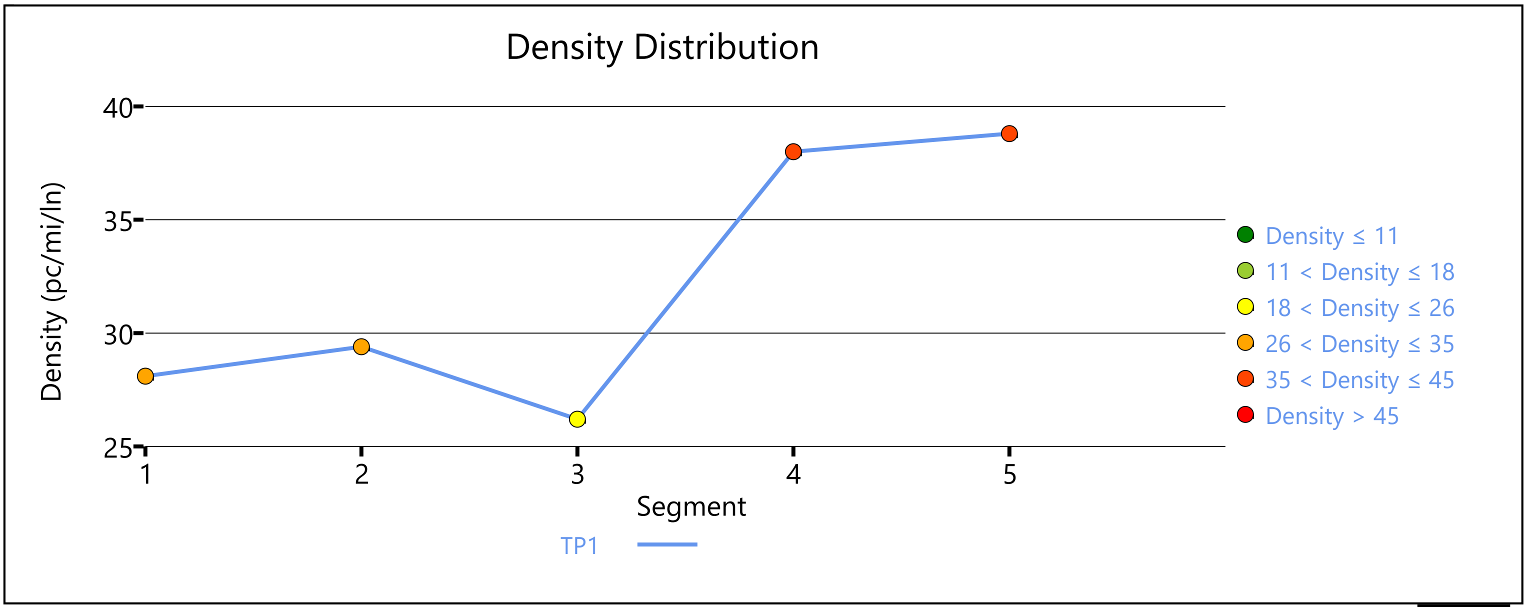
Space Mean Speed, mi/h	61.0	Density, veh/mi/ln	28.3
Average Travel Time, min	1.30	Density, pc/mi/ln	30.2

Messages

Comments


Volume Distribution
Volume (pc/h)
4500
4000
3500
3000
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
65
60
55
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4296	4688	0.92	56.8	37.8	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4296	972	7200	4000	0.60	0.24	65.7	58.2	21.8	12.0	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3280	4702	0.70	64.3	25.5	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.994	3619	339	4800	2000	0.75	0.17	61.7	61.7	29.3	28.5	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	3639	4702	0.77	62.6	29.1	D

Facility Time Period Results

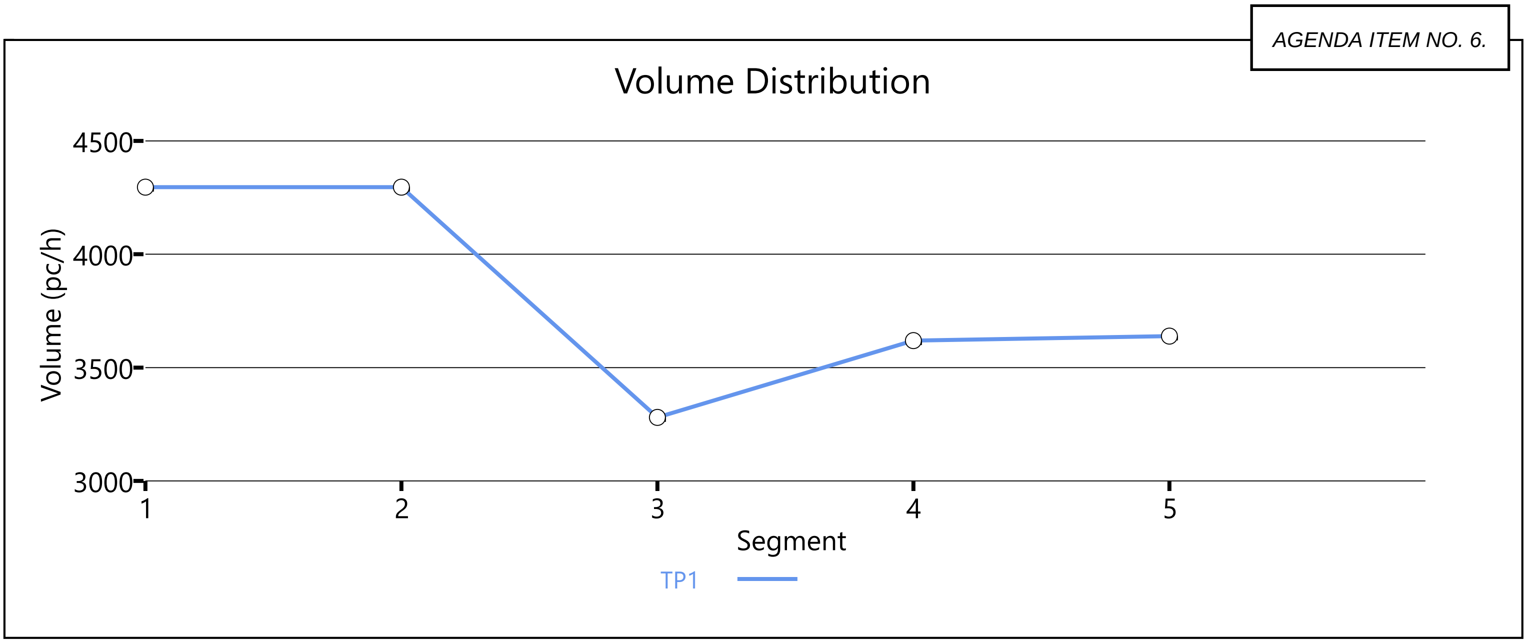
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.8	25.3	23.7	1.00	C

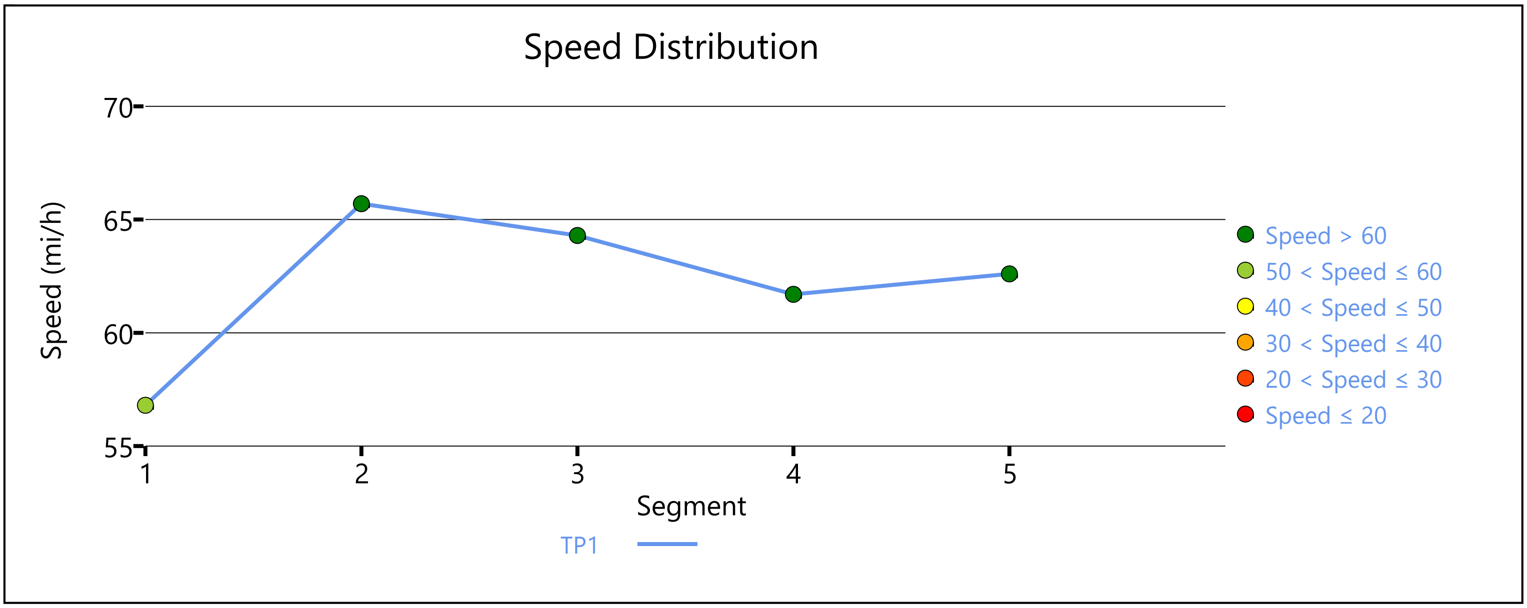
Facility Overall Results

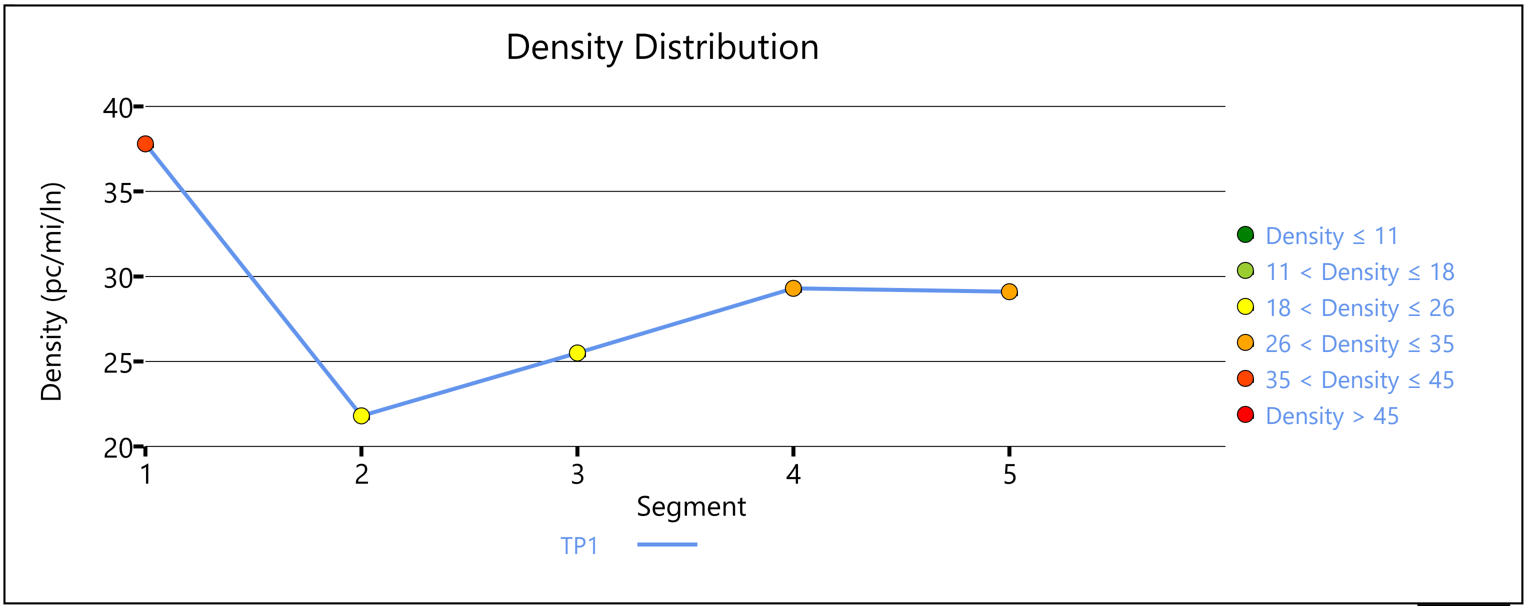
Space Mean Speed, mi/h	63.8	Density, veh/mi/ln	23.7
Average Travel Time, min	1.00	Density, pc/mi/ln	25.3

Messages

Comments


Volume Distribution
Volume (pc/h)
4500
4000
3500
3000
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
55
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
20
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4219	4716	0.90	58.3	36.2	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.967	4136	191	4800	2000	0.89	0.10	60.5	60.5	34.2	38.4	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3755	4716	0.86	30.9	60.8	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	4391	665	4800	2000	0.99	0.33	38.6	52.0	56.9	36.6	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4391	4716	1.01	56.4	38.9	F

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	39.8	50.8	47.7	2.00	F

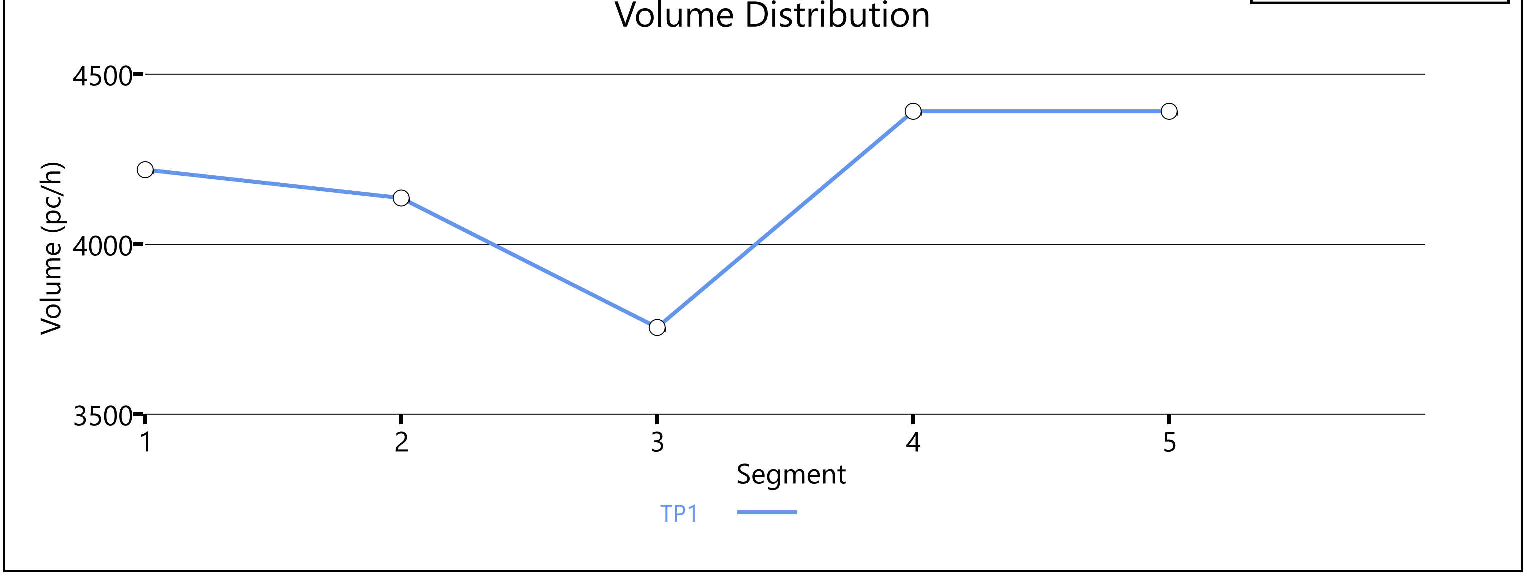
Facility Overall Results

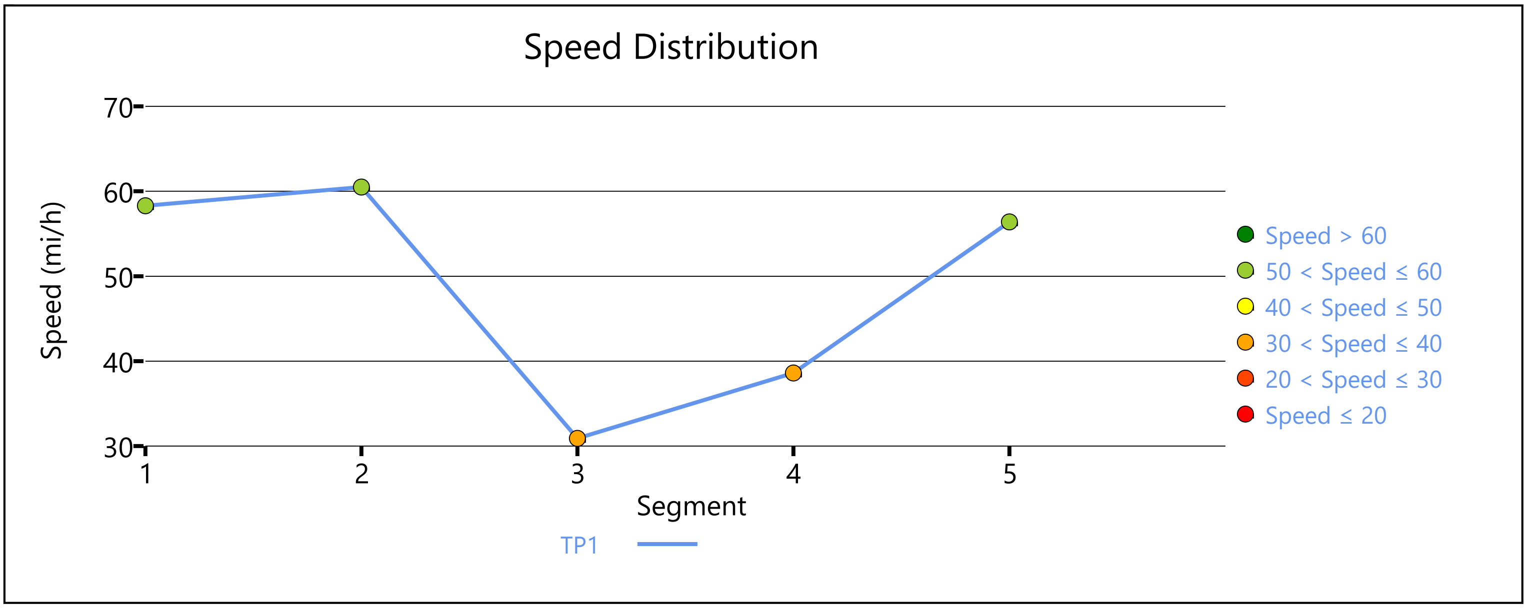
Space Mean Speed, mi/h	39.8	Density, veh/mi/ln	47.7
Average Travel Time, min	2.00	Density, pc/mi/ln	50.8

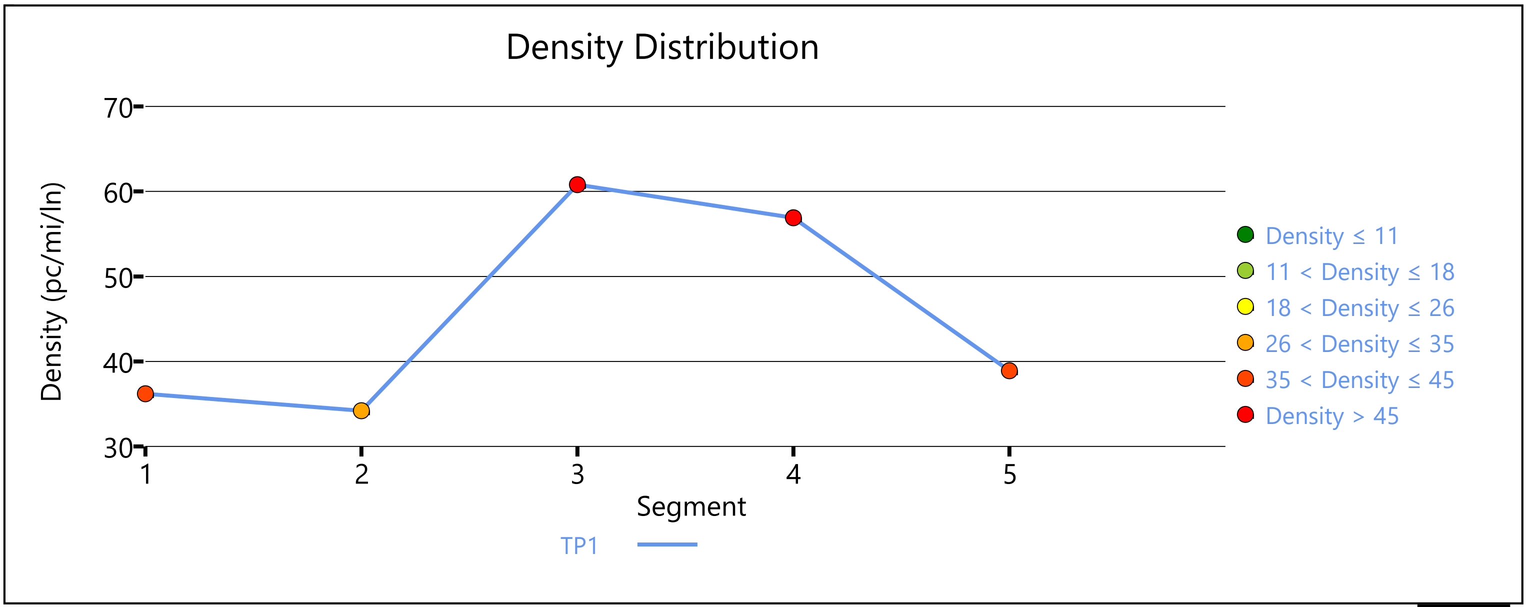
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 5. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
4500
4000
3500
Volume (pc/h)
1
2
3
4
5
Segment
TP1


Speed Distribution
70
60
50
40
30
Speed (mi/h)
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
70
60
50
40
30
Density (pc/mi/ln)
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1155	4688	0.25	64.4	9.0	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.971	1155	530	7200	4000	0.16	0.13	64.9	59.5	5.9	0.0	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	606	4702	0.13	65.1	4.7	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	721	115	4800	2000	0.15	0.06	66.3	66.3	5.4	6.0	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	726	4702	0.15	65.1	5.6	A

Facility Time Period Results

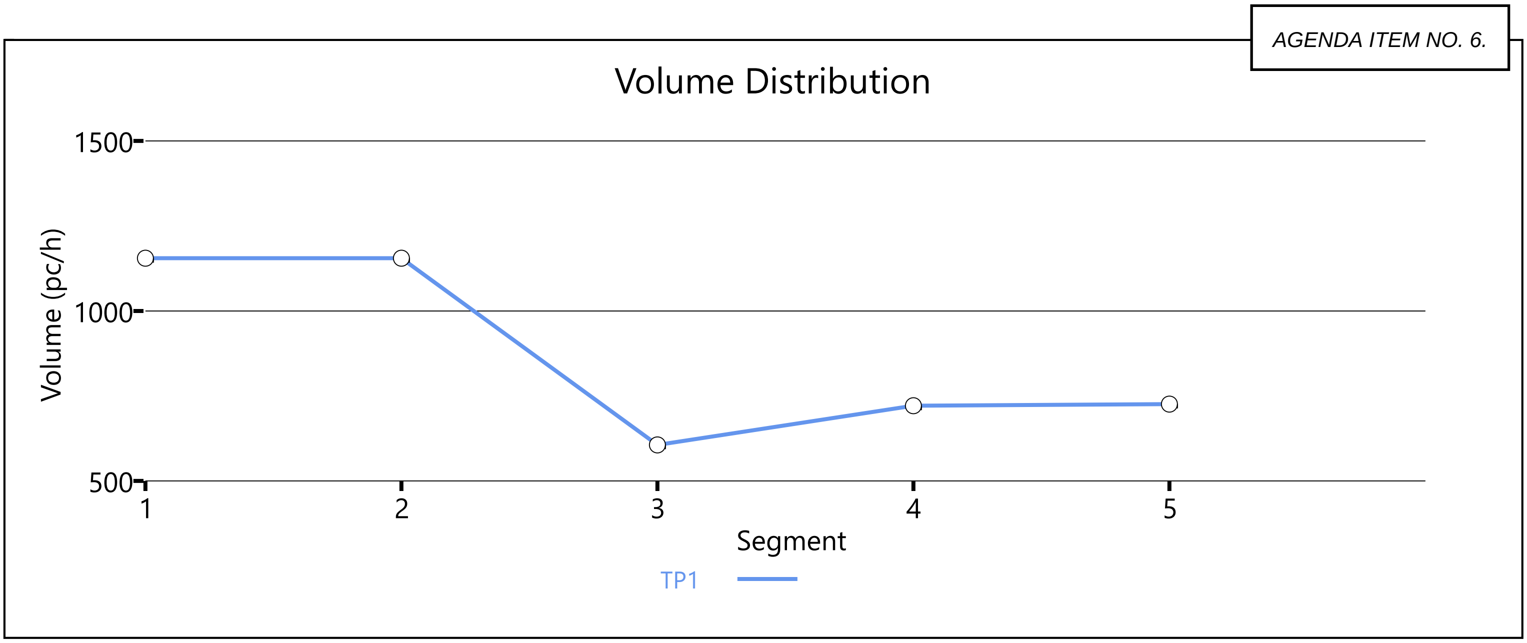
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.3	5.3	5.0	1.00	A

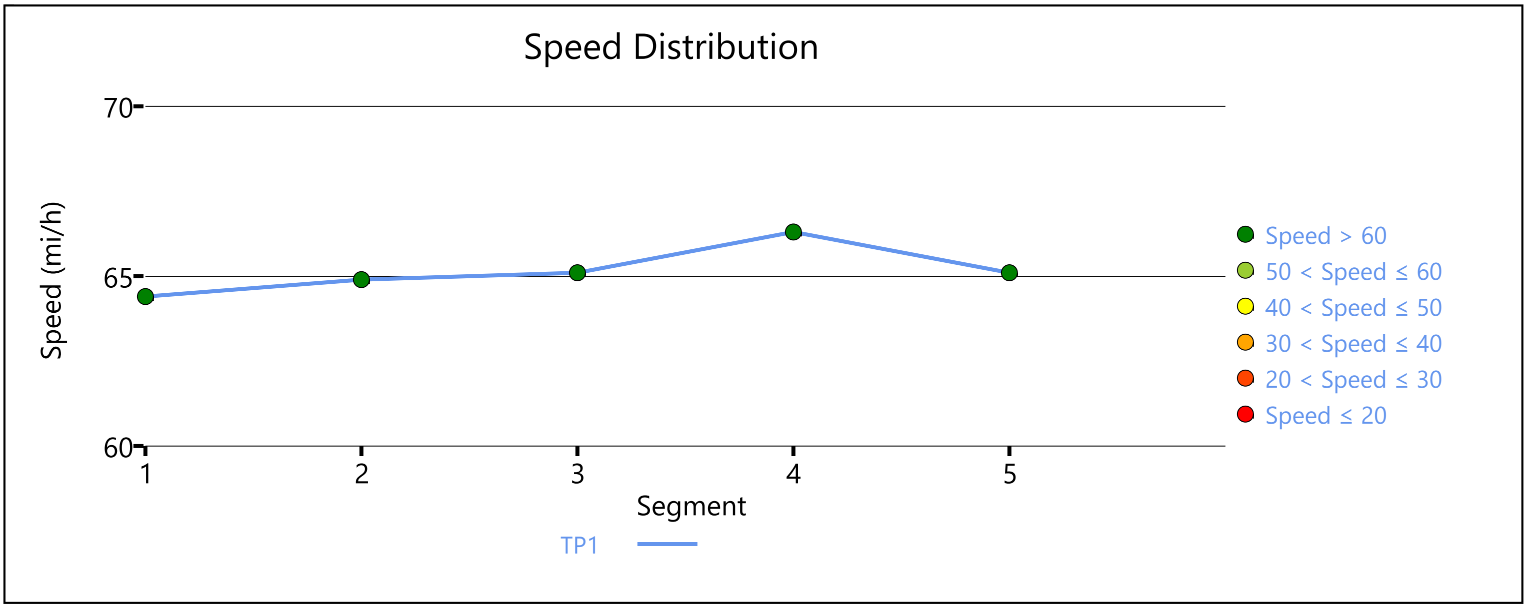
Facility Overall Results

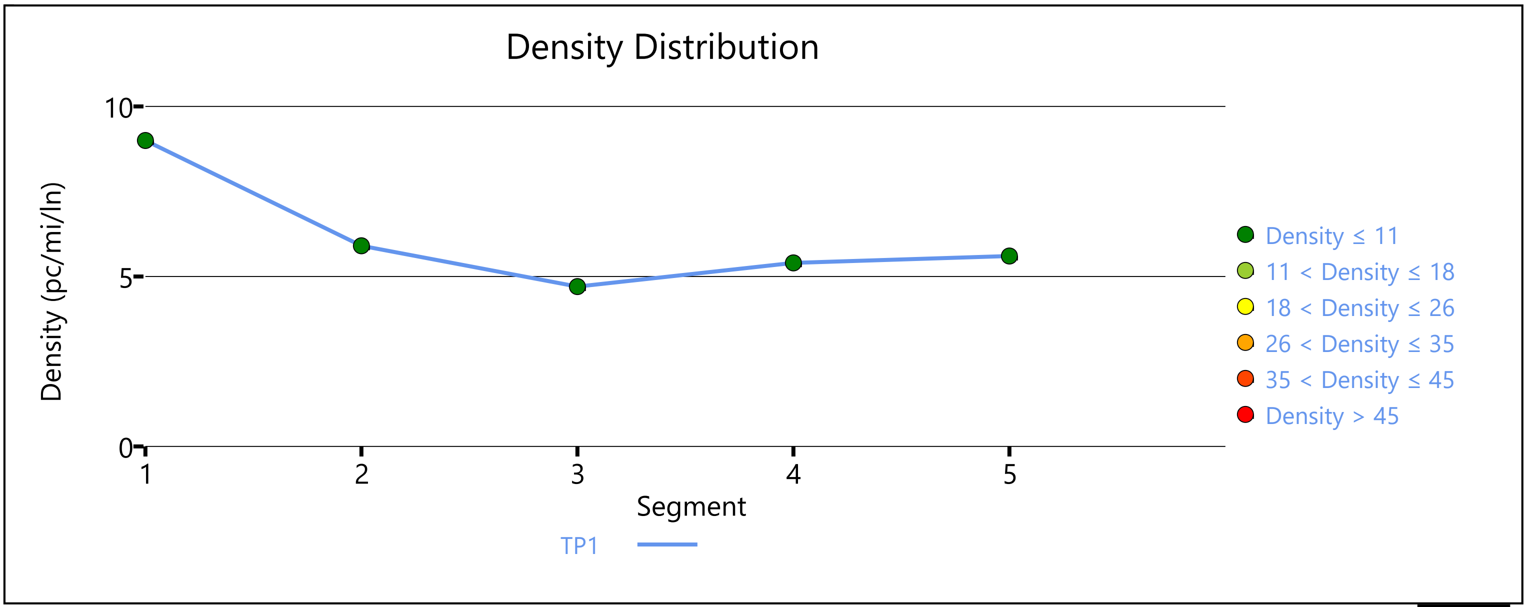
Space Mean Speed, mi/h	65.3	Density, veh/mi/ln	5.0
Average Travel Time, min	1.00	Density, pc/mi/ln	5.3

Messages

Comments


Volume Distribution
Volume (pc/h)
1500
1000
500
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
10
5
0
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Existing (2022) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3565	4716	0.76	63.5	28.1	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.988	3565	178	4800	2000	0.74	0.09	60.6	60.6	29.4	33.5	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3377	4716	0.72	64.4	26.2	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.992	4327	950	4800	2000	0.90	0.48	56.9	56.9	38.0	33.3	[illegible]

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4382	4716	0.93	56.5	38.8	E

Facility Time Period Results

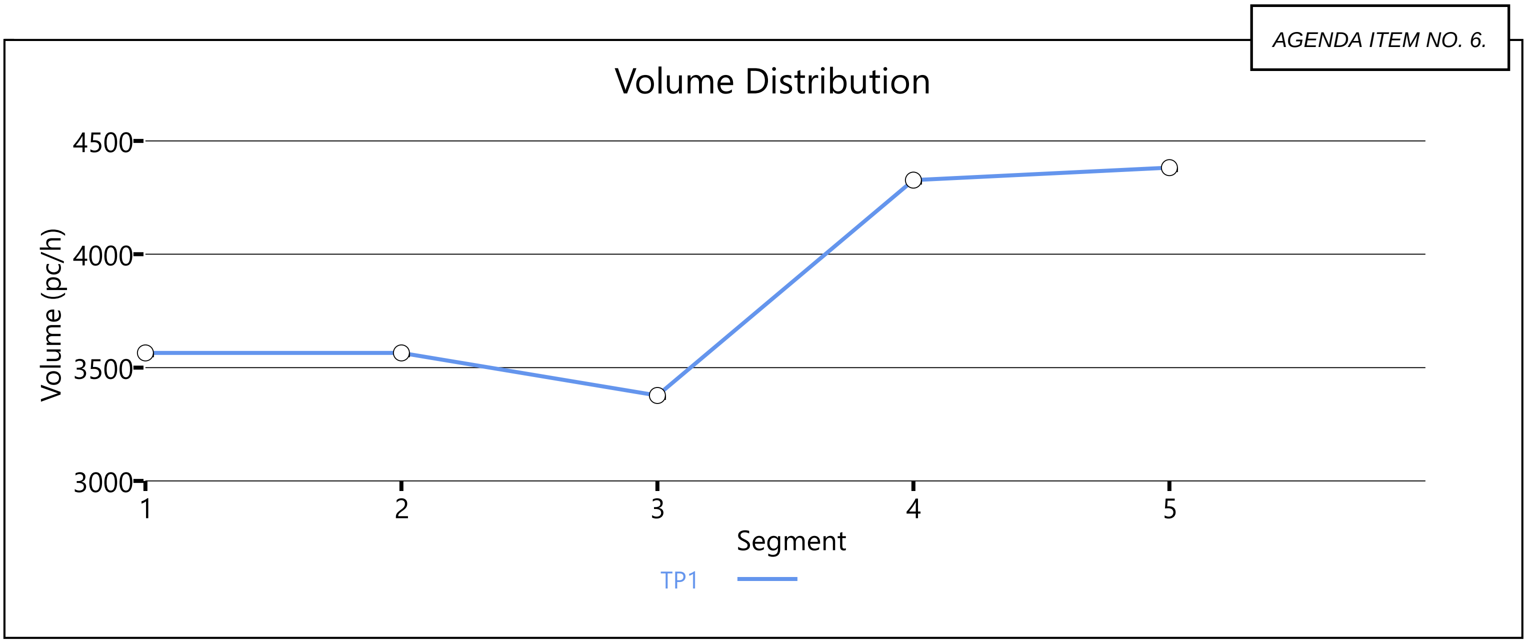
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	61.0	30.2	28.3	1.30	D

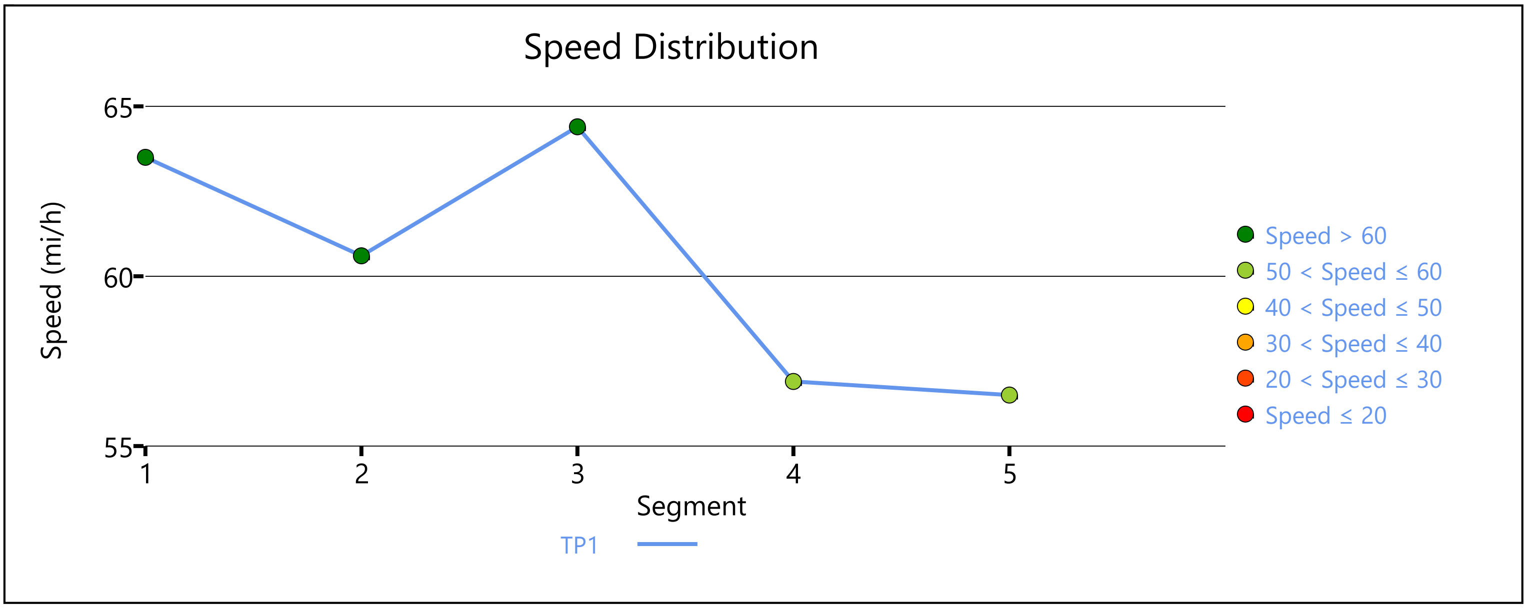
Facility Overall Results

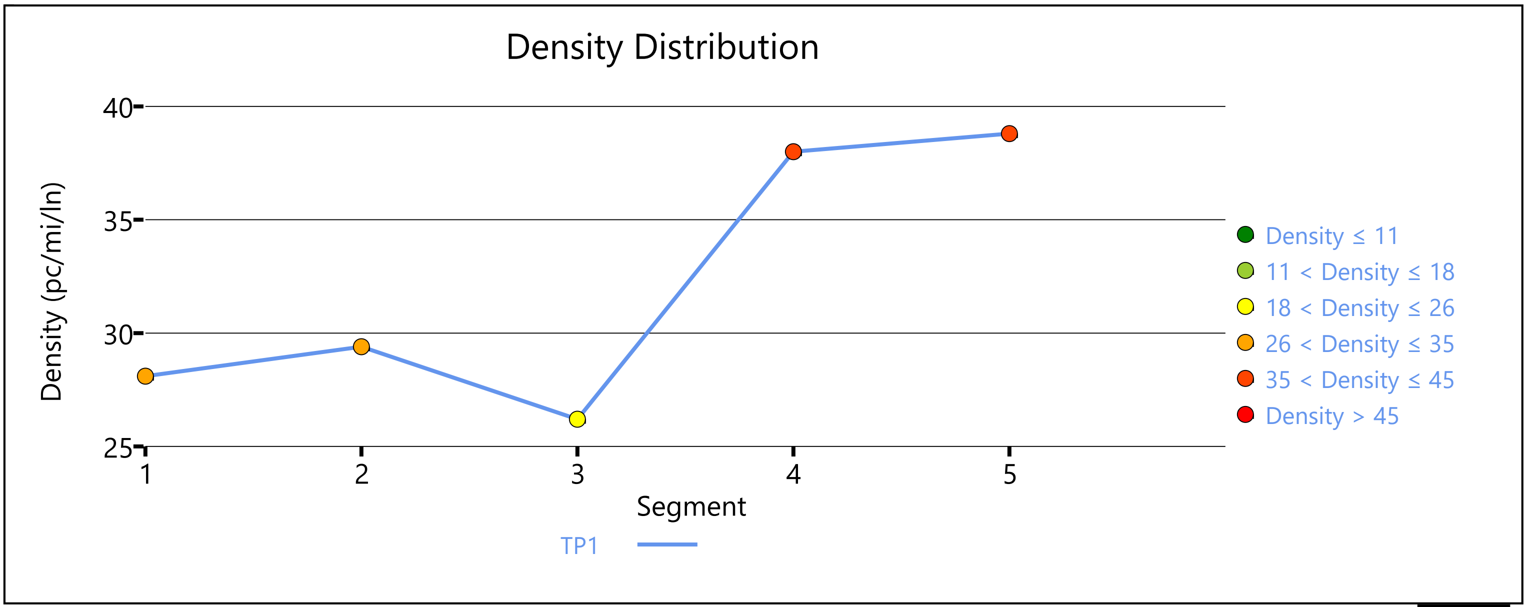
Space Mean Speed, mi/h	61.0	Density, veh/mi/ln	28.3
Average Travel Time, min	1.30	Density, pc/mi/ln	30.2

Messages

Comments


Volume Distribution
Volume (pc/h)
4500
4000
3500
3000
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
65
60
55
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

AGENDA ITEM NO. 6.

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4337	4688	0.93	56.3	38.5	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4337	1011	7200	4000	0.60	0.25	65.5	58.1	22.1	12.3	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3280	4702	0.70	64.3	25.5	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.994	3619	339	4800	2000	0.75	0.17	61.7	61.7	29.3	28.5	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	3639	4702	0.77	62.6	29.1	D

Facility Time Period Results

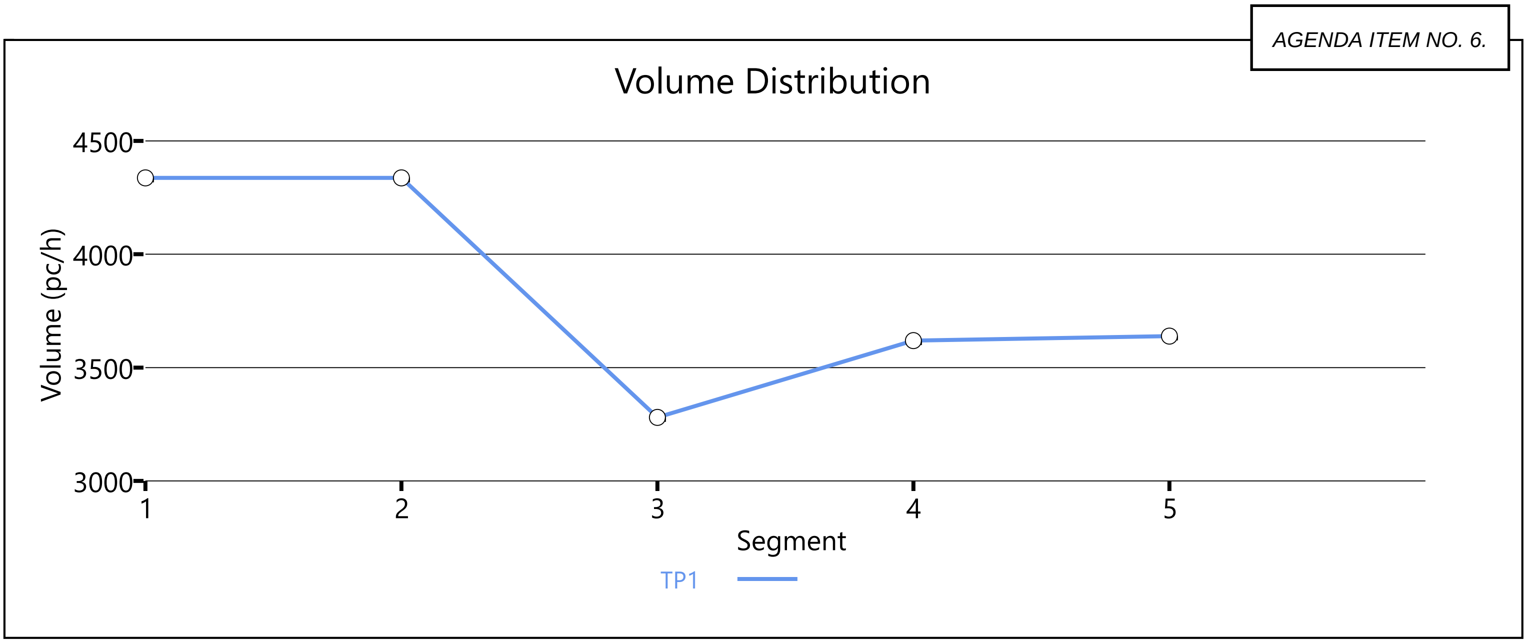
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.8	25.4	23.9	1.10	C

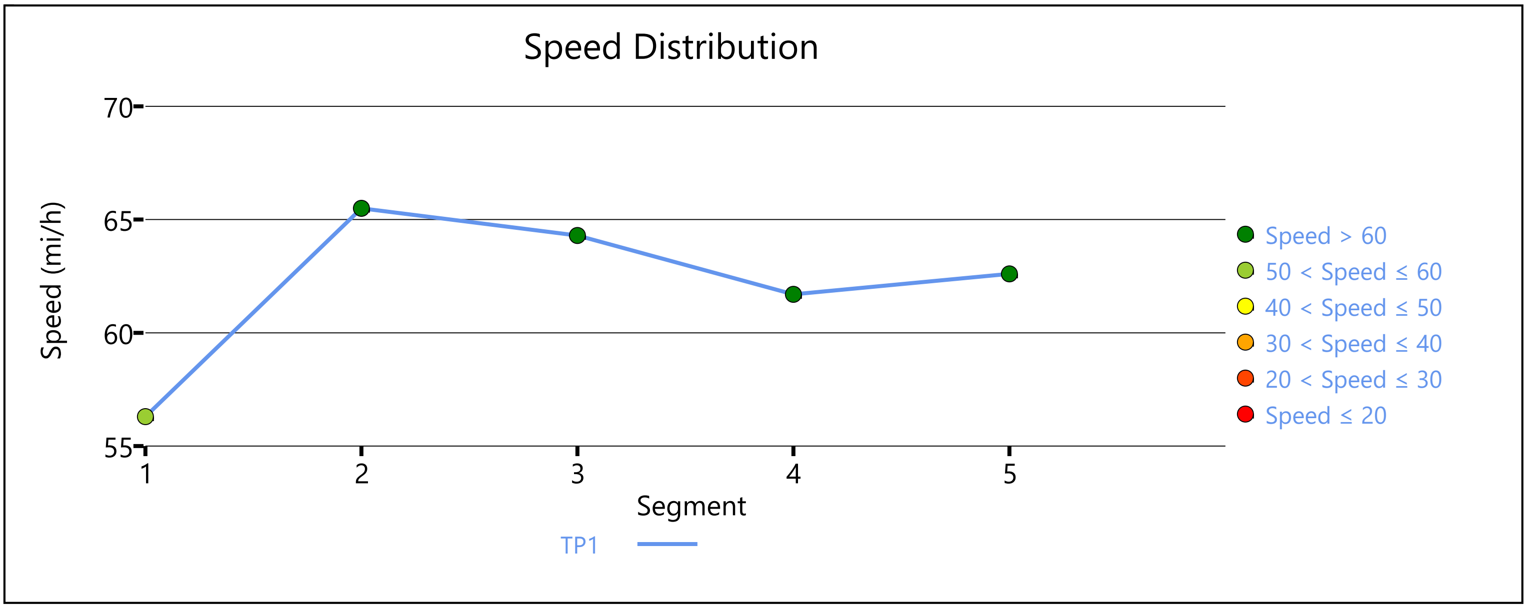
Facility Overall Results

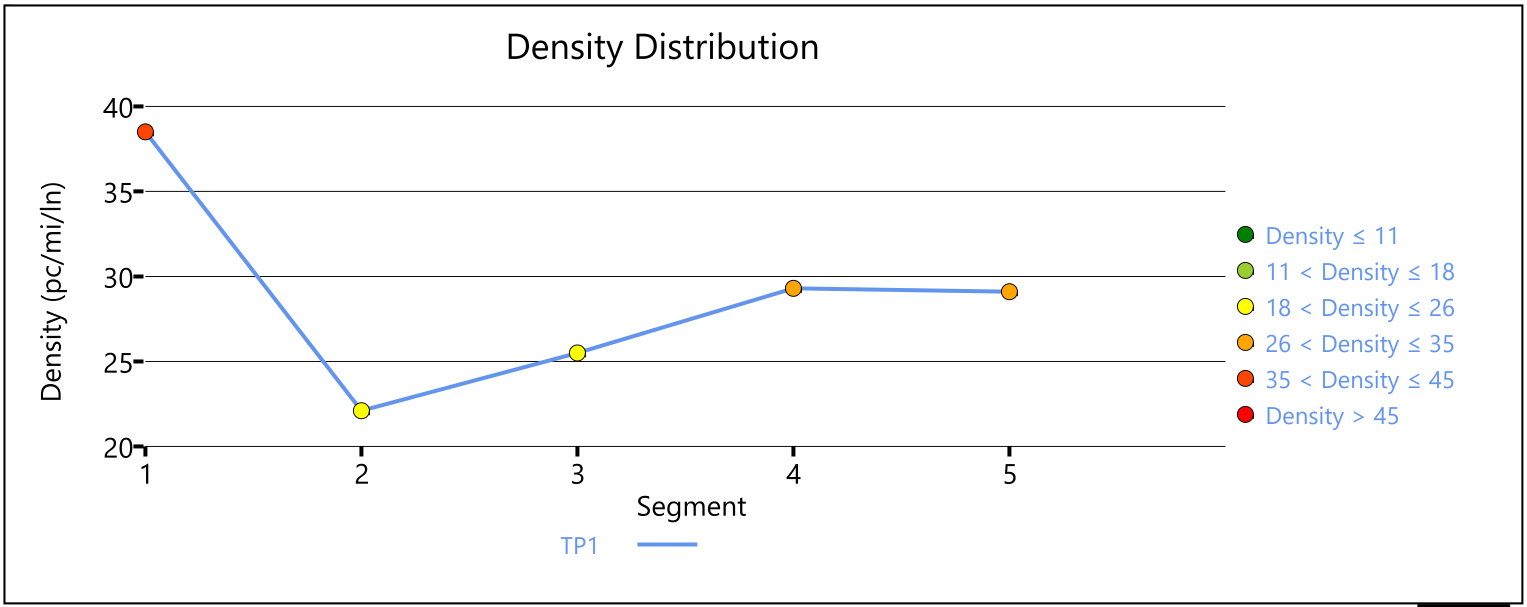
Space Mean Speed, mi/h	63.8	Density, veh/mi/ln	23.9
Average Travel Time, min	1.10	Density, pc/mi/ln	25.4

Messages

Comments


Volume Distribution
4500
4000
3500
3000
Volume (pc/h)
1
2
3
4
5
Segment
TP1


Speed Distribution
70
65
60
55
Speed (mi/h)
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
40
35
30
25
20
Density (pc/mi/ln)
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Existing (2022) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4219	4716	0.90	58.3	36.2	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.967	4136	191	4800	2000	0.89	0.10	60.5	60.5	34.2	38.4	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3755	4716	0.86	30.9	60.8	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	4391	665	4800	2000	0.99	0.33	38.6	52.0	56.9	36.6	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4391	4716	1.01	56.4	38.9	F

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	39.8	50.8	47.7	2.00	F

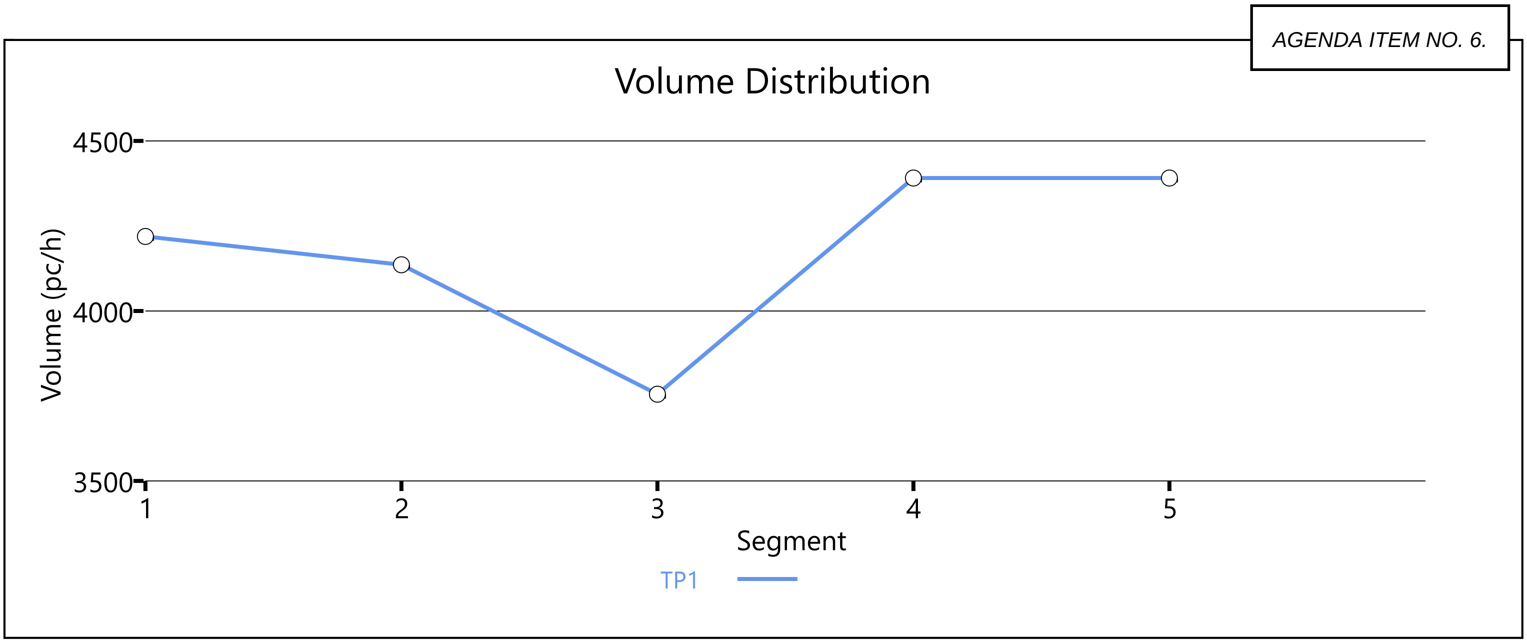
Facility Overall Results

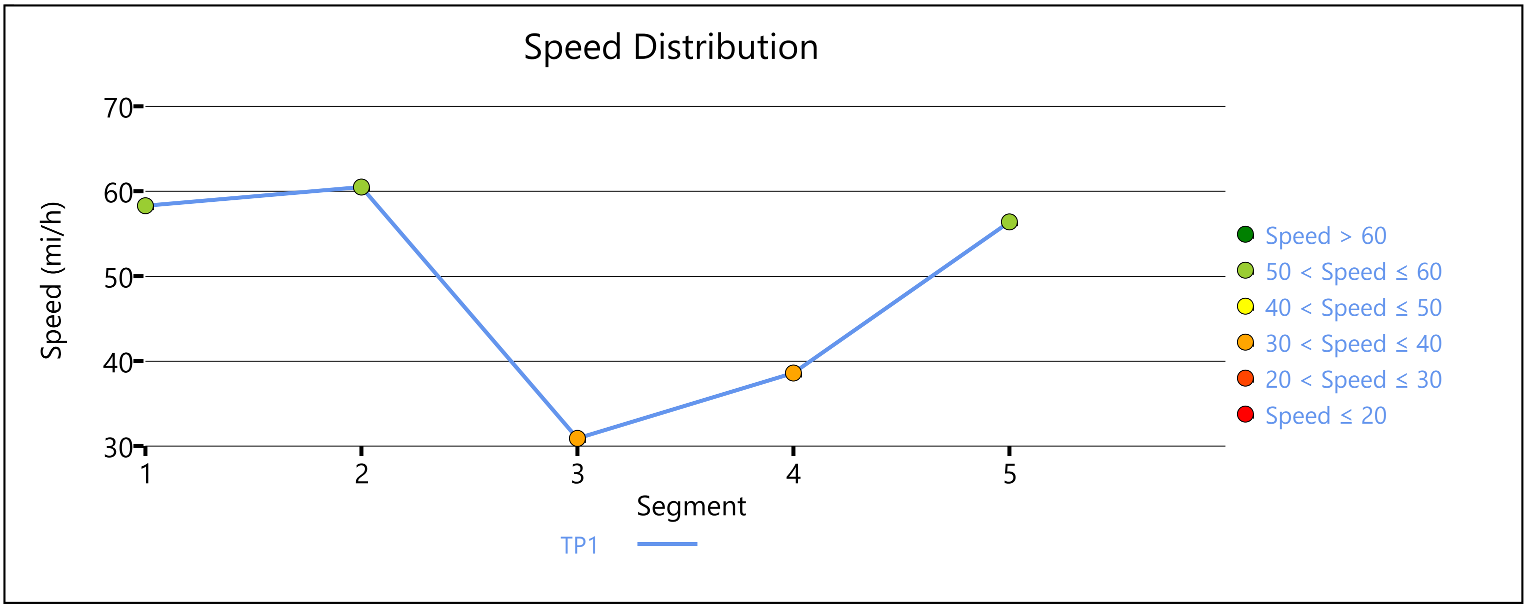
Space Mean Speed, mi/h	39.8	Density, veh/mi/ln	47.7
Average Travel Time, min	2.00	Density, pc/mi/ln	50.8

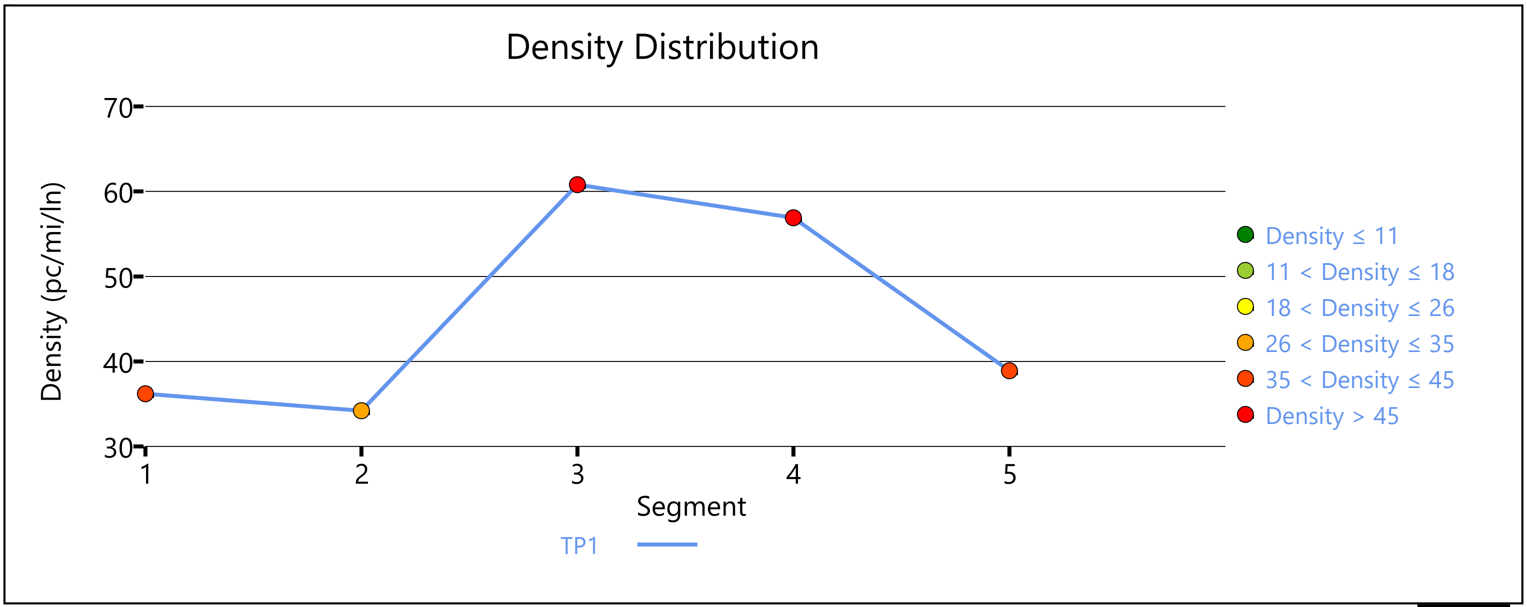
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 5. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
Volume (pc/h)
4500
4000
3500
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
70
60
50
40
30
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
70
60
50
40
30
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1869	7098	0.26	66.6	9.4	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.962	1869	1032	7200	4000	0.26	0.26	62.6	58.0	10.0	13.4	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	811	4688	0.17	64.3	6.3	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.991	1040	229	4800	1900	0.22	0.12	65.5	65.5	7.9	8.9	A

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	1.000	1136	84	4800	2000	0.24	0.04	66.1	66.1	8.6	9.4	A

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1142	4688	0.24	64.4	8.9	A

Facility Time Period Results

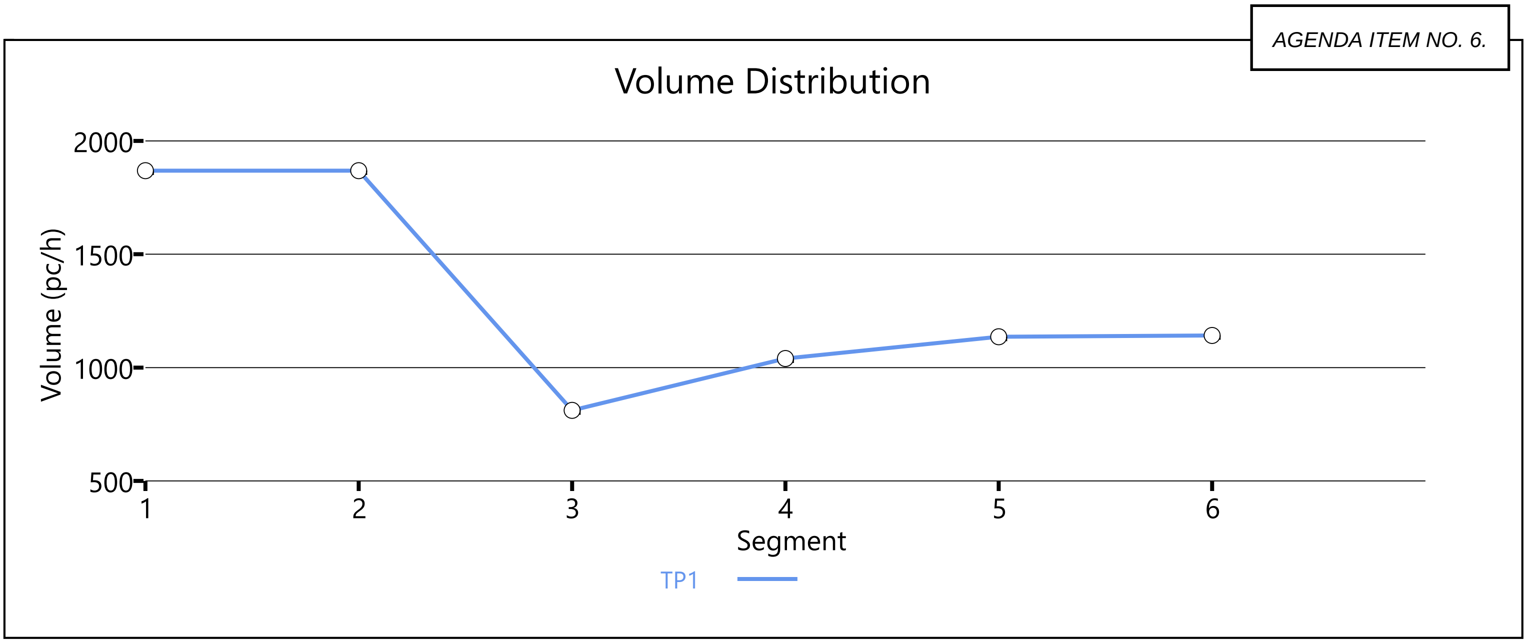
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.7	8.5	8.0	1.20	A

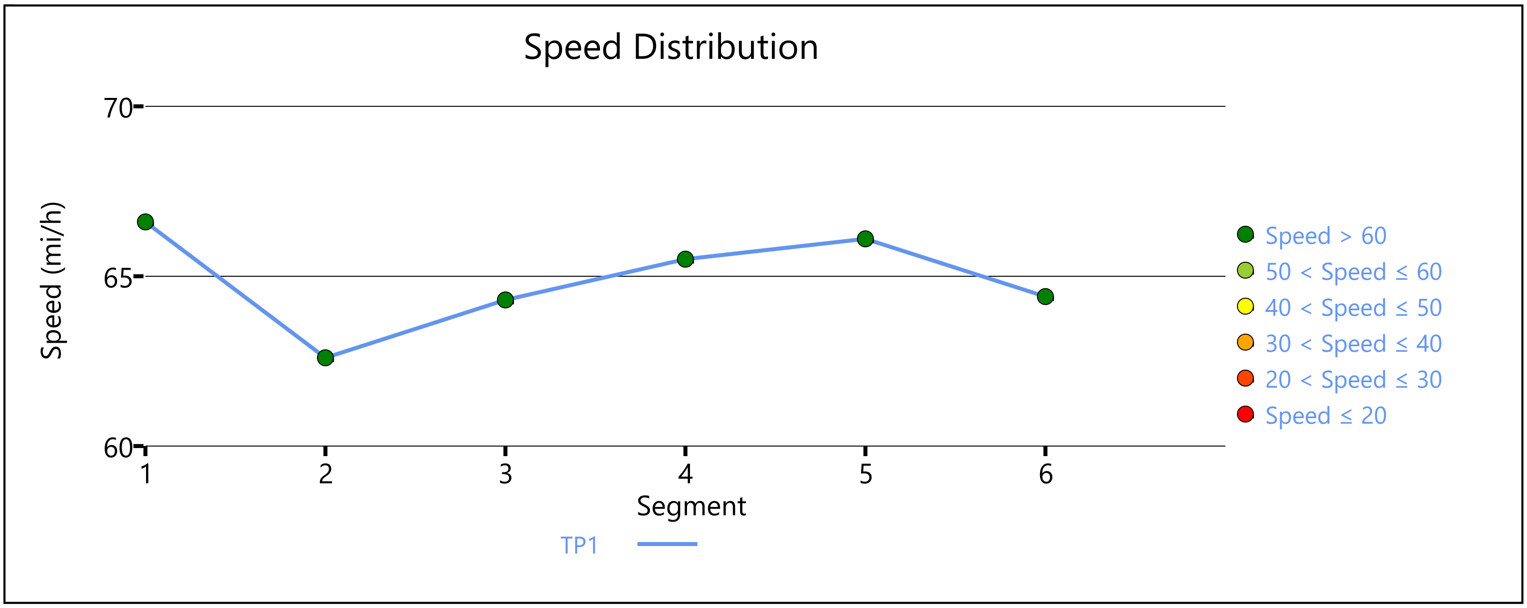
Facility Overall Results

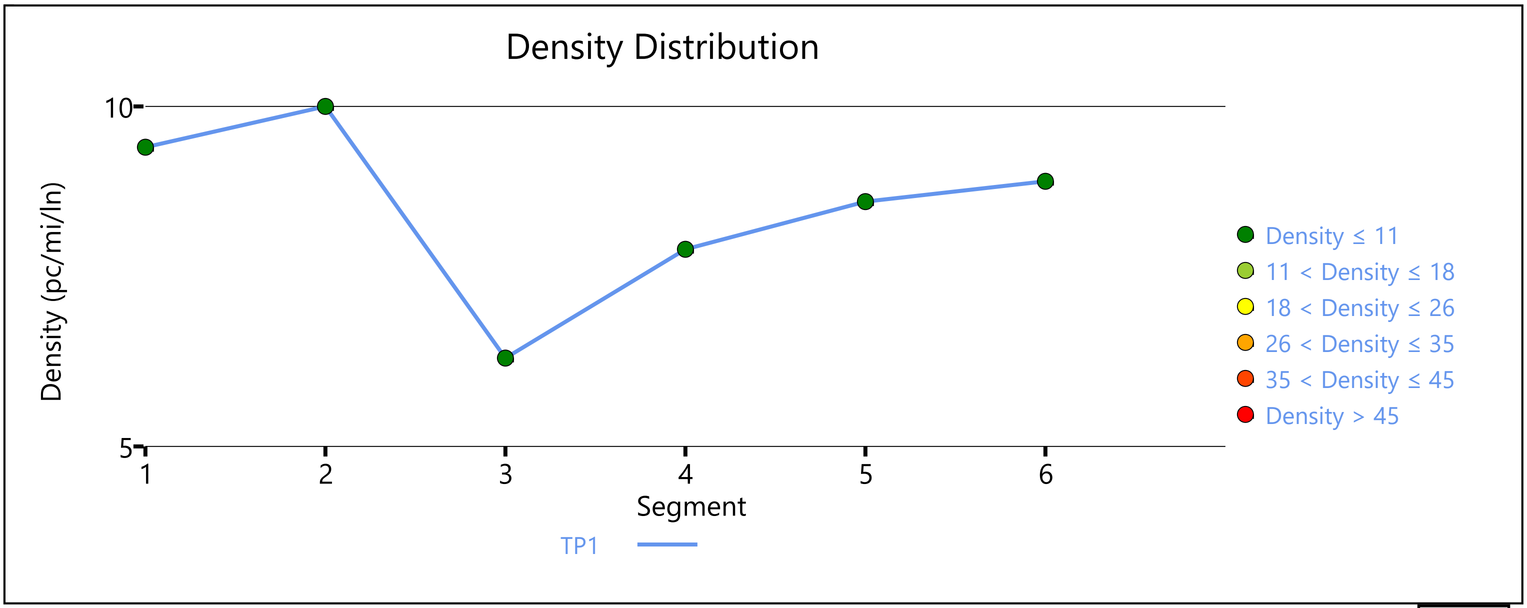
Space Mean Speed, mi/h	64.7	Density, veh/mi/ln	8.0
Average Travel Time, min	1.20	Density, pc/mi/ln	8.5

Messages

Comments


Volume Distribution
Volume (pc/h)
2000
1500
1000
500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
10
5
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4382	4716	0.93	56.5	38.8	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4382	850	4800	2000	0.91	0.43	58.5	58.5	37.5	38.2	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3481	4672	0.75	62.4	27.9	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4106	625	4800	2000	0.86	0.31	58.0	58.0	35.4	33.9	D

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	4666	532	7200	2000	0.65	0.27	71.8	-	21.7	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4691	7008	0.67	63.4	24.7	C

Facility Time Period Results

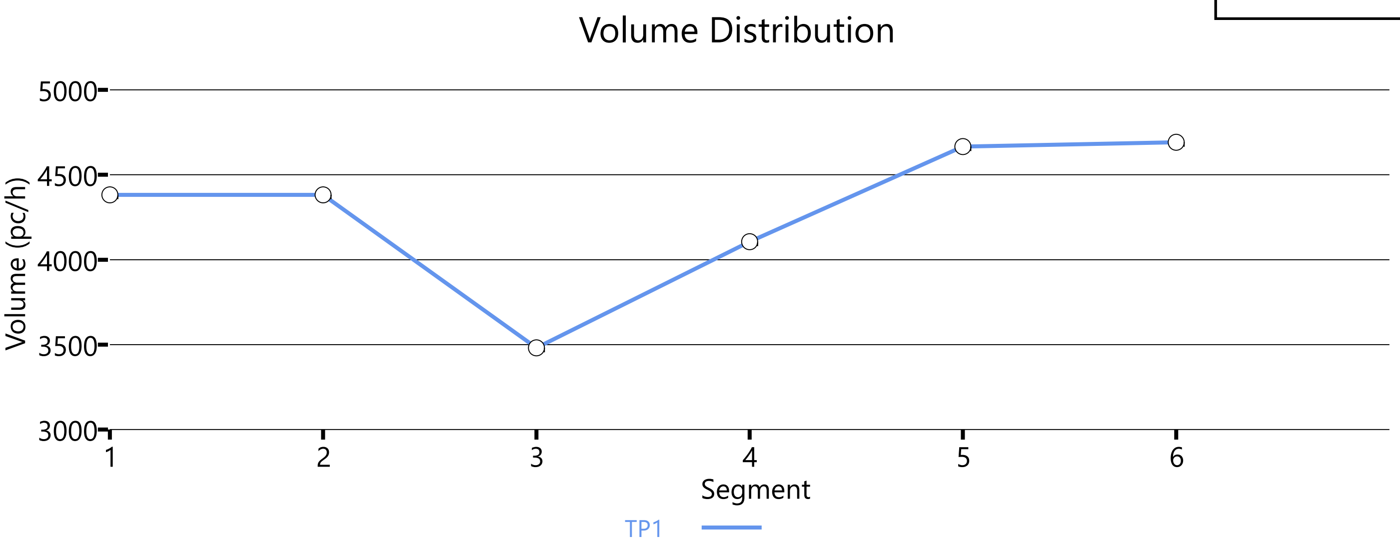
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	62.2	29.3	27.5	1.30	D

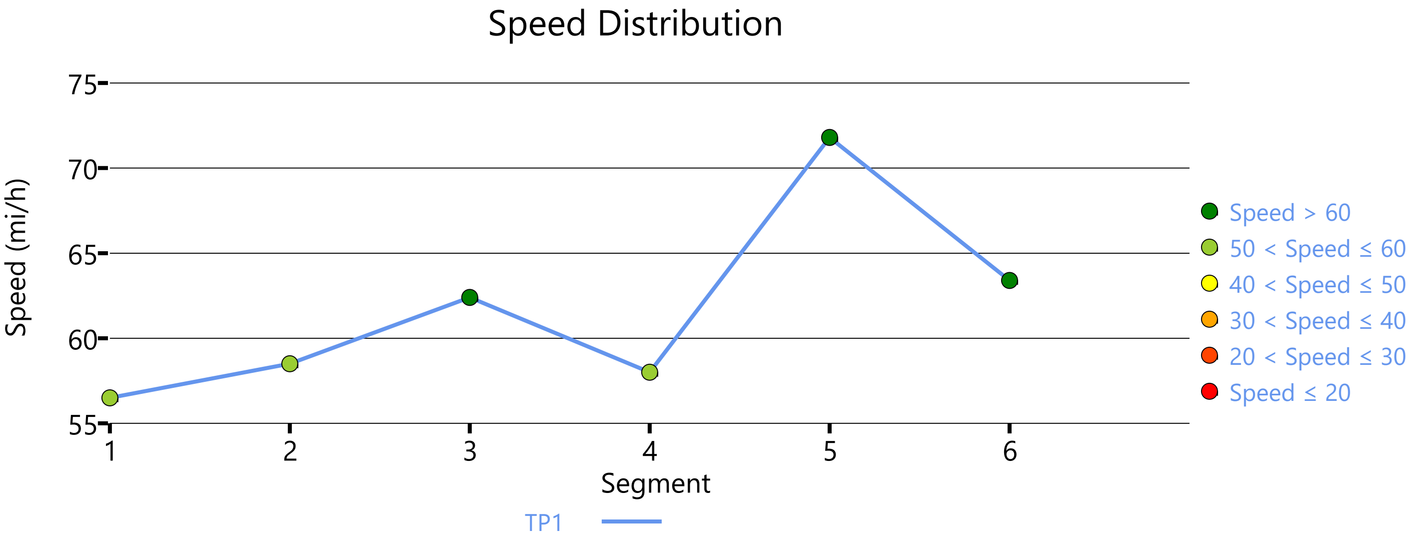
Facility Overall Results

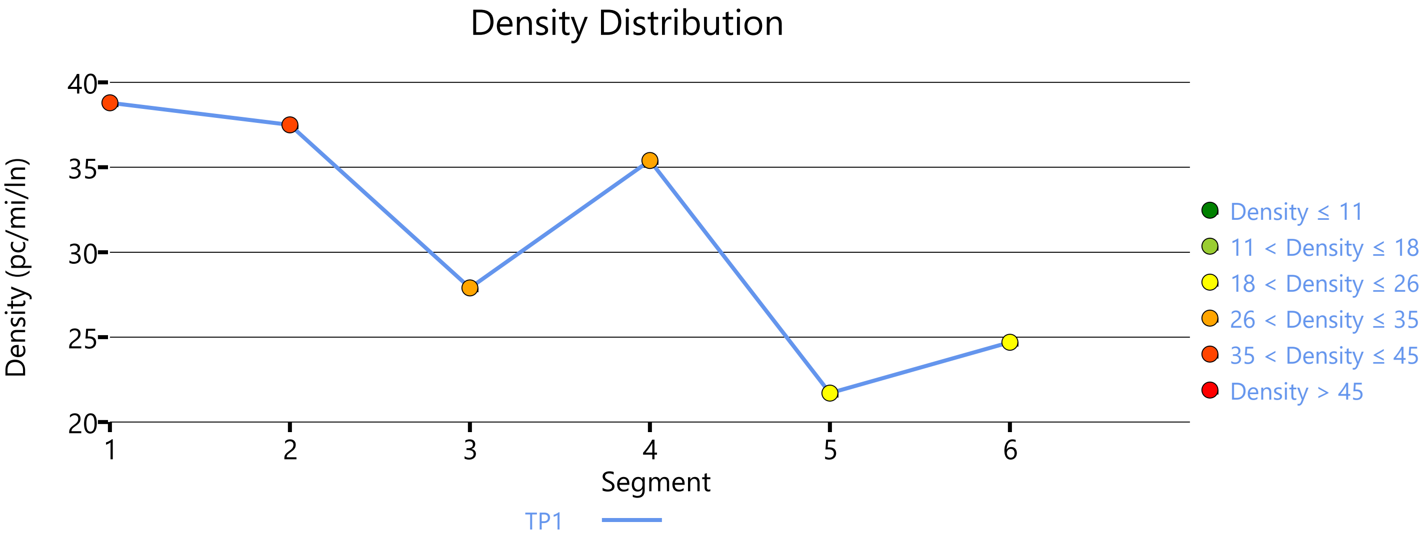
Space Mean Speed, mi/h	62.2	Density, veh/mi/ln	27.5
Average Travel Time, min	1.30	Density, pc/mi/ln	29.3

Messages

Comments


Volume Distribution


Speed Distribution


Density Distribution

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5011	7098	0.71	65.1	25.7	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.990	5011	1262	7200	4000	0.70	0.32	64.5	57.3	25.9	26.6	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3679	4688	0.78	61.9	29.7	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	4066	387	4800	1900	0.85	0.20	58.3	58.3	34.9	32.4	D

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4284	197	4800	2000	0.89	0.10	57.1	57.1	37.5	33.9	D

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4296	4688	0.92	56.8	37.8	E

Facility Time Period Results

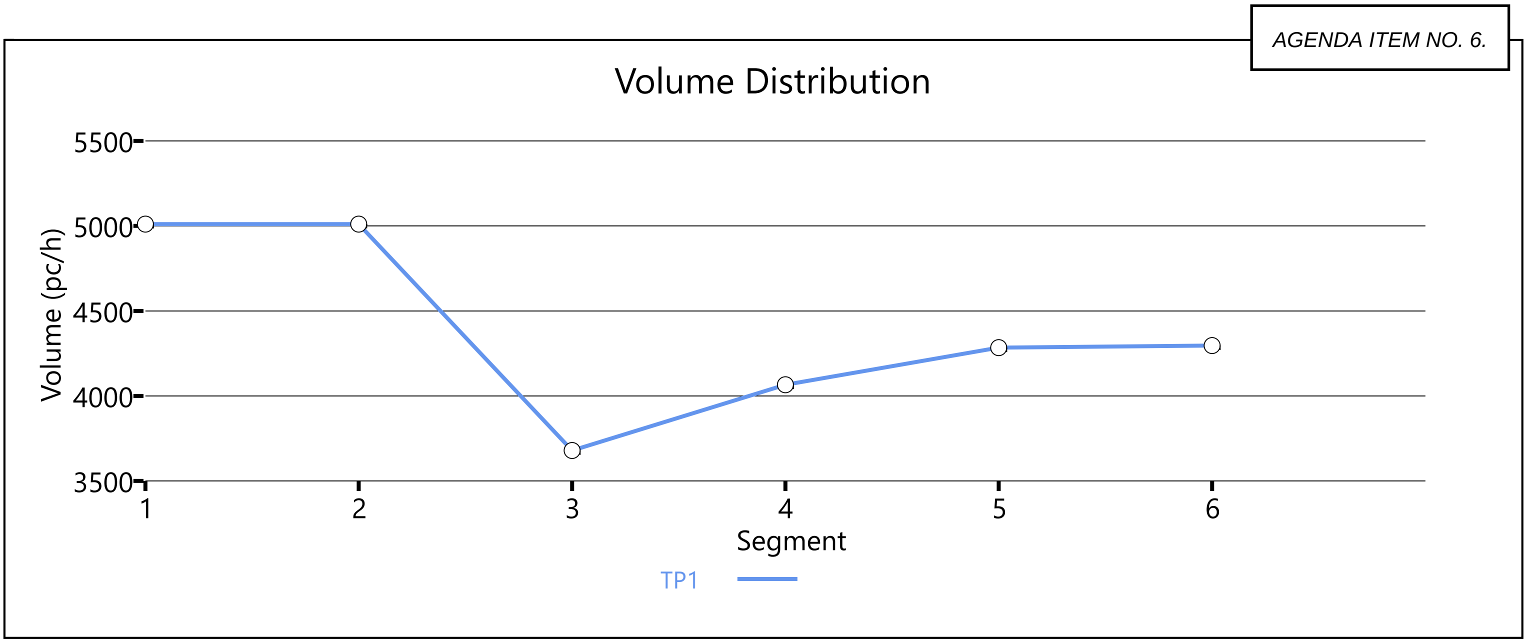
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	61.2	30.2	28.4	1.30	D

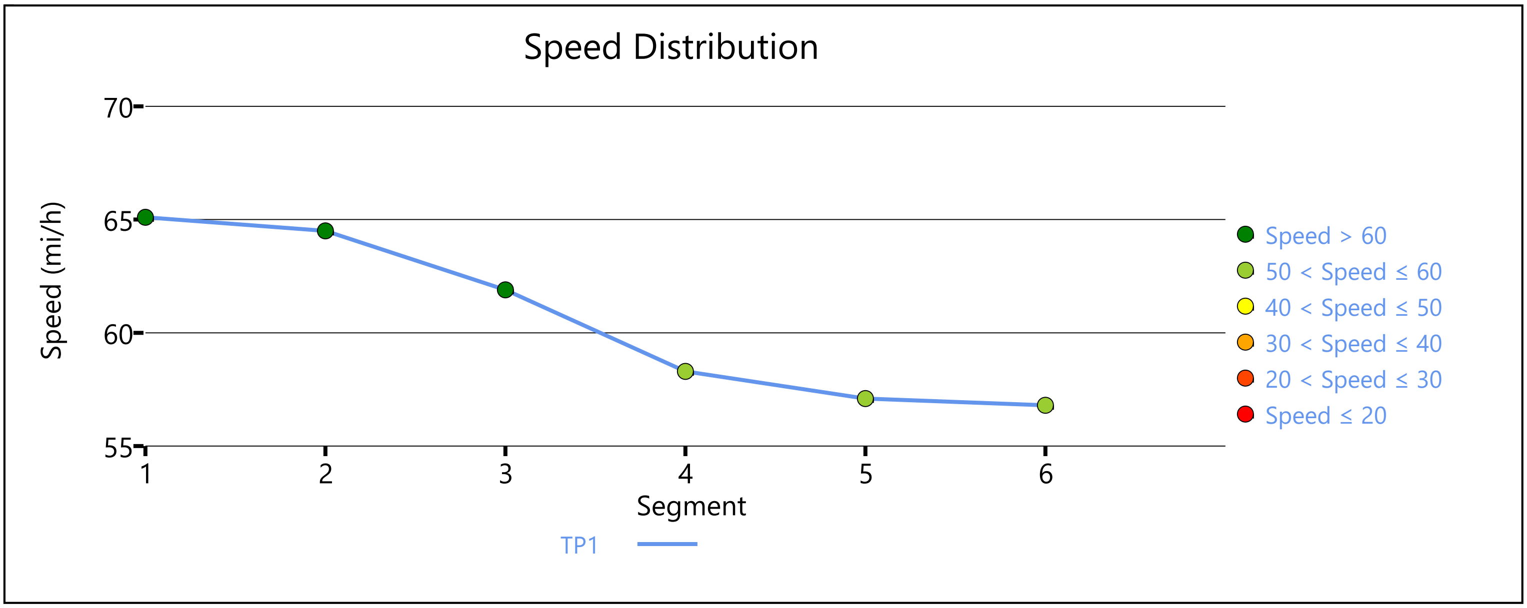
Facility Overall Results

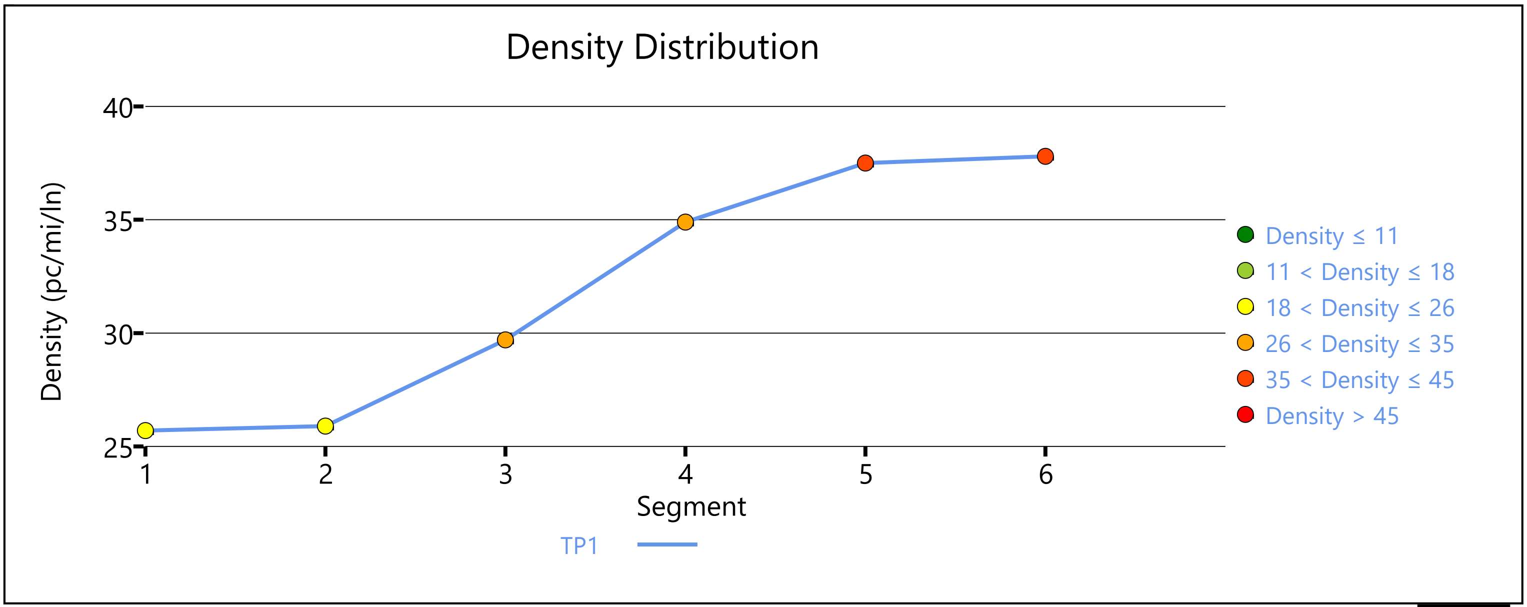
Space Mean Speed, mi/h	61.2	Density, veh/mi/ln	28.4
Average Travel Time, min	1.30	Density, pc/mi/ln	30.2

Messages

Comments


Volume Distribution
Volume (pc/h)
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
55
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4451	4716	1.01	41.9	53.1	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4406	436	4800	2000	0.99	0.22	40.6	59.8	54.2	41.5	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3887	4672	0.92	29.4	66.1	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.985	4470	583	4800	2000	1.02	0.29	54.6	54.6	40.9	36.8	F

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	5039	569	7200	2000	0.76	0.28	65.3	-	25.7	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5039	7008	0.79	62.8	26.7	D

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	45.2	43.0	40.4	1.90	F

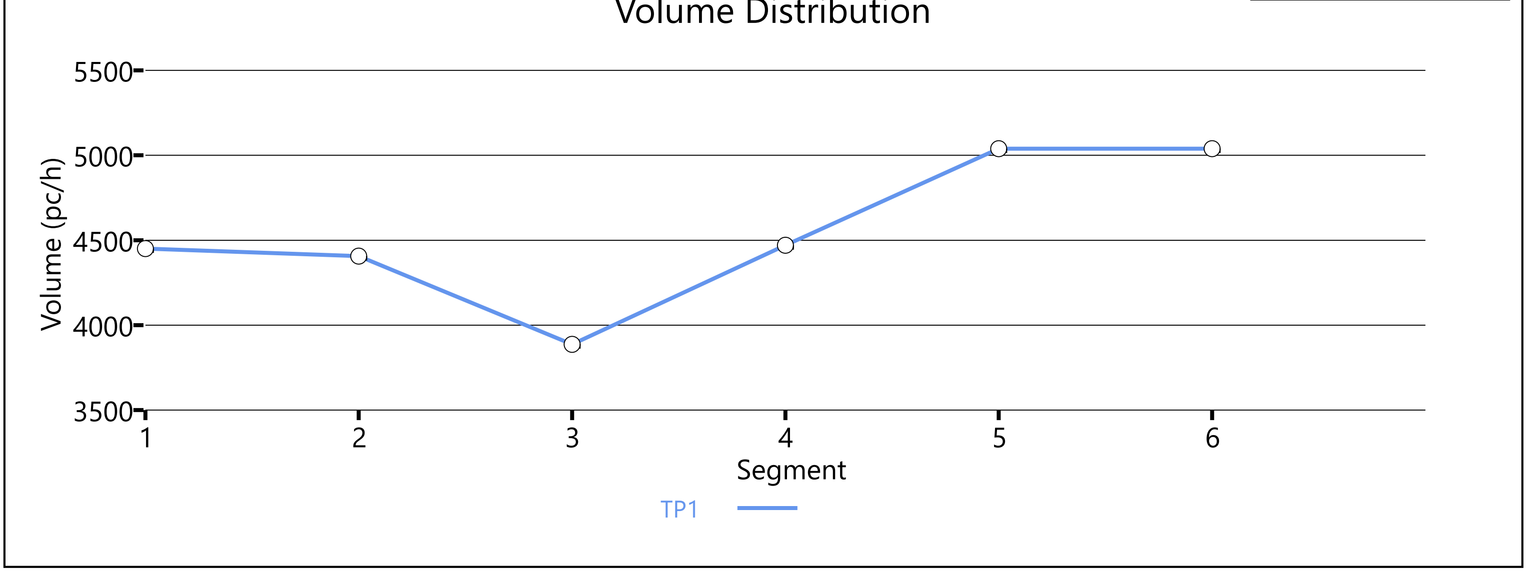
Facility Overall Results

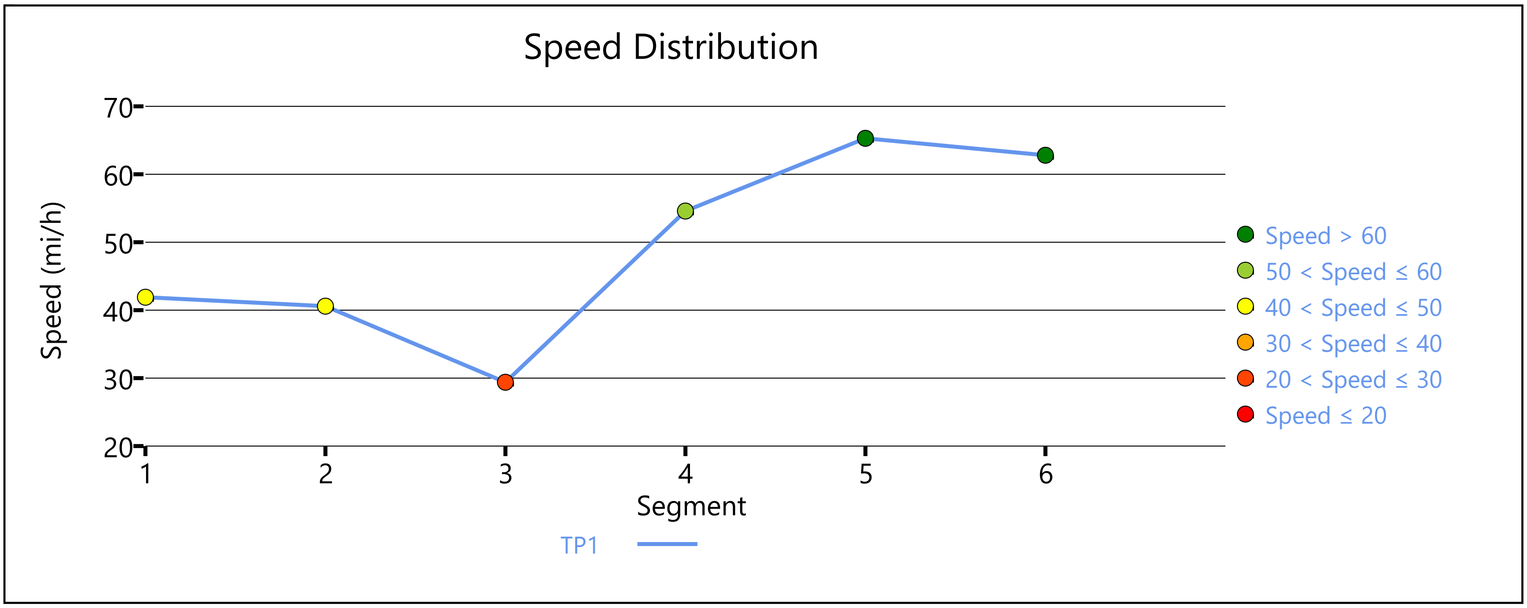
Space Mean Speed, mi/h	45.2	Density, veh/mi/ln	40.4
Average Travel Time, min	1.90	Density, pc/mi/ln	43.0

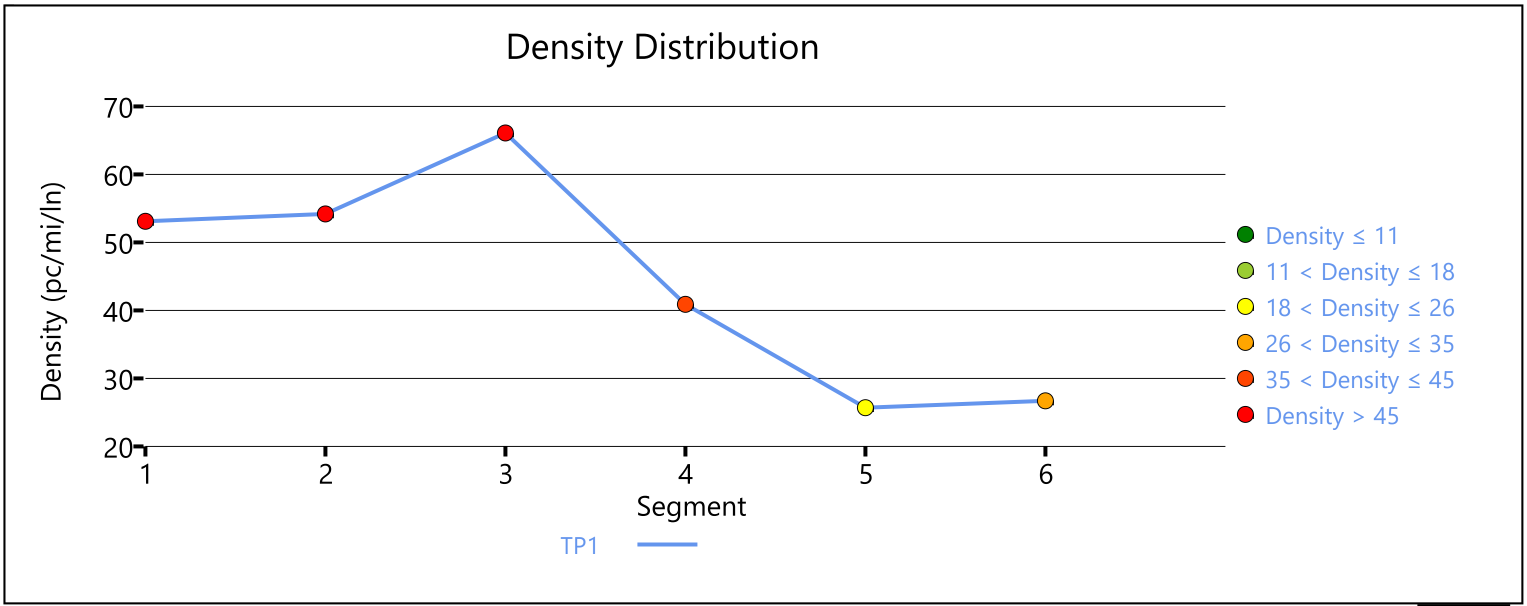
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
Volume (pc/h)
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
60
50
40
30
20
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
70
60
50
40
30
20
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1903	7098	0.27	66.6	9.5	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.962	1903	1053	7200	4000	0.26	0.26	62.5	57.9	10.1	13.6	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	823	4688	0.18	64.3	6.4	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.991	1052	229	4800	1900	0.22	0.12	65.5	65.5	8.0	9.0	A

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	1.000	1149	84	4800	2000	0.24	0.04	66.1	66.1	8.7	9.5	A

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1155	4688	0.25	64.4	9.0	A

Facility Time Period Results

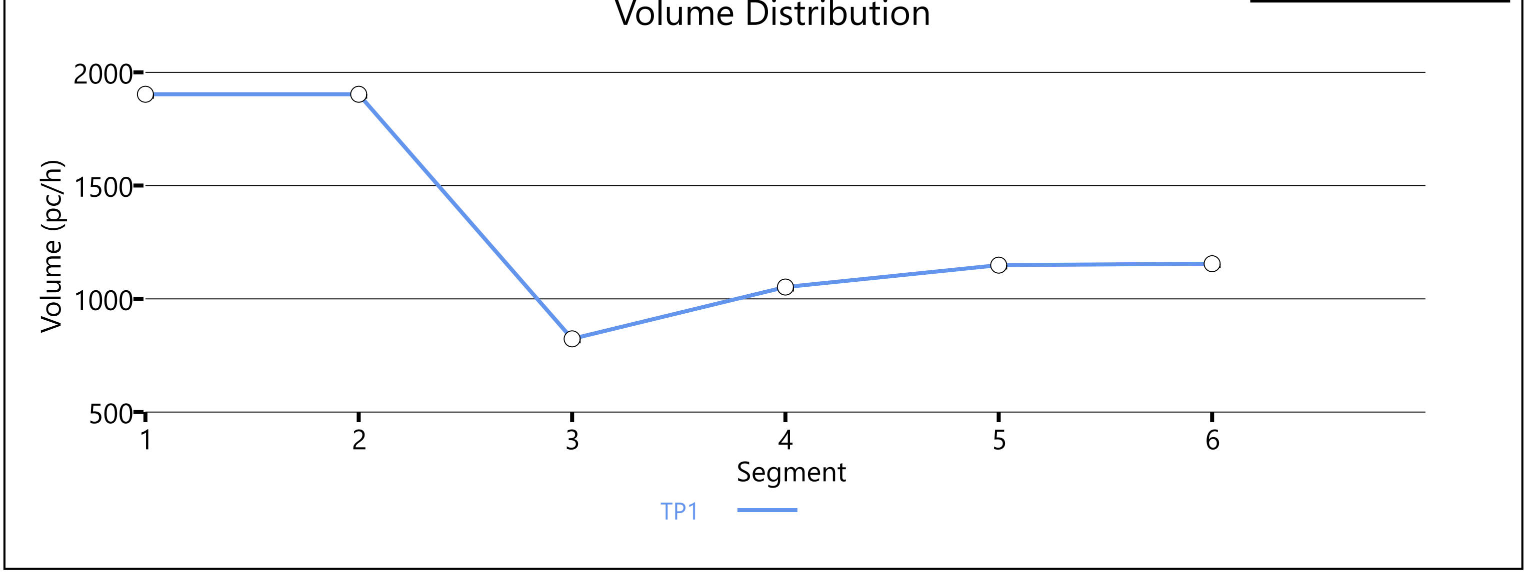
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.6	8.6	8.1	1.20	A

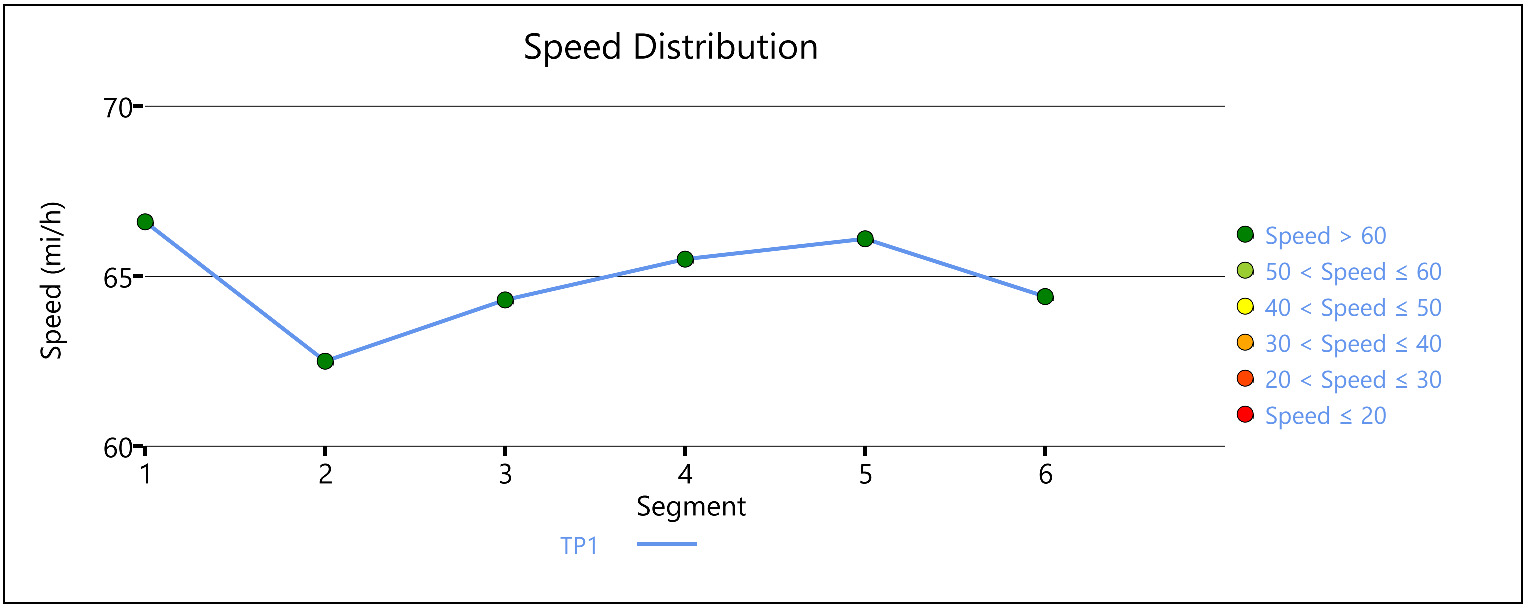
Facility Overall Results

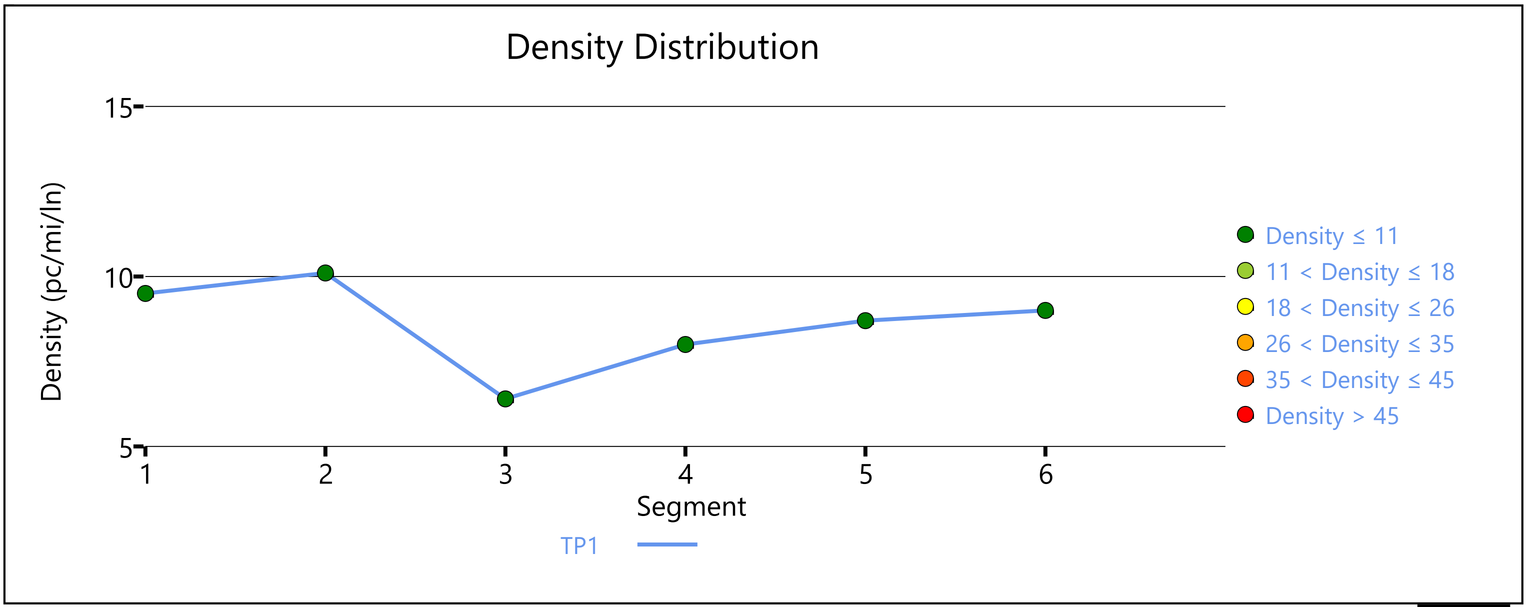
Space Mean Speed, mi/h	64.6	Density, veh/mi/ln	8.1
Average Travel Time, min	1.20	Density, pc/mi/ln	8.6

Messages

Comments


Volume Distribution


Speed Distribution


Density Distribution

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Existing (2022) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4382	4716	0.93	56.5	38.8	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4382	850	4800	2000	0.91	0.43	58.5	58.5	37.5	38.2	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3481	4672	0.75	62.4	27.9	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4198	717	4800	2000	0.87	0.36	57.3	57.3	36.6	34.6	D

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	4762	532	7200	2000	0.66	0.27	71.4	-	22.2	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4787	7008	0.68	63.3	25.2	C

Facility Time Period Results

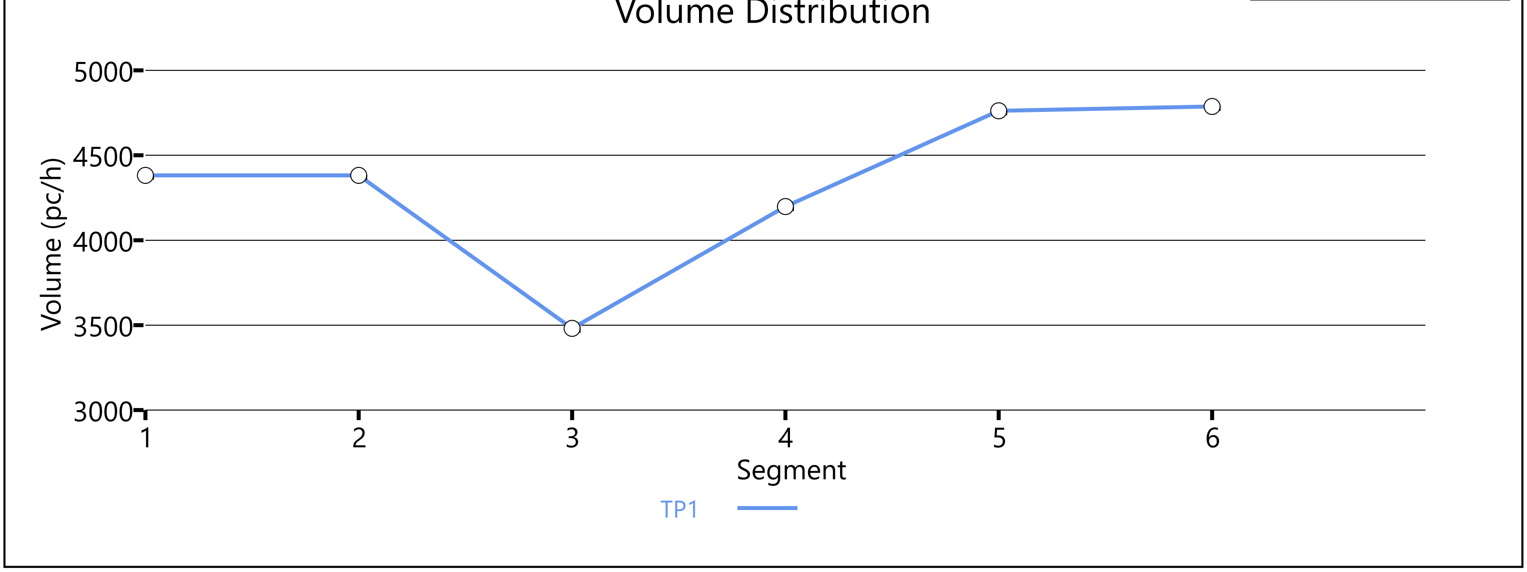
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	62.0	29.7	27.9	1.40	D

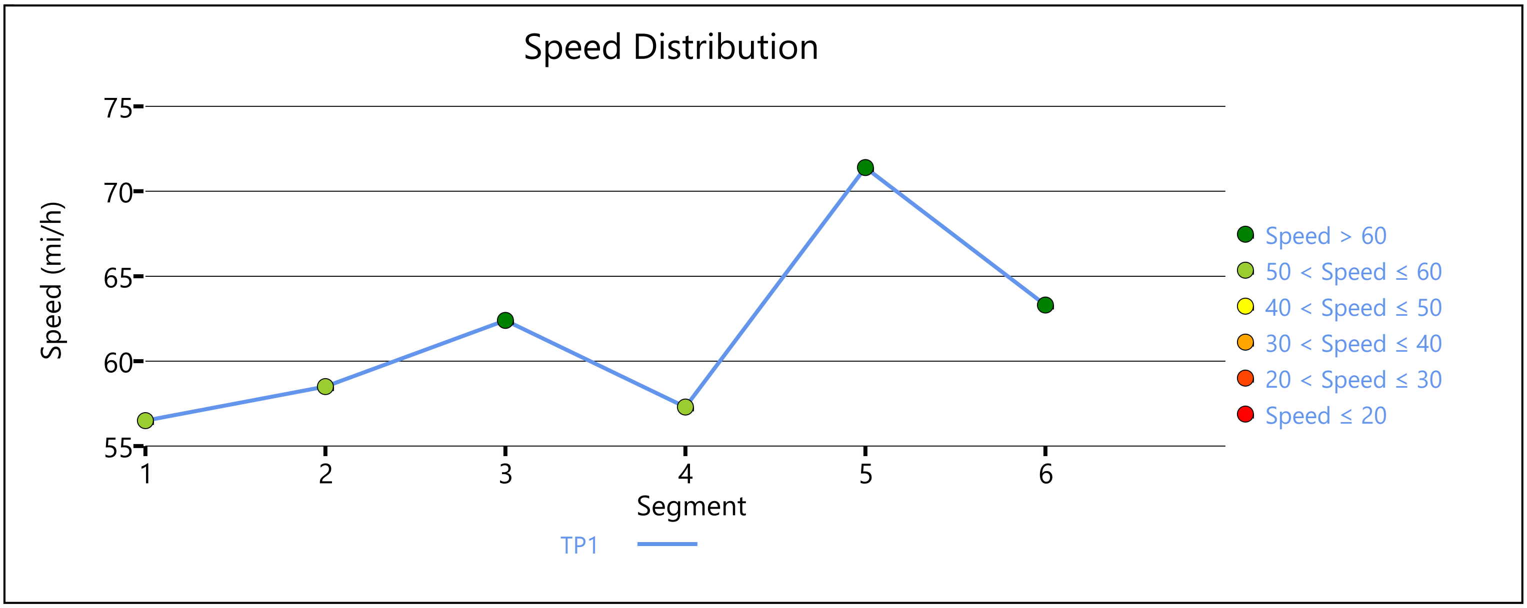
Facility Overall Results

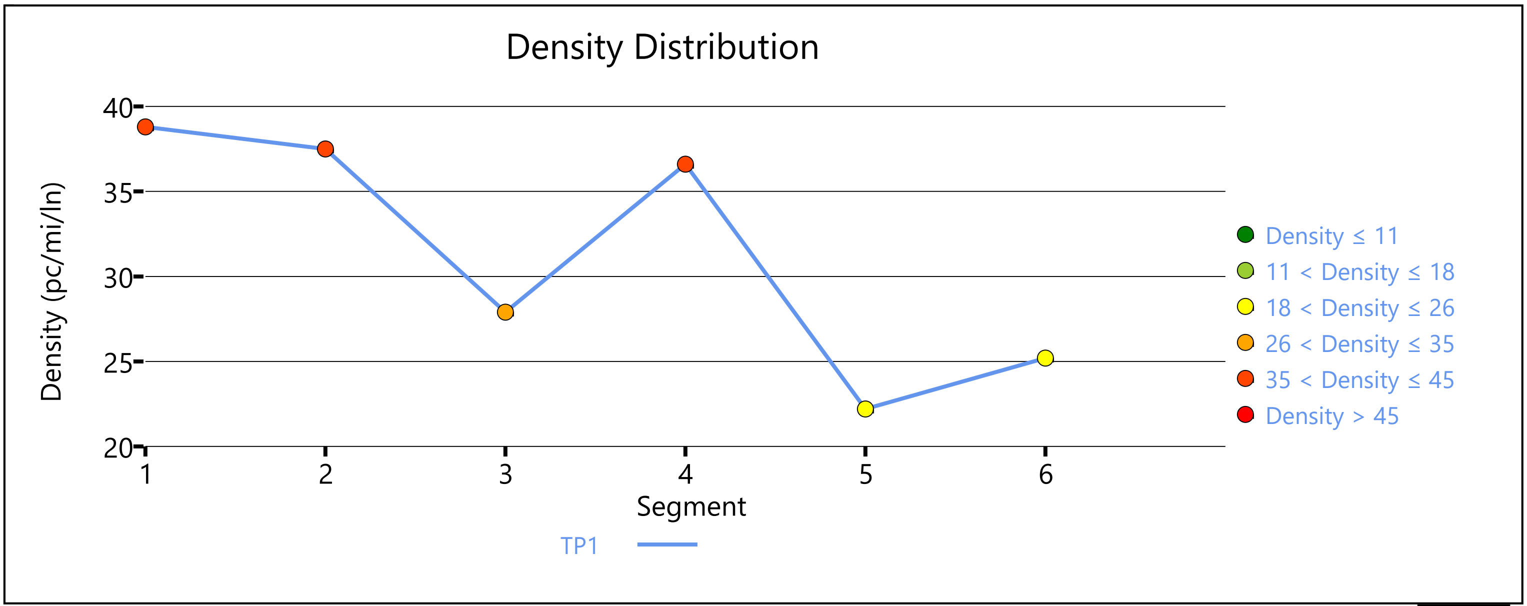
Space Mean Speed, mi/h	62.0	Density, veh/mi/ln	27.9
Average Travel Time, min	1.40	Density, pc/mi/ln	29.7

Messages

Comments


Volume Distribution
Volume (pc/h)
5000
4500
4000
3500
3000
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
75
70
65
60
55
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
20
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Existing (2022) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5121	7098	0.72	64.8	26.3	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.990	5121	1327	7200	4000	0.71	0.33	64.2	57.1	26.6	27.4	C

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3720	4688	0.79	61.6	30.2	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	4107	387	4800	1900	0.86	0.20	58.0	58.0	35.4	32.7	D

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4325	197	4800	2000	0.90	0.10	56.7	56.7	38.1	34.2	D

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4337	4688	0.93	56.3	38.5	E

Facility Time Period Results

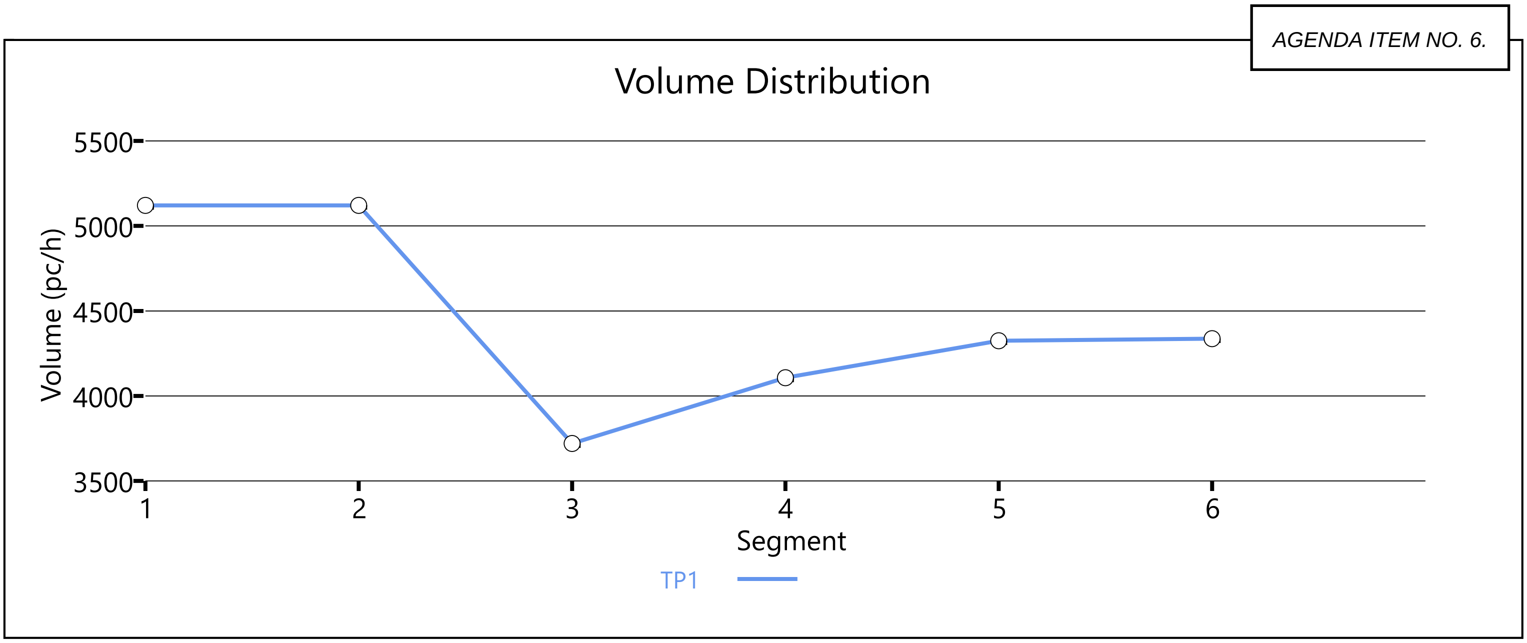
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.9	30.8	28.9	1.30	D

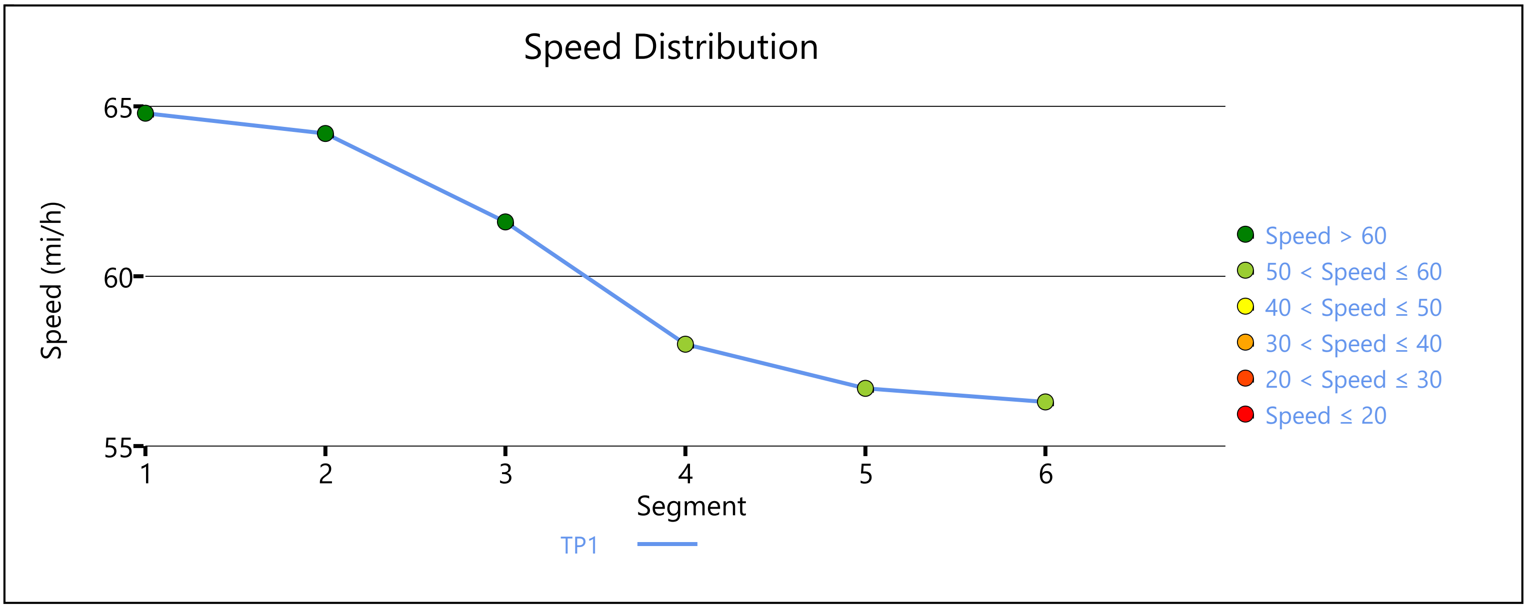
Facility Overall Results

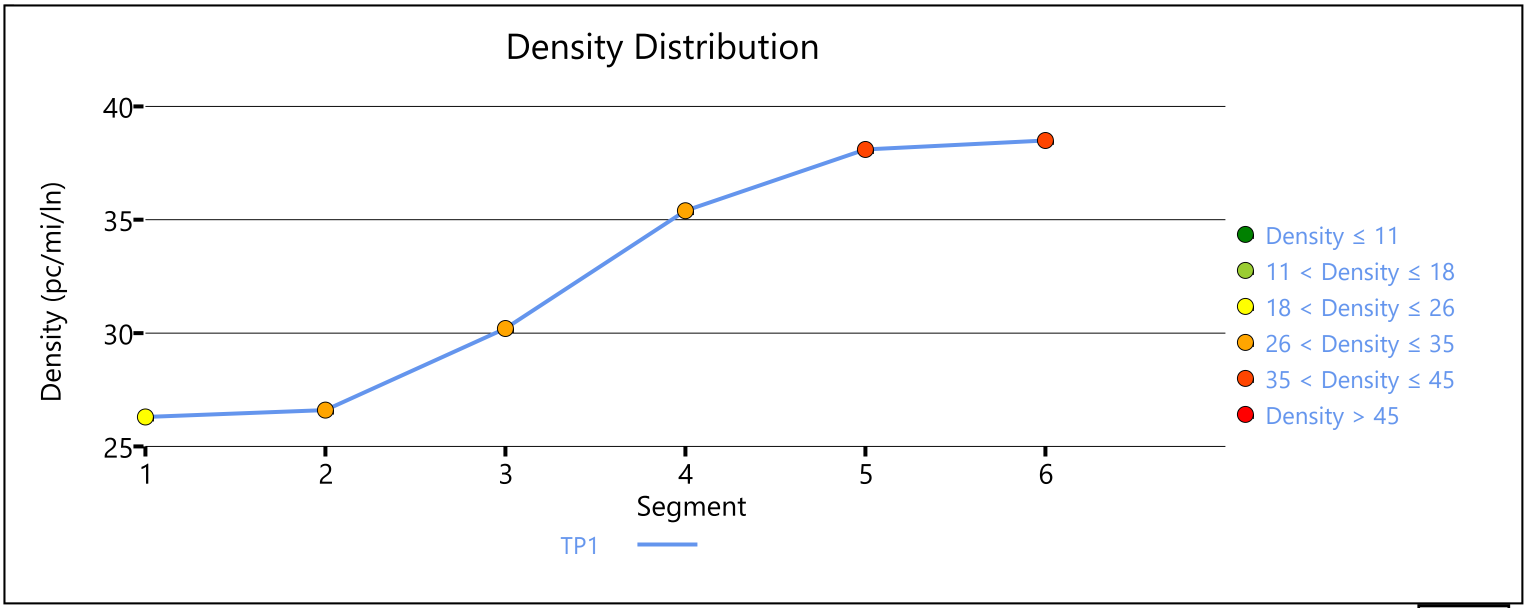
Space Mean Speed, mi/h	60.9	Density, veh/mi/ln	28.9
Average Travel Time, min	1.30	Density, pc/mi/ln	30.8

Messages

Comments


Volume Distribution
Volume (pc/h)
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
65
60
55
1
2
3
4
5
6
Segment
TP1
● Speed > 60
● 50 < Speed ≤ 60
● 40 < Speed ≤ 50
● 30 < Speed ≤ 40
● 20 < Speed ≤ 30
● Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
1
2
3
4
5
6
Segment
TP1
● Density ≤ 11
● 11 < Density ≤ 18
● 18 < Density ≤ 26
● 26 < Density ≤ 35
● 35 < Density ≤ 45
● Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Existing (2022) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4398	4716	1.01	40.1	54.8	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4349	436	4800	2000	0.99	0.22	38.8	59.8	56.1	41.5	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3825	4672	0.92	28.1	68.2	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.985	4470	645	4800	2000	1.03	0.32	54.6	54.6	40.9	36.8	F

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	5039	569	7200	2000	0.77	0.28	65.3	-	25.7	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5039	7008	0.80	62.8	26.7	D

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	44.1	43.9	41.1	1.90	F

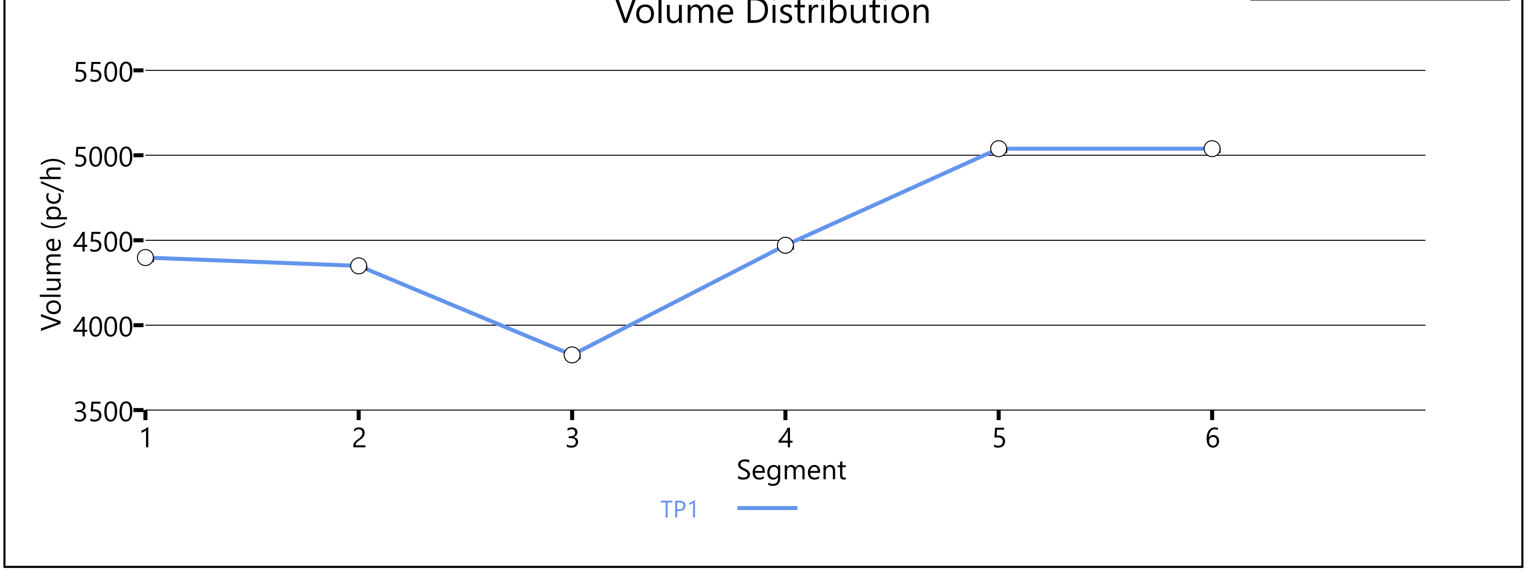
Facility Overall Results

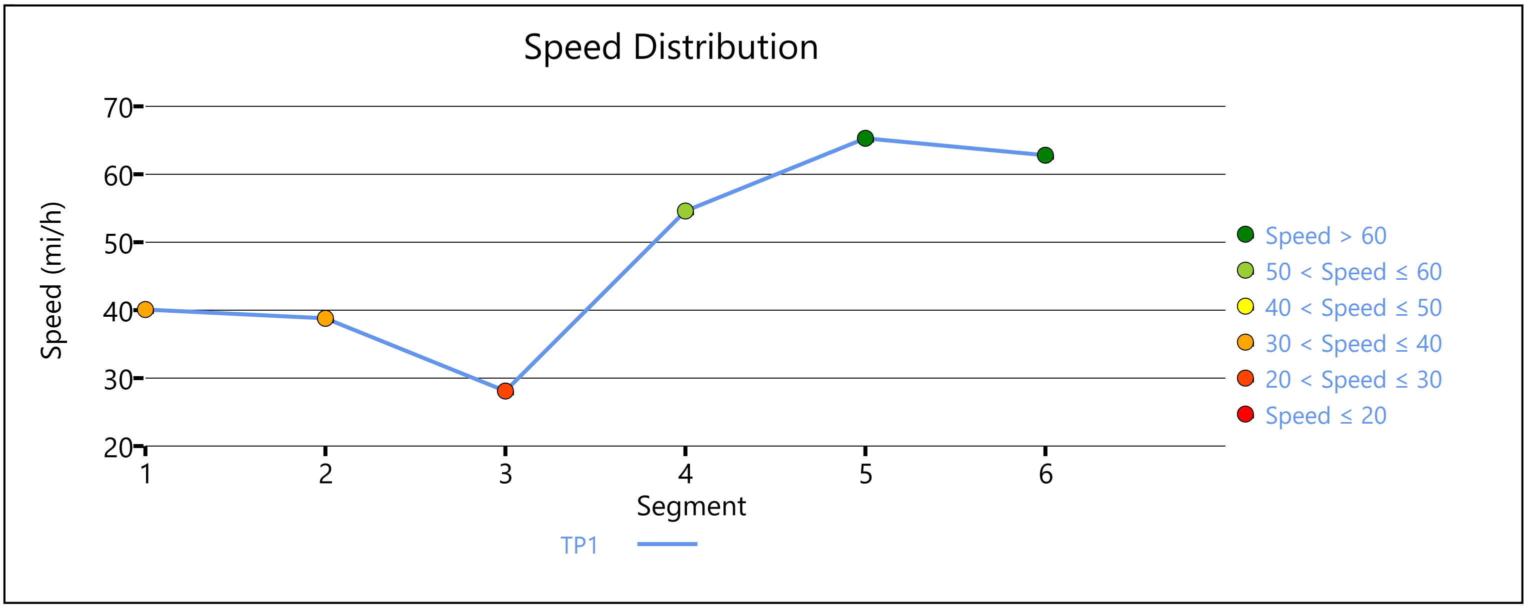
Space Mean Speed, mi/h	44.1	Density, veh/mi/ln	41.1
Average Travel Time, min	1.90	Density, pc/mi/ln	43.9

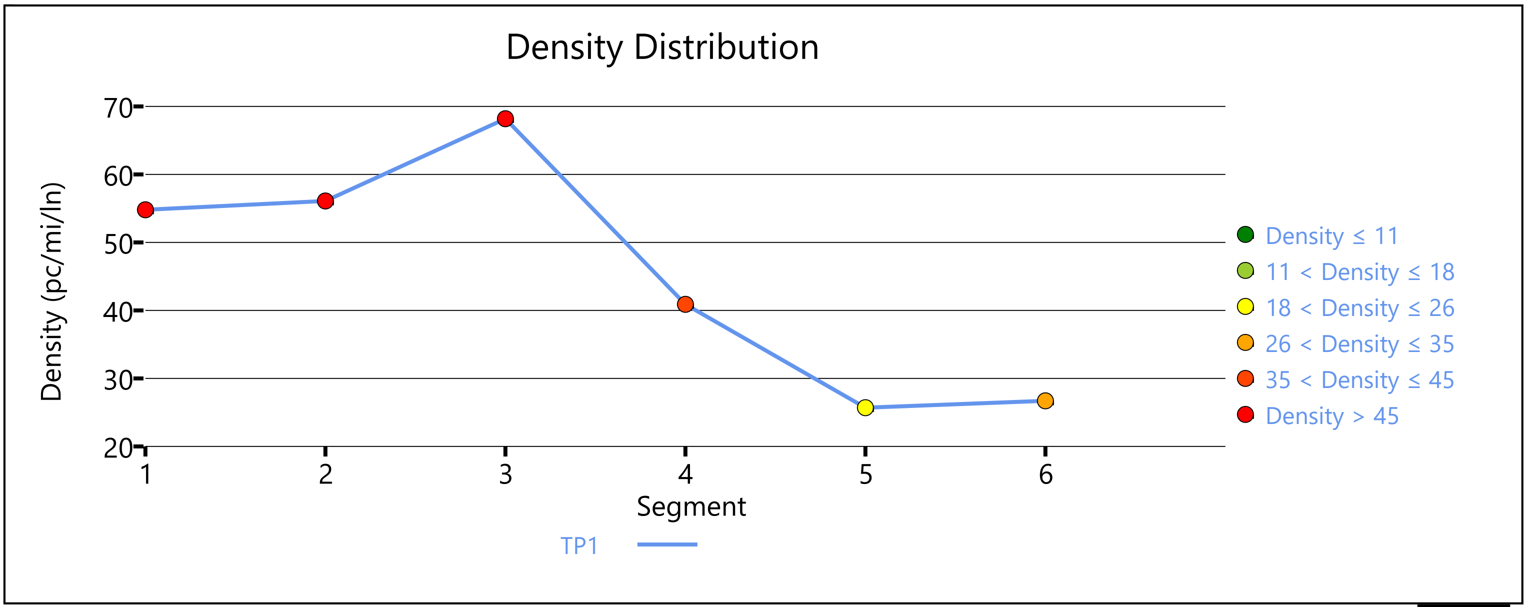
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
Volume (pc/h)
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
60
50
40
30
20
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
70
60
50
40
30
20
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1231	4688	0.26	64.4	9.6	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.971	1231	532	7200	4000	0.17	0.13	65.2	59.5	6.3	0.0	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	679	4702	0.14	65.1	5.2	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	798	119	4800	2000	0.17	0.06	66.3	66.3	6.0	6.6	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	804	4702	0.17	65.1	6.2	A

Facility Time Period Results

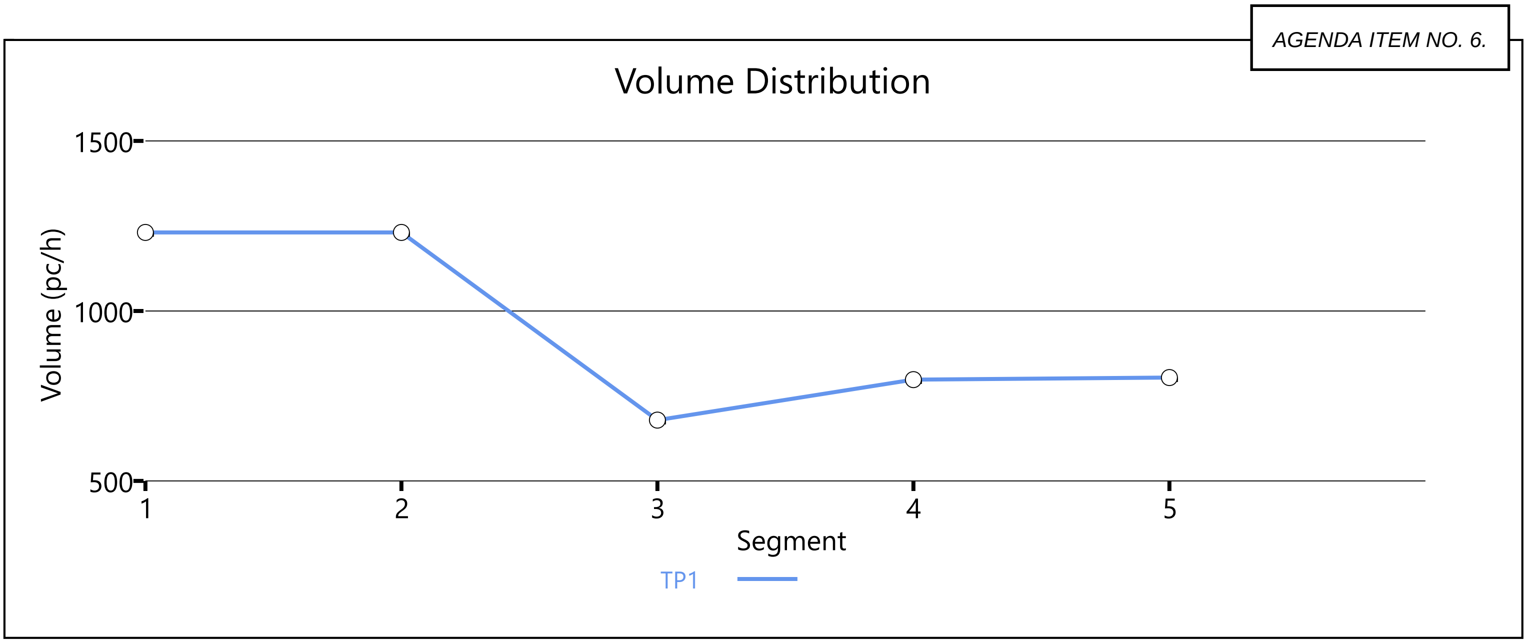
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.4	5.8	5.5	1.00	A

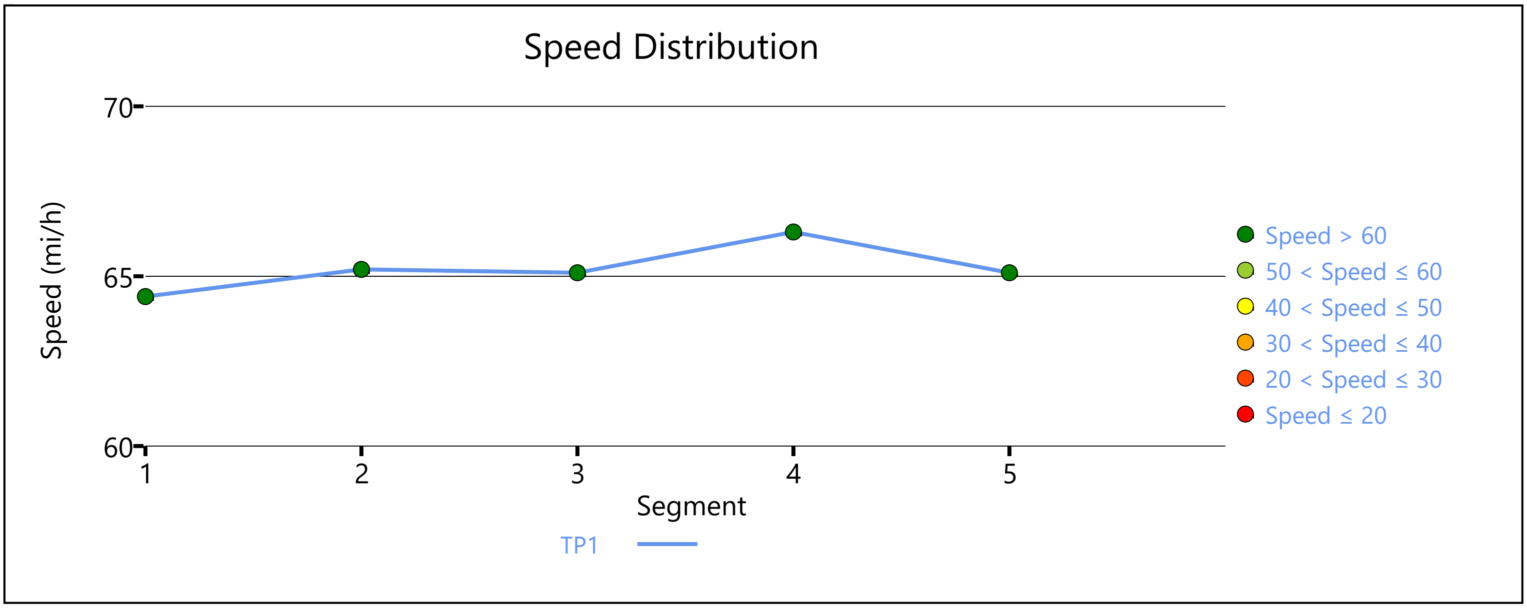
Facility Overall Results

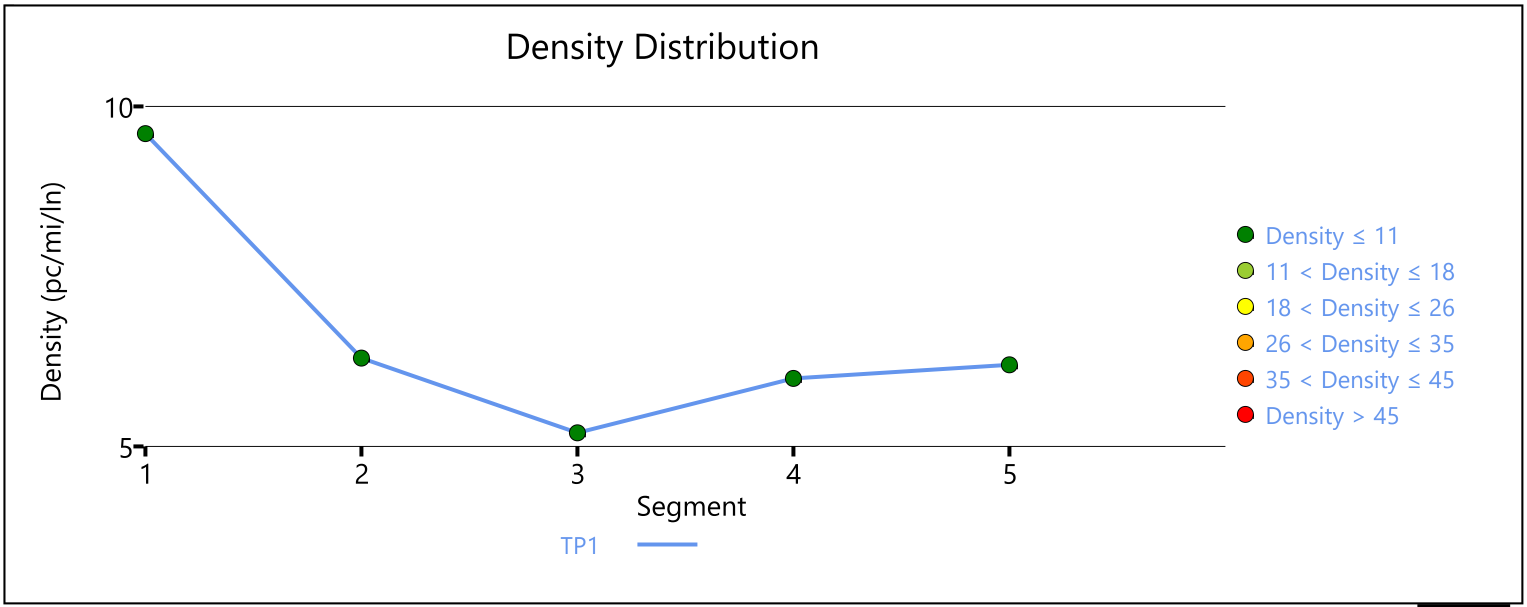
Space Mean Speed, mi/h	65.4	Density, veh/mi/ln	5.5
Average Travel Time, min	1.00	Density, pc/mi/ln	5.8

Messages

Comments


Volume Distribution
1500
1000
500
Volume (pc/h)
1
2
3
4
5
Segment
TP1


Speed Distribution
70
65
60
Speed (mi/h)
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
10
5
Density (pc/mi/ln)
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3685	4716	0.78	62.7	29.4	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.988	3685	179	4800	2000	0.77	0.09	60.6	60.6	30.4	34.5	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3497	4716	0.74	63.8	27.4	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.992	4488	991	4800	2000	0.94	0.50	55.2	55.2	40.7	34.5	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4545	4716	0.96	54.6	41.6	E

Facility Time Period Results

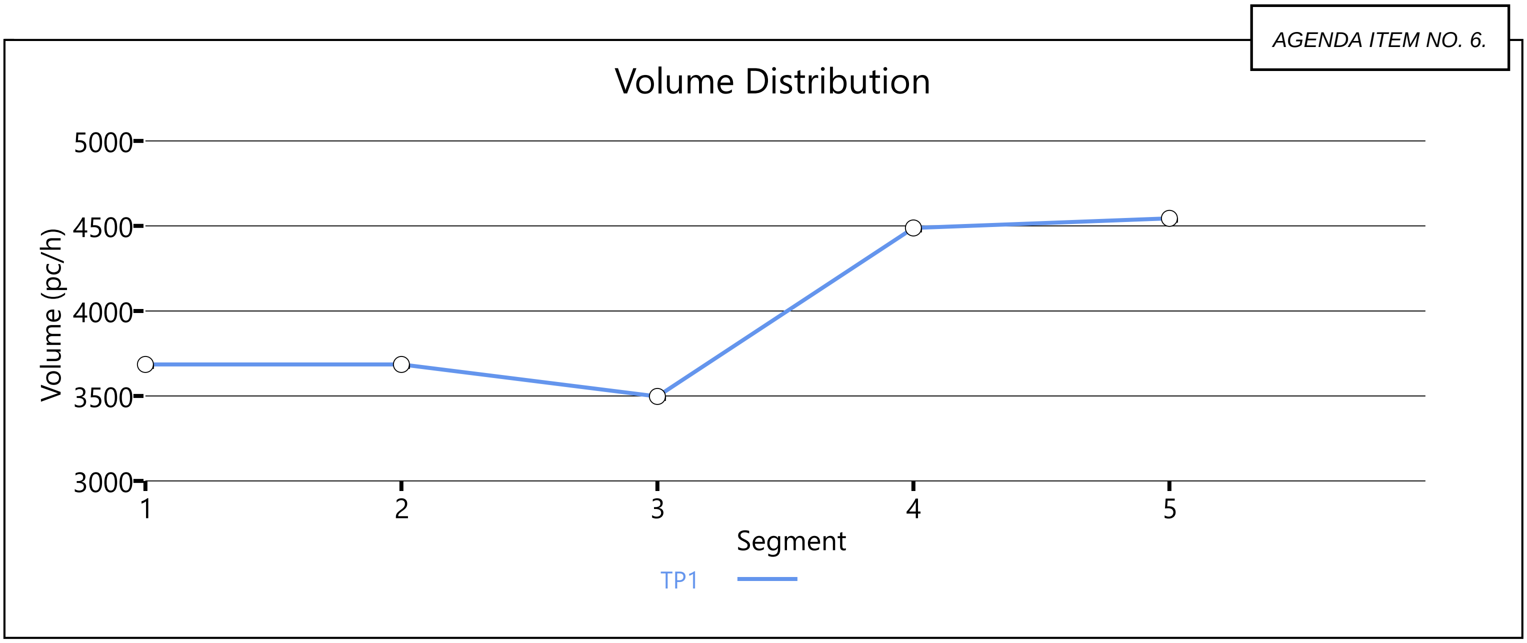
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.1	31.8	29.8	1.30	D

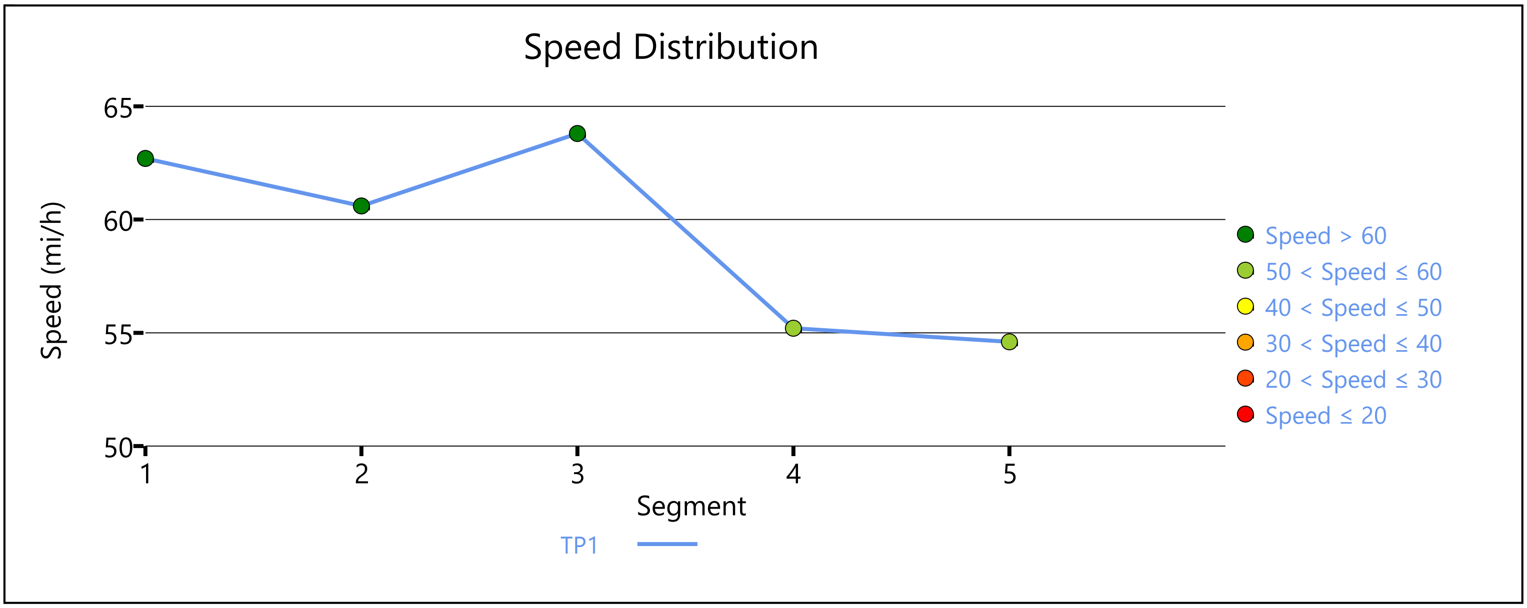
Facility Overall Results

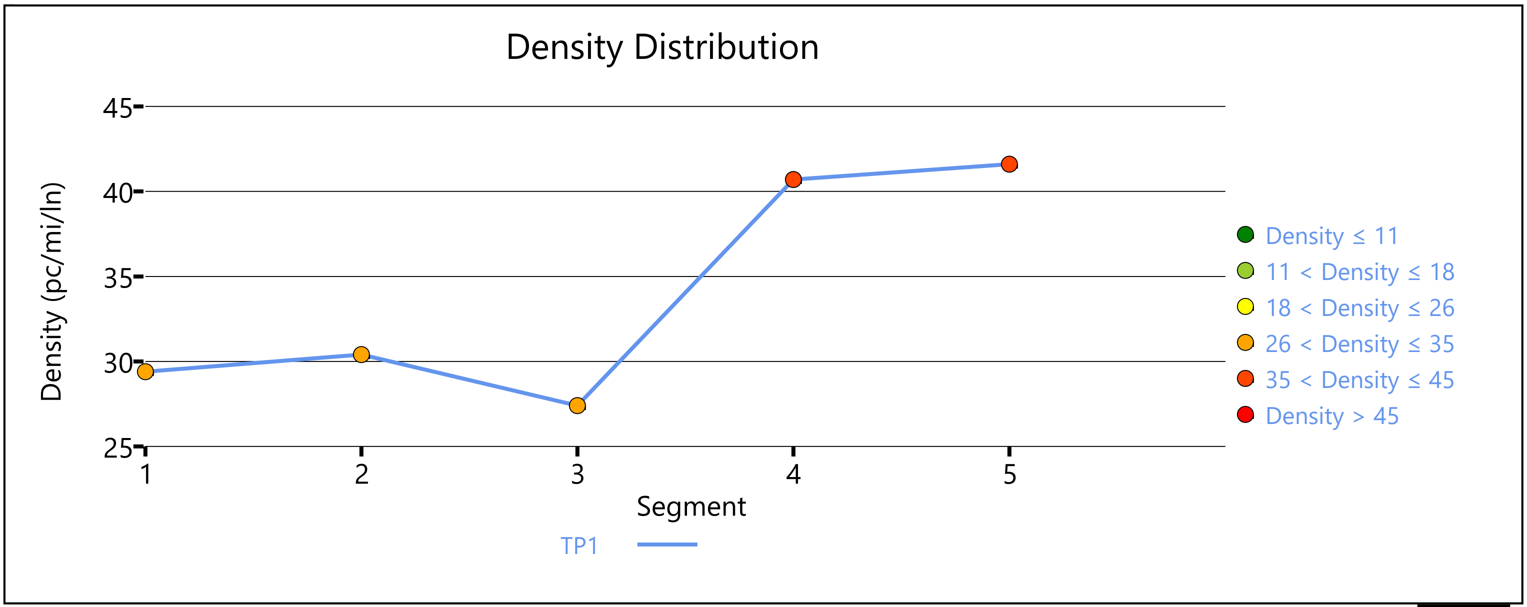
Space Mean Speed, mi/h	60.1	Density, veh/mi/ln	29.8
Average Travel Time, min	1.30	Density, pc/mi/ln	31.8

Messages

Comments


Volume Distribution
Volume (pc/h)
5000
4500
4000
3500
3000
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
65
60
55
50
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
45
40
35
30
25
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4491	4688	0.96	54.6	41.1	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4491	1016	7200	4000	0.62	0.25	65.5	58.1	22.9	12.9	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3429	4702	0.73	63.7	26.9	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.994	3770	341	4800	2000	0.79	0.17	60.9	60.9	31.0	29.7	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	3790	4702	0.81	61.6	30.8	D

Facility Time Period Results

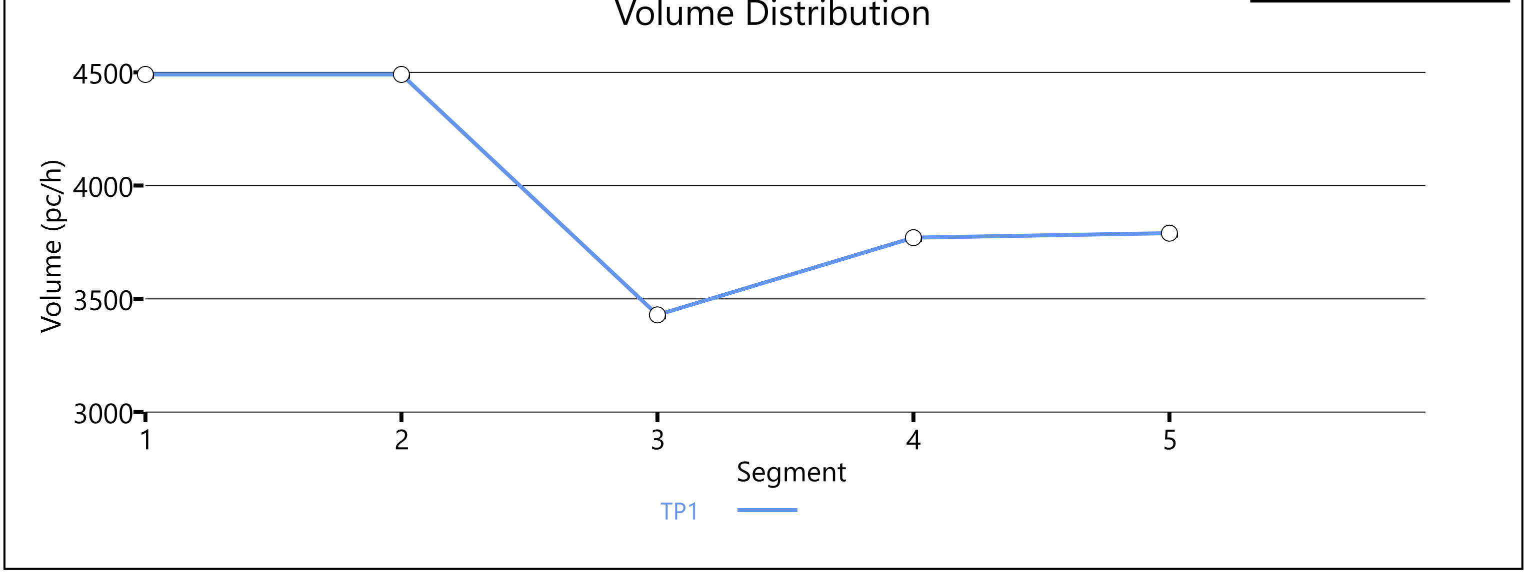
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.2	26.7	25.1	1.10	D

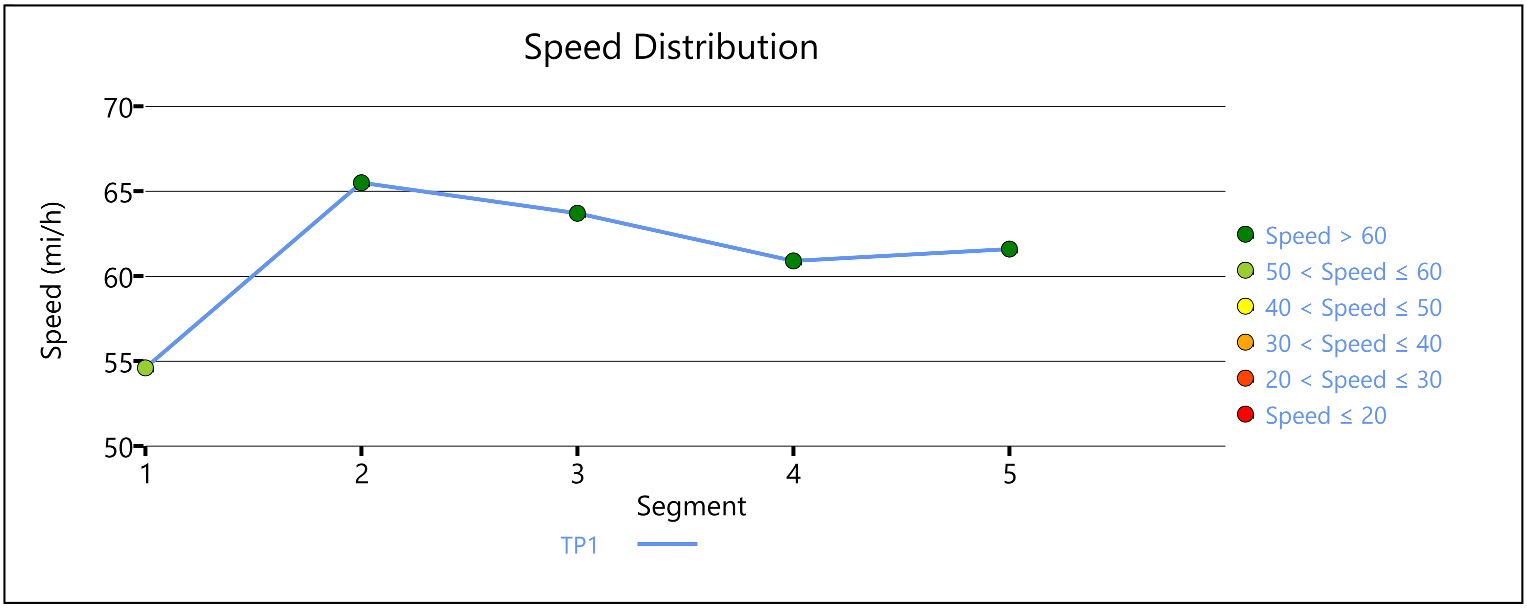
Facility Overall Results

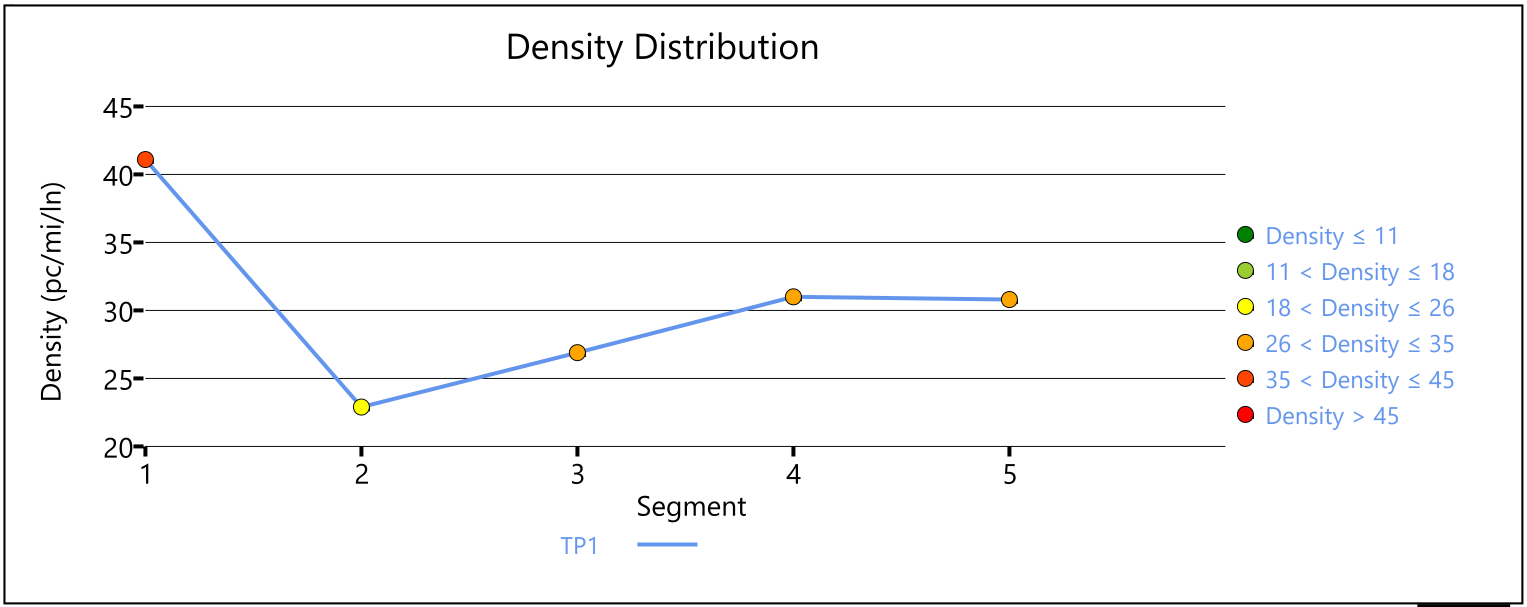
Space Mean Speed, mi/h	63.2	Density, veh/mi/ln	25.1
Average Travel Time, min	1.10	Density, pc/mi/ln	26.7

Messages

Comments


Volume Distribution
4500
4000
3500
3000
Volume (pc/h)
1
2
3
4
5
Segment
TP1


Speed Distribution
70
65
60
55
50
Speed (mi/h)
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
45
40
35
30
25
20
Density (pc/mi/ln)
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4198	4716	0.92	35.8	58.7	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.967	4115	196	4800	2000	0.90	0.10	40.5	60.5	50.8	40.1	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3729	4716	0.88	28.8	64.7	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	4391	691	4800	2000	1.00	0.35	38.5	50.6	57.0	37.3	[illegible]

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4391	4716	1.03	56.4	38.9	F

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	34.6	58.3	54.6	2.30	F

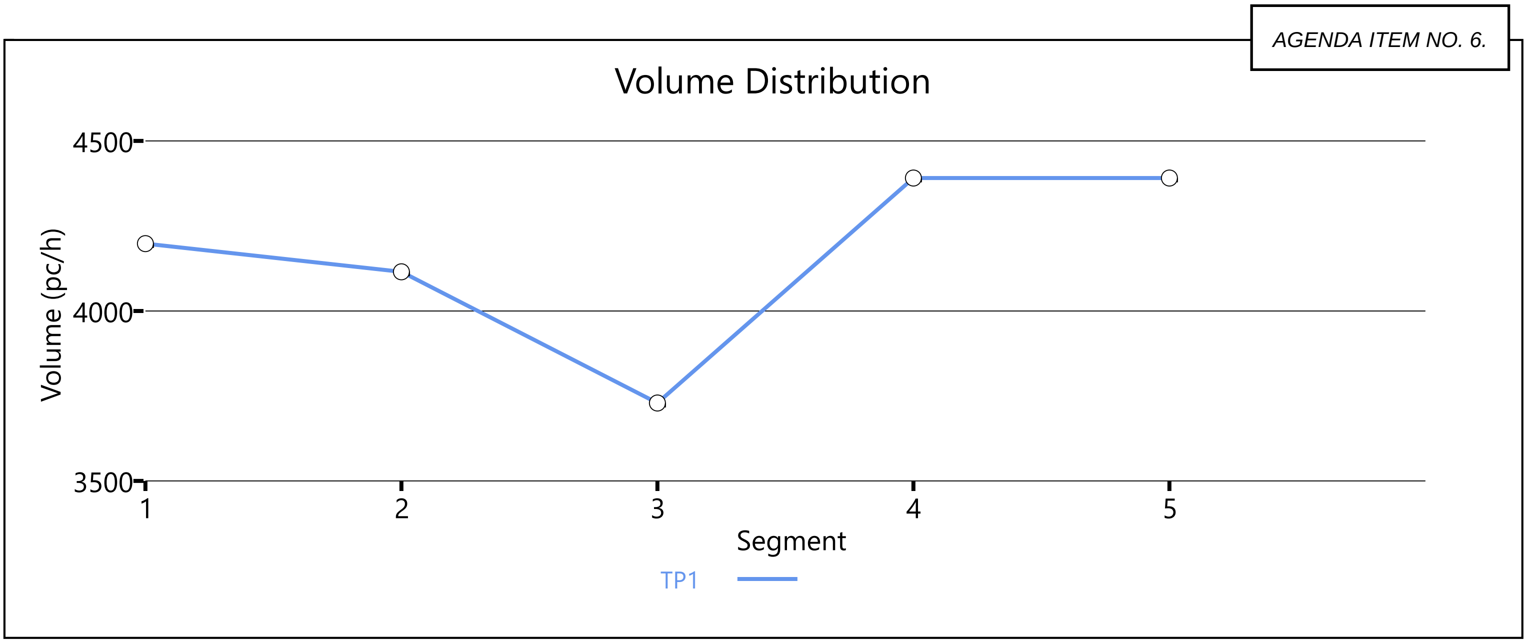
Facility Overall Results

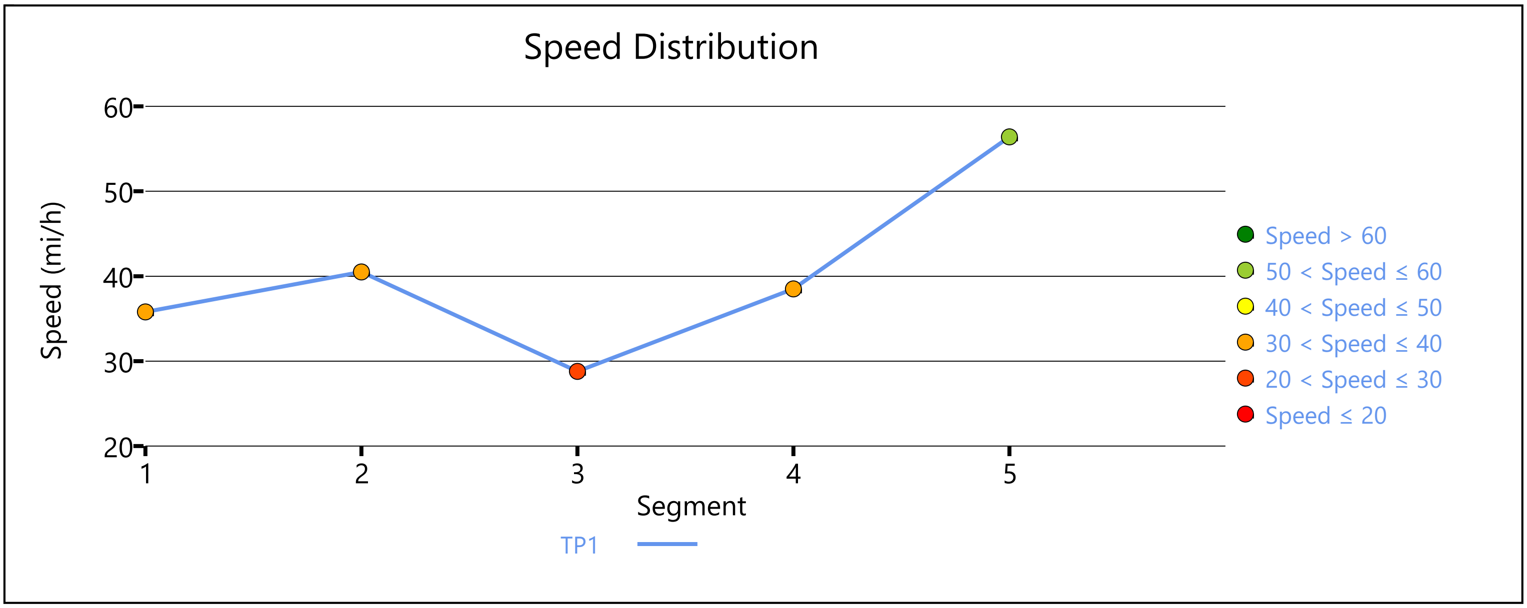
Space Mean Speed, mi/h	34.6	Density, veh/mi/ln	54.6
Average Travel Time, min	2.30	Density, pc/mi/ln	58.3

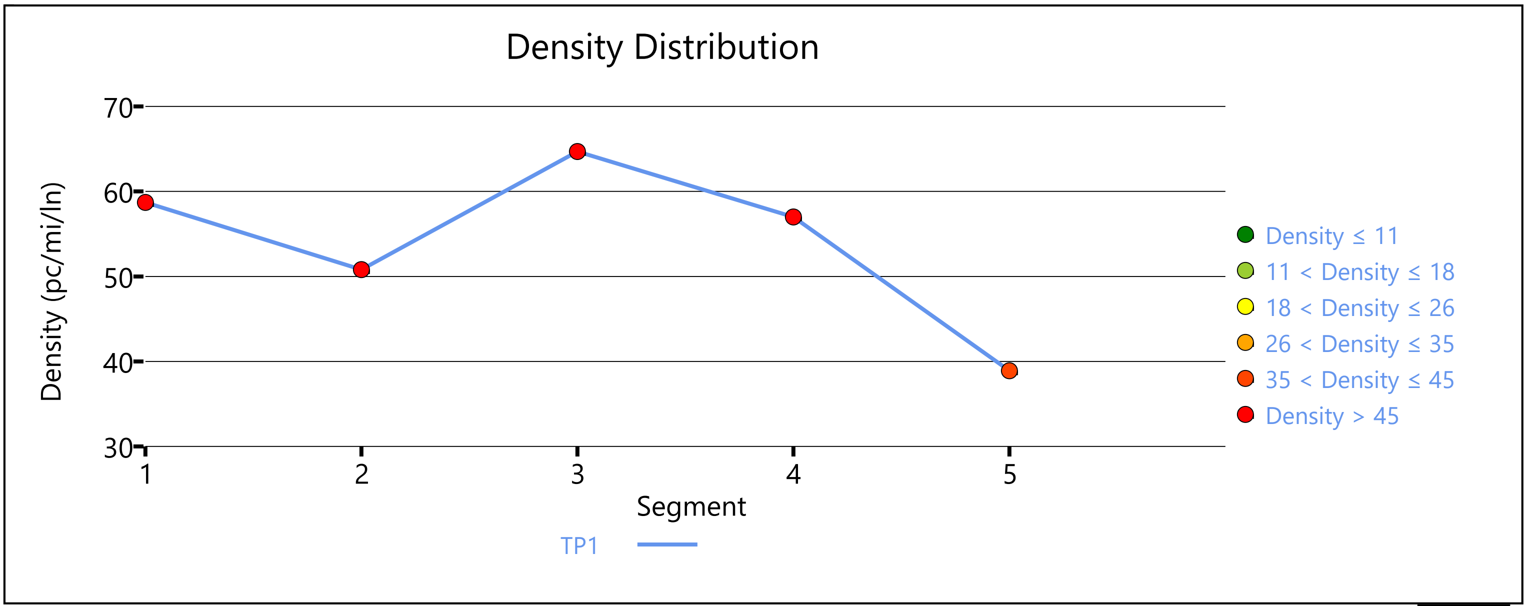
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 5. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
4500
4000
3500
Volume (pc/h)
1
2
3
4
5
Segment
TP1


Speed Distribution
60
50
40
30
20
Speed (mi/h)
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
70
60
50
40
30
Density (pc/mi/ln)
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1243	4688	0.27	64.4	9.7	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.971	1243	545	7200	4000	0.17	0.14	65.1	59.5	6.4	0.0	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	679	4702	0.14	65.1	5.2	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	798	119	4800	2000	0.17	0.06	66.3	66.3	6.0	6.6	

Segment 5: Basic

AGENDA ITEM NO. 6.

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	804	4702	0.17	65.1	6.2	A

Facility Time Period Results

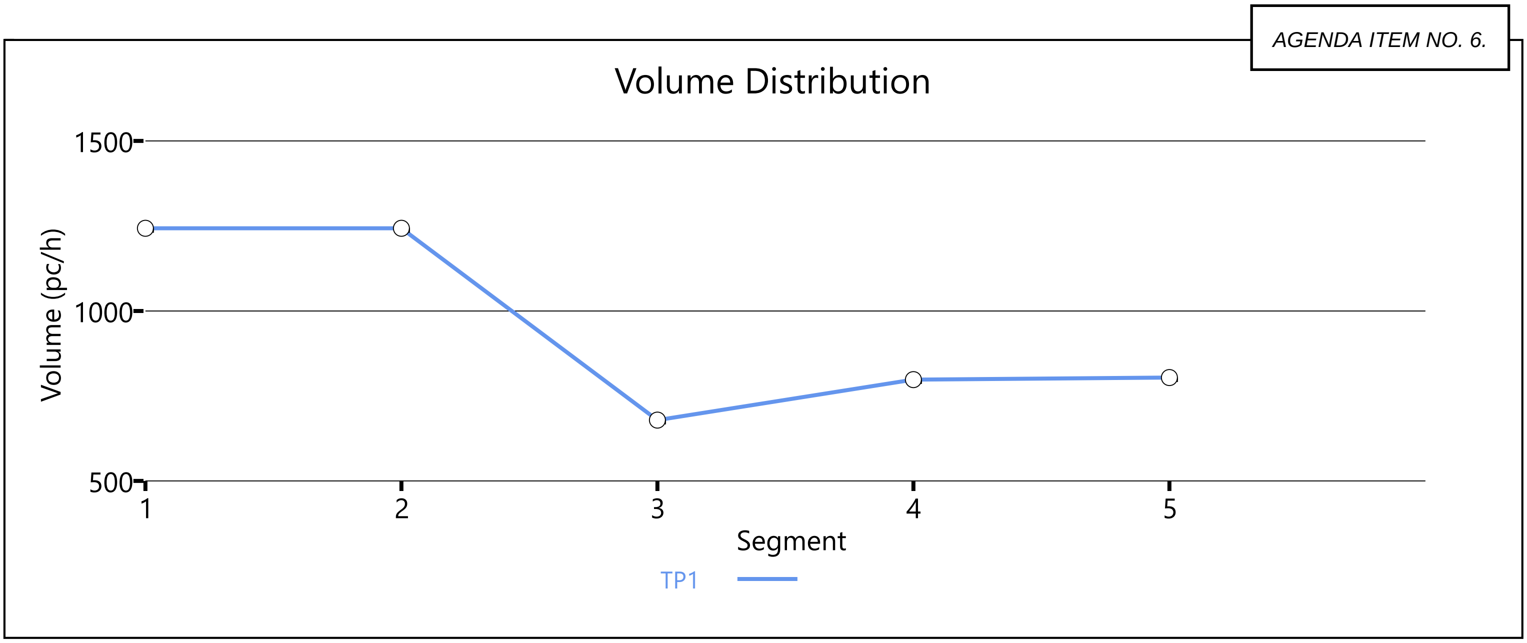
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.4	5.9	5.5	1.00	A

Facility Overall Results

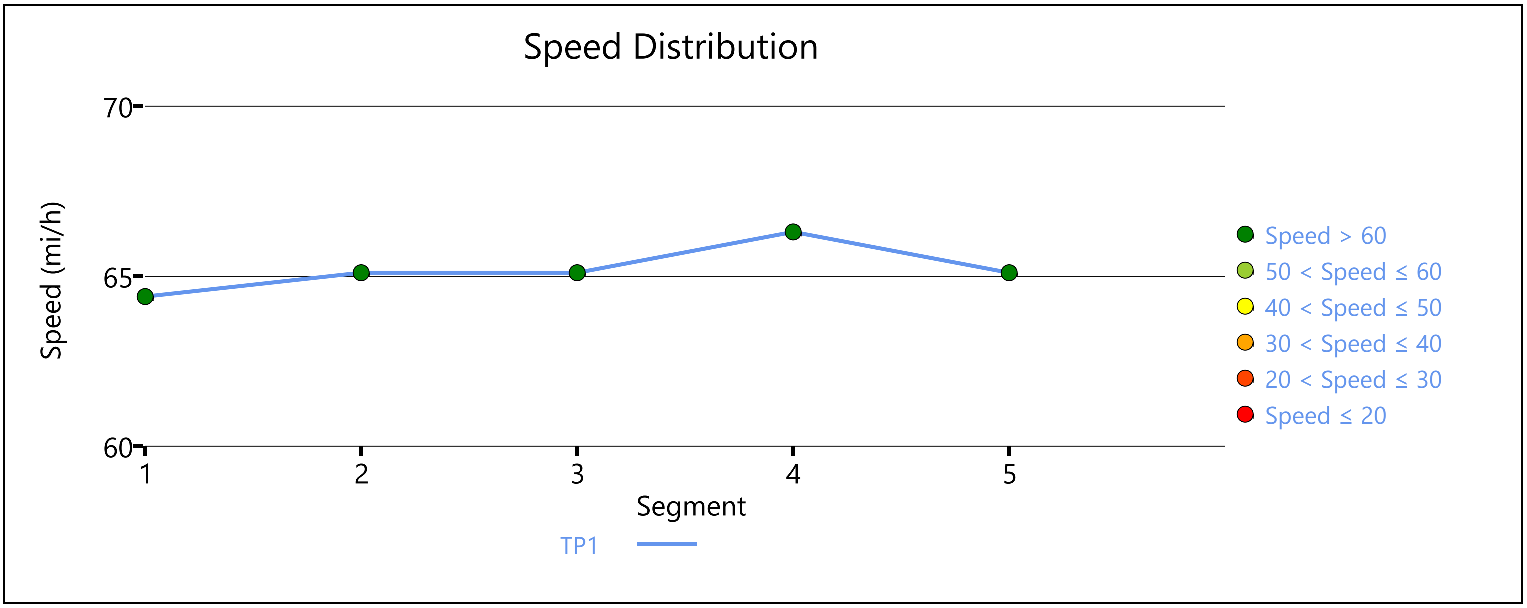
Space Mean Speed, mi/h	65.4	Density, veh/mi/ln	5.5
Average Travel Time, min	1.00	Density, pc/mi/ln	5.9

Messages

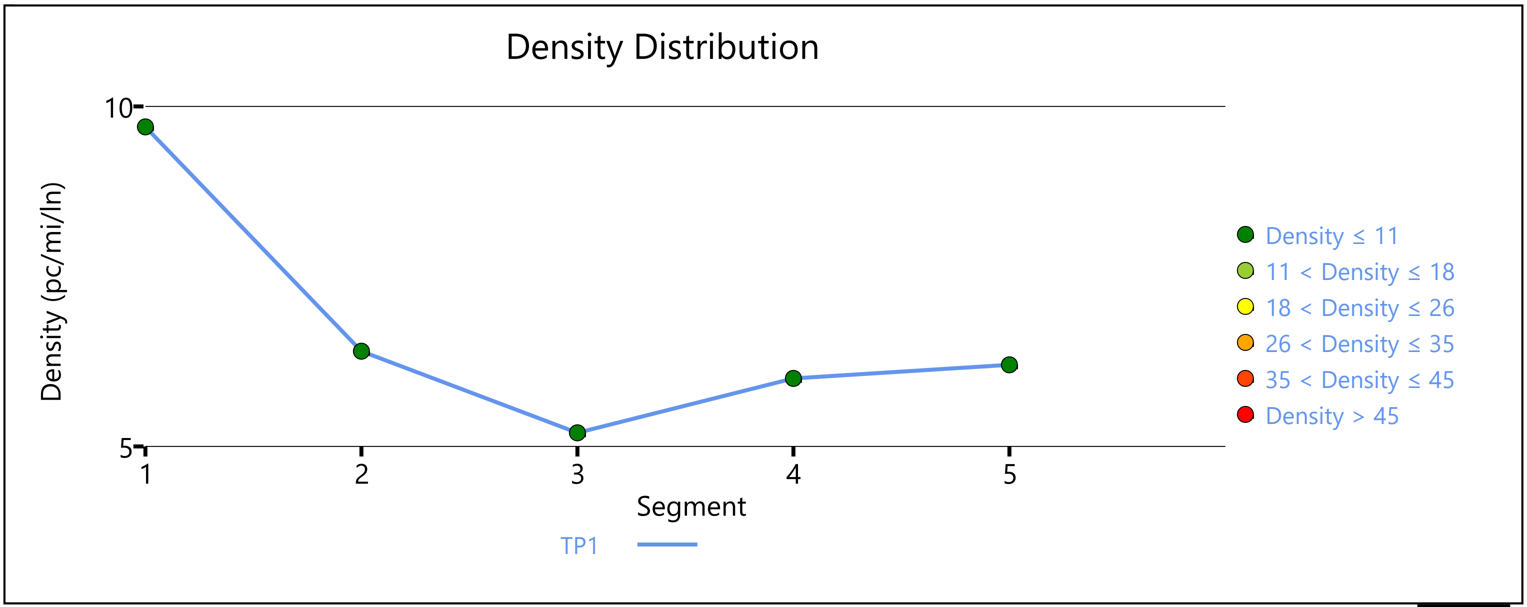
Comments



Volume Distribution



Speed Distribution



Density Distribution

HCS7 Freeway Facilities Report

AGENDA ITEM NO. 6.

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Near Term Year (2028) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3685	4716	0.78	62.7	29.4	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.988	3685	179	4800	2000	0.77	0.09	60.6	60.6	30.4	34.5	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3497	4716	0.74	63.8	27.4	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.992	4488	991	4800	2000	0.94	0.50	55.2	55.2	40.7	34.5	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4545	4716	0.96	54.6	41.6	E

Facility Time Period Results

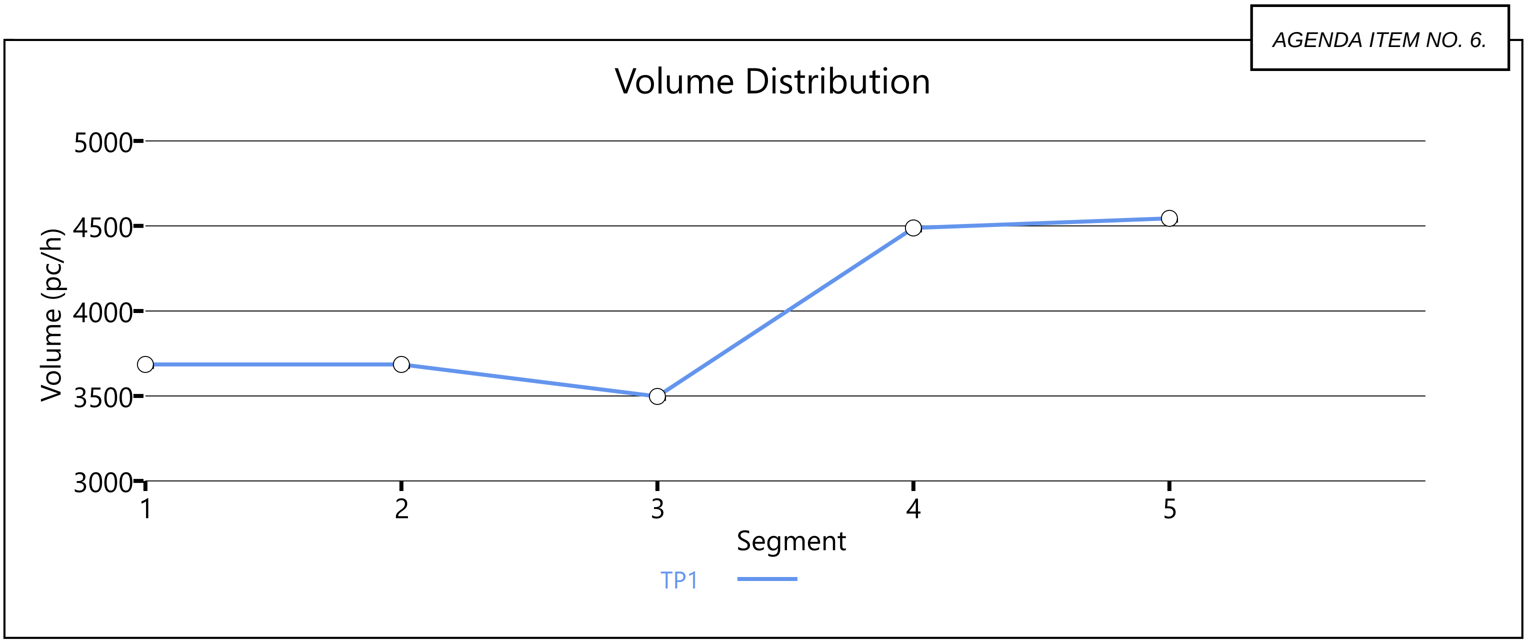
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.1	31.8	29.8	1.30	D

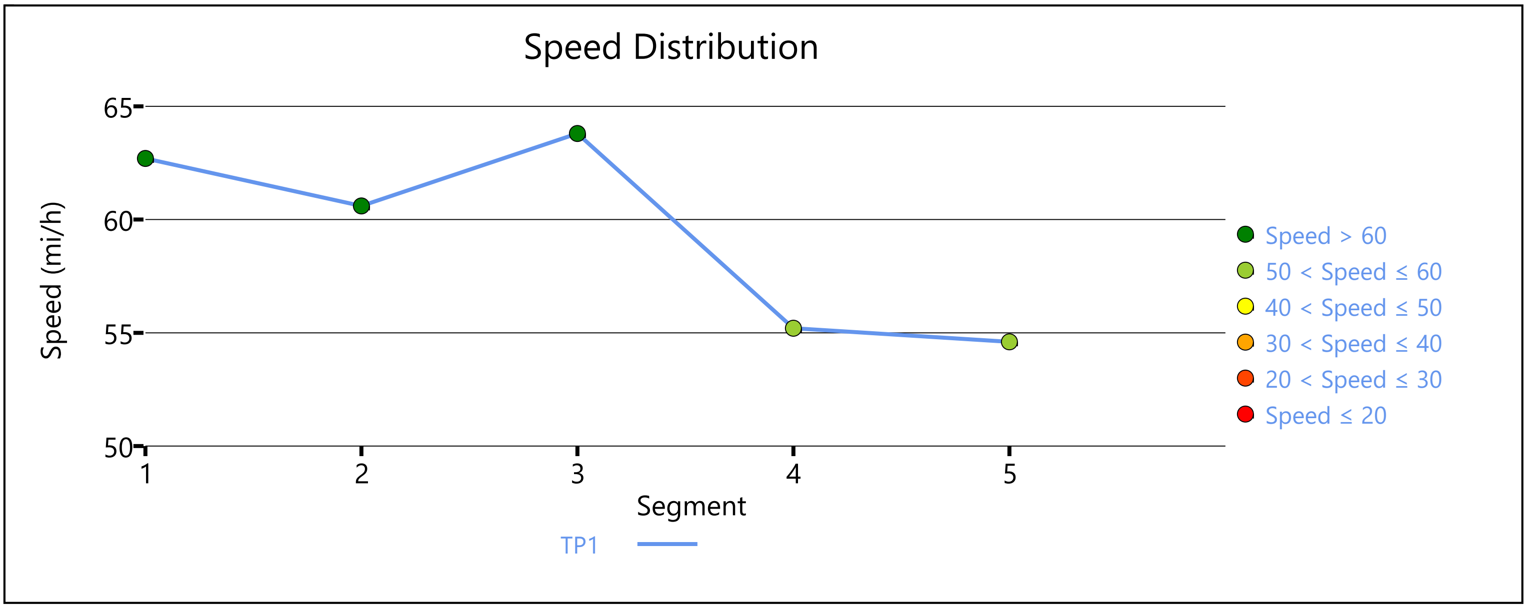
Facility Overall Results

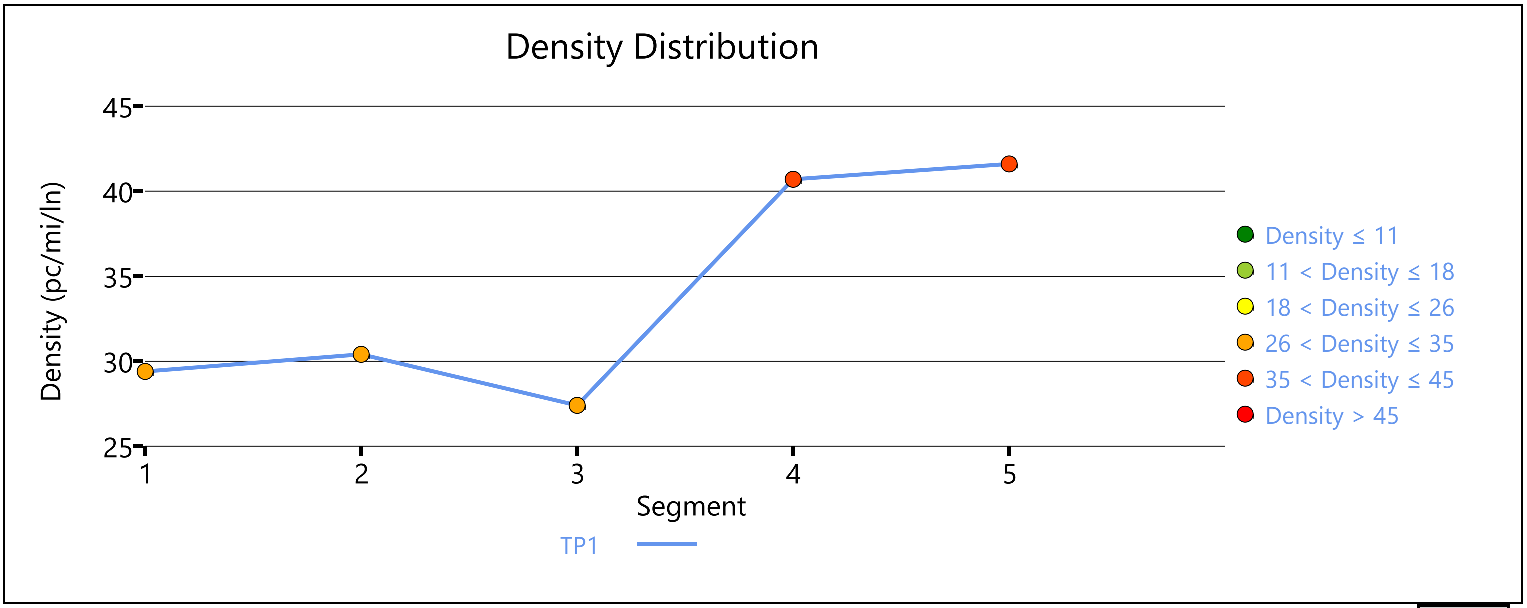
Space Mean Speed, mi/h	60.1	Density, veh/mi/ln	29.8
Average Travel Time, min	1.30	Density, pc/mi/ln	31.8

Messages

Comments


Volume Distribution


Speed Distribution


Density Distribution

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4532	4688	0.97	54.1	41.9	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4532	1055	7200	4000	0.63	0.26	65.3	57.9	23.1	13.3	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3429	4702	0.73	63.7	26.9	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.994	3770	341	4800	2000	0.79	0.17	60.9	60.9	31.0	29.7	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	3790	4702	0.81	61.6	30.8	D

Facility Time Period Results

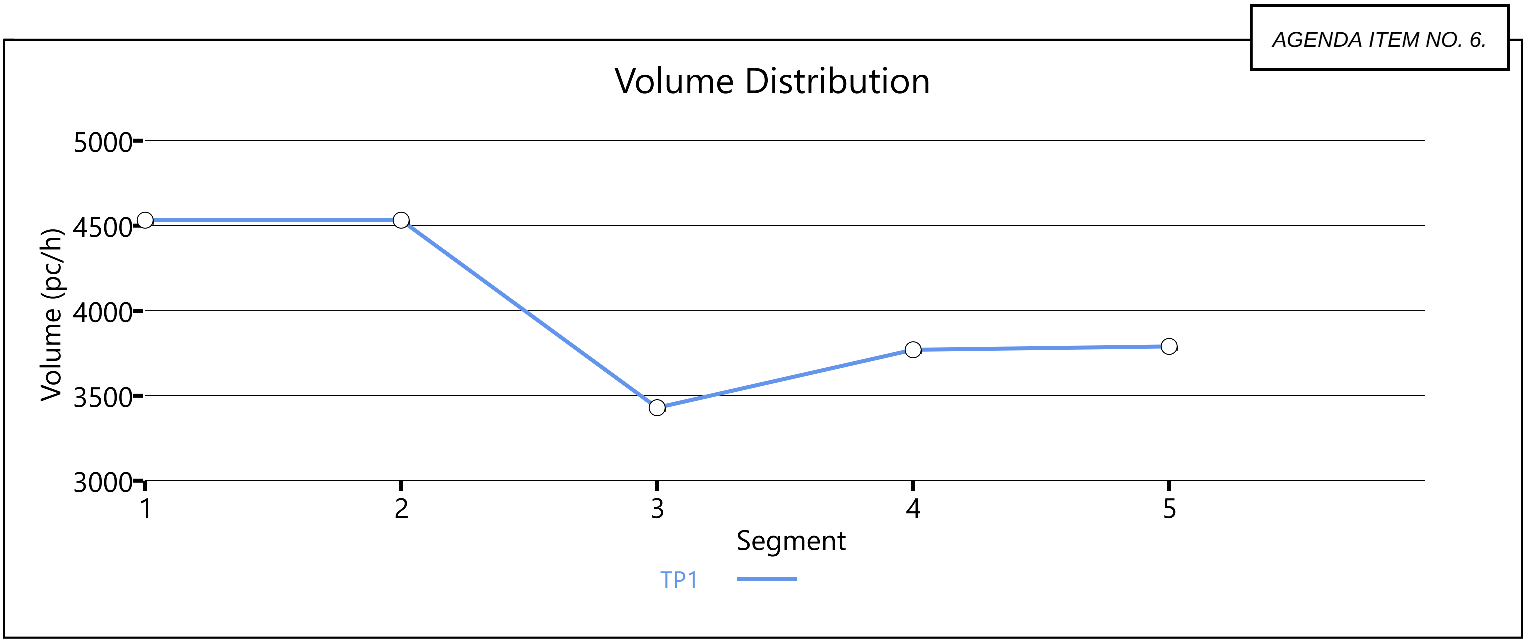
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.2	26.8	25.1	1.10	D

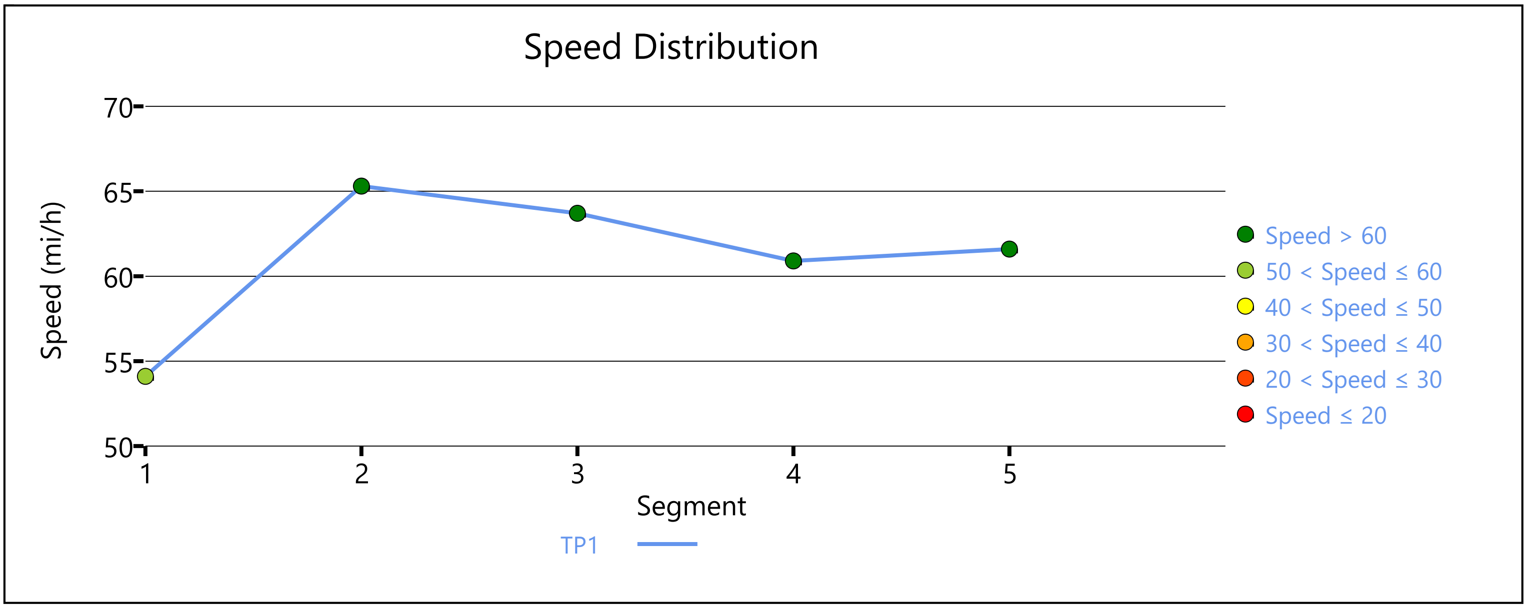
Facility Overall Results

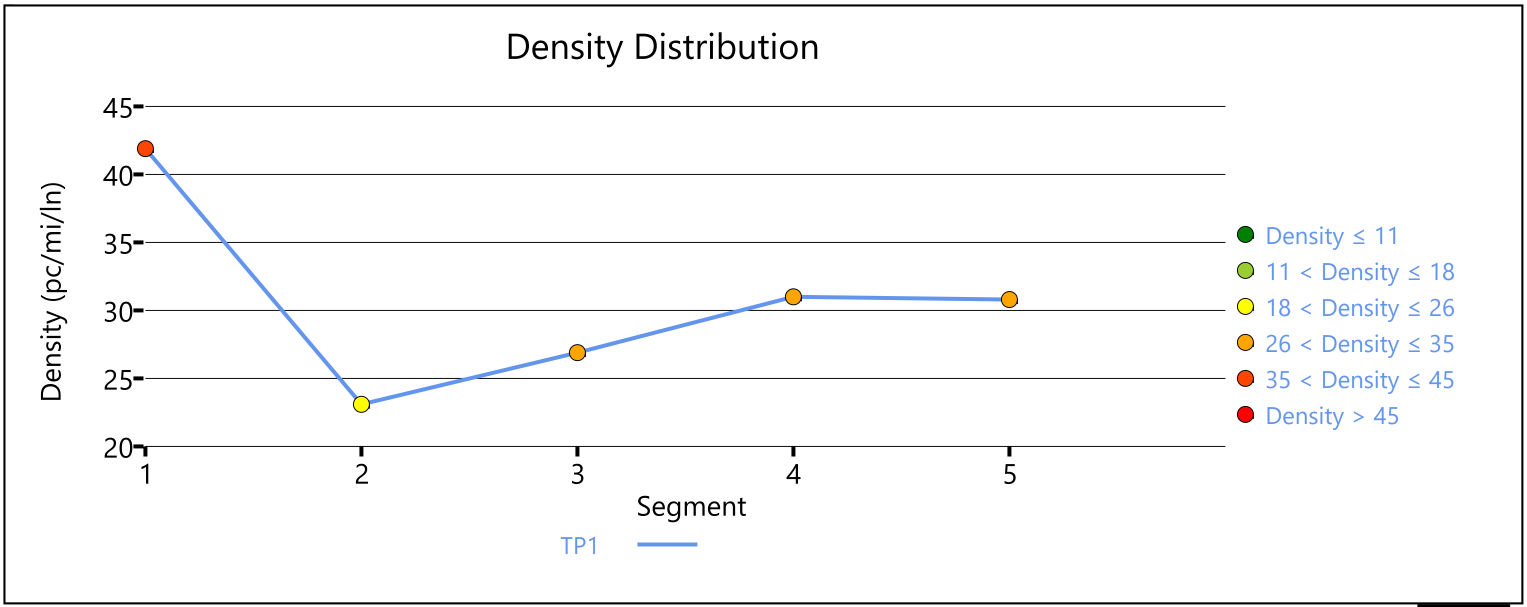
Space Mean Speed, mi/h	63.2	Density, veh/mi/ln	25.1
Average Travel Time, min	1.10	Density, pc/mi/ln	26.8

Messages

Comments


Volume Distribution
Volume (pc/h)
5000
4500
4000
3500
3000
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
55
50
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
45
40
35
30
25
20
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Near Term Year (2028) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4198	4716	0.92	35.8	58.7	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.967	4115	196	4800	2000	0.90	0.10	40.5	60.5	50.8	40.1	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3729	4716	0.88	28.8	64.7	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	4391	691	4800	2000	1.00	0.35	38.5	50.6	57.0	37.3	

Segment 5: Basic

AGENDA ITEM NO. 6.

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4391	4716	1.03	56.4	38.9	F

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	34.6	58.3	54.6	2.30	F

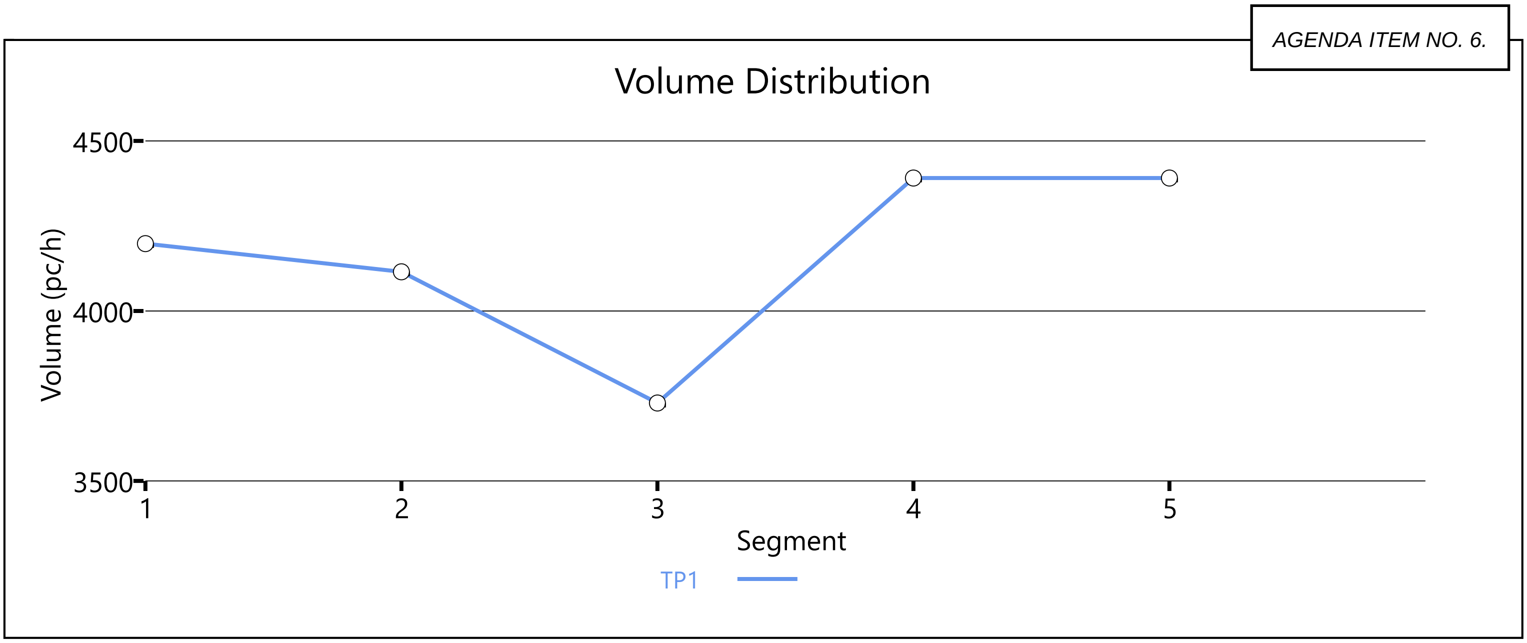
Facility Overall Results

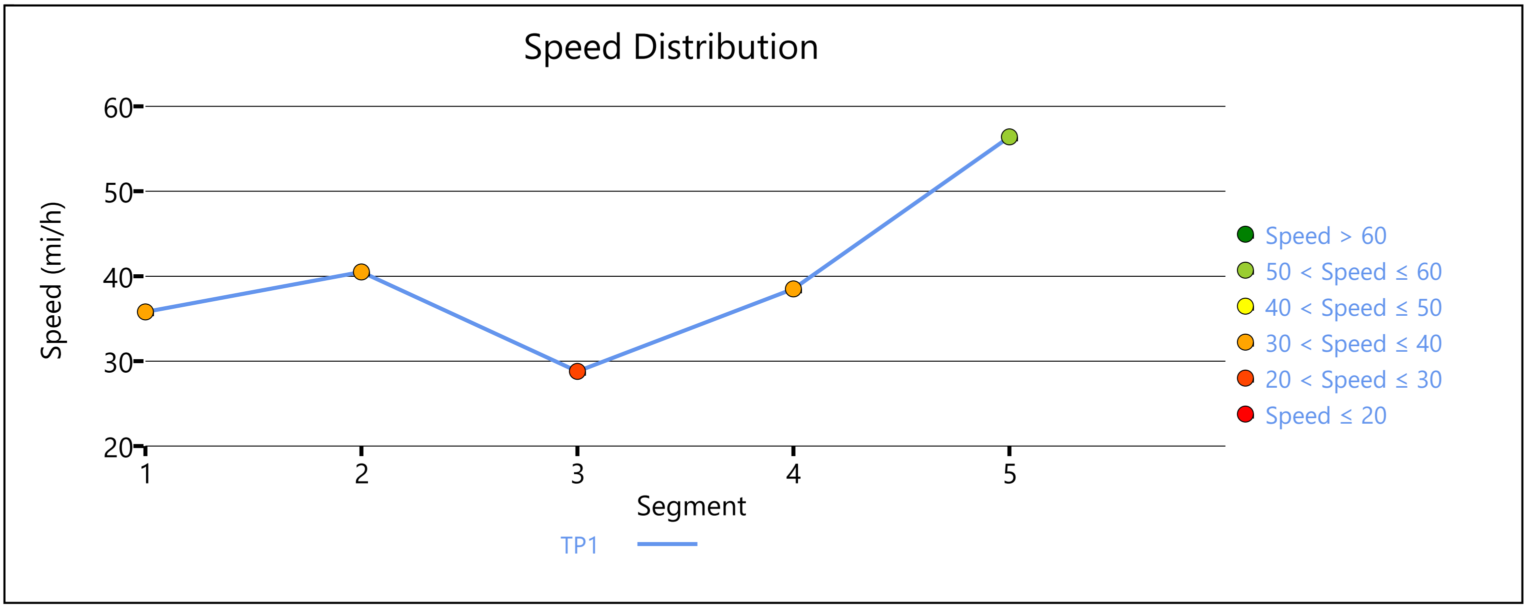
Space Mean Speed, mi/h	34.6	Density, veh/mi/ln	54.6
Average Travel Time, min	2.30	Density, pc/mi/ln	58.3

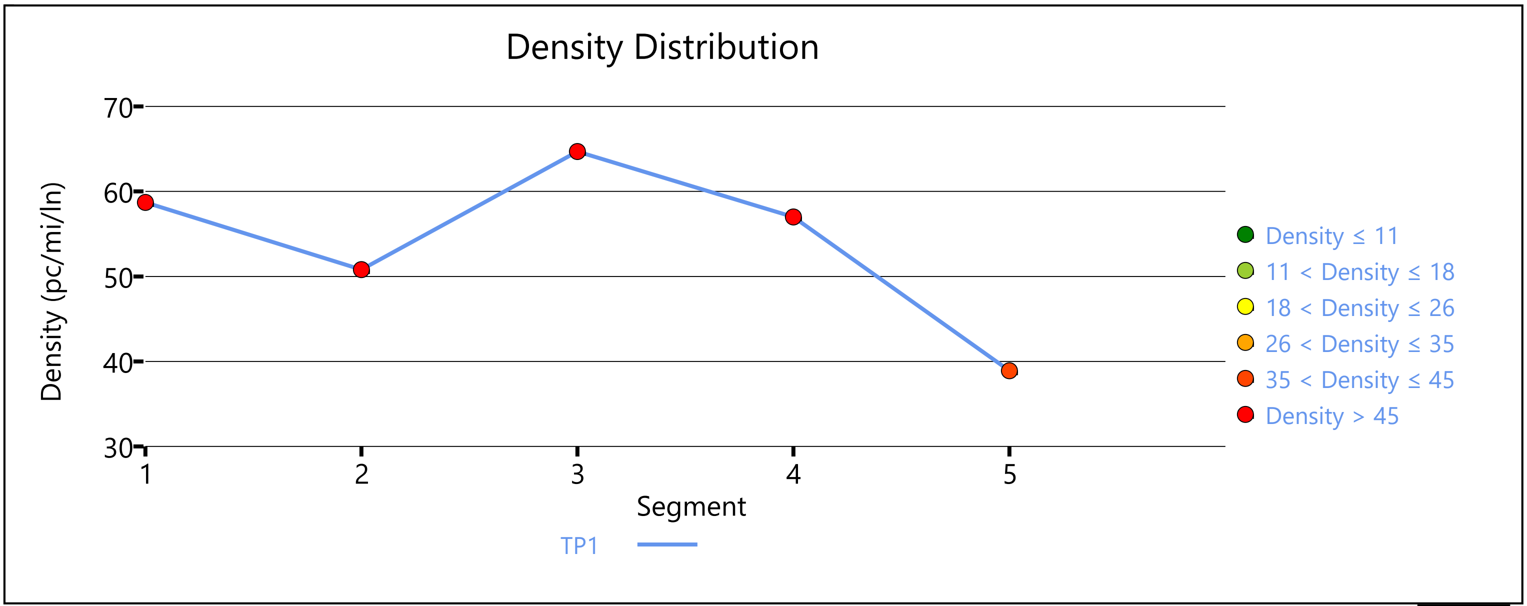
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 5. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
4500
4000
3500
Volume (pc/h)
1
2
3
4
5
Segment
TP1


Speed Distribution
60
50
40
30
20
Speed (mi/h)
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
70
60
50
40
30
Density (pc/mi/ln)
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	2065	7098	0.29	66.6	10.3	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.962	2065	1152	7200	4000	0.29	0.29	62.2	57.6	11.1	14.7	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	884	4688	0.19	64.2	6.9	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.991	1123	239	4800	1900	0.23	0.13	65.5	65.5	8.6	9.5	A

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	1.000	1224	88	4800	2000	0.26	0.04	66.1	66.1	9.3	10.1	B

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1231	4688	0.26	64.4	9.6	A

Facility Time Period Results

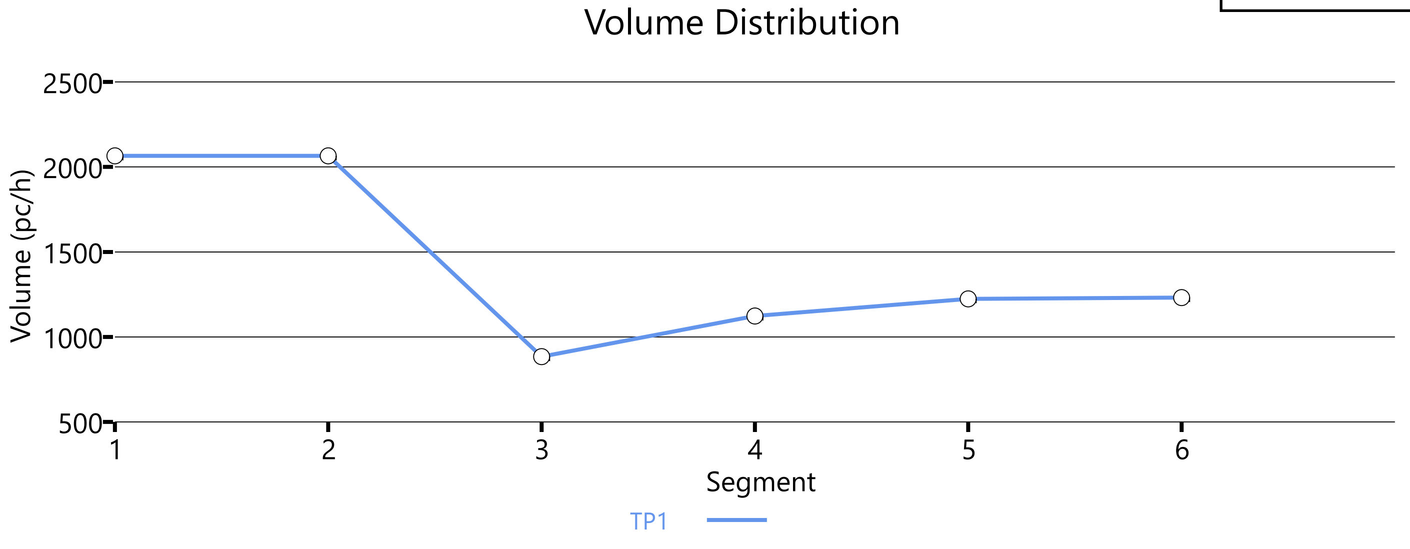
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.5	9.4	8.8	1.20	A

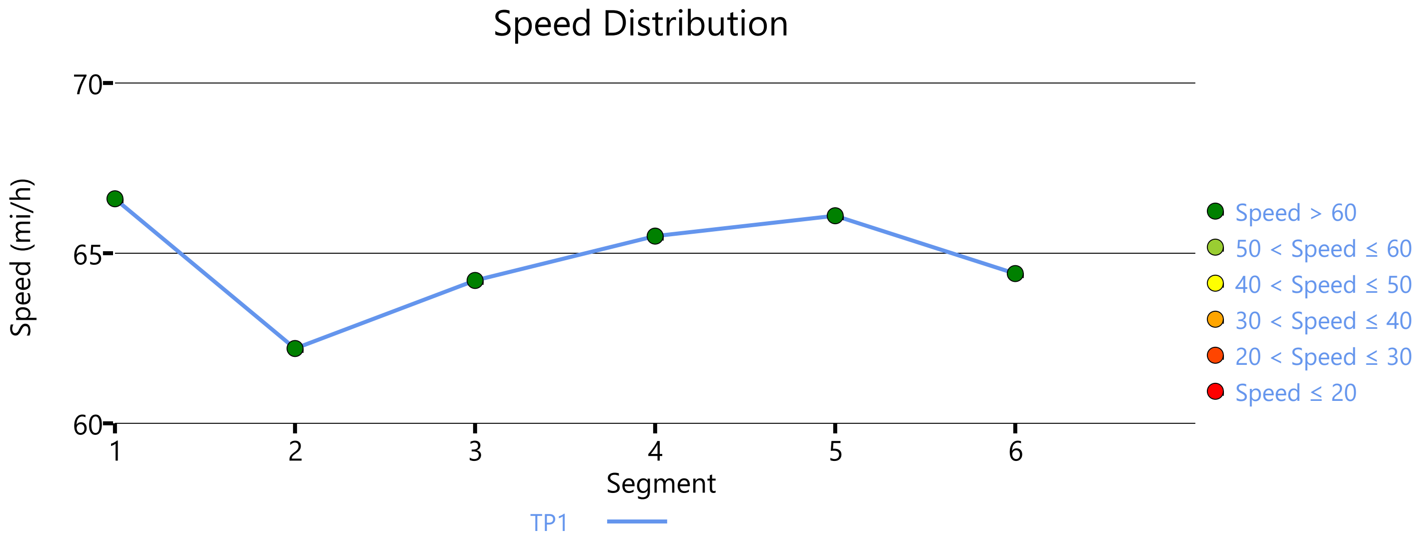
Facility Overall Results

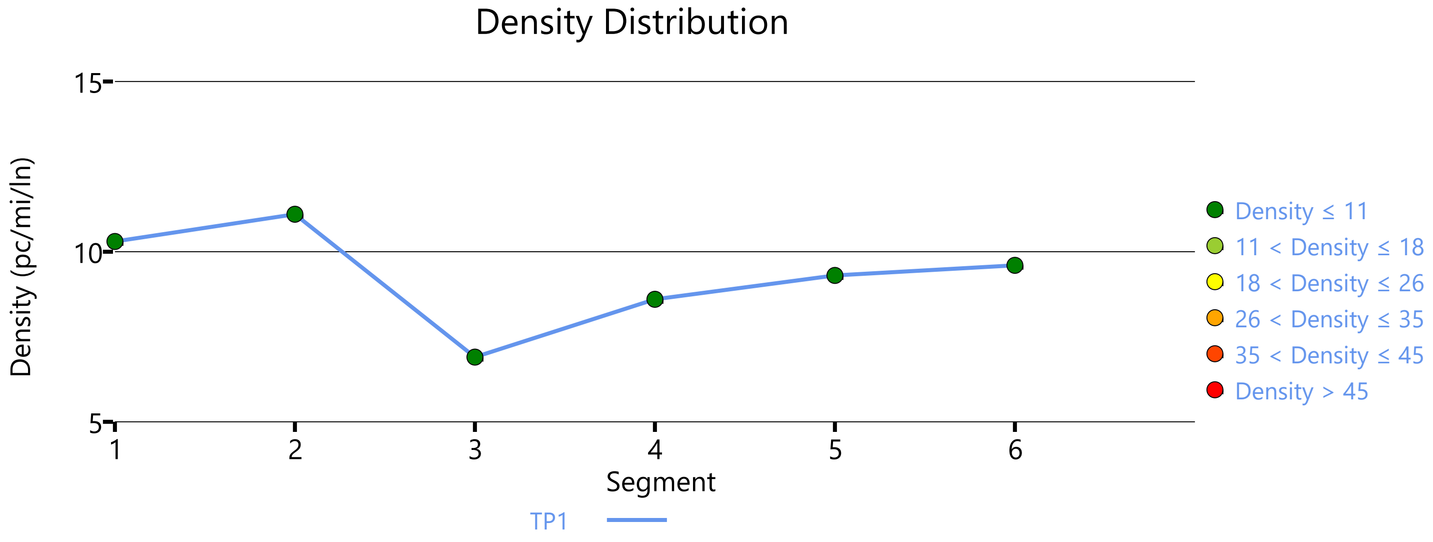
Space Mean Speed, mi/h	64.5	Density, veh/mi/ln	8.8
Average Travel Time, min	1.20	Density, pc/mi/ln	9.4

Messages

Comments


Volume Distribution
Volume (pc/h)
2500
2000
1500
1000
500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
1
2
3
4
5
6
Segment
TP1
● Speed > 60
● 50 < Speed ≤ 60
● 40 < Speed ≤ 50
● 30 < Speed ≤ 40
● 20 < Speed ≤ 30
● Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
15
10
5
1
2
3
4
5
6
Segment
TP1
● Density ≤ 11
● 11 < Density ≤ 18
● 18 < Density ≤ 26
● 26 < Density ≤ 35
● 35 < Density ≤ 45
● Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4545	4716	0.96	54.6	41.6	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4545	857	4800	2000	0.95	0.43	58.5	58.5	38.8	39.6	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3635	4672	0.78	61.6	29.5	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4505	870	4800	2000	0.94	0.44	54.2	54.2	41.6	36.9	E

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	5099	554	7200	2000	0.71	0.28	69.8	-	24.4	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5124	7008	0.73	62.6	27.3	D

Facility Time Period Results

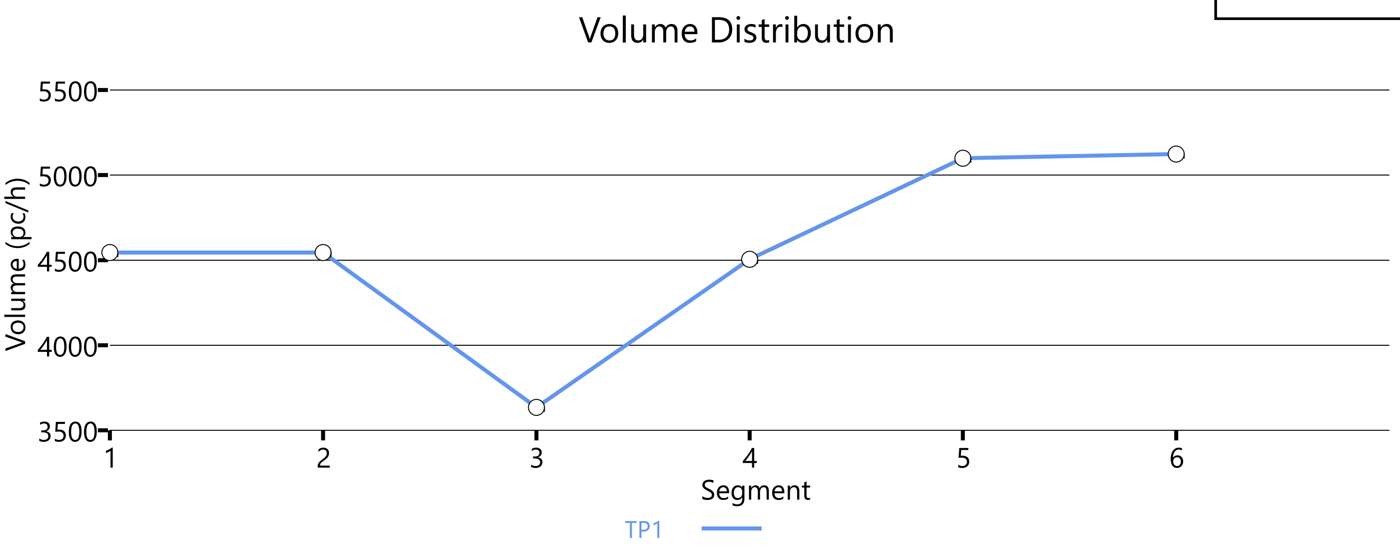
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.6	32.1	30.2	1.40	D

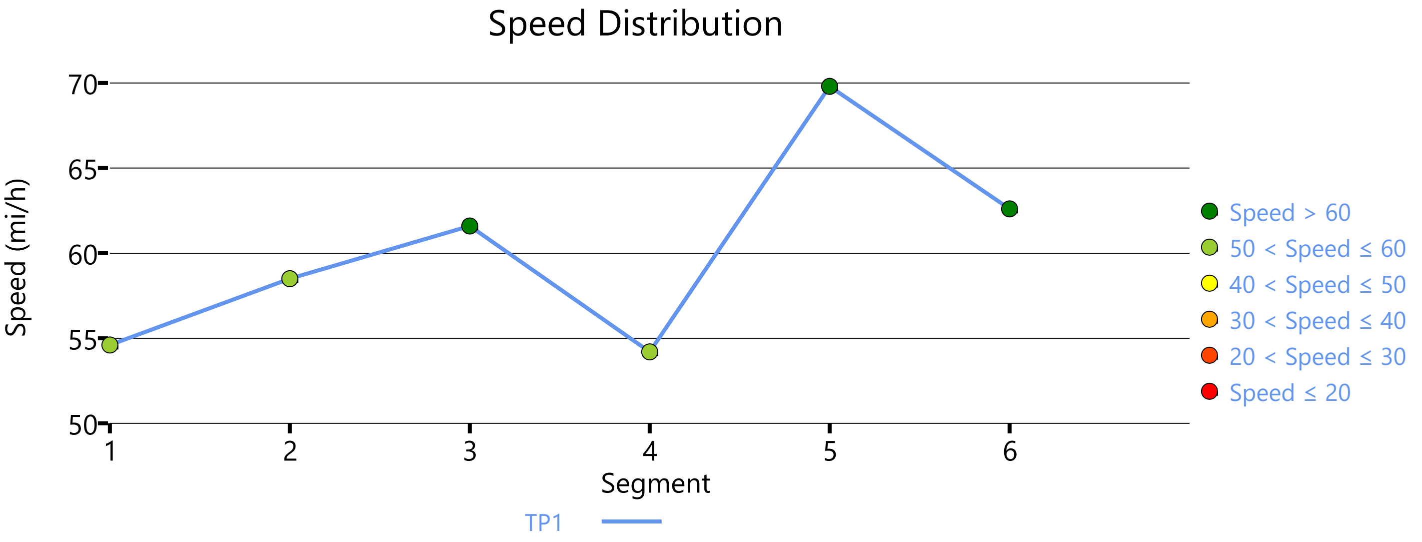
Facility Overall Results

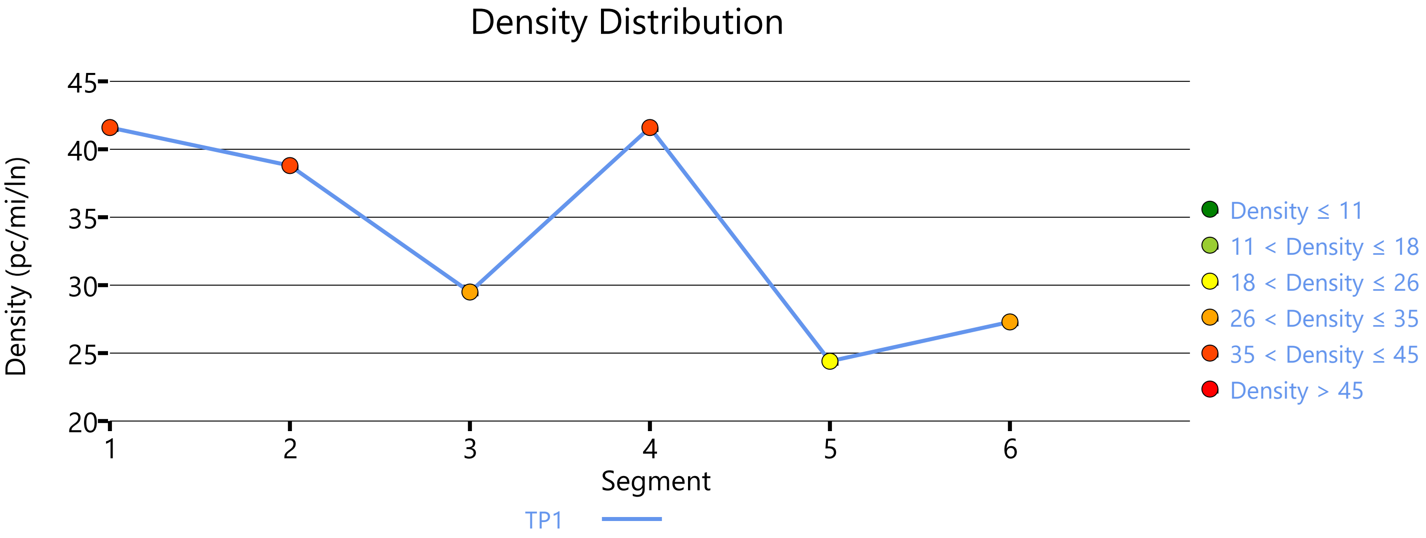
Space Mean Speed, mi/h	60.6	Density, veh/mi/ln	30.2
Average Travel Time, min	1.40	Density, pc/mi/ln	32.1

Messages

Comments


Volume Distribution
Volume (pc/h)
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
55
50
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
45
40
35
30
25
20
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5489	7098	0.77	63.4	28.9	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.990	5489	1554	7200	4000	0.76	0.39	63.4	56.4	28.9	29.9	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3849	4688	0.82	60.8	31.6	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	4244	395	4800	1900	0.88	0.21	56.8	56.8	37.4	33.8	D

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4479	213	4800	2000	0.93	0.11	55.1	55.1	40.6	35.4	E

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4491	4688	0.96	54.6	41.1	E

Facility Time Period Results

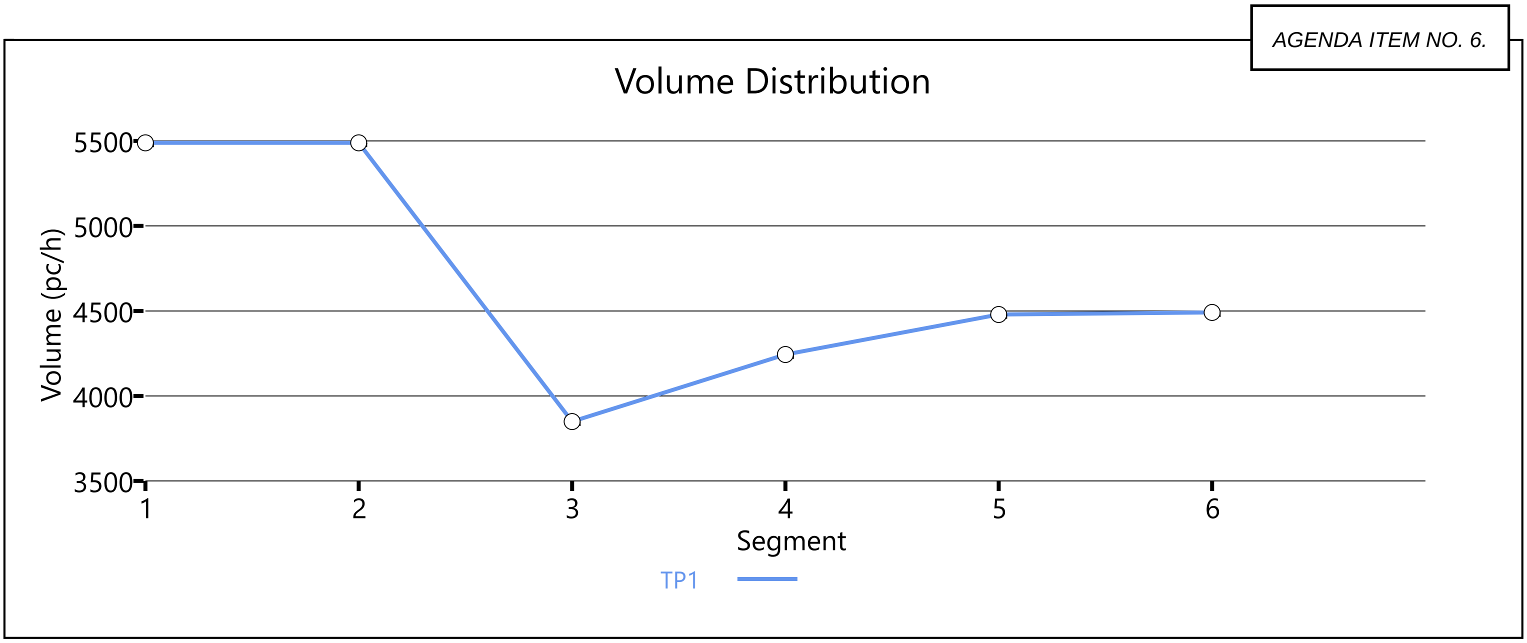
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	59.8	33.0	30.9	1.30	D

Facility Overall Results

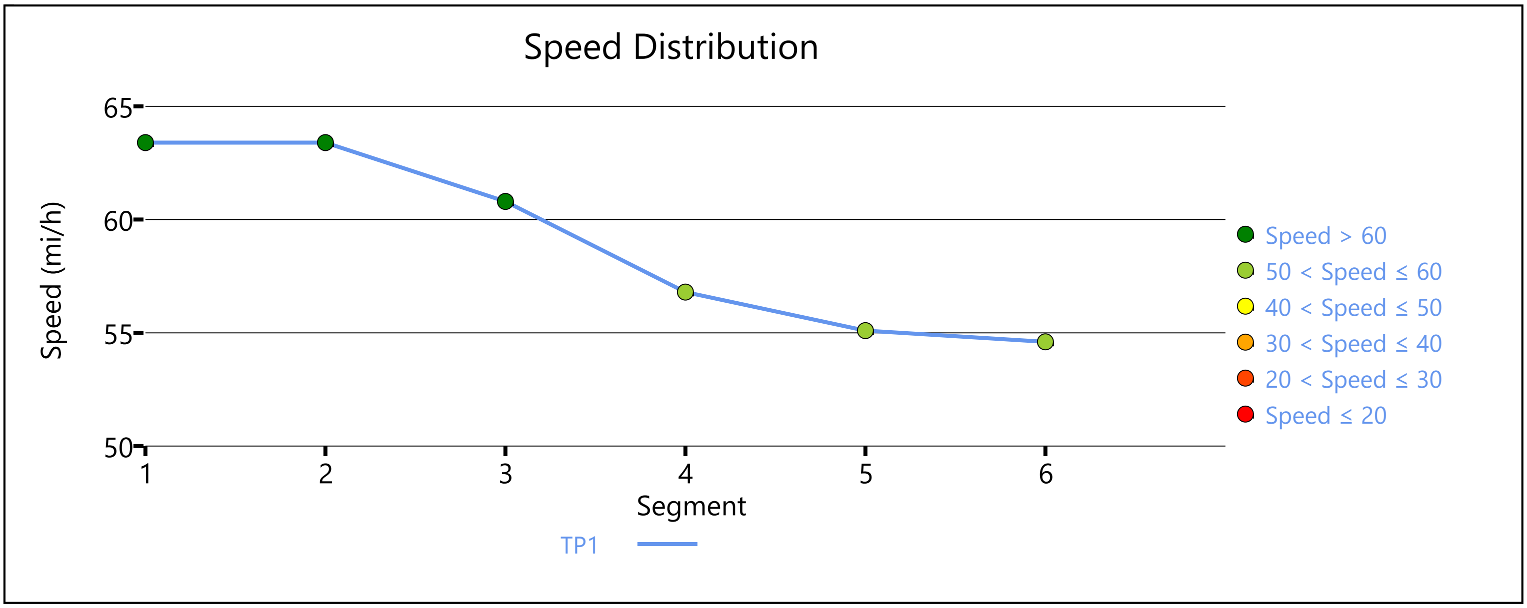
Space Mean Speed, mi/h	59.8	Density, veh/mi/ln	30.9
Average Travel Time, min	1.30	Density, pc/mi/ln	33.0

Messages

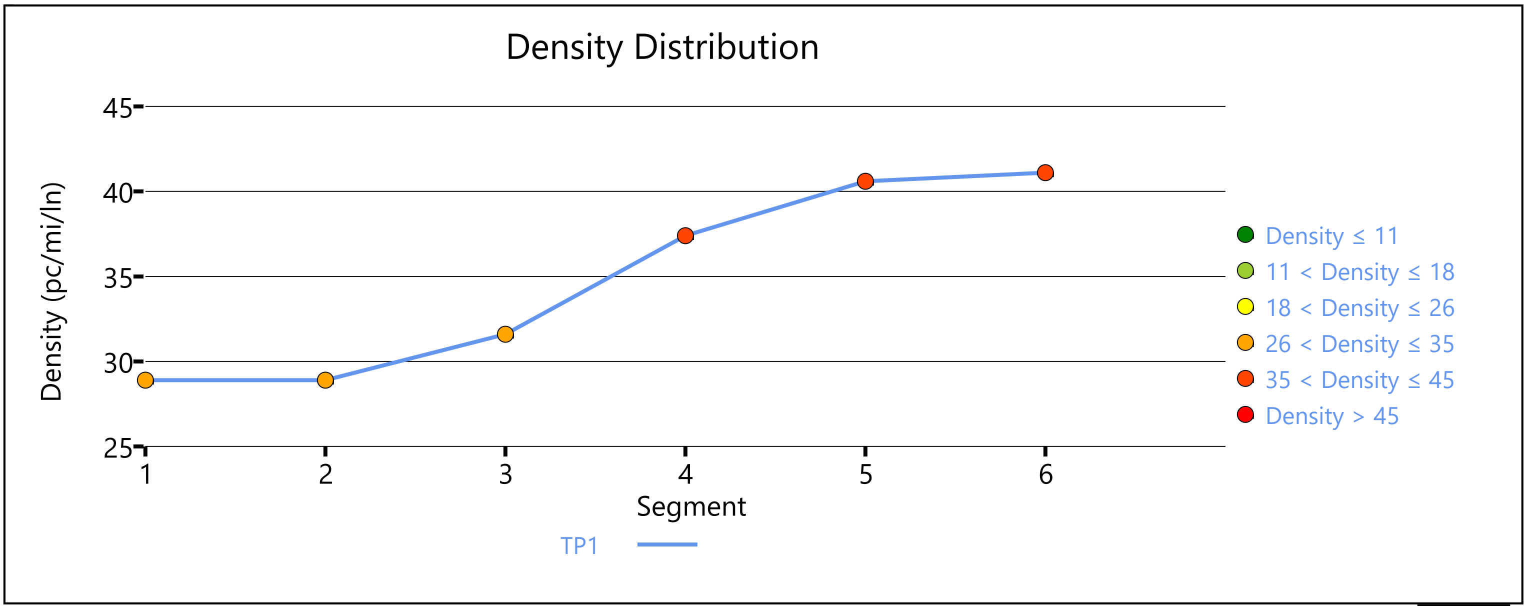
Comments



Volume Distribution



Speed Distribution



Density Distribution

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4288	4716	1.03	36.9	58.2	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4242	444	4800	2000	1.01	0.22	34.9	59.8	60.8	42.3	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3704	4672	0.94	25.6	72.2	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.985	4470	766	4800	2000	1.07	0.38	54.6	54.6	40.9	36.7	F

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	5056	586	7200	2000	0.80	0.29	65.3	-	25.8	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5056	7008	0.83	62.8	26.8	D

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	45.7	42.9	2.00	F

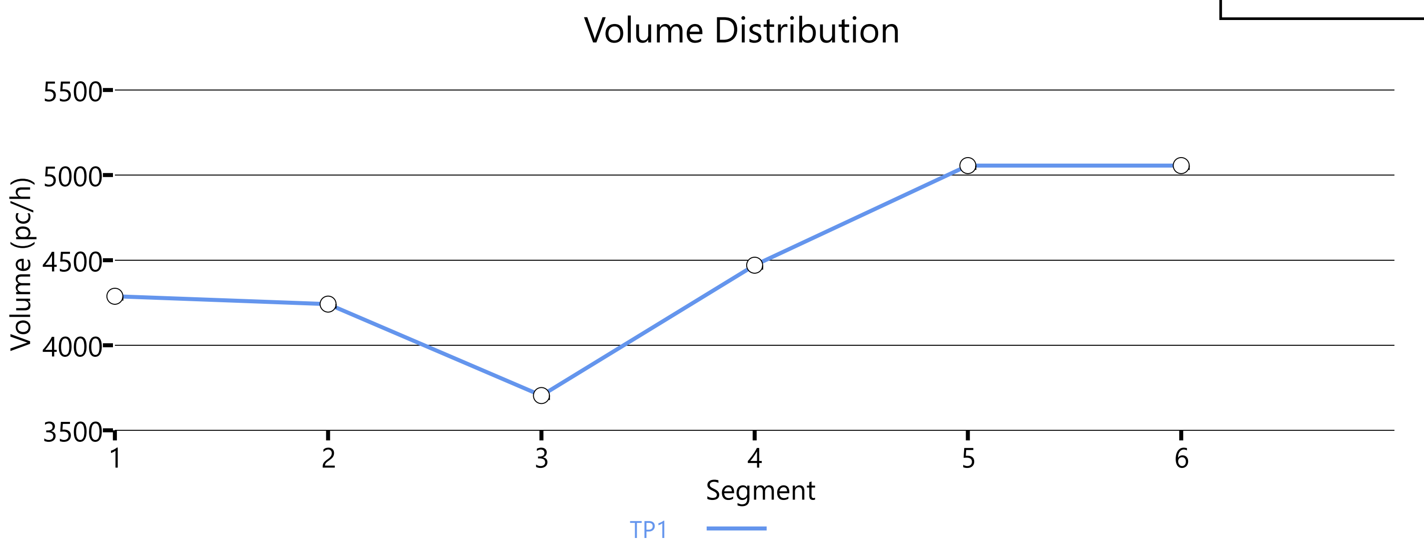
Facility Overall Results

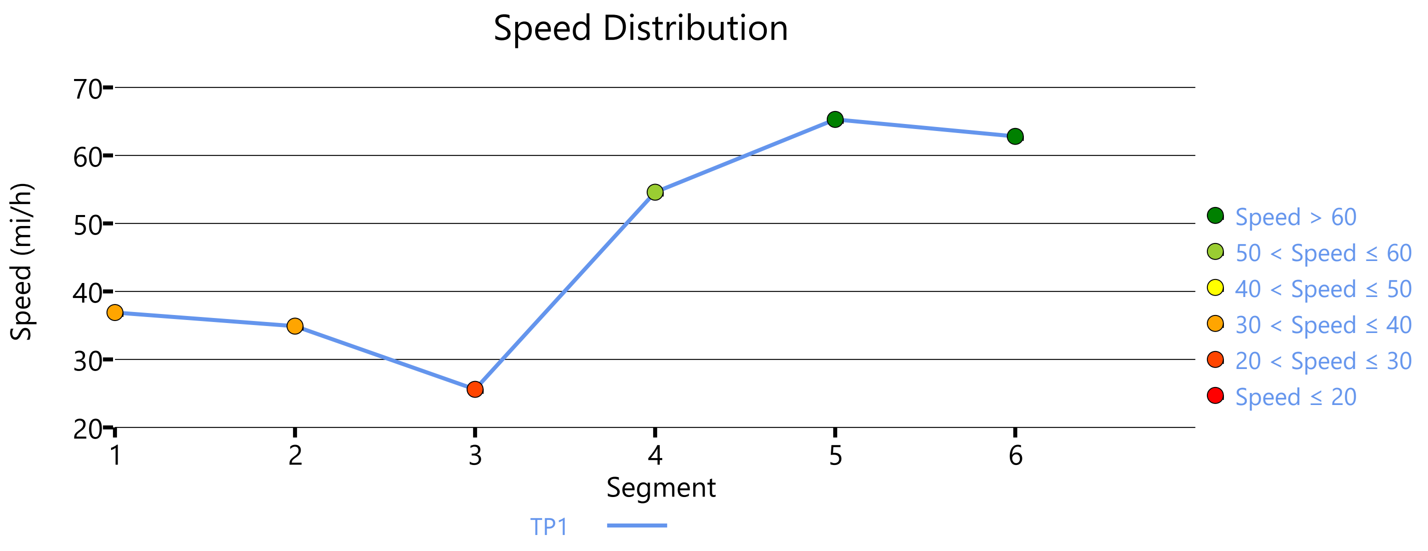
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	42.9
Average Travel Time, min	2.00	Density, pc/mi/ln	45.7

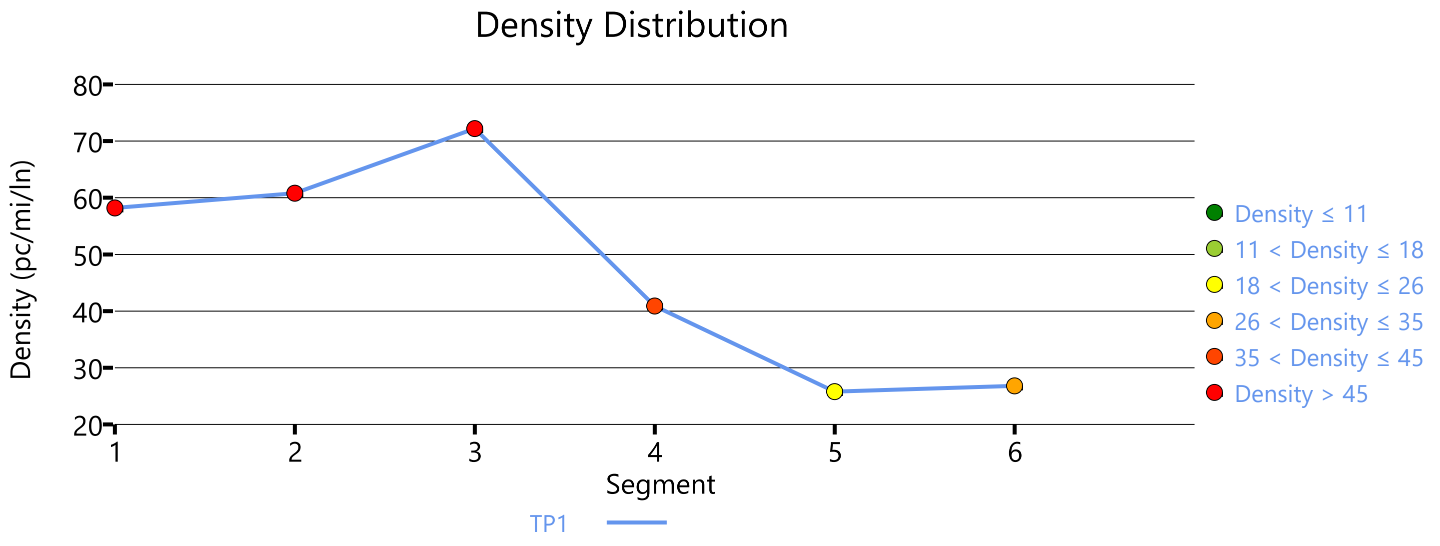
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution


Speed Distribution


Density Distribution

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	2099	7098	0.30	66.6	10.5	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.962	2099	1173	7200	4000	0.29	0.29	62.2	57.6	11.2	15.0	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	896	4688	0.19	64.2	7.0	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.991	1135	239	4800	1900	0.24	0.13	65.5	65.5	8.7	9.6	A

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	1.000	1237	88	4800	2000	0.26	0.04	66.1	66.1	9.4	10.2	B

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1243	4688	0.27	64.4	9.7	A

Facility Time Period Results

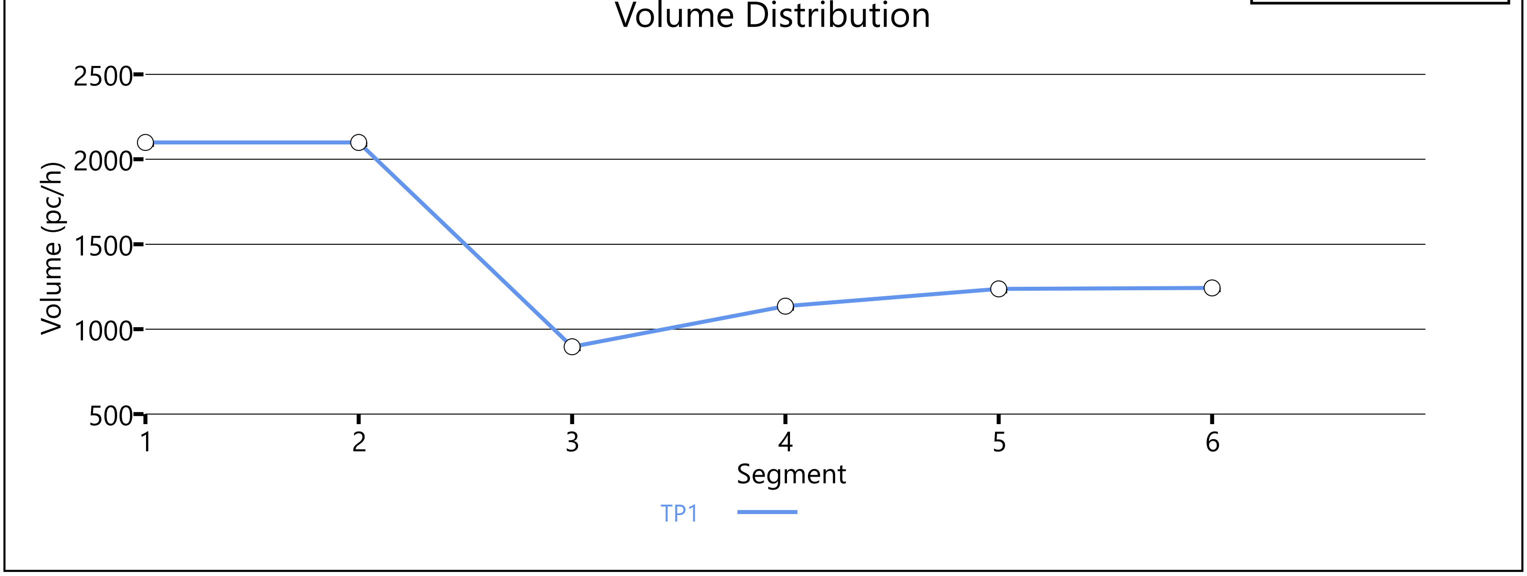
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.5	9.5	8.9	1.20	A

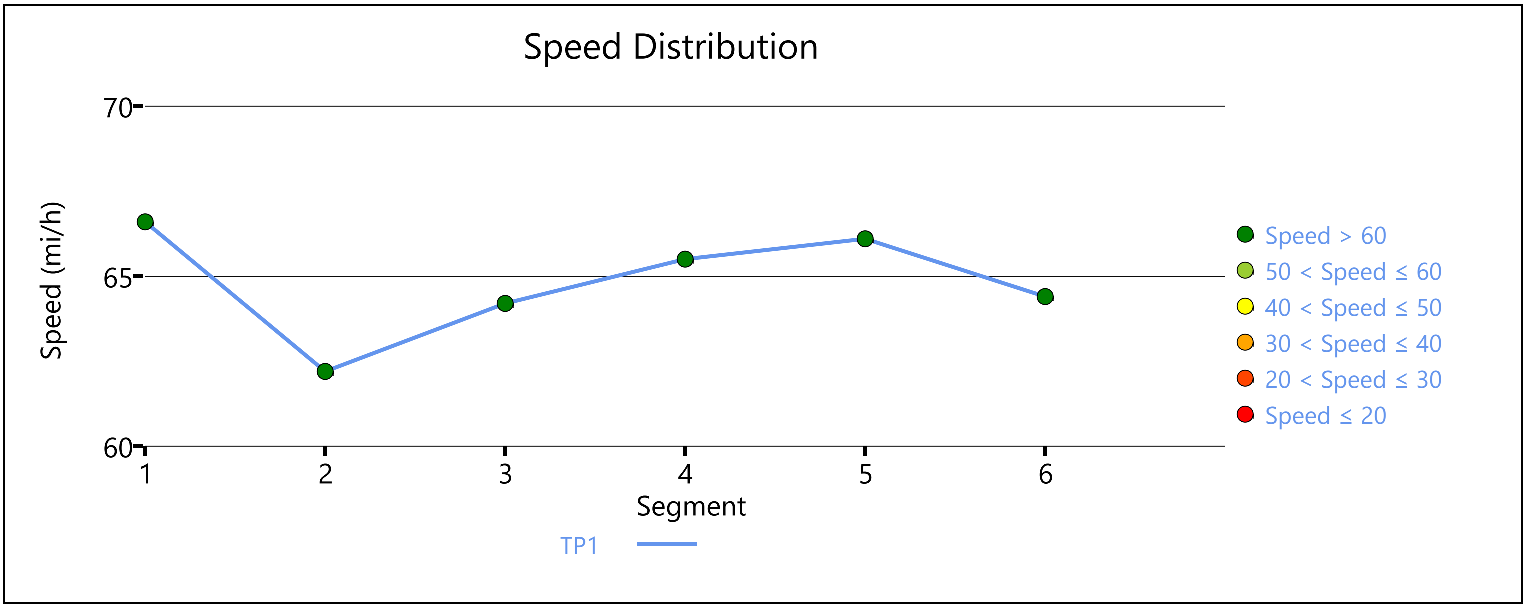
Facility Overall Results

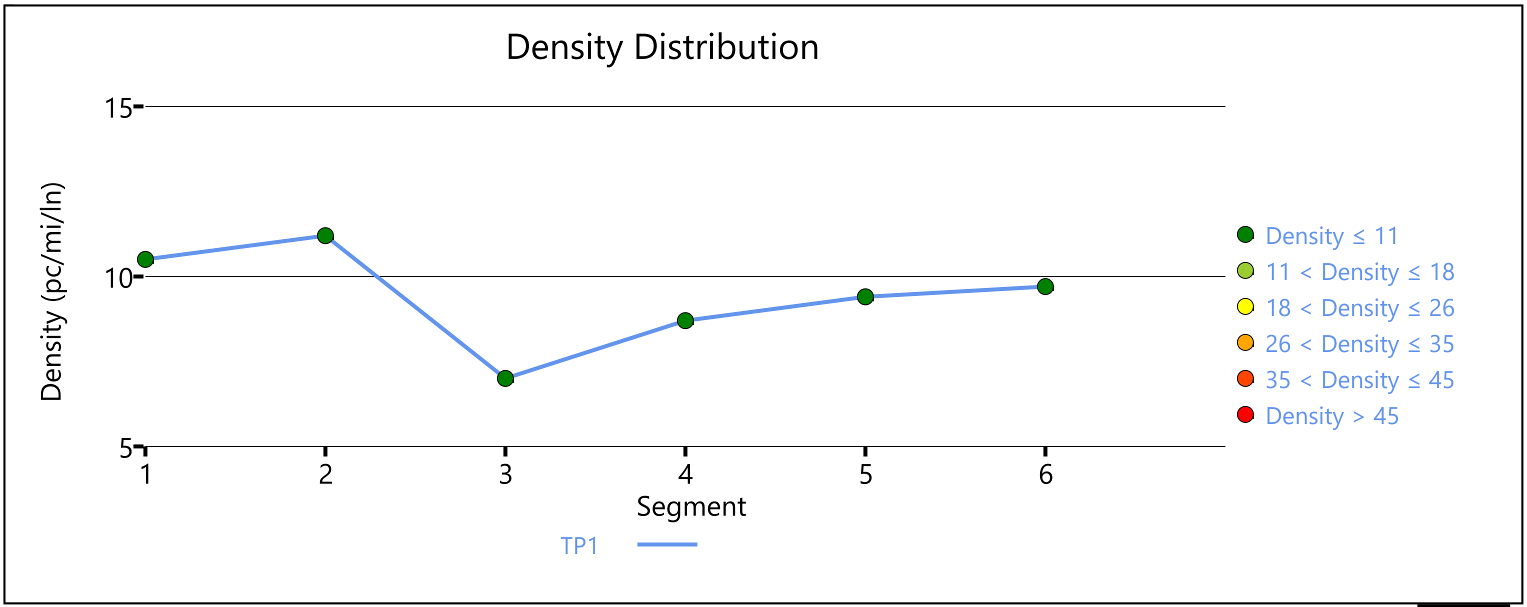
Space Mean Speed, mi/h	64.5	Density, veh/mi/ln	8.9
Average Travel Time, min	1.20	Density, pc/mi/ln	9.5

Messages

Comments


Volume Distribution
2500
2000
1500
1000
500
Volume (pc/h)
1
2
3
4
5
6
Segment
TP1


Speed Distribution
70
65
60
Speed (mi/h)
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
15
10
5
Density (pc/mi/ln)
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Near Term Year (2028) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4545	4716	0.96	54.6	41.6	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4545	857	4800	2000	0.95	0.43	58.5	58.5	38.8	39.6	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3635	4672	0.78	61.6	29.5	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4597	962	4800	2000	0.96	0.48	53.0	53.0	43.4	37.6	E

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	5195	554	7200	2000	0.72	0.28	69.2	-	25.0	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5220	7008	0.74	62.4	27.9	D

Facility Time Period Results

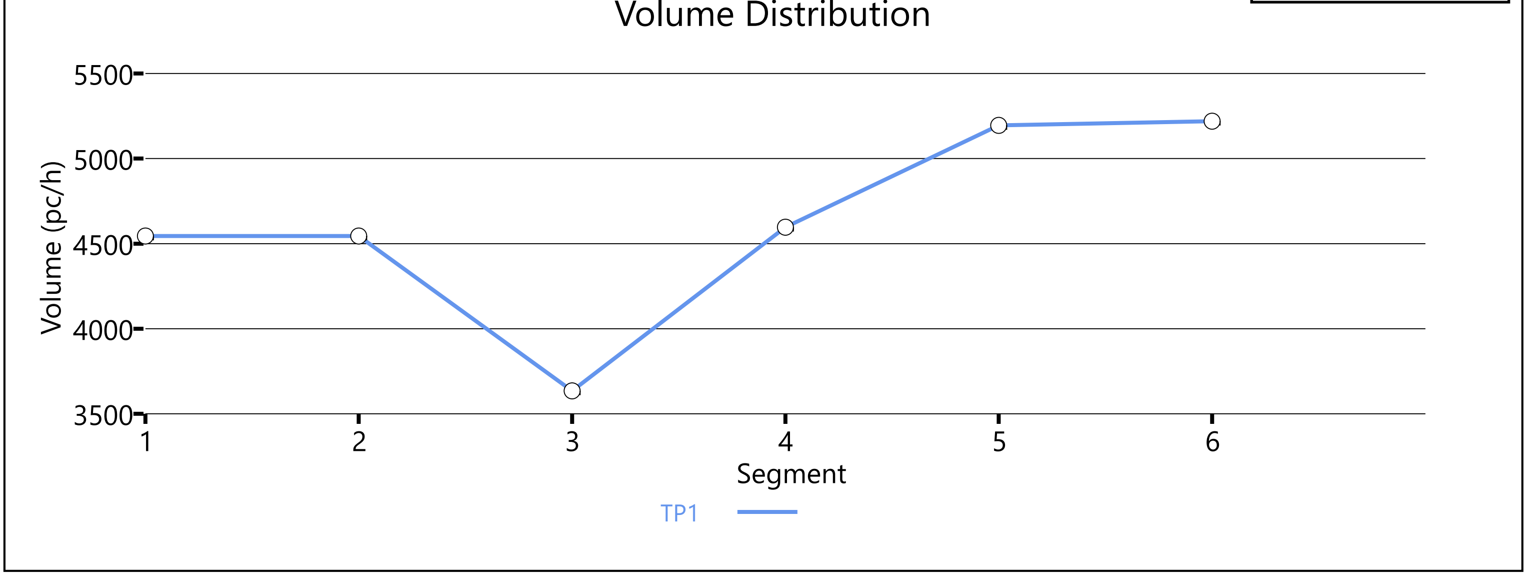
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.2	32.7	30.7	1.40	D

Facility Overall Results

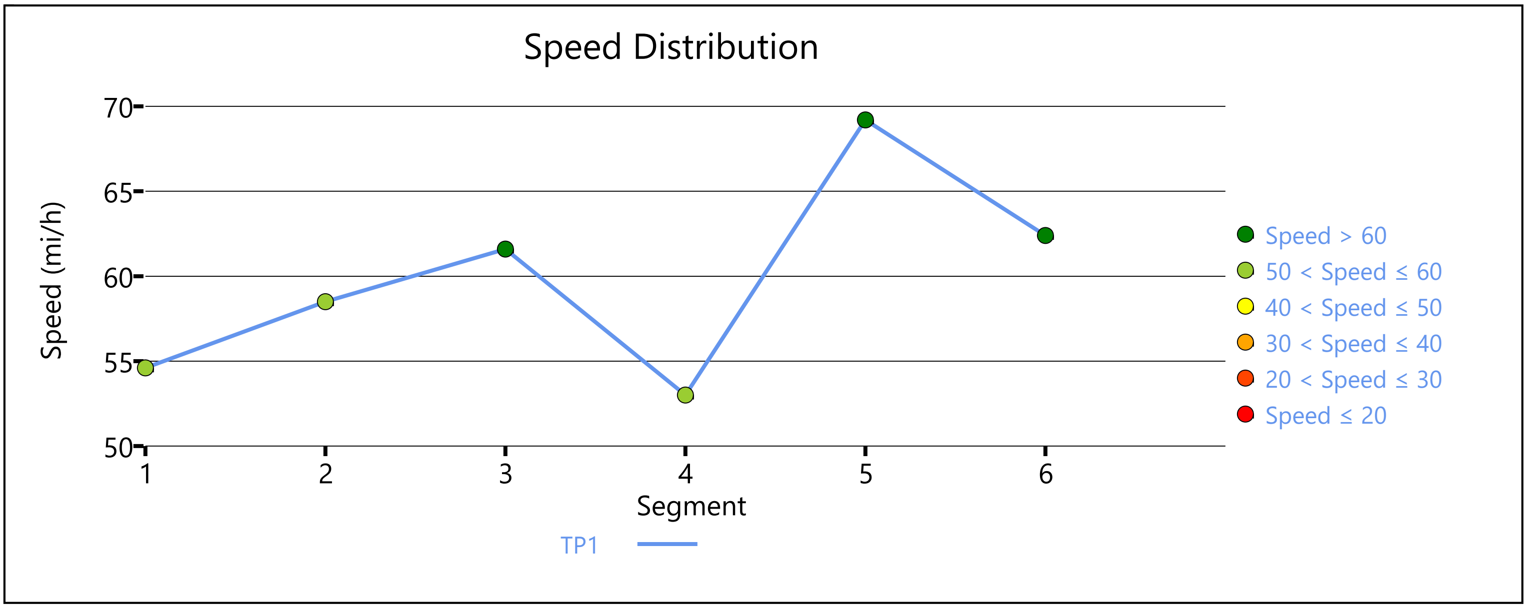
Space Mean Speed, mi/h	60.2	Density, veh/mi/ln	30.7
Average Travel Time, min	1.40	Density, pc/mi/ln	32.7

Messages

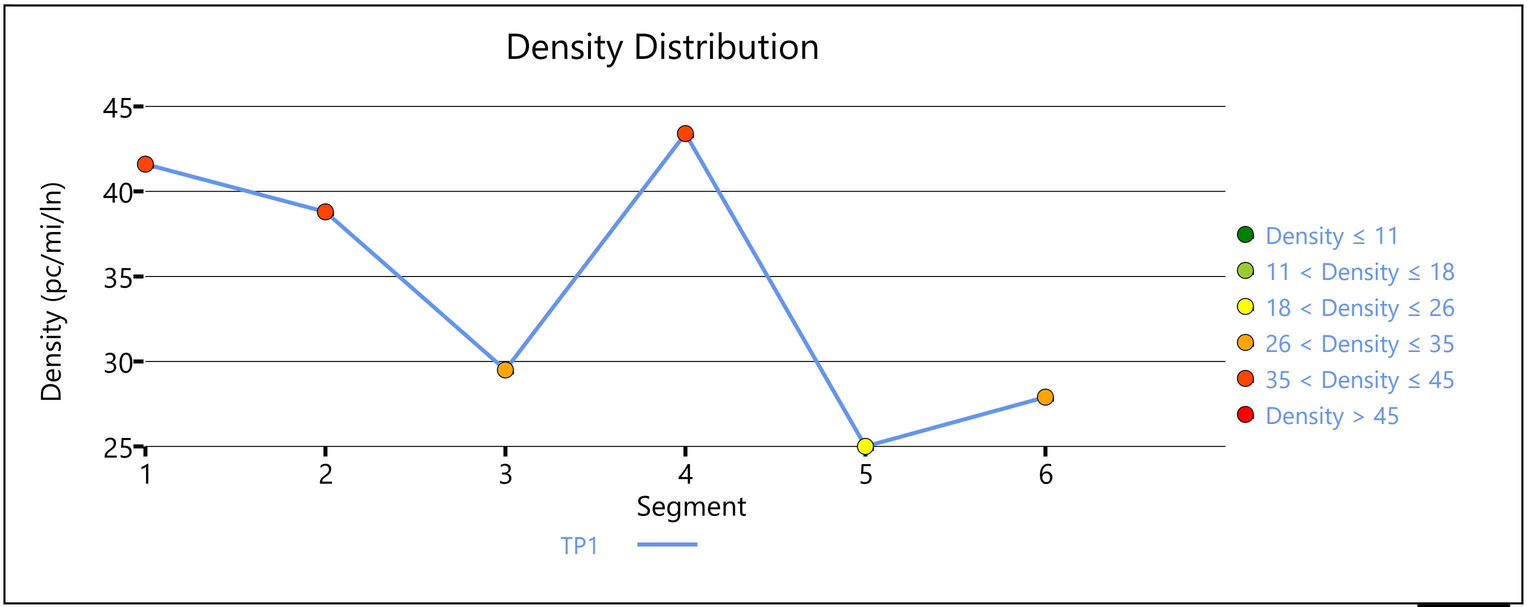
Comments



Volume Distribution



Speed Distribution



Density Distribution

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Near Term Year (2028) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5599	7098	0.79	62.9	29.7	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.990	5599	1619	7200	4000	0.78	0.40	63.1	56.2	29.6	30.6	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3890	4688	0.83	60.5	32.1	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	4285	395	4800	1900	0.89	0.21	56.5	56.5	37.9	34.1	D

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4519	213	4800	2000	0.94	0.11	54.6	54.6	41.4	35.7	E

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4532	4688	0.97	54.1	41.9	E

Facility Time Period Results

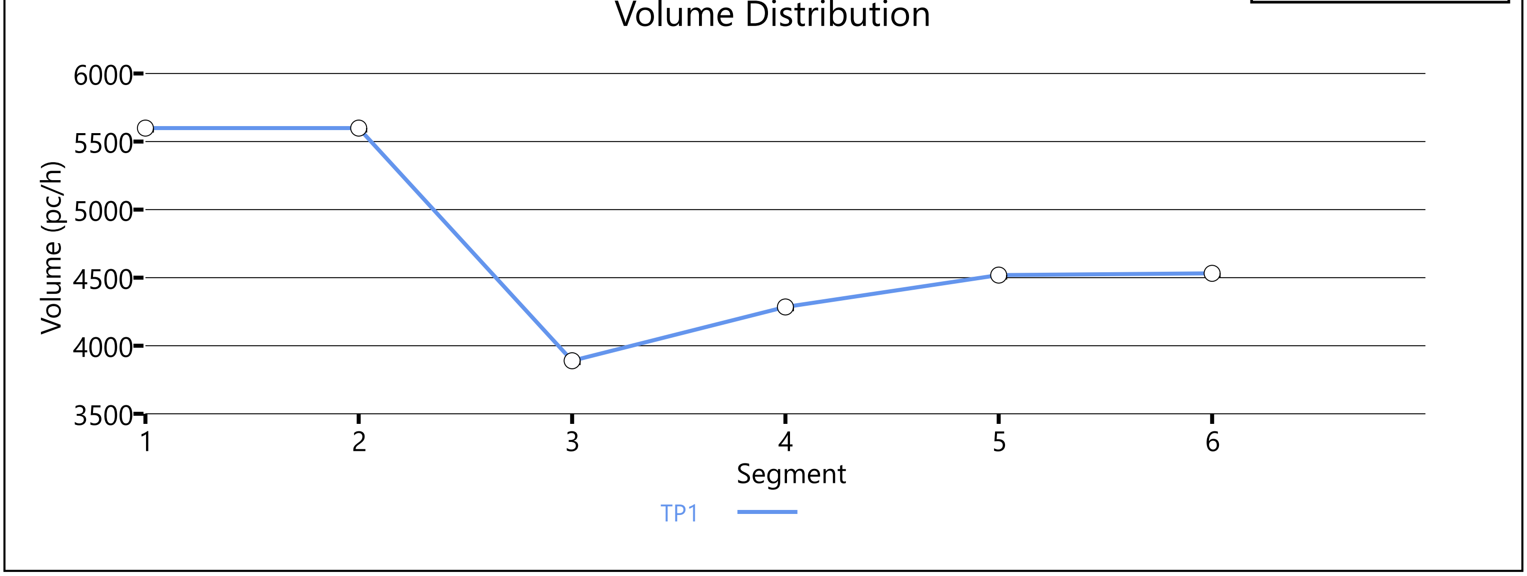
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	59.4	33.7	31.6	1.30	D

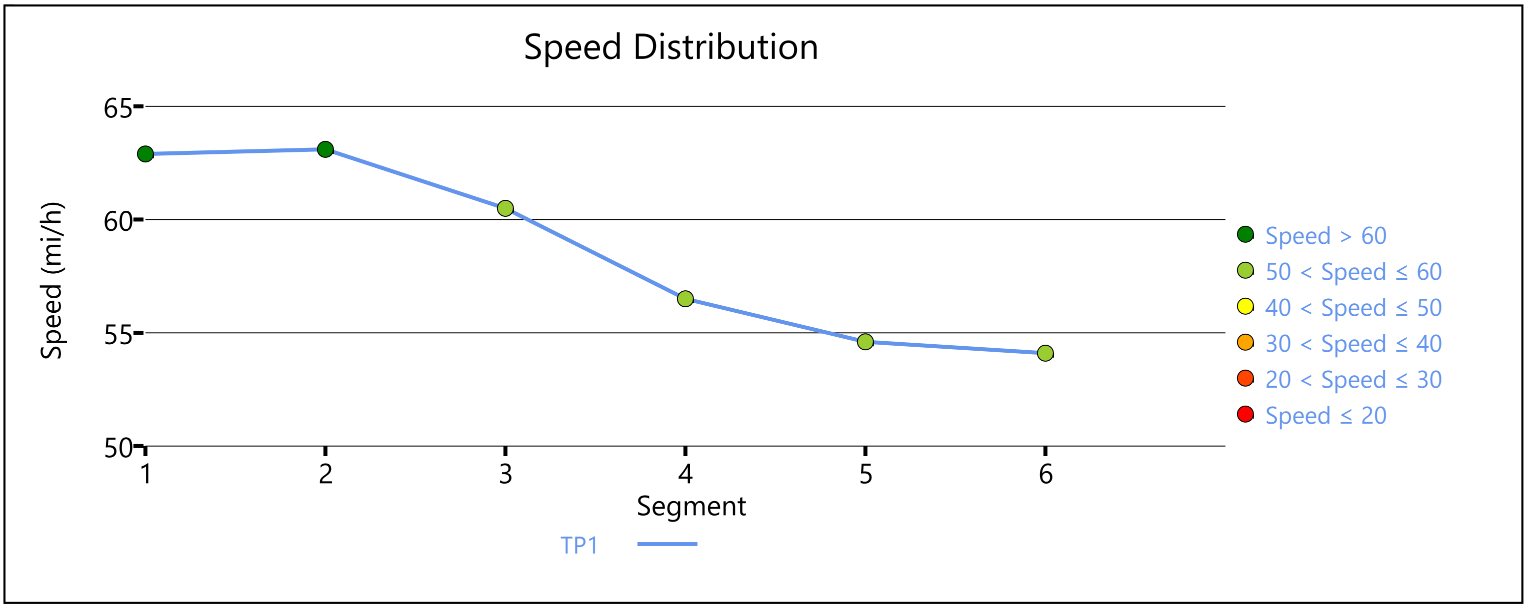
Facility Overall Results

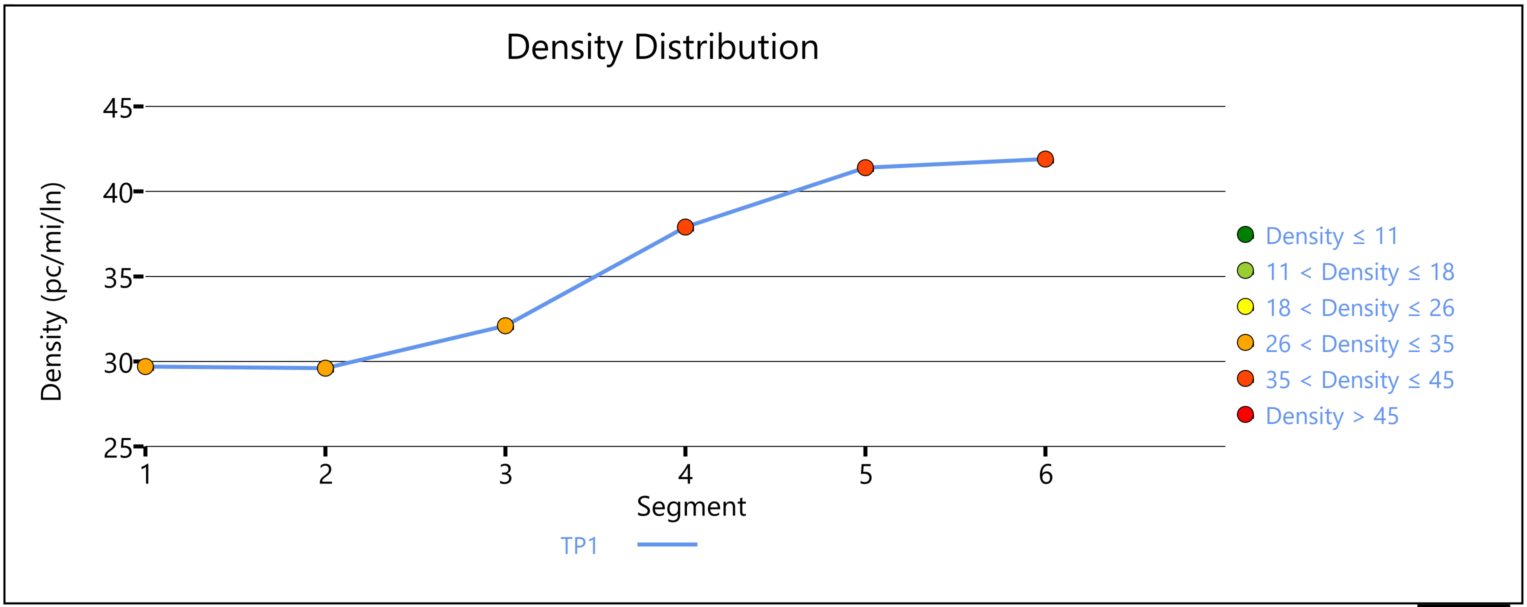
Space Mean Speed, mi/h	59.4	Density, veh/mi/ln	31.6
Average Travel Time, min	1.30	Density, pc/mi/ln	33.7

Messages

Comments


Volume Distribution
Volume (pc/h)
6000
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
65
60
55
50
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
45
40
35
30
25
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Near Term Year (2028) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4236	4716	1.03	35.4	59.8	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4186	444	4800	2000	1.01	0.22	33.5	59.8	62.4	42.3	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3643	4672	0.94	24.6	74.2	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.985	4470	827	4800	2000	1.09	0.41	54.6	54.6	40.9	36.7	F

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	5056	586	7200	2000	0.81	0.29	65.3	-	25.8	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5056	7008	0.84	62.8	26.8	D

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	40.9	46.5	43.6	2.00	F

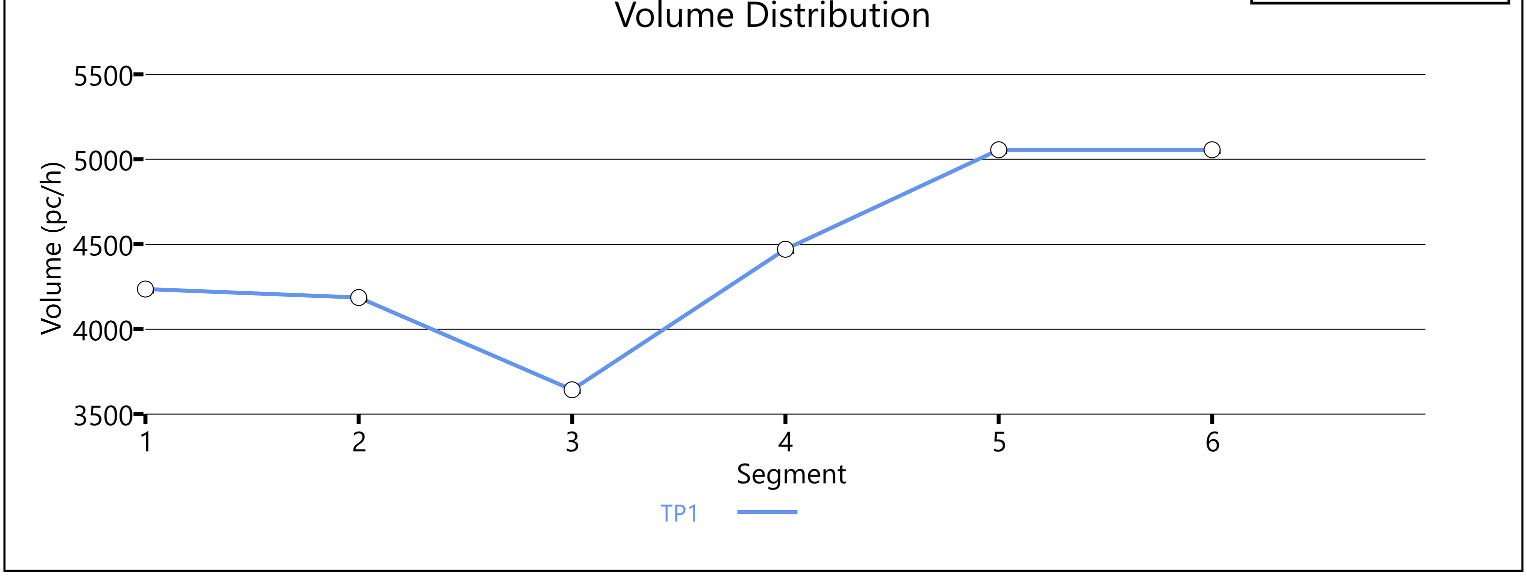
Facility Overall Results

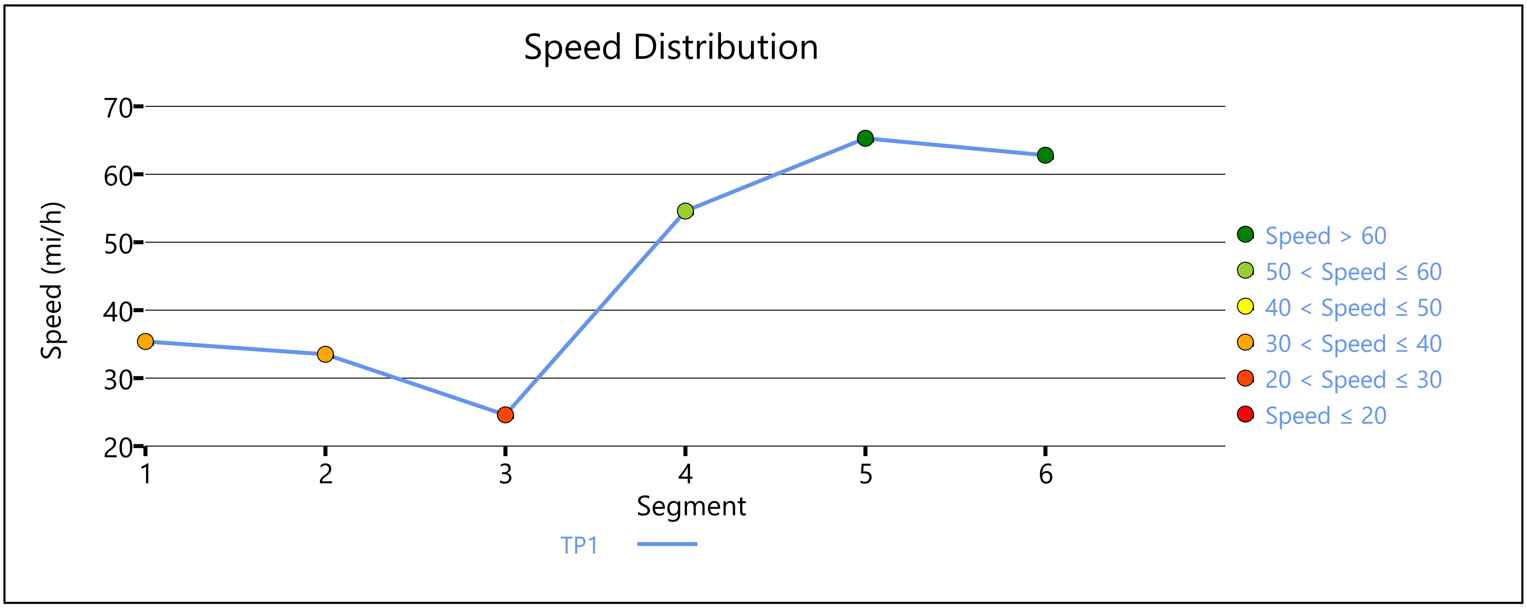
Space Mean Speed, mi/h	40.9	Density, veh/mi/ln	43.6
Average Travel Time, min	2.00	Density, pc/mi/ln	46.5

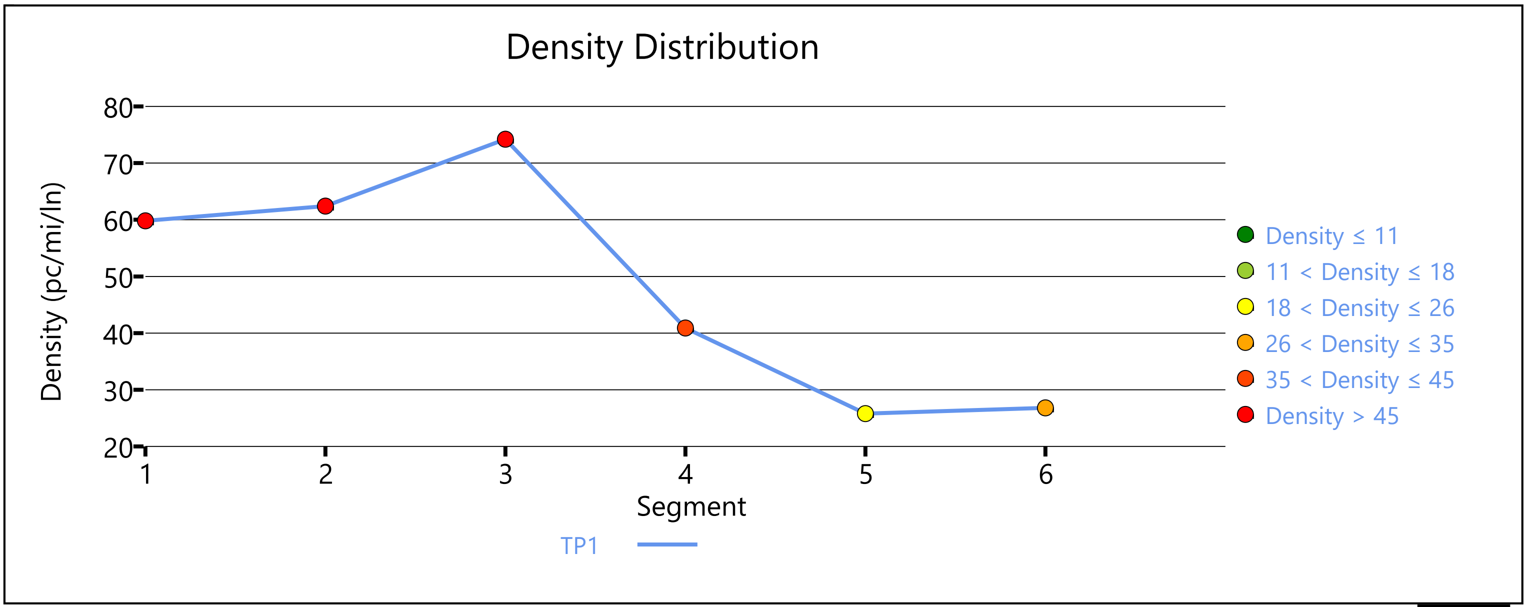
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
Volume (pc/h)
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
60
50
40
30
20
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
80
70
60
50
40
30
20
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1257	4688	0.27	64.4	9.8	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.971	1257	585	7200	4000	0.17	0.15	64.7	59.3	6.5	0.0	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	651	4702	0.14	65.1	5.0	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	777	126	4800	2000	0.16	0.06	66.3	66.3	5.9	6.4	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	783	4702	0.17	65.1	6.0	A

Facility Time Period Results

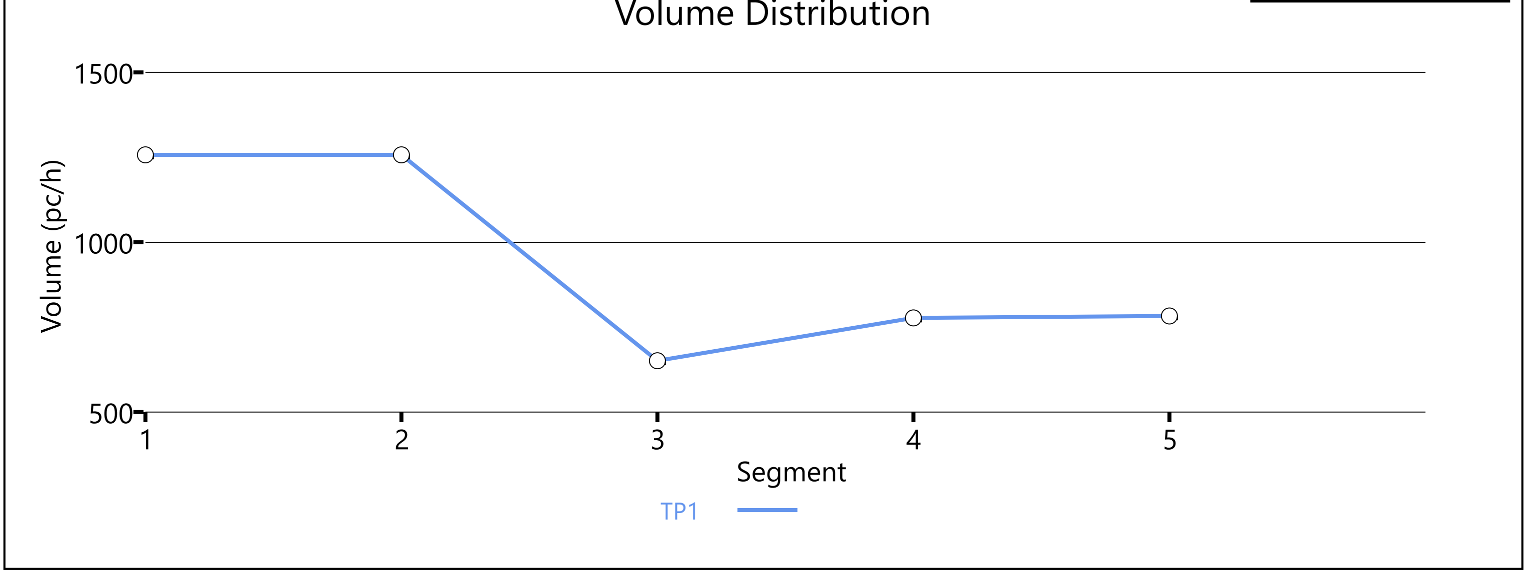
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.2	5.8	5.4	1.00	A

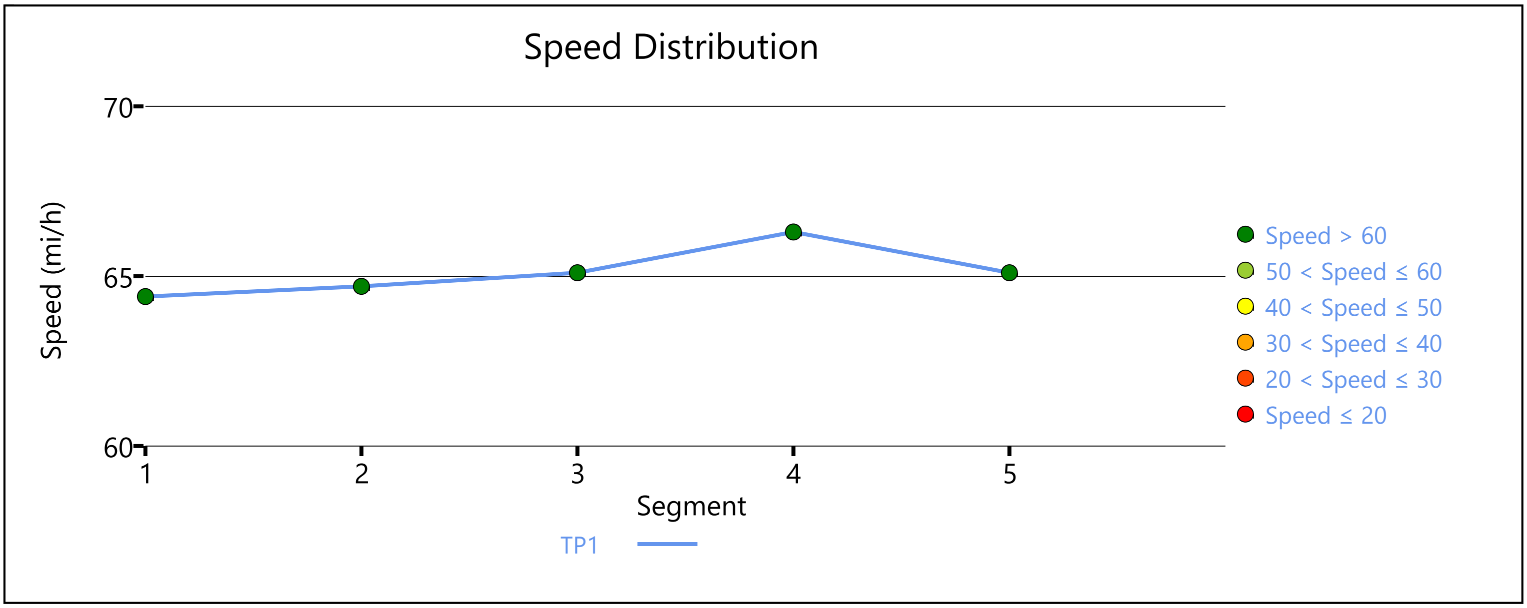
Facility Overall Results

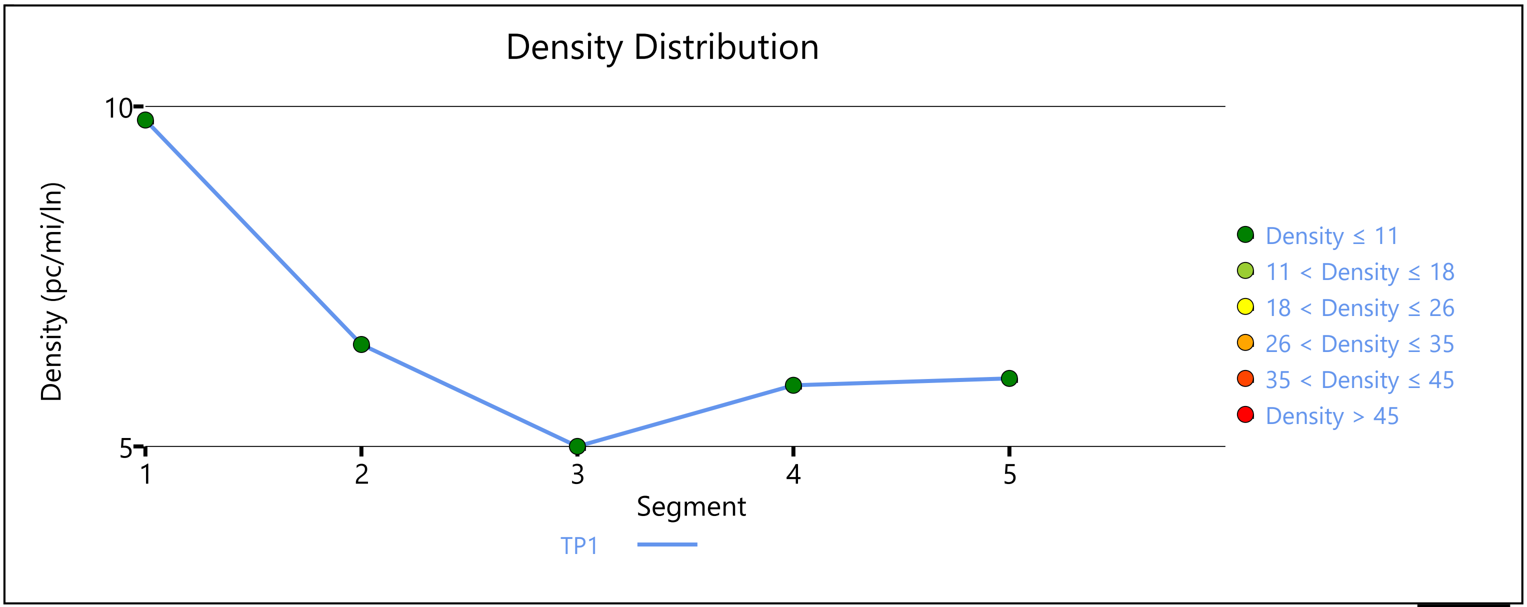
Space Mean Speed, mi/h	65.2	Density, veh/mi/ln	5.4
Average Travel Time, min	1.00	Density, pc/mi/ln	5.8

Messages

Comments


Volume Distribution
1500
1000
500
Volume (pc/h)
1
2
3
4
5
Segment
TP1


Speed Distribution
70
65
60
Speed (mi/h)
1
2
3
4
5
Segment
TP1
● Speed > 60
● 50 < Speed ≤ 60
● 40 < Speed ≤ 50
● 30 < Speed ≤ 40
● 20 < Speed ≤ 30
● Speed ≤ 20


Density Distribution
10
5
Density (pc/mi/ln)
1
2
3
4
5
Segment
TP1
● Density ≤ 11
● 11 < Density ≤ 18
● 18 < Density ≤ 26
● 26 < Density ≤ 35
● 35 < Density ≤ 45
● Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3232	4716	0.69	65.0	24.9	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.988	3232	183	4800	2000	0.67	0.09	60.6	60.6	26.7	30.6	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3040	4716	0.64	65.5	23.2	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.992	4190	1150	4800	2000	0.87	0.58	58.2	58.2	36.0	32.1	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4255	4716	0.90	57.9	36.8	E

Facility Time Period Results

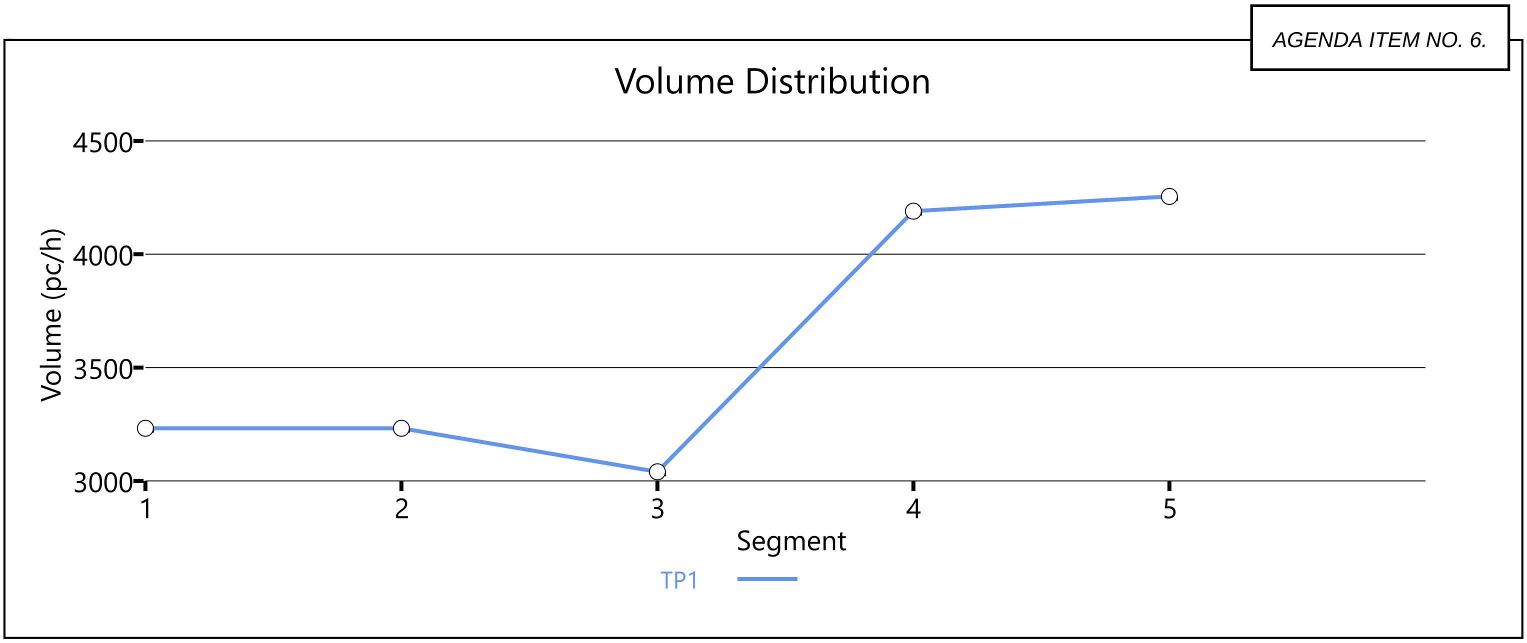
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	61.9	27.5	25.8	1.30	D

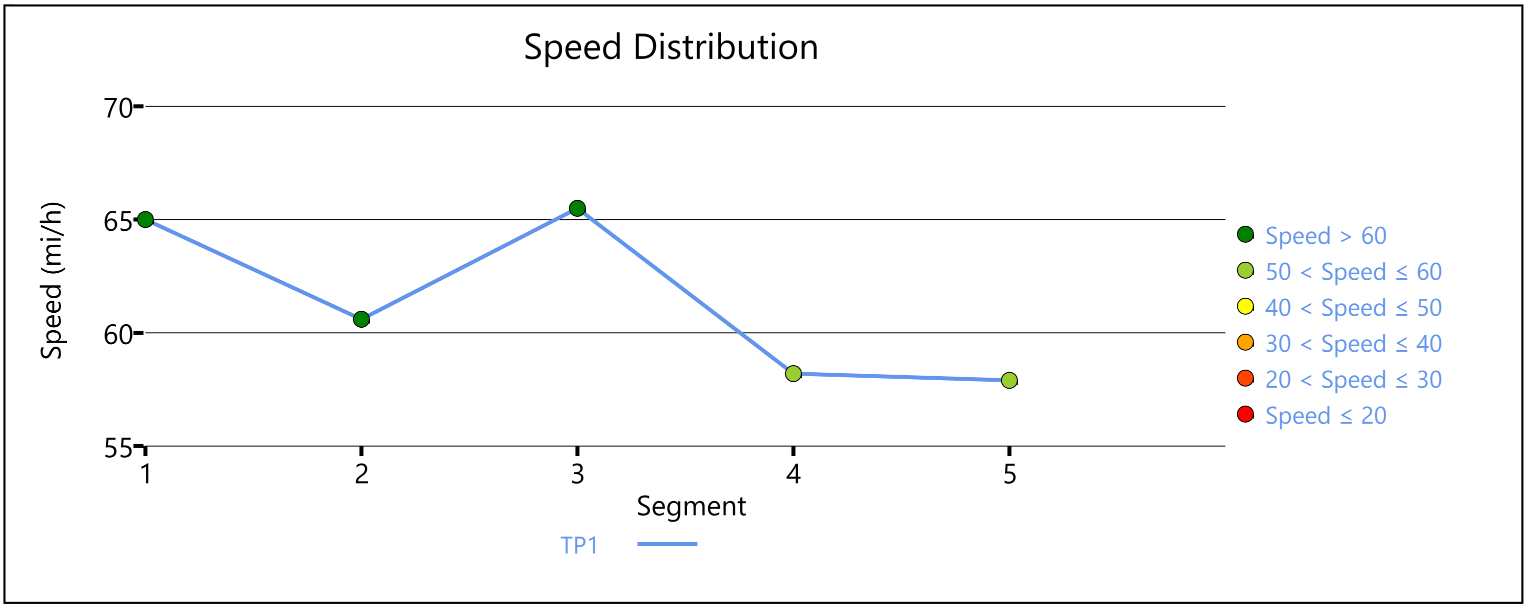
Facility Overall Results

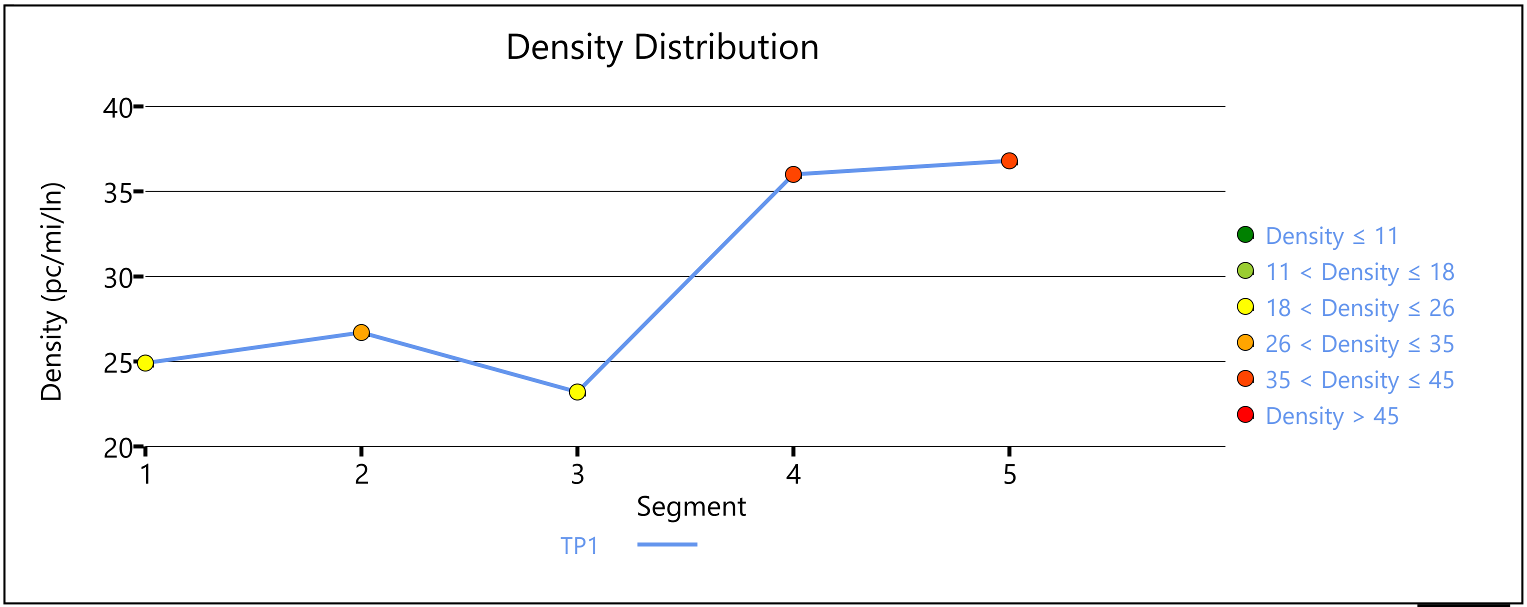
Space Mean Speed, mi/h	61.9	Density, veh/mi/ln	25.8
Average Travel Time, min	1.30	Density, pc/mi/ln	27.5

Messages

Comments


Volume Distribution
Volume (pc/h)
4500
4000
3500
3000
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
55
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
20
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4312	4688	0.92	56.6	38.1	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4312	1071	7200	4000	0.60	0.27	65.3	57.9	22.0	12.5	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3191	4702	0.68	64.5	24.7	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.994	3555	364	4800	2000	0.74	0.18	62.0	62.0	28.7	28.0	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	3577	4702	0.76	62.9	28.4	D

Facility Time Period Results

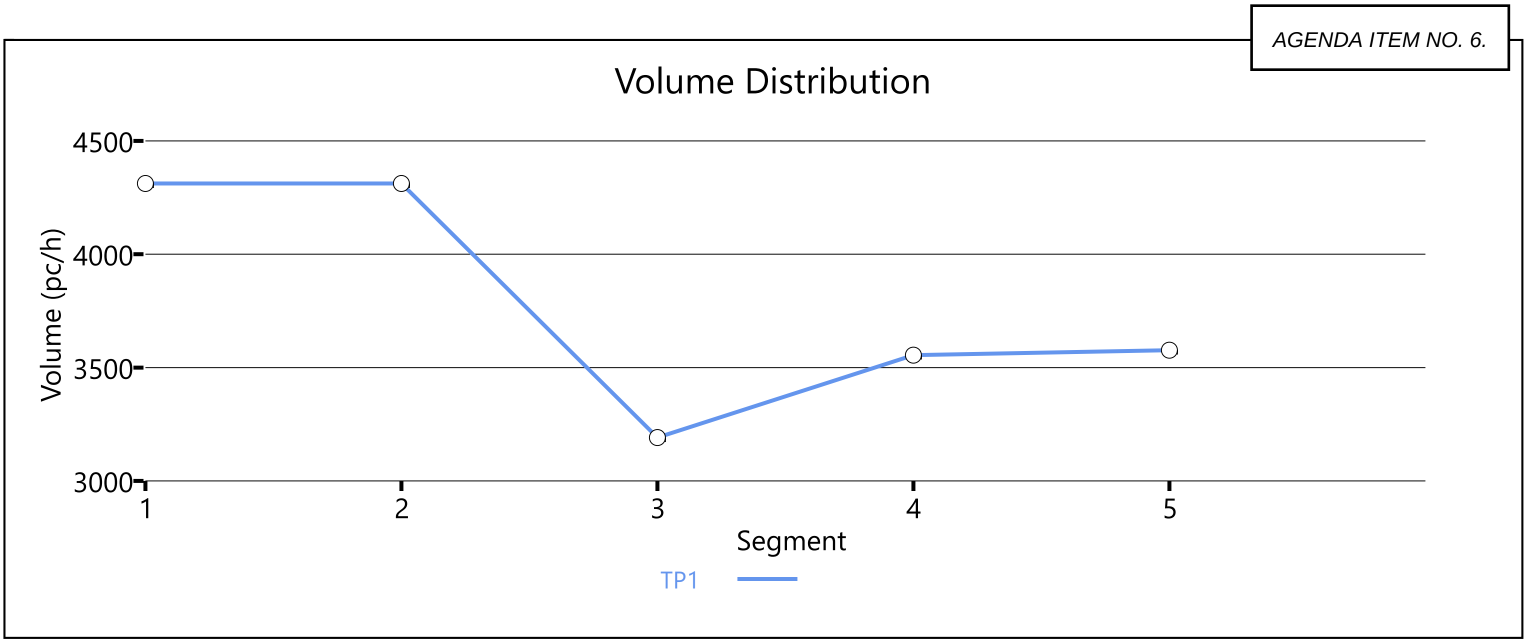
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.9	24.9	23.4	1.00	C

Facility Overall Results

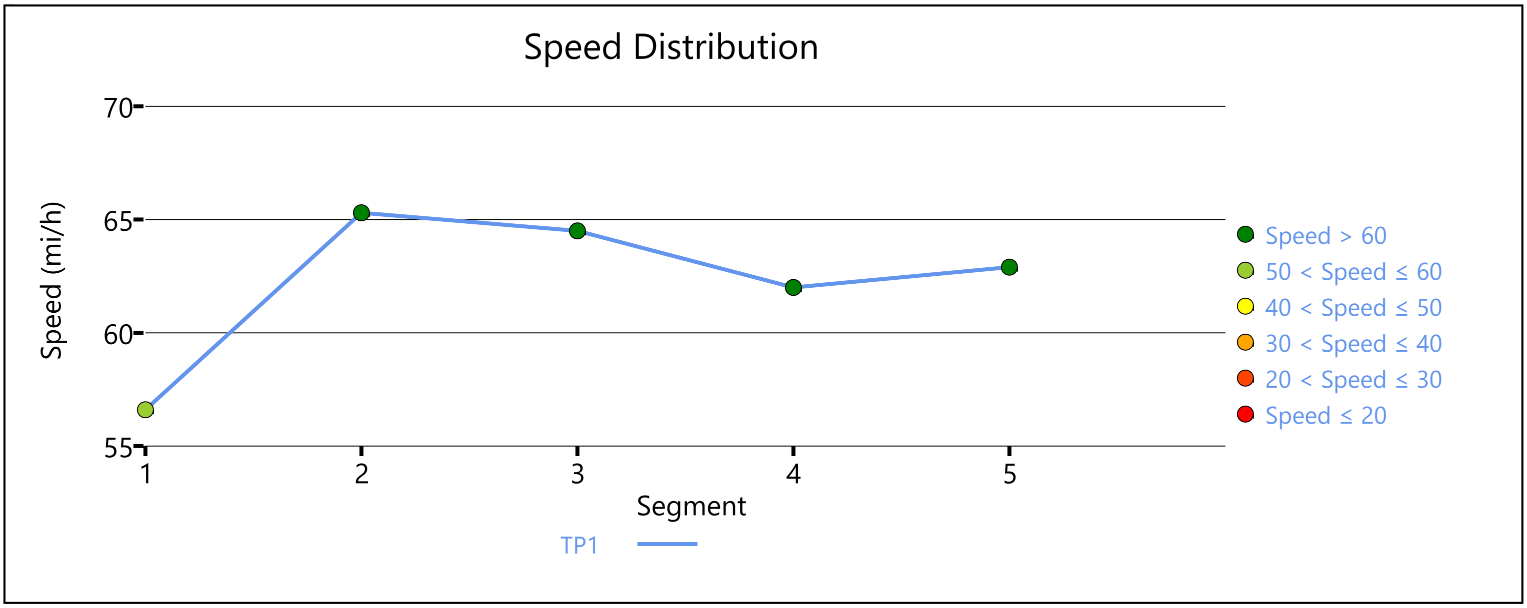
Space Mean Speed, mi/h	63.9	Density, veh/mi/ln	23.4
Average Travel Time, min	1.00	Density, pc/mi/ln	24.9

Messages

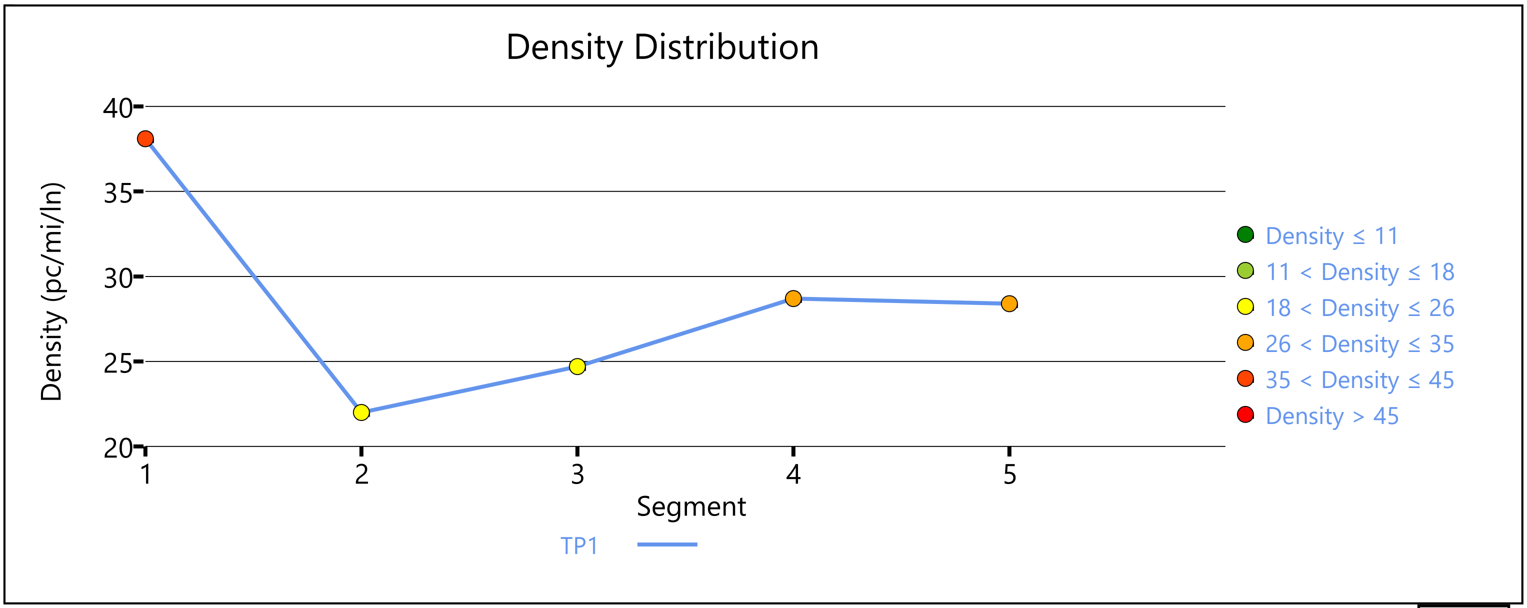
Comments



Volume Distribution



Speed Distribution



Density Distribution

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4134	4716	0.96	32.9	62.9	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.967	4050	208	4800	2000	0.95	0.10	33.1	60.5	61.2	41.9	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3656	4716	0.92	25.4	71.9	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	4391	764	4800	2000	1.06	0.38	38.5	45.4	57.0	39.4	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4391	4716	1.09	56.4	38.9	F

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	31.1	64.0	60.0	2.60	F

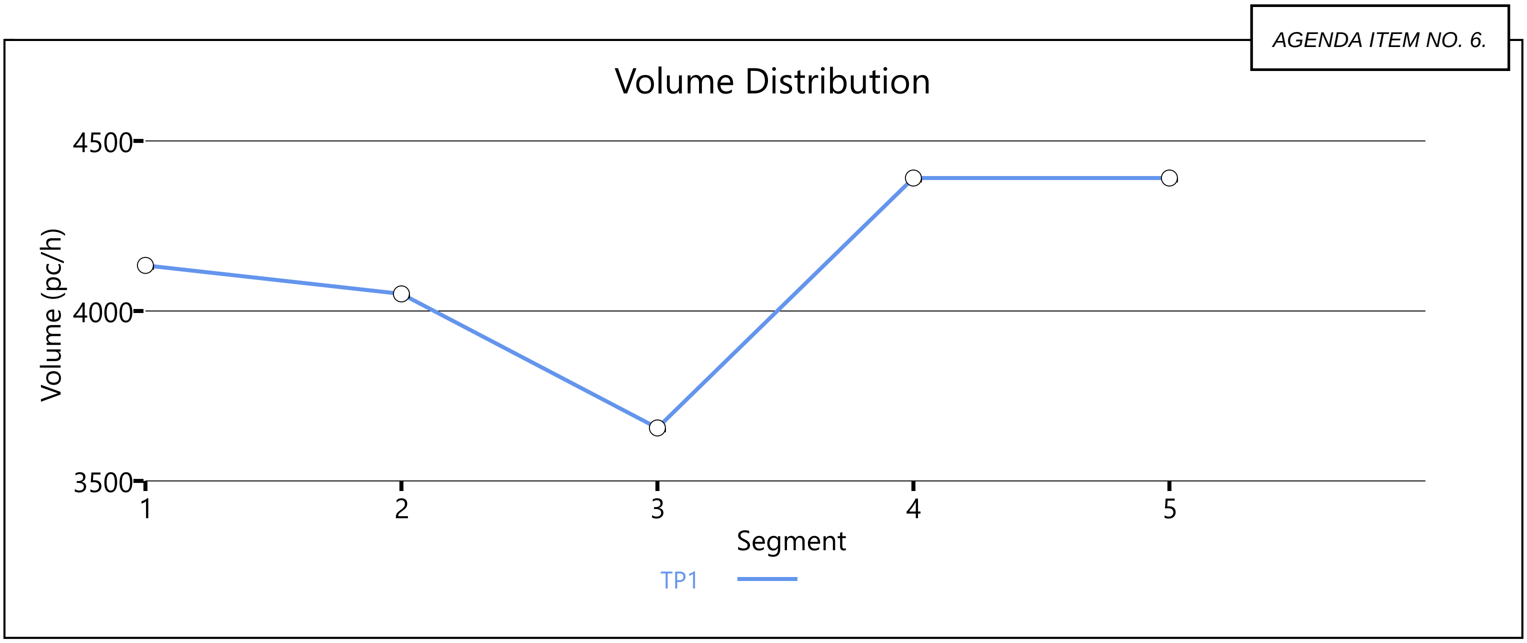
Facility Overall Results

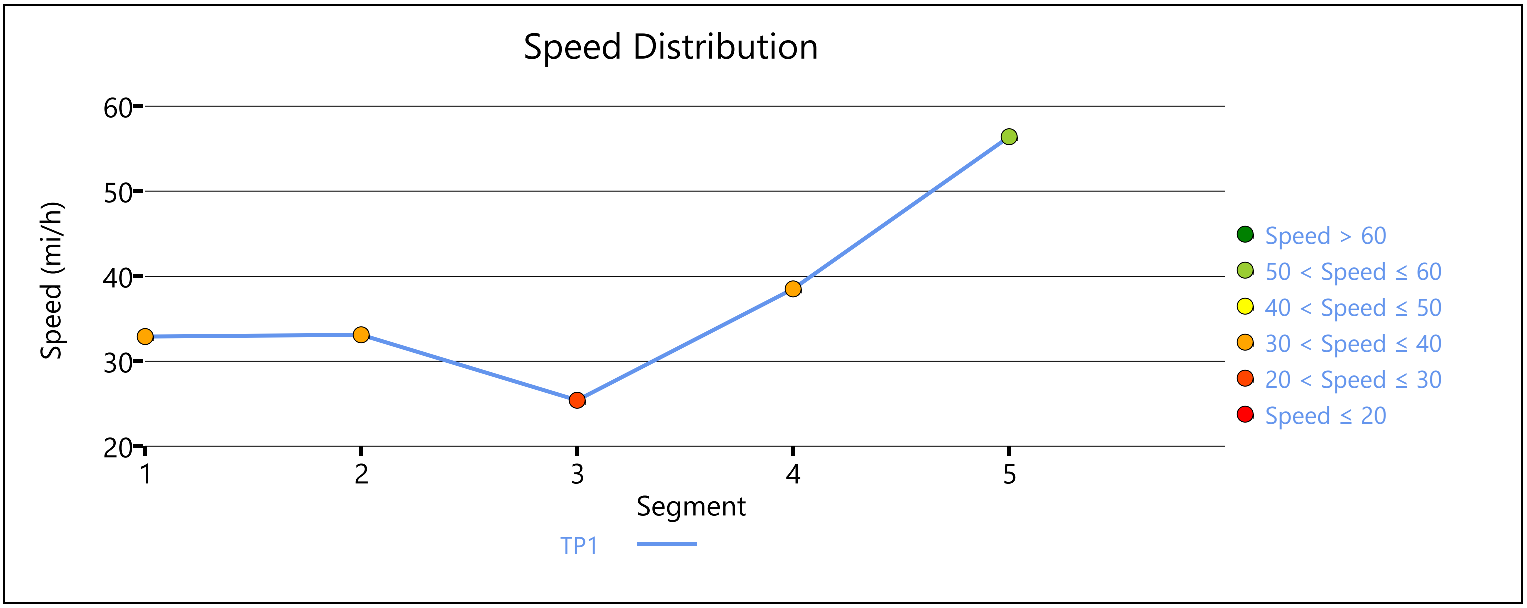
Space Mean Speed, mi/h	31.1	Density, veh/mi/ln	60.0
Average Travel Time, min	2.60	Density, pc/mi/ln	64.0

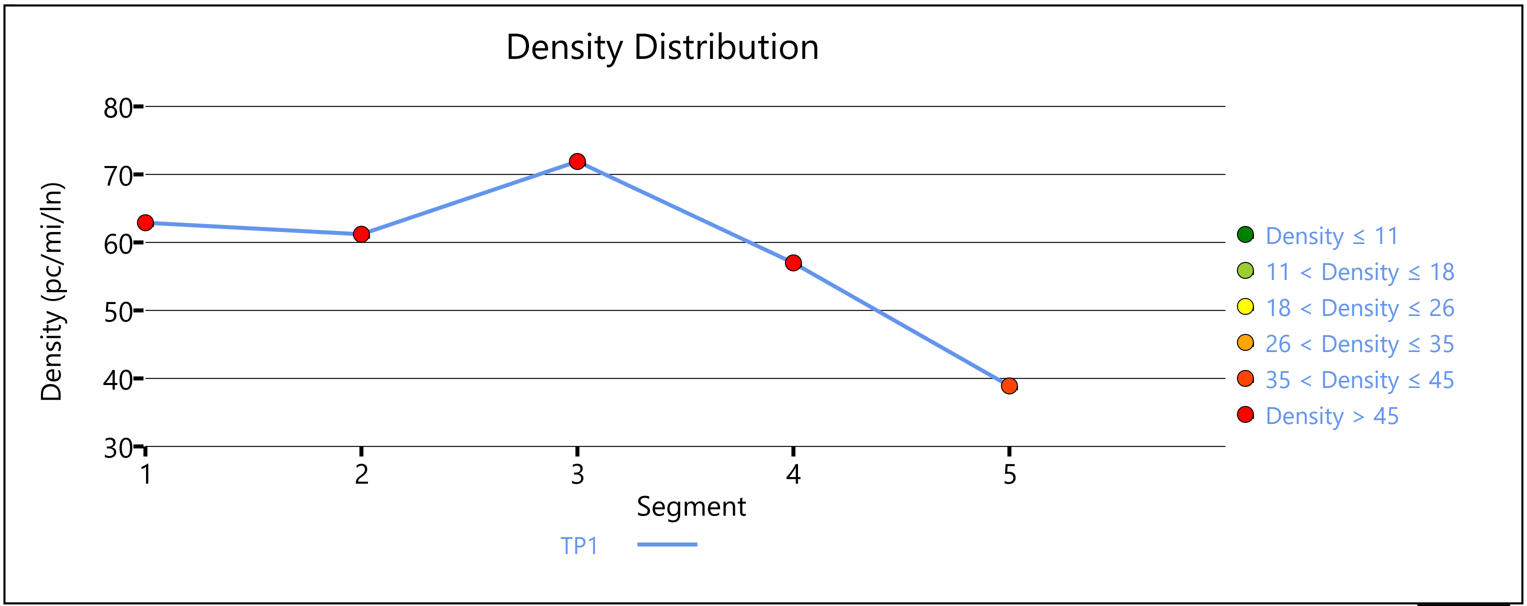
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 5. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
4500
4000
3500
Volume (pc/h)
1
2
3
4
5
Segment
TP1


Speed Distribution
60
50
40
30
20
Speed (mi/h)
1
2
3
4
5
Segment
TP1
● Speed > 60
● 50 < Speed ≤ 60
● 40 < Speed ≤ 50
● 30 < Speed ≤ 40
● 20 < Speed ≤ 30
● Speed ≤ 20


Density Distribution
80
70
60
50
40
30
Density (pc/mi/ln)
1
2
3
4
5
Segment
TP1
● Density ≤ 11
● 11 < Density ≤ 18
● 18 < Density ≤ 26
● 26 < Density ≤ 35
● 35 < Density ≤ 45
● Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1269	4688	0.27	64.4	9.8	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.971	1269	597	7200	4000	0.18	0.15	64.6	59.3	6.5	0.0	A

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	651	4702	0.14	65.1	5.0	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	777	126	4800	2000	0.16	0.06	66.3	66.3	5.9	6.4	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	783	4702	0.17	65.1	6.0	A

Facility Time Period Results

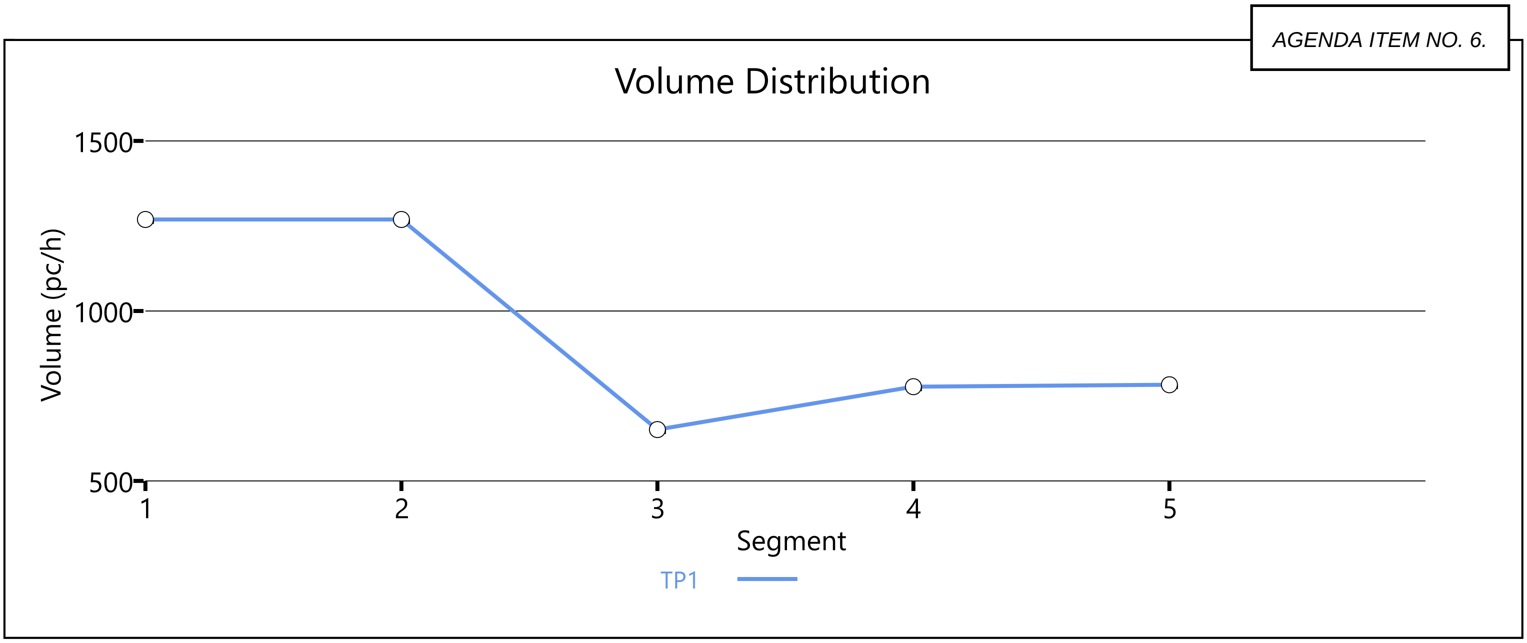
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	65.2	5.8	5.4	1.00	A

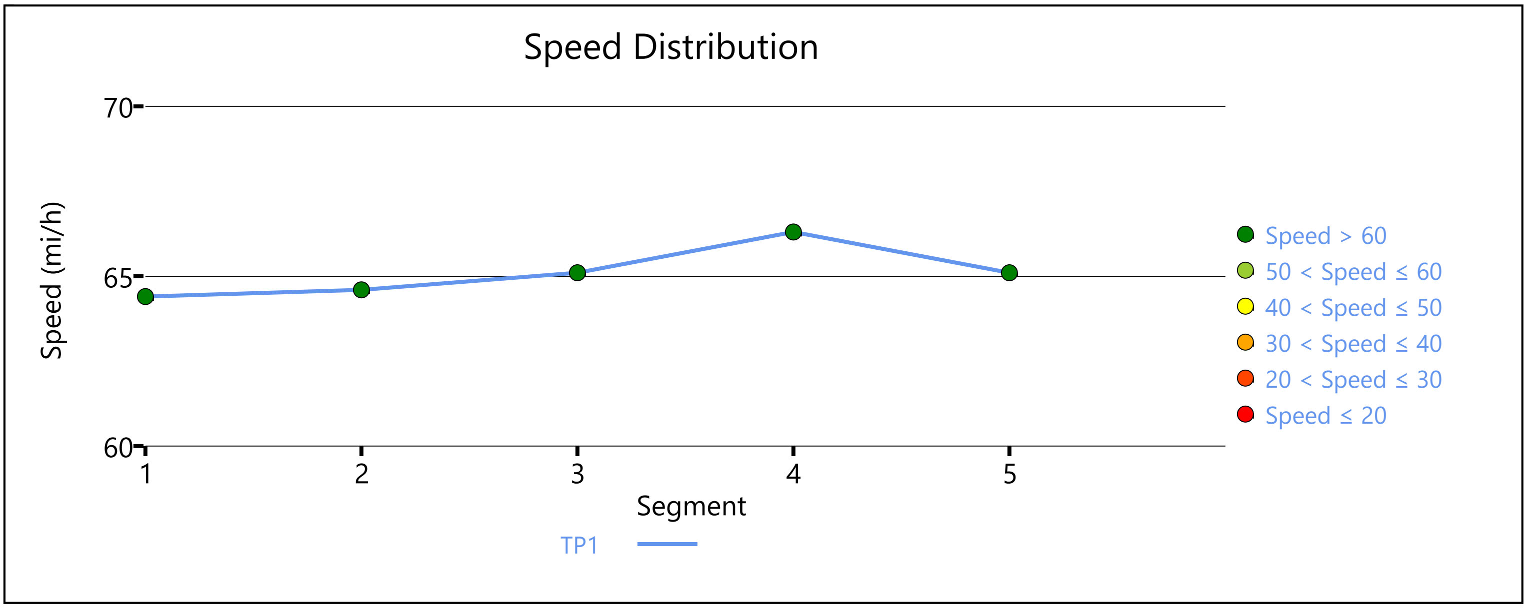
Facility Overall Results

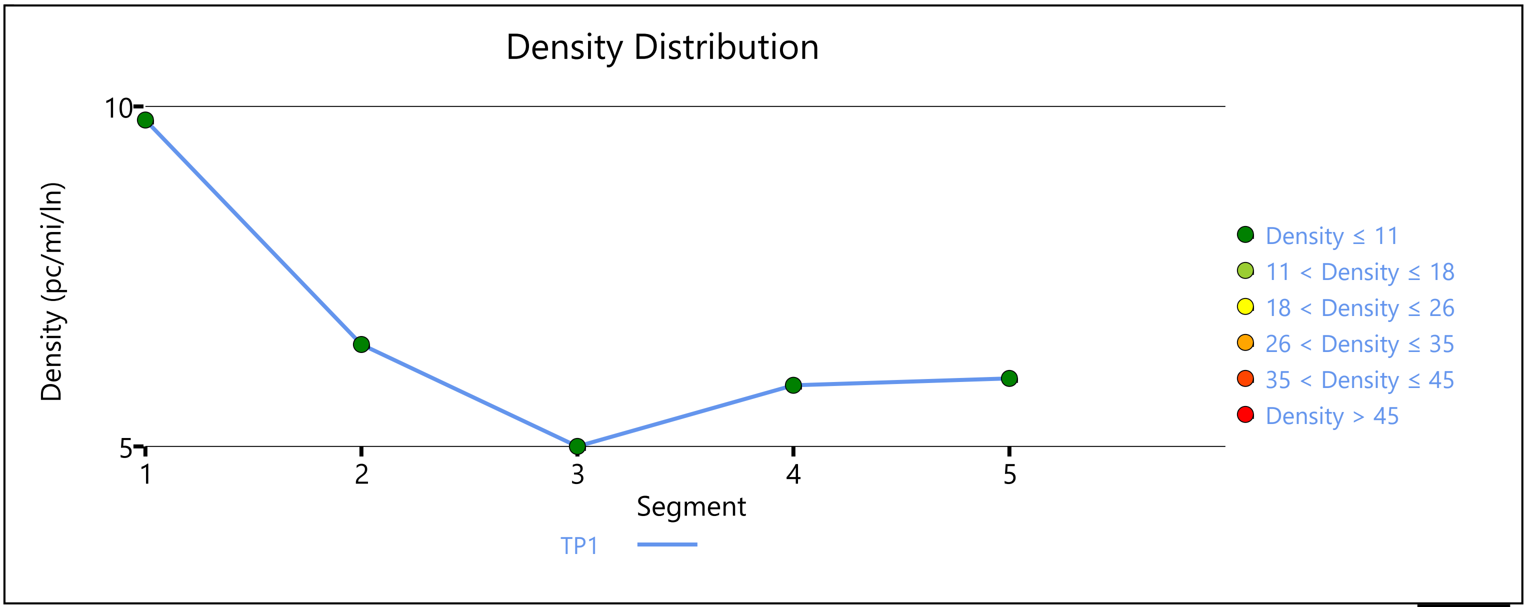
Space Mean Speed, mi/h	65.2	Density, veh/mi/ln	5.4
Average Travel Time, min	1.00	Density, pc/mi/ln	5.8

Messages

Comments


Volume Distribution
1500
1000
500
Volume (pc/h)
1
2
3
4
5
Segment
TP1


Speed Distribution
70
65
60
Speed (mi/h)
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
10
5
Density (pc/mi/ln)
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Cumulative Year (2046) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3232	4716	0.69	65.0	24.9	C

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.988	3232	183	4800	2000	0.67	0.09	60.6	60.6	26.7	30.6	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3040	4716	0.64	65.5	23.2	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.992	4190	1150	4800	2000	0.87	0.58	58.2	58.2	36.0	32.1	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4255	4716	0.90	57.9	36.8	E

Facility Time Period Results

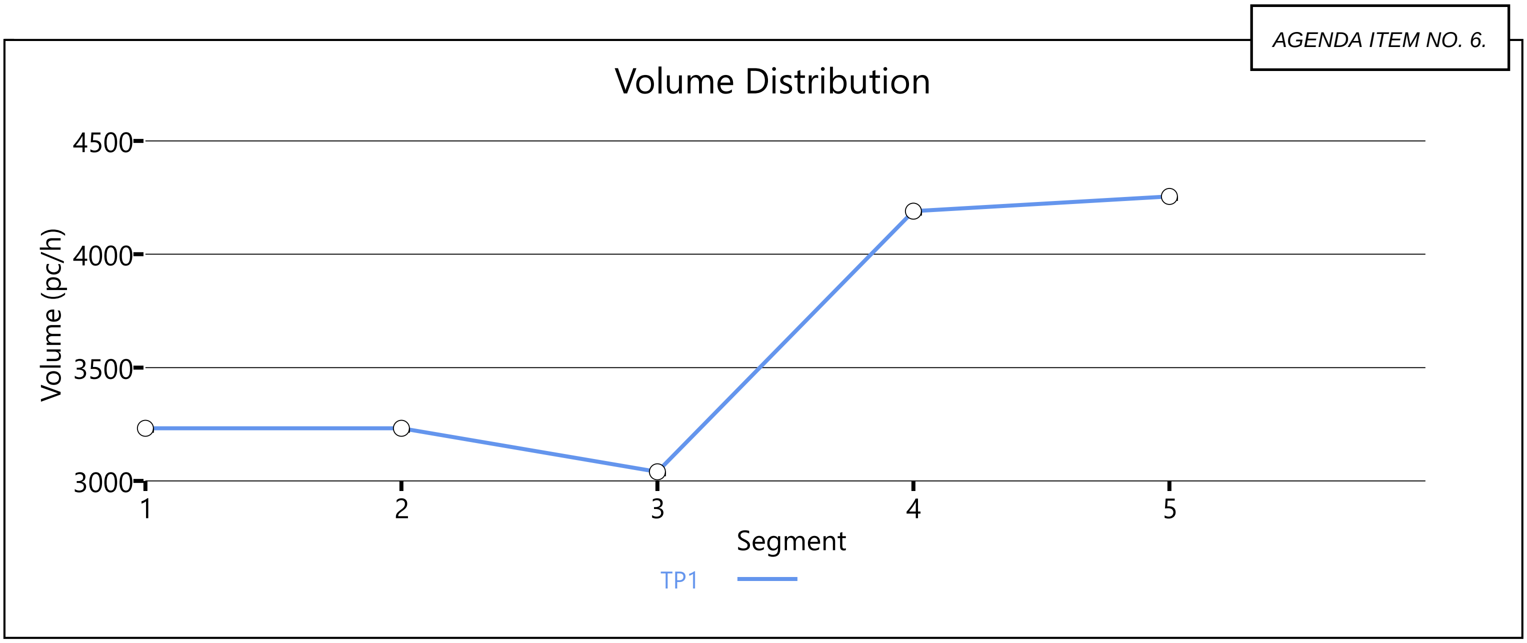
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	61.9	27.5	25.8	1.30	D

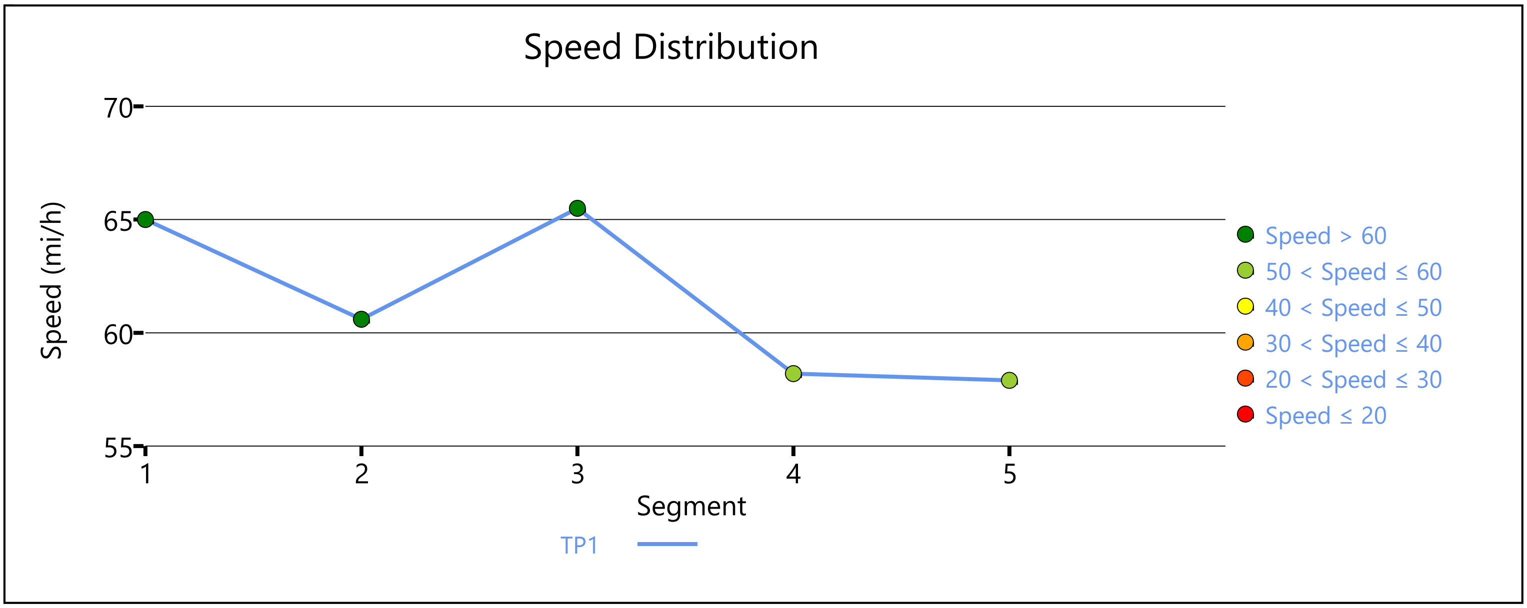
Facility Overall Results

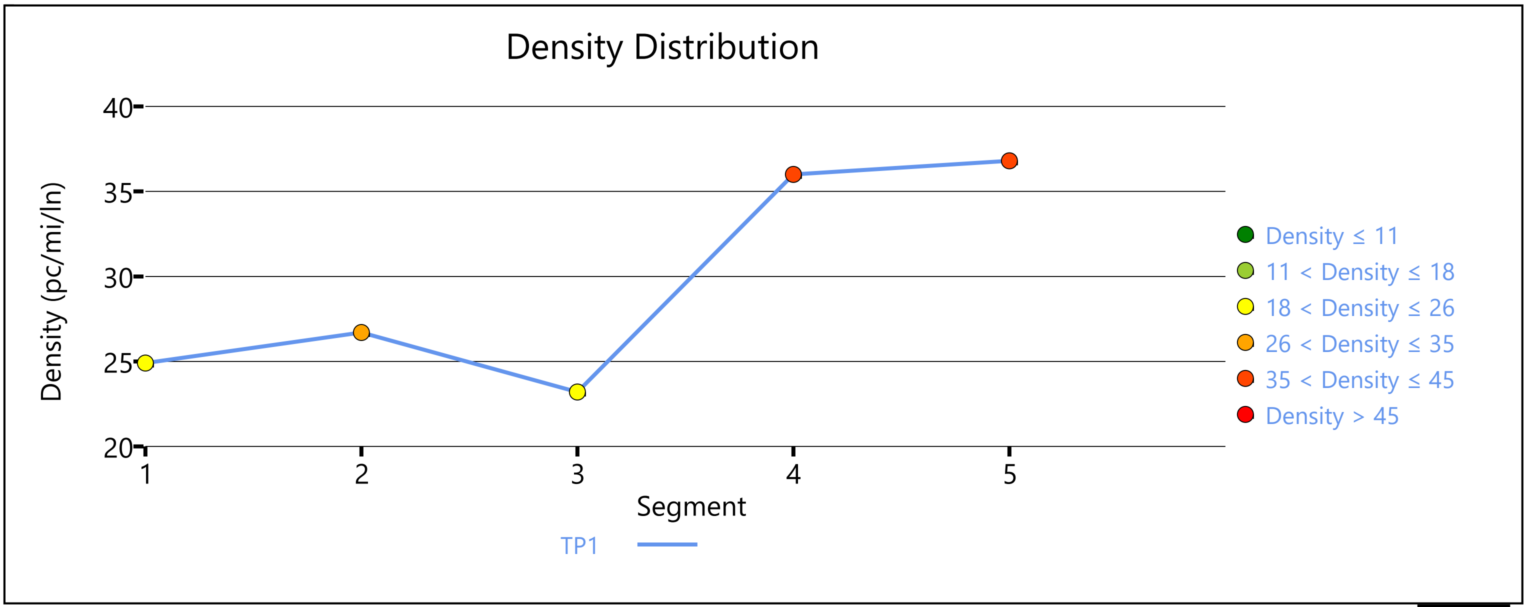
Space Mean Speed, mi/h	61.9	Density, veh/mi/ln	25.8
Average Travel Time, min	1.30	Density, pc/mi/ln	27.5

Messages

Comments


Volume Distribution
Volume (pc/h)
4500
4000
3500
3000
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
55
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
20
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.12		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	2770	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Temperance Avenue Off-Ramp	10	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4353	4688	0.93	56.2	38.7	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4353	1110	7200	4000	0.60	0.28	65.1	57.8	22.3	12.8	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3191	4702	0.68	64.5	24.7	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.994	3555	364	4800	2000	0.74	0.18	62.0	62.0	28.7	28.0	[illegible]

Segment 5: Basic

AGENDA ITEM NO. 6.

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	3577	4702	0.76	62.9	28.4	D

Facility Time Period Results

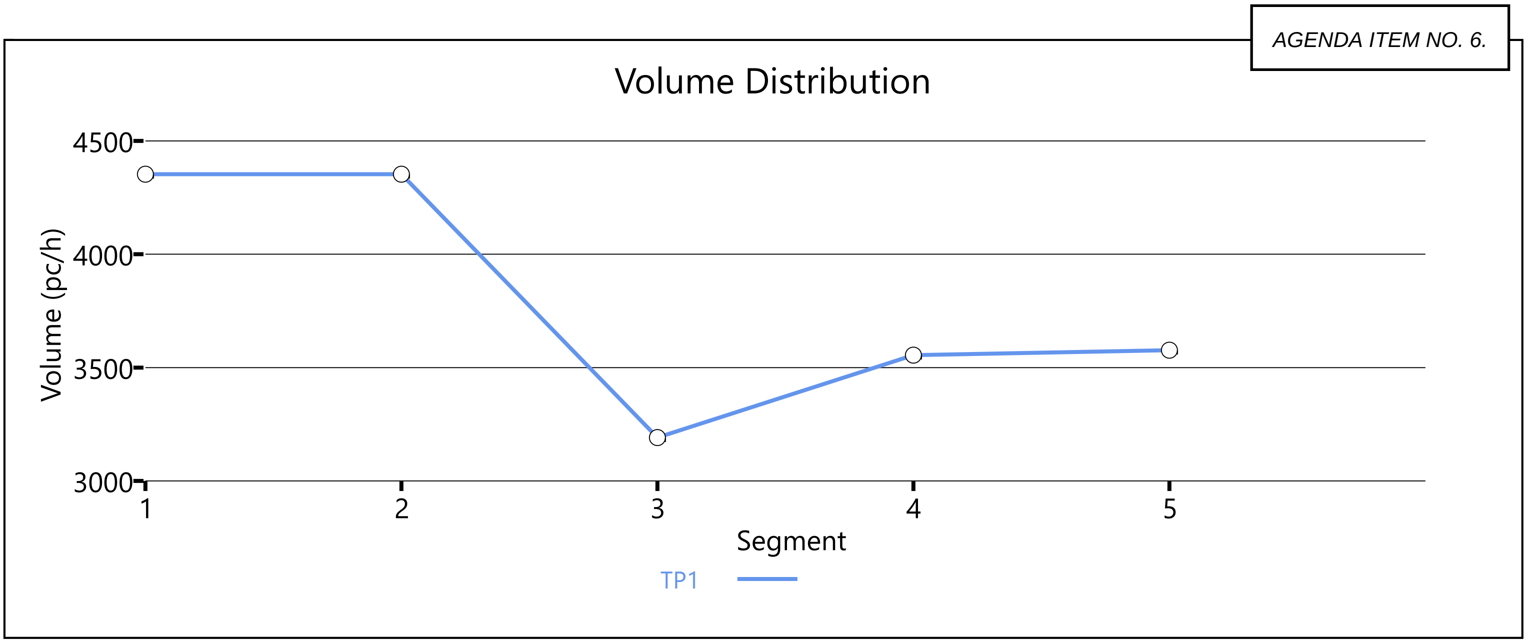
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.8	25.0	23.5	1.00	C

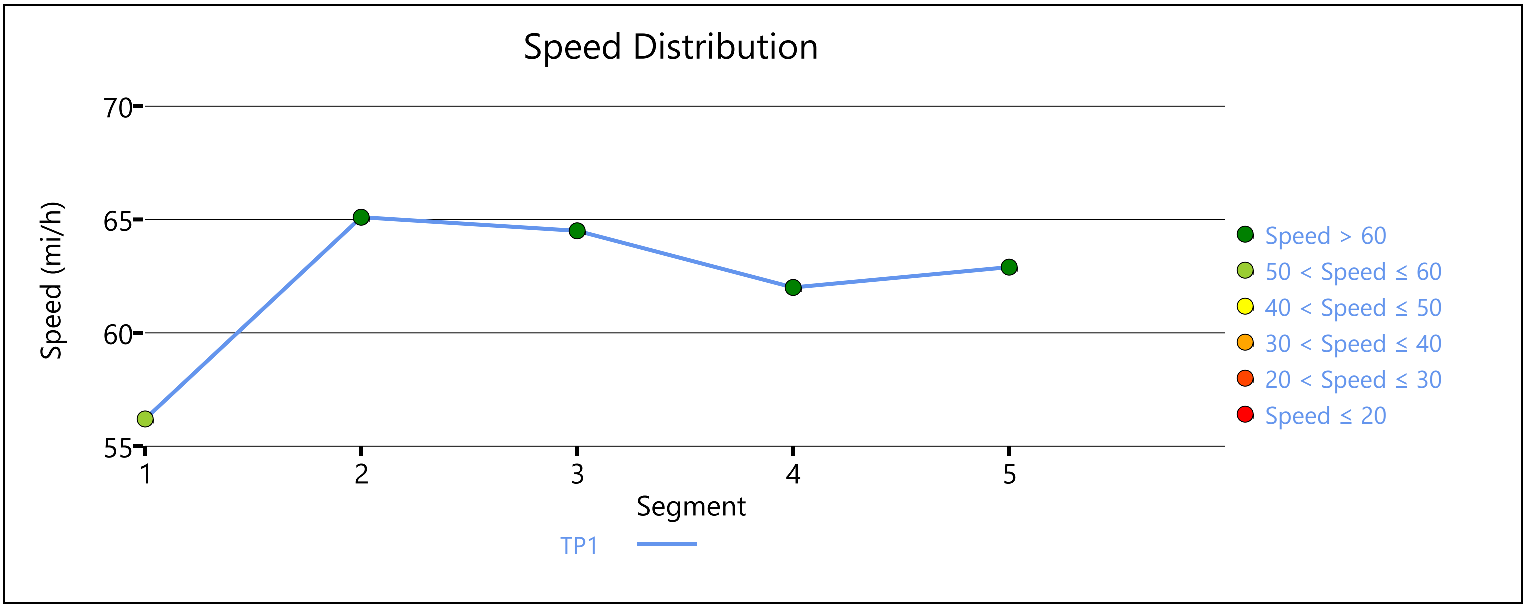
Facility Overall Results

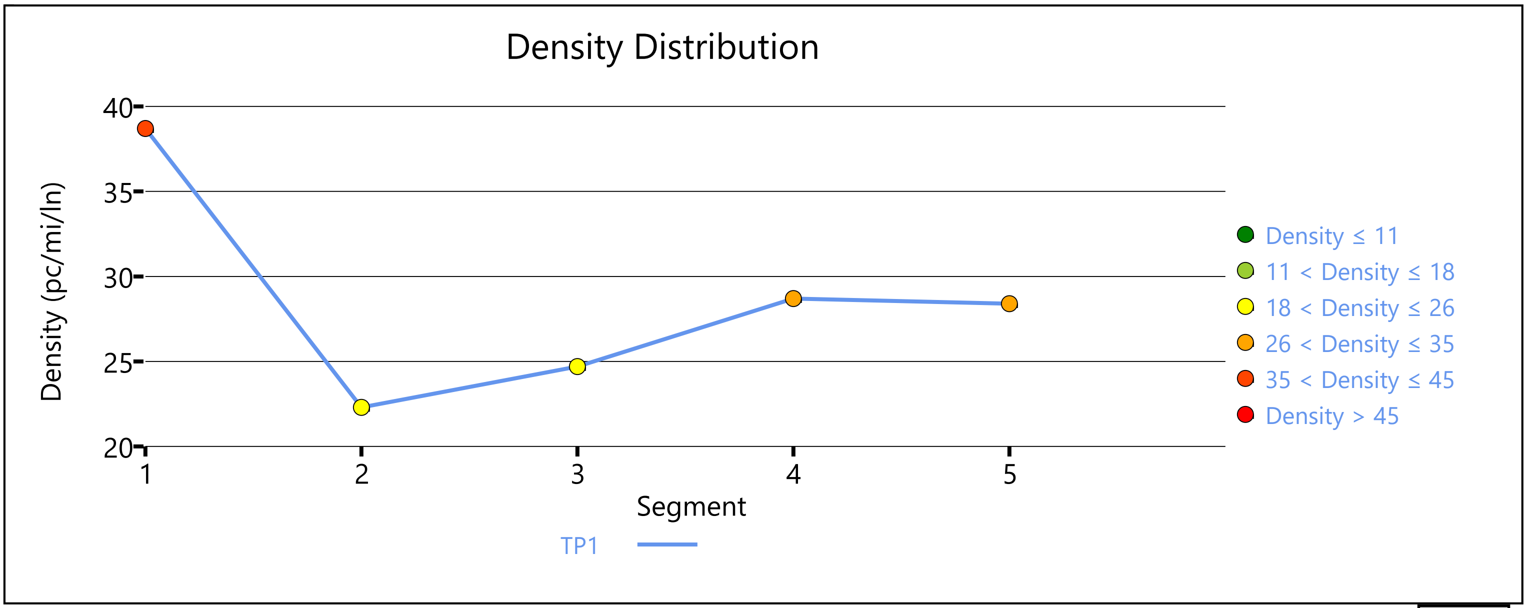
Space Mean Speed, mi/h	63.8	Density, veh/mi/ln	23.5
Average Travel Time, min	1.00	Density, pc/mi/ln	25.0

Messages

Comments


Volume Distribution
Volume (pc/h)
4500
4000
3500
3000
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
55
1
2
3
4
5
Segment
TP1
● Speed > 60
● 50 < Speed ≤ 60
● 40 < Speed ≤ 50
● 30 < Speed ≤ 40
● 20 < Speed ≤ 30
● Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
20
1
2
3
4
5
Segment
TP1
● Density ≤ 11
● 11 < Density ≤ 18
● 18 < Density ≤ 26
● 26 < Density ≤ 35
● 35 < Density ≤ 45
● Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Cumulative Year (2046) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	5
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.34		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Temperance Avenue On-Ramp and Fowler Avenue Off-Ramp	700	2
2	Diverge	Diverge	Fowler Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Fowler Avenue Off-Ramp and Fowler Avenue On-Ramp	3030	2
4	Merge	Merge	Fowler Avenue On-Ramp	1500	2
5	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4134	4716	0.96	32.9	62.9	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.967	4050	208	4800	2000	0.95	0.10	33.1	60.5	61.2	41.9	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3656	4716	0.92	25.4	71.9	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	4391	764	4800	2000	1.06	0.38	38.5	45.4	57.0	39.4	

Segment 5: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	(	
1	0.94	0.938	4391	4716	1.09	56.4	38.9	F

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	31.1	64.0	60.0	2.60	F

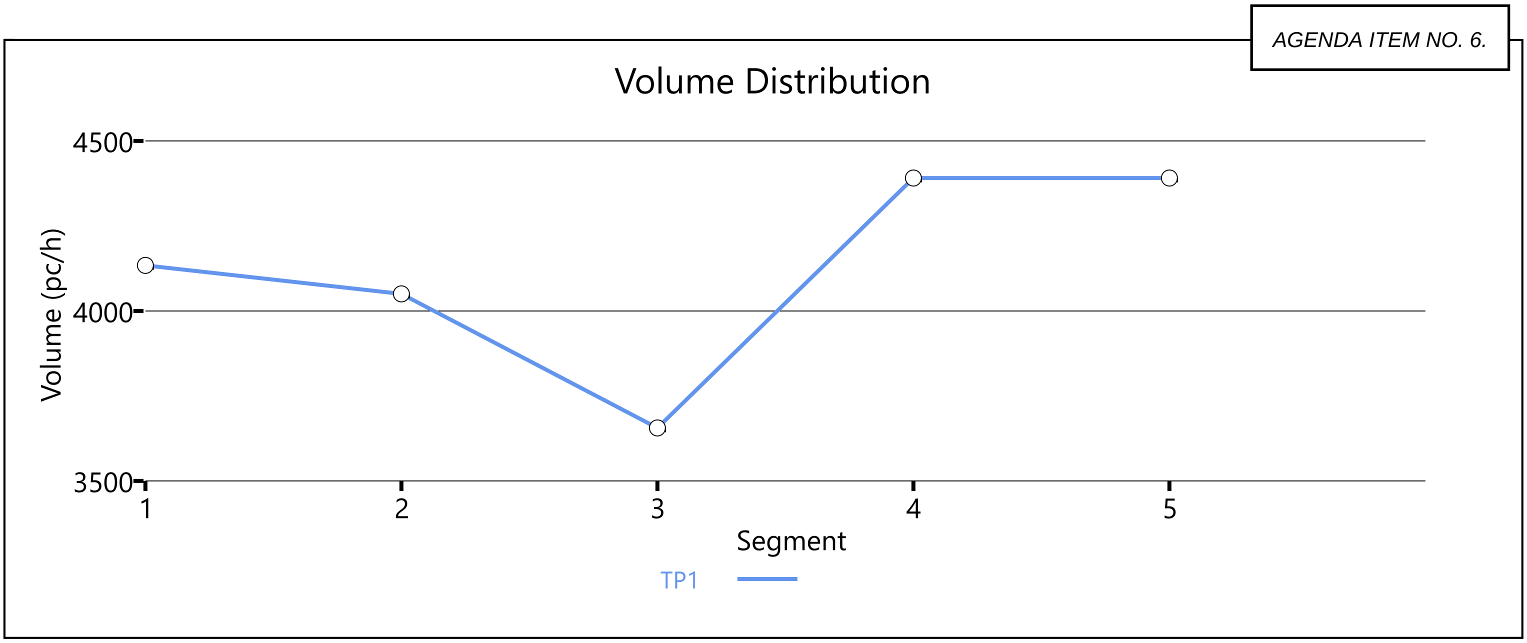
Facility Overall Results

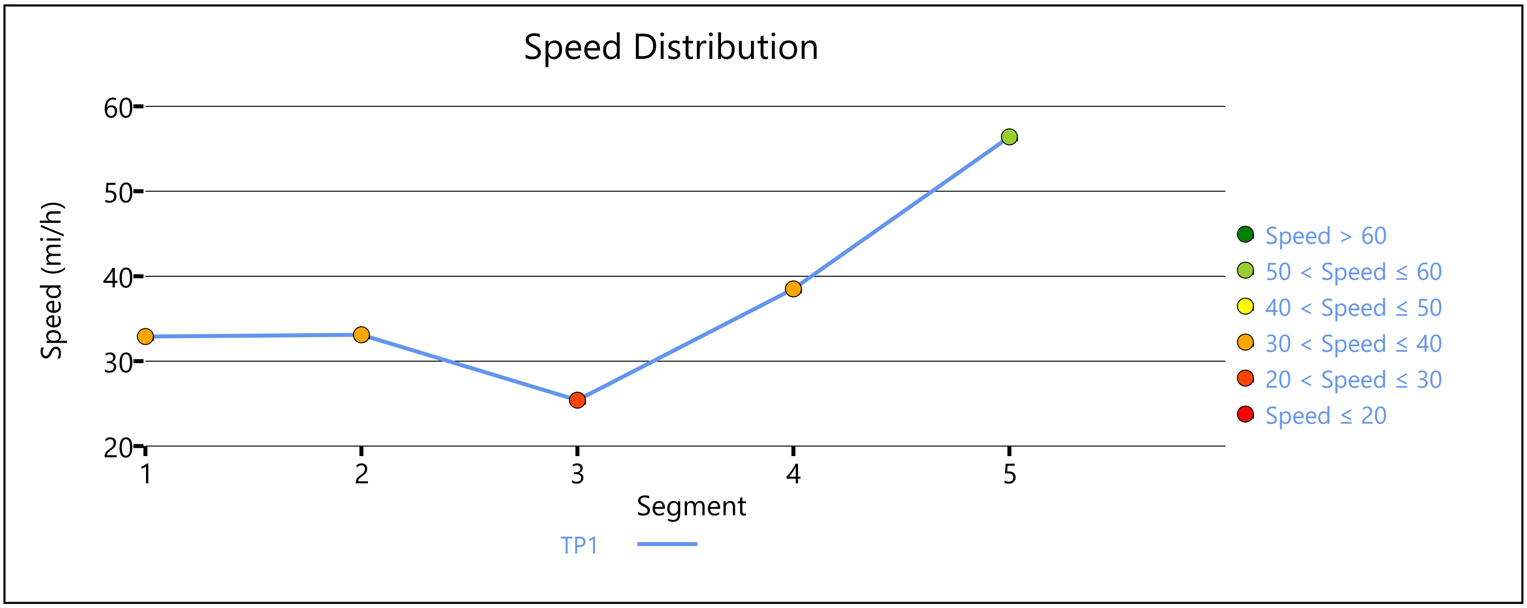
Space Mean Speed, mi/h	31.1	Density, veh/mi/ln	60.0
Average Travel Time, min	2.60	Density, pc/mi/ln	64.0

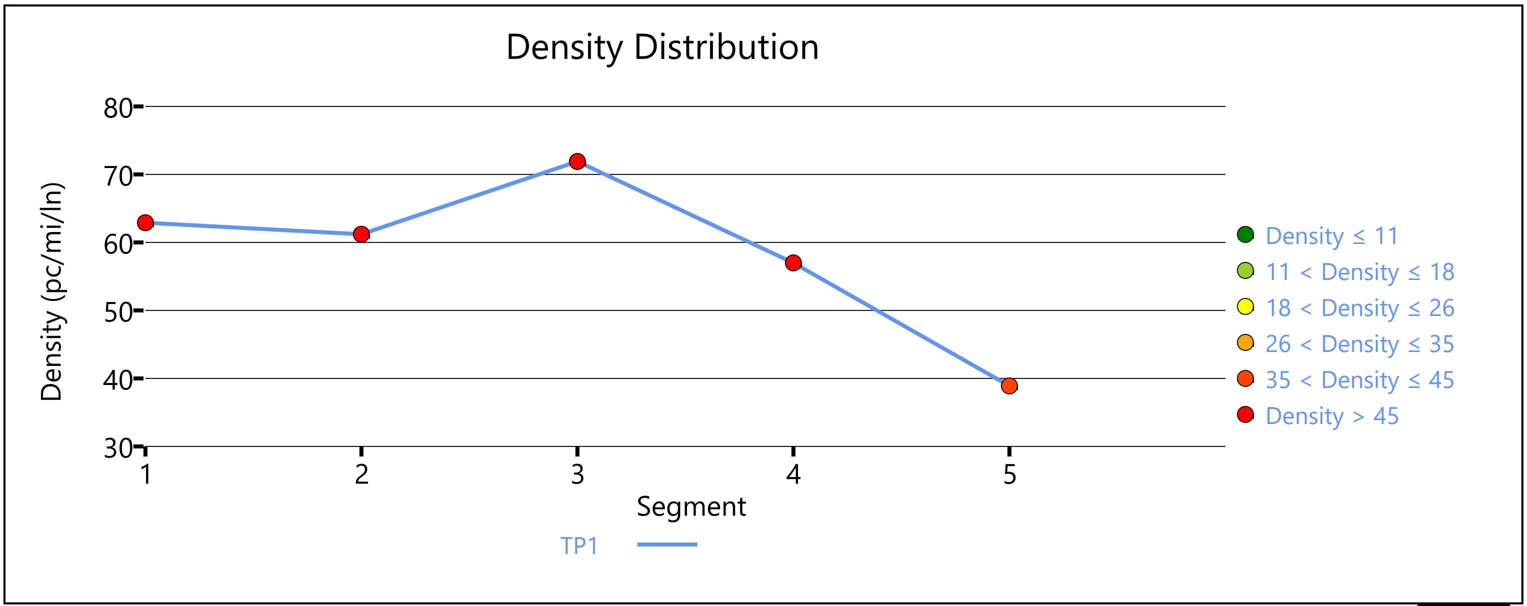
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 5. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
Volume (pc/h)
4500
4000
3500
1
2
3
4
5
Segment
TP1


Speed Distribution
Speed (mi/h)
60
50
40
30
20
1
2
3
4
5
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
80
70
60
50
40
30
1
2
3
4
5
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	2129	7098	0.30	66.6	10.7	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.962	2129	1212	7200	4000	0.30	0.30	62.0	57.5	11.4	15.3	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	886	4688	0.19	64.2	6.9	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.991	1137	251	4800	1900	0.24	0.13	65.5	65.5	8.7	9.6	A

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	1.000	1250	99	4800	2000	0.26	0.05	66.1	66.1	9.5	10.3	B

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1257	4688	0.27	64.4	9.8	A

Facility Time Period Results

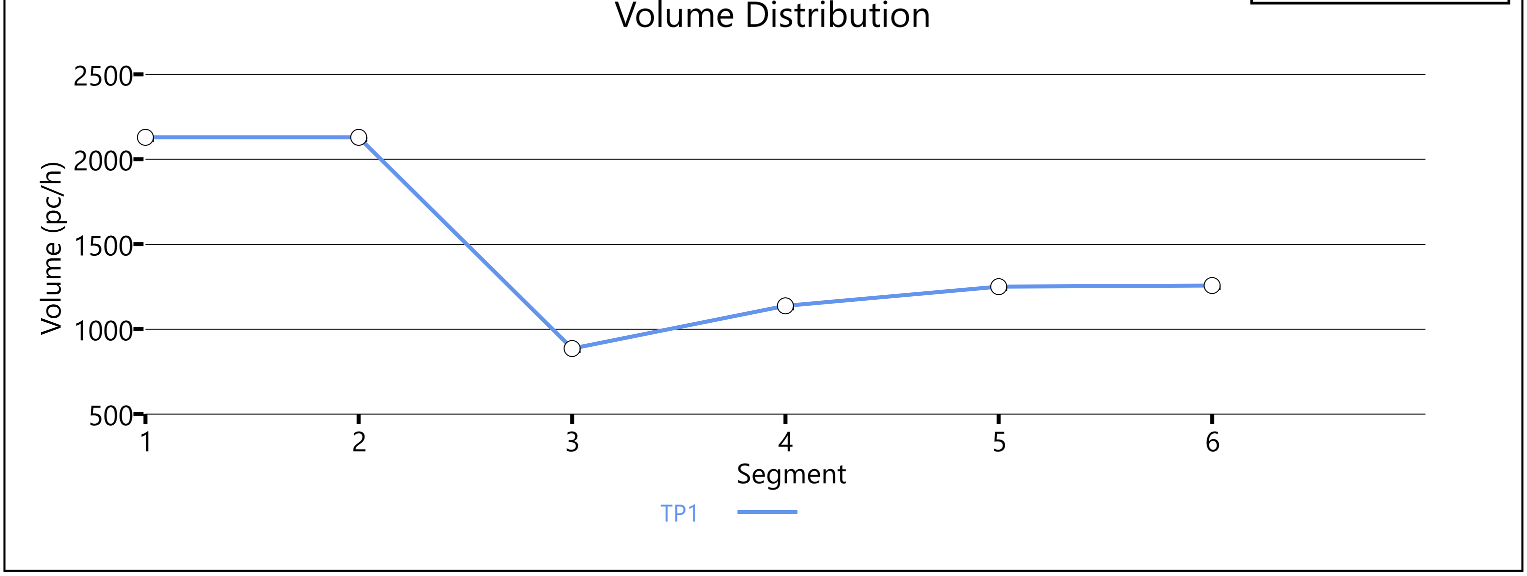
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.4	9.6	9.0	1.20	A

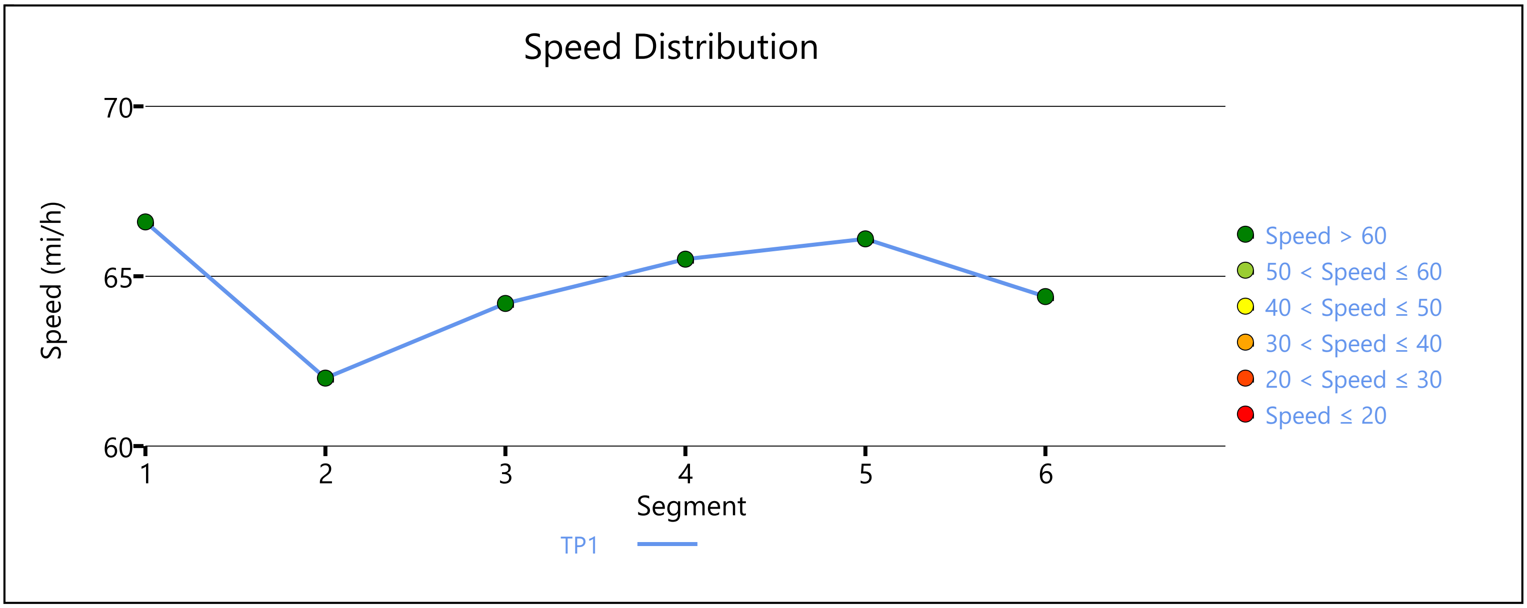
Facility Overall Results

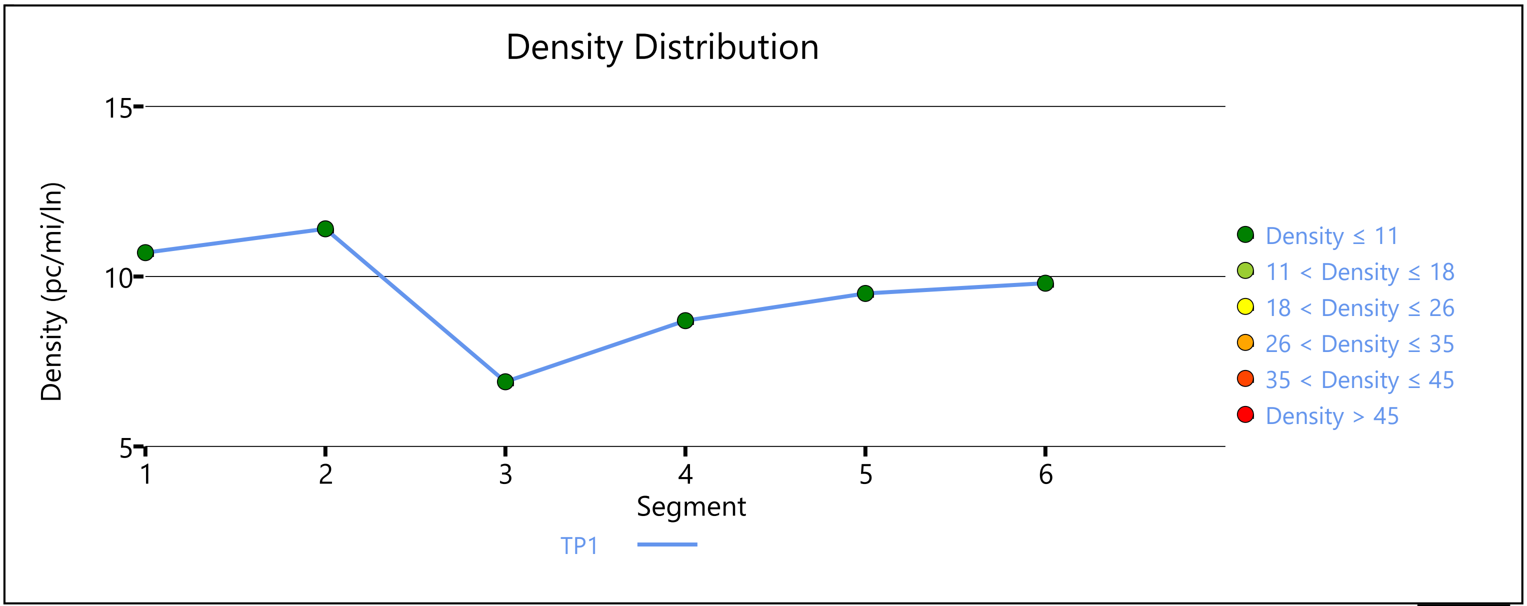
Space Mean Speed, mi/h	64.4	Density, veh/mi/ln	9.0
Average Travel Time, min	1.20	Density, pc/mi/ln	9.6

Messages

Comments


Volume Distribution
Volume (pc/h)
2500
2000
1500
1000
500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
1
2
3
4
5
6
Segment
TP1
● Speed > 60
● 50 < Speed ≤ 60
● 40 < Speed ≤ 50
● 30 < Speed ≤ 40
● 20 < Speed ≤ 30
● Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
15
10
5
1
2
3
4
5
6
Segment
TP1
● Density ≤ 11
● 11 < Density ≤ 18
● 18 < Density ≤ 26
● 26 < Density ≤ 35
● 35 < Density ≤ 45
● Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) NP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4255	4716	0.90	57.9	36.8	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4255	925	4800	2000	0.89	0.46	58.3	58.3	36.5	37.1	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3274	4672	0.70	63.1	25.9	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4194	920	4800	2000	0.87	0.46	57.3	57.3	36.6	34.5	D

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	5210	974	7200	2000	0.72	0.49	69.2	-	25.1	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5256	7008	0.75	62.3	28.1	D

Facility Time Period Results

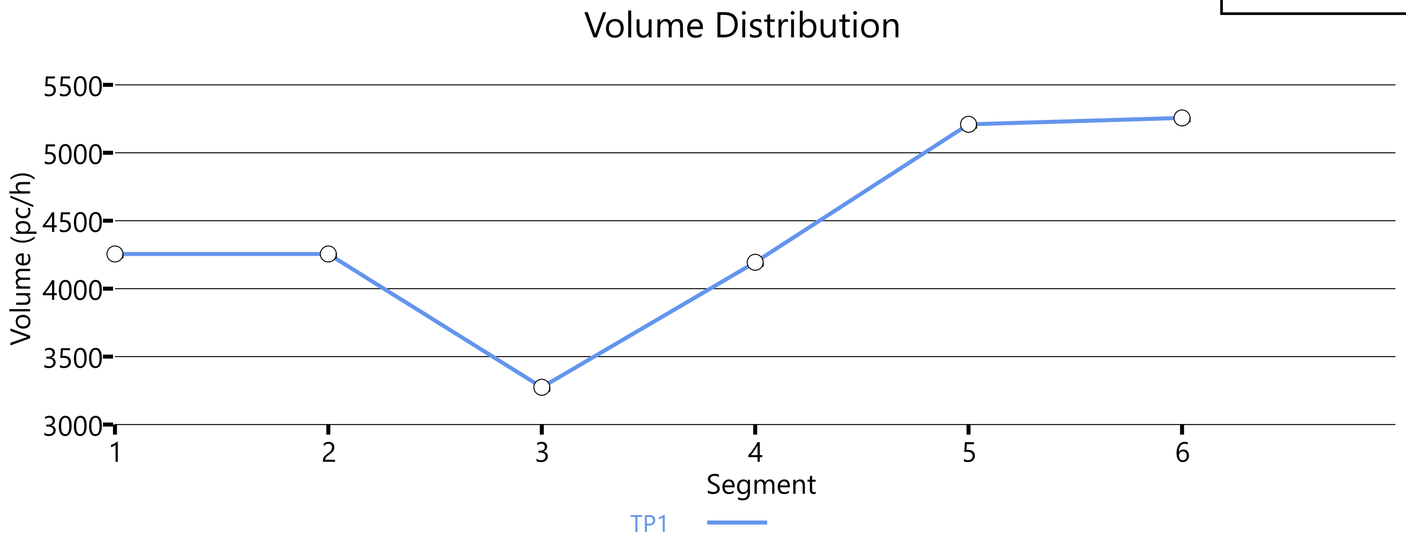
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	61.8	30.2	28.3	1.40	D

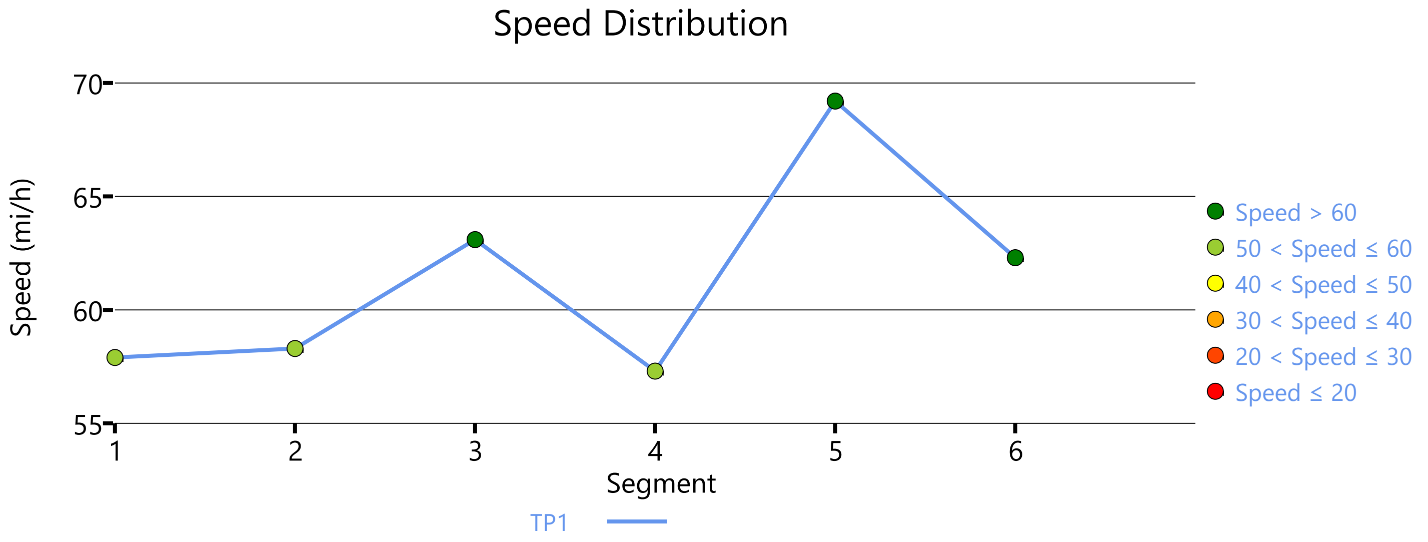
Facility Overall Results

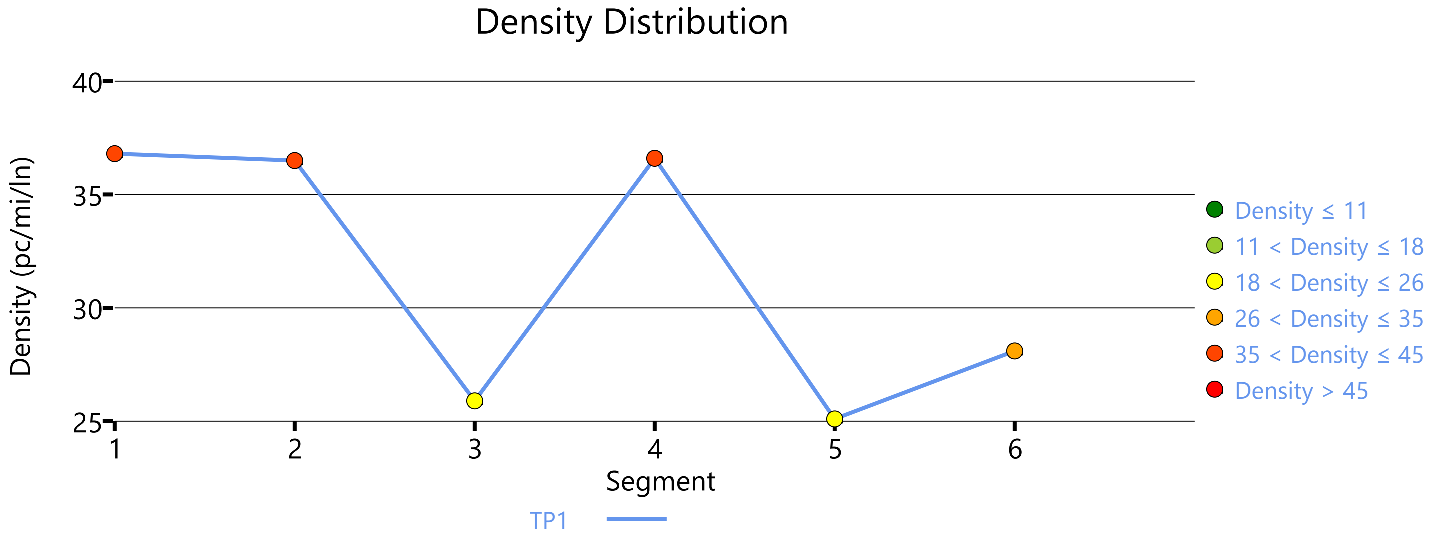
Space Mean Speed, mi/h	61.8	Density, veh/mi/ln	28.3
Average Travel Time, min	1.40	Density, pc/mi/ln	30.2

Messages

Comments


Volume Distribution
Volume (pc/h)
5500
5000
4500
4000
3500
3000
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
55
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5599	7098	0.79	62.9	29.7	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.990	5599	1876	7200	4000	0.78	0.47	62.2	55.5	30.0	31.8	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3619	4688	0.77	62.2	29.1	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	4046	427	4800	1900	0.84	0.22	58.5	58.5	34.6	32.2	D

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4298	229	4800	2000	0.90	0.11	57.0	57.0	37.7	34.0	D

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4312	4688	0.92	56.6	38.1	E

Facility Time Period Results

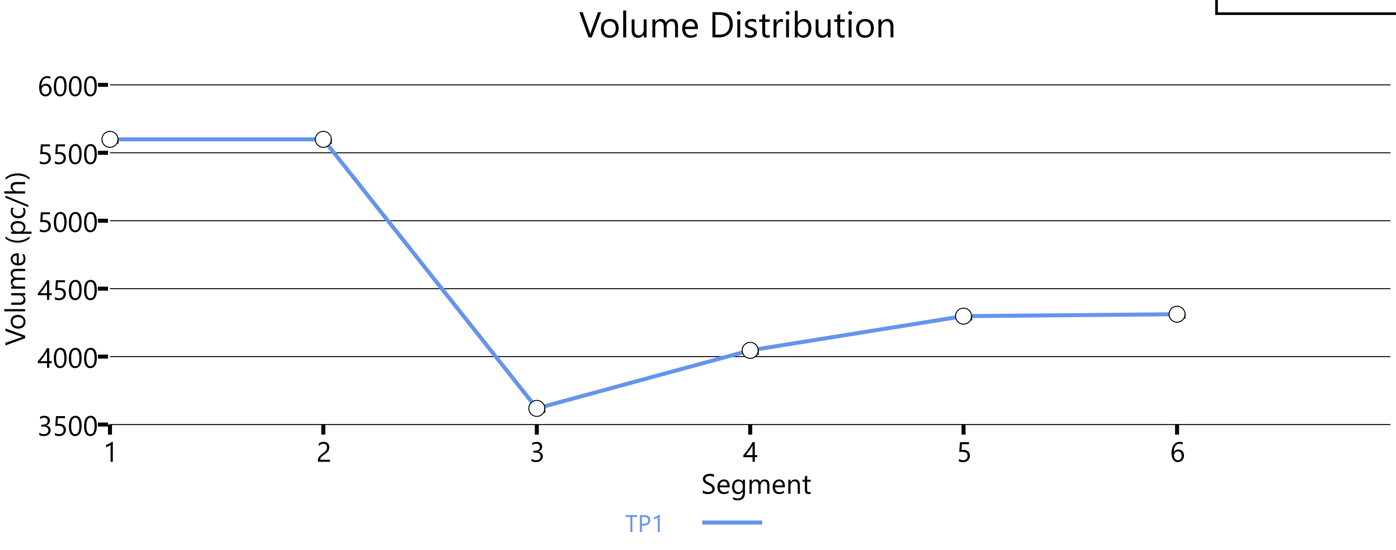
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.5	31.9	30.0	1.30	D

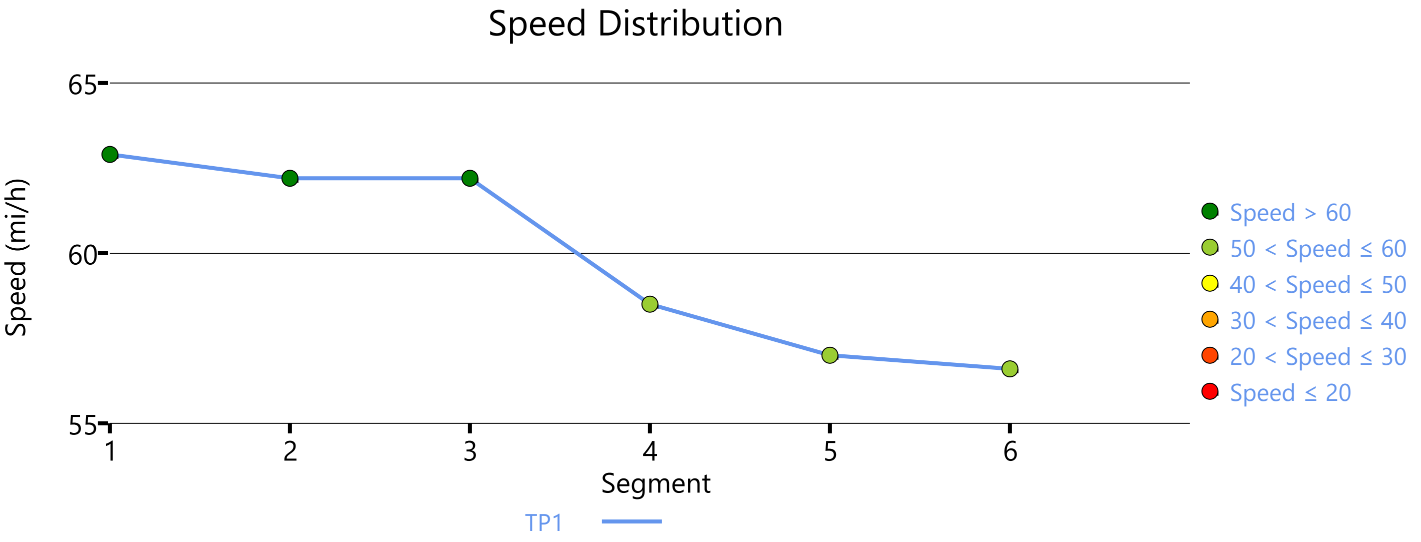
Facility Overall Results

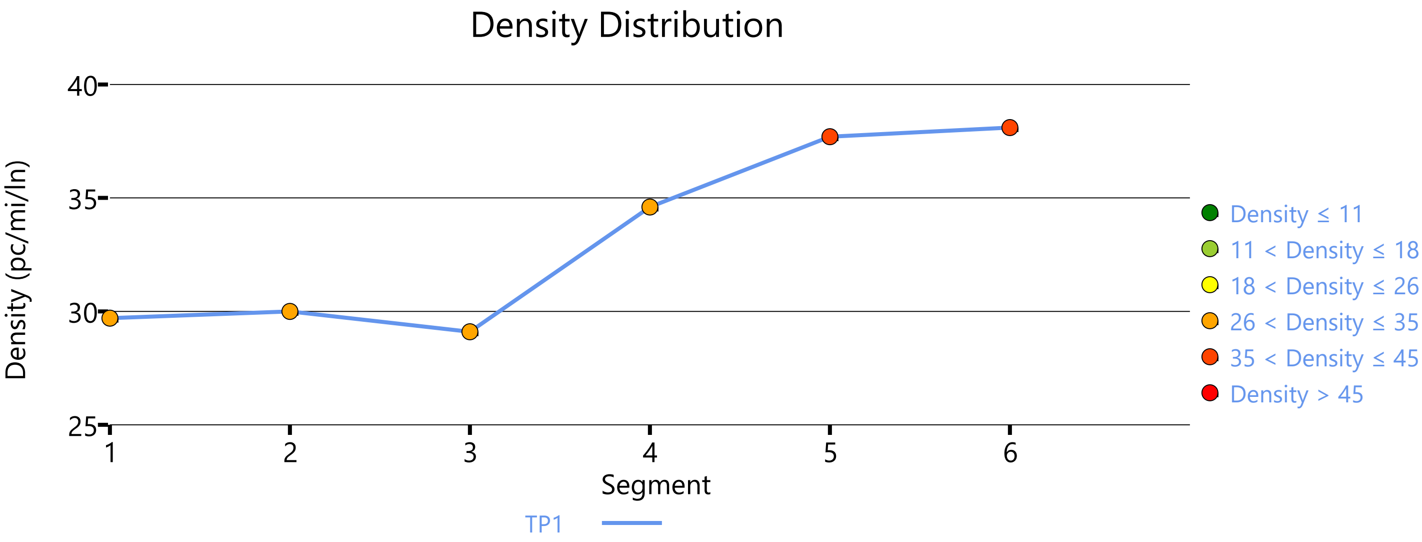
Space Mean Speed, mi/h	60.5	Density, veh/mi/ln	30.0
Average Travel Time, min	1.30	Density, pc/mi/ln	31.9

Messages

Comments


Volume Distribution
Volume (pc/h)
6000
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
65
60
55
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) NP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4287	4716	1.09	36.8	58.2	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4242	516	4800	2000	1.07	0.26	34.9	59.6	60.8	44.7	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3636	4672	0.98	24.4	74.6	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.985	4470	834	4800	2000	1.13	0.42	54.6	54.6	40.9	36.7	F

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	5125	655	7200	2000	0.85	0.33	65.1	-	26.2	-	D

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5125	7008	0.88	62.6	27.3	D

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.3	46.4	43.5	2.00	F

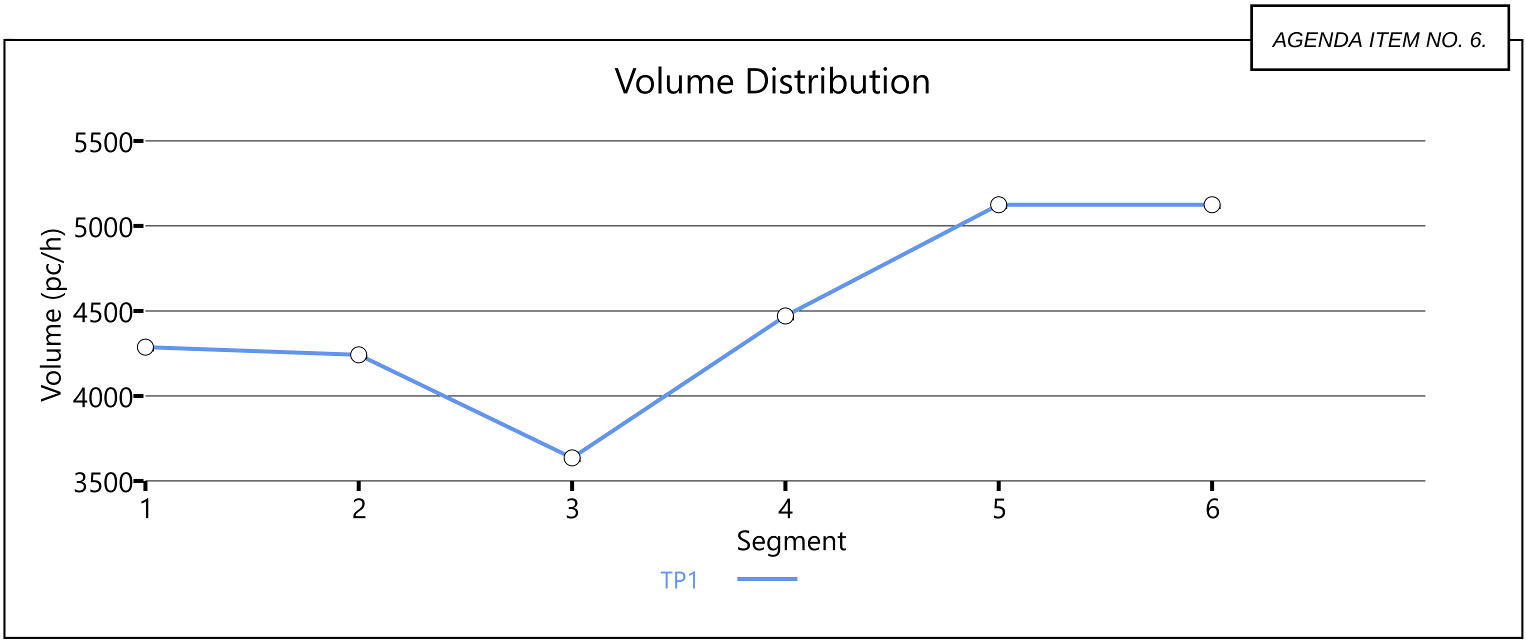
Facility Overall Results

Space Mean Speed, mi/h	41.3	Density, veh/mi/ln	43.5
Average Travel Time, min	2.00	Density, pc/mi/ln	46.4

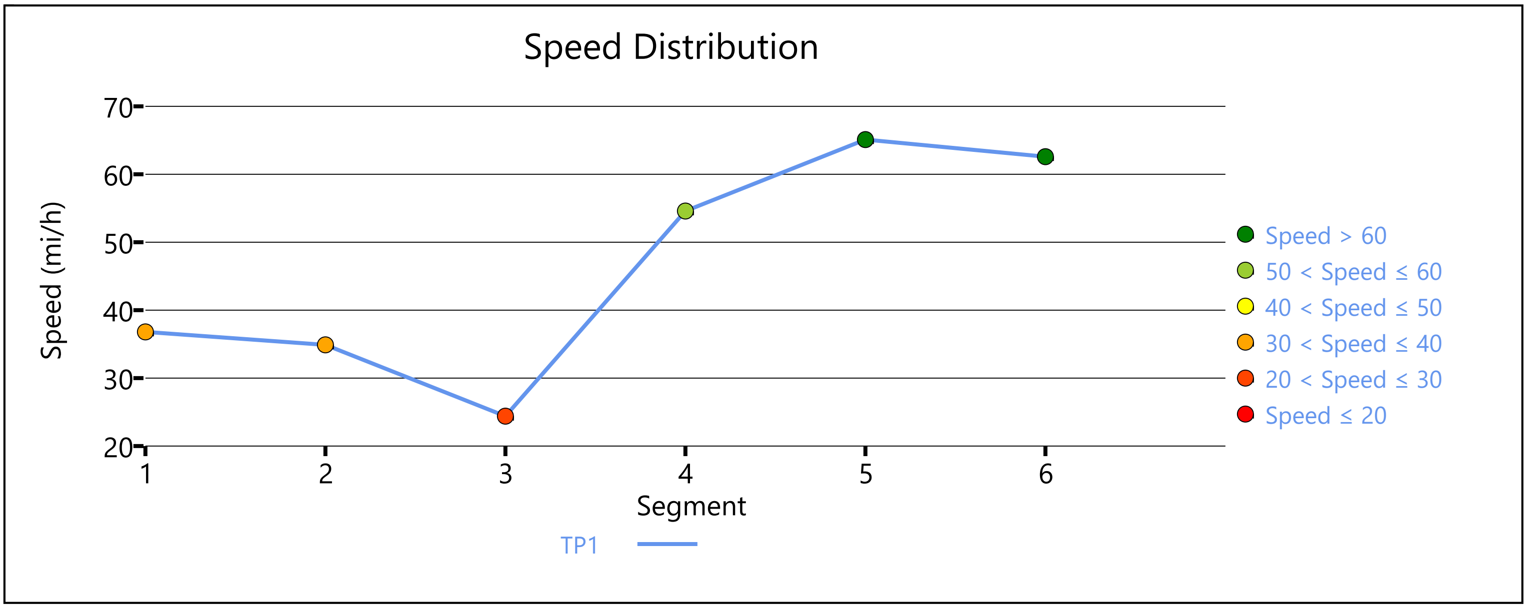
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

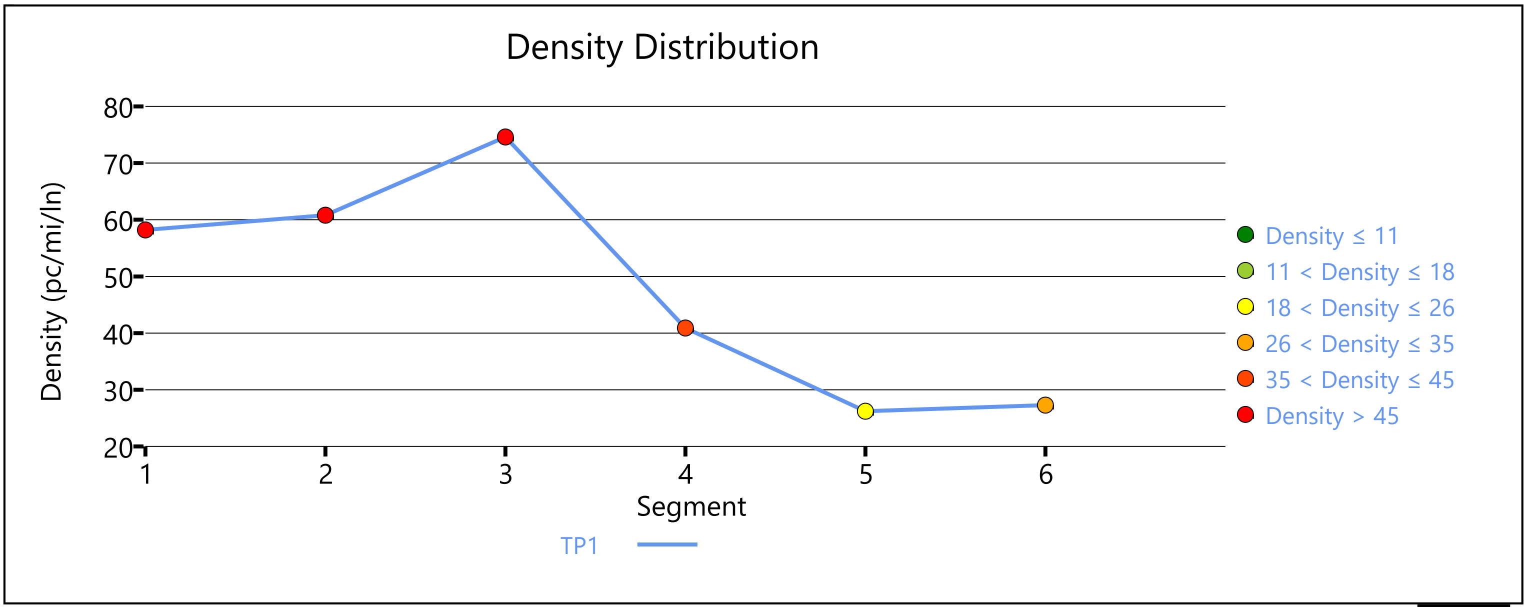
Comments



Volume Distribution



Speed Distribution



Density Distribution

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	2163	7098	0.30	66.6	10.8	A

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.962	2163	1233	7200	4000	0.30	0.31	61.9	57.4	11.6	15.5	B

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	898	4688	0.19	64.2	7.0	A

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.991	1149	251	4800	1900	0.24	0.13	65.5	65.5	8.8	9.7	A

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	1.000	1263	99	4800	2000	0.26	0.05	66.1	66.1	9.6	10.4	B

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	1269	4688	0.27	64.4	9.8	A

Facility Time Period Results

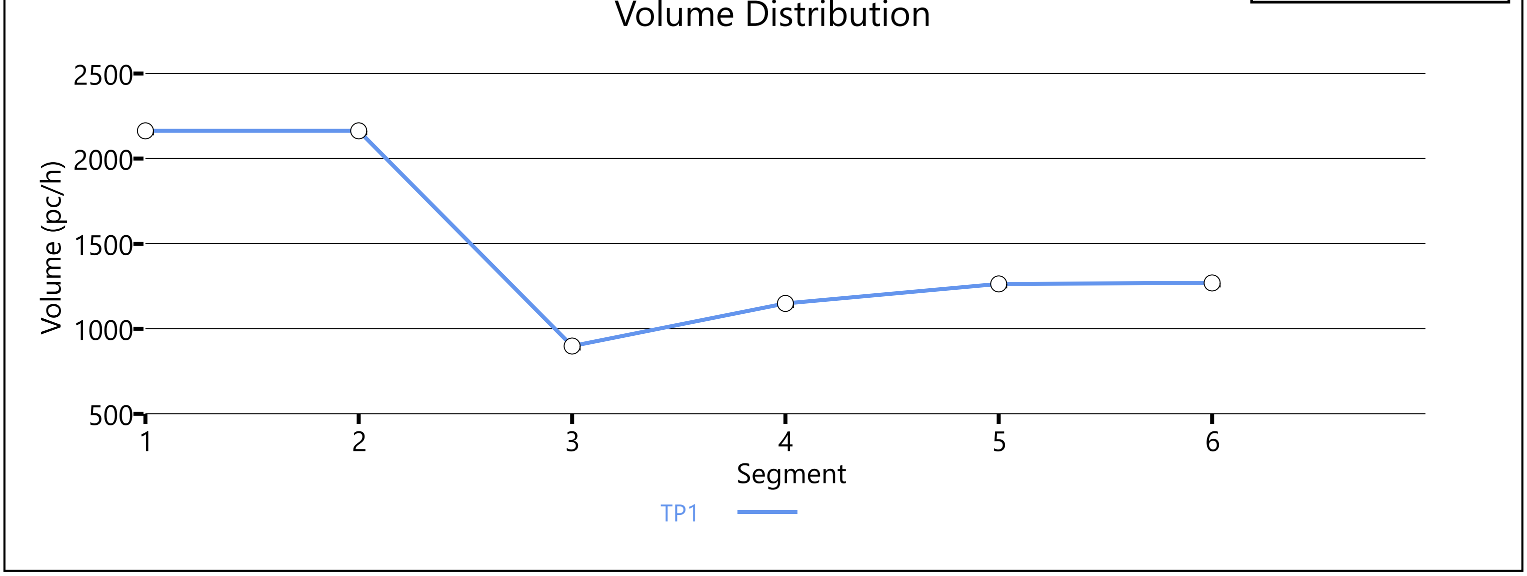
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.4	9.7	9.1	1.20	A

Facility Overall Results

Space Mean Speed, mi/h	64.4	Density, veh/mi/ln	9.1
Average Travel Time, min	1.20	Density, pc/mi/ln	9.7

Messages

Comments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1000
500
Volume (pc/h)
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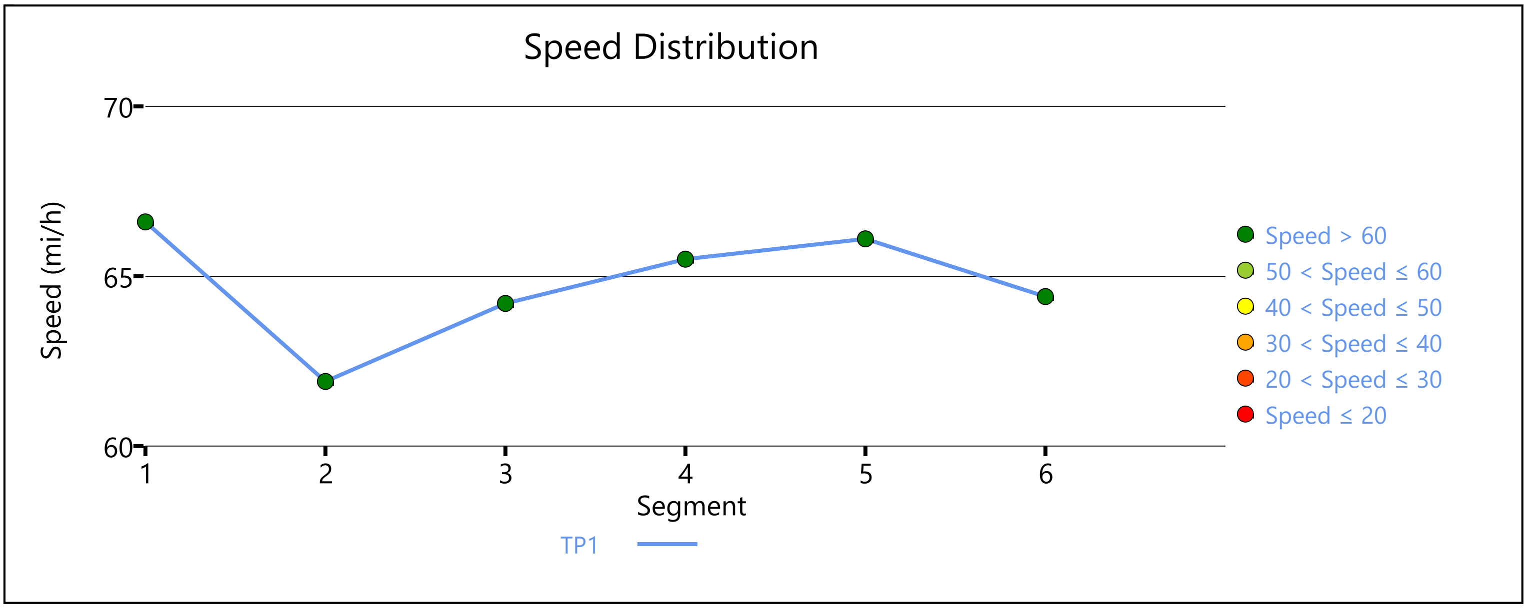
3
4
5
6
Segment
TP1


Speed Distribution
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Speed (mi/h)
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2
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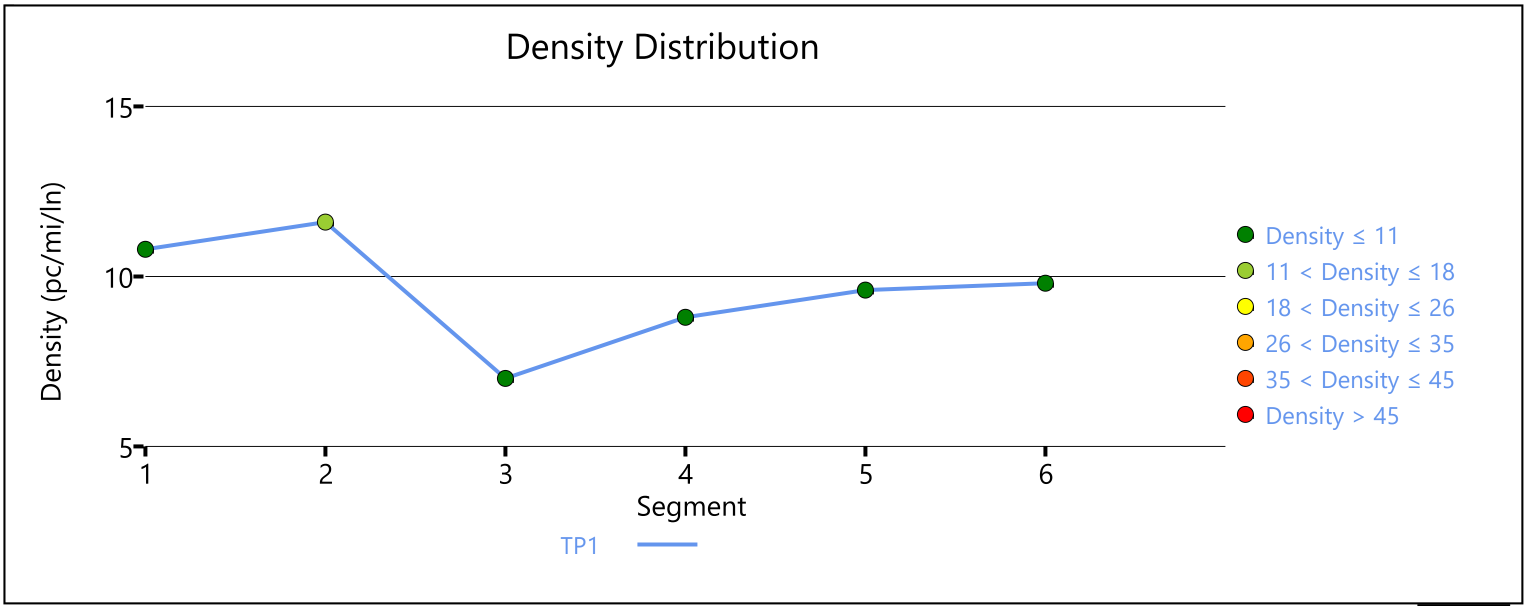
● 30 < Speed ≤ 40
● 20 < Speed ≤ 30
● Speed ≤ 20


Density Distribution
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Density (pc/mi/ln)
1
2
3
4
5
6
Segment
TP1
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● 11 < Density ≤ 18
● 18 < Density ≤ 26
● 26 < Density ≤ 35
● 35 < Density ≤ 45
● Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Cumulative Year (2046) WP
Jurisdiction	Caltrans	Time Period Analyzed	A.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4255	4716	0.90	57.9	36.8	E

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4255	925	4800	2000	0.89	0.46	58.3	58.3	36.5	37.1	E

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3274	4672	0.70	63.1	25.9	C

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.981	4286	1012	4800	2000	0.89	0.51	56.5	56.5	37.9	35.2	E

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.982	5306	974	7200	2000	0.74	0.49	68.6	-	25.8	-	C

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5352	7008	0.76	62.0	28.8	D

Facility Time Period Results

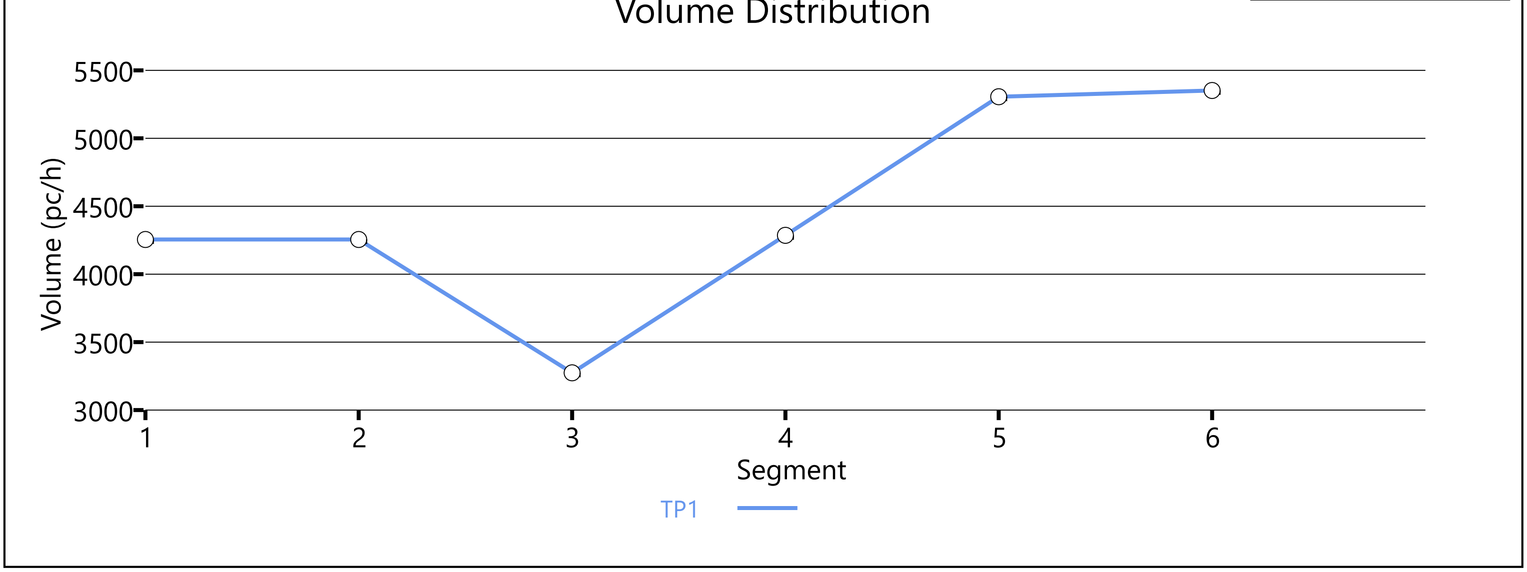
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	61.5	30.7	28.8	1.40	D

Facility Overall Results

Space Mean Speed, mi/h	61.5	Density, veh/mi/ln	28.8
Average Travel Time, min	1.40	Density, pc/mi/ln	30.7

Messages

Comments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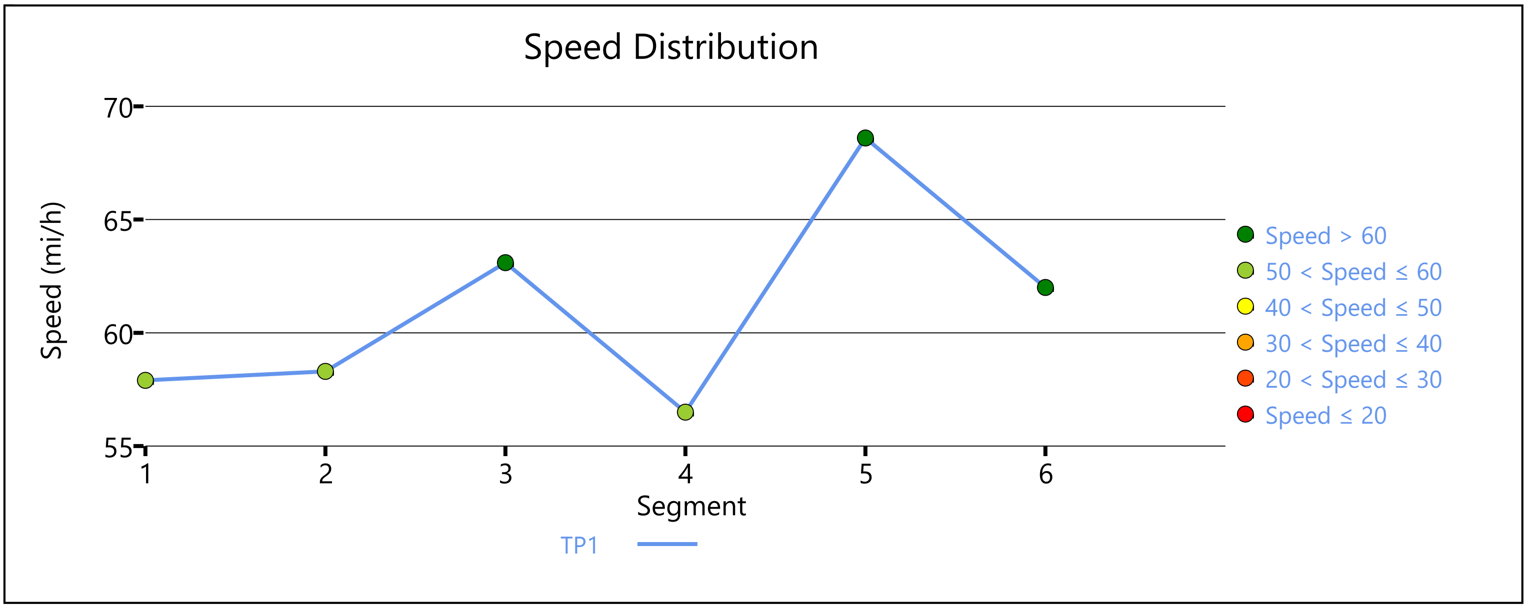
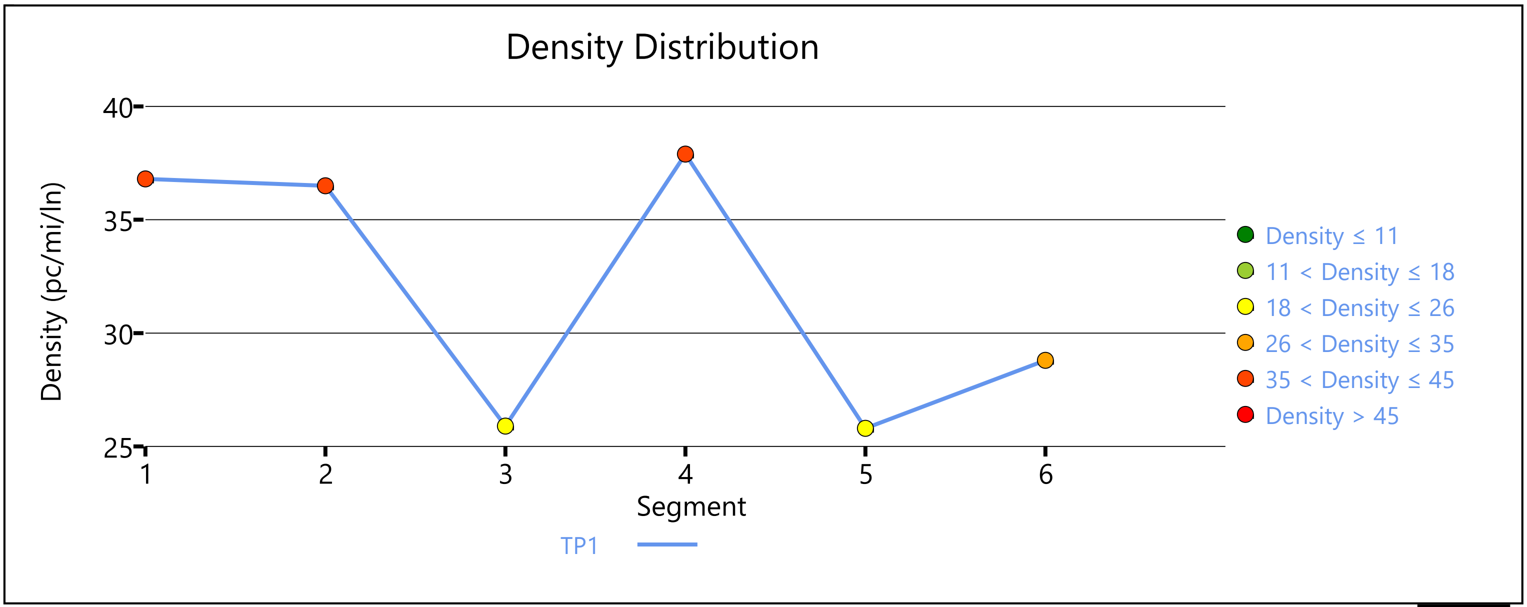
5000
4500
4000
3500
3000
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
65
60
55
1
2
3
4
5
6
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	2/26/2023
Agency		Analysis Year	Cumulative Year (2046) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Bullard Avenue On-Ramp and Herndon Avenue Off-Ramp	885	3
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	3
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1725	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1070	2
5	Merge	Merge	Herndon Avenue Slip On-Ramp	1500	2
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Fowler Avenue Off-Ramp	115	2

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5709	7098	0.80	62.4	30.5	D

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.990	5709	1942	7200	4000	0.79	0.49	61.9	55.3	30.7	32.6	D

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3660	4688	0.78	62.0	29.5	D

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	4087	427	4800	1900	0.85	0.22	58.2	58.2	35.1	32.6	D

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4339	229	4800	2000	0.90	0.11	56.6	56.6	38.3	34.3	D

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4353	4688	0.93	56.2	38.7	E

Facility Time Period Results

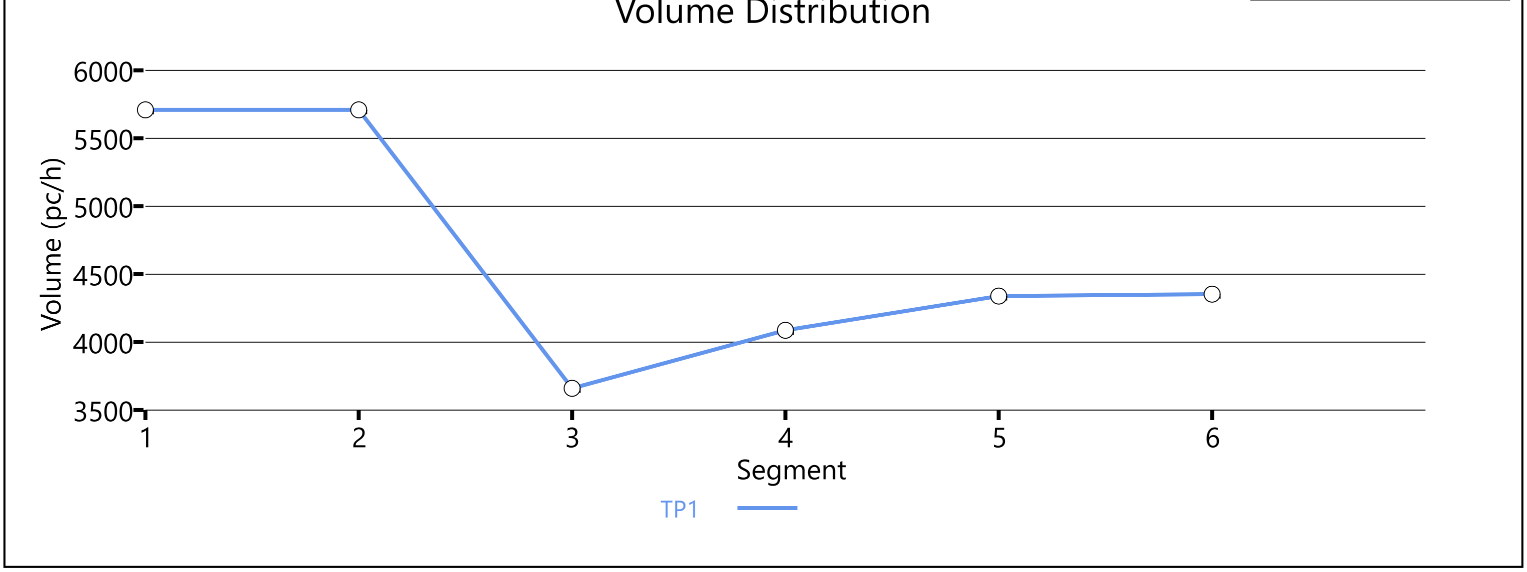
T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	60.2	32.5	30.5	1.30	D

Facility Overall Results

Space Mean Speed, mi/h	60.2	Density, veh/mi/ln	30.5
Average Travel Time, min	1.30	Density, pc/mi/ln	32.5

Messages

Comments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Volume (pc/h)
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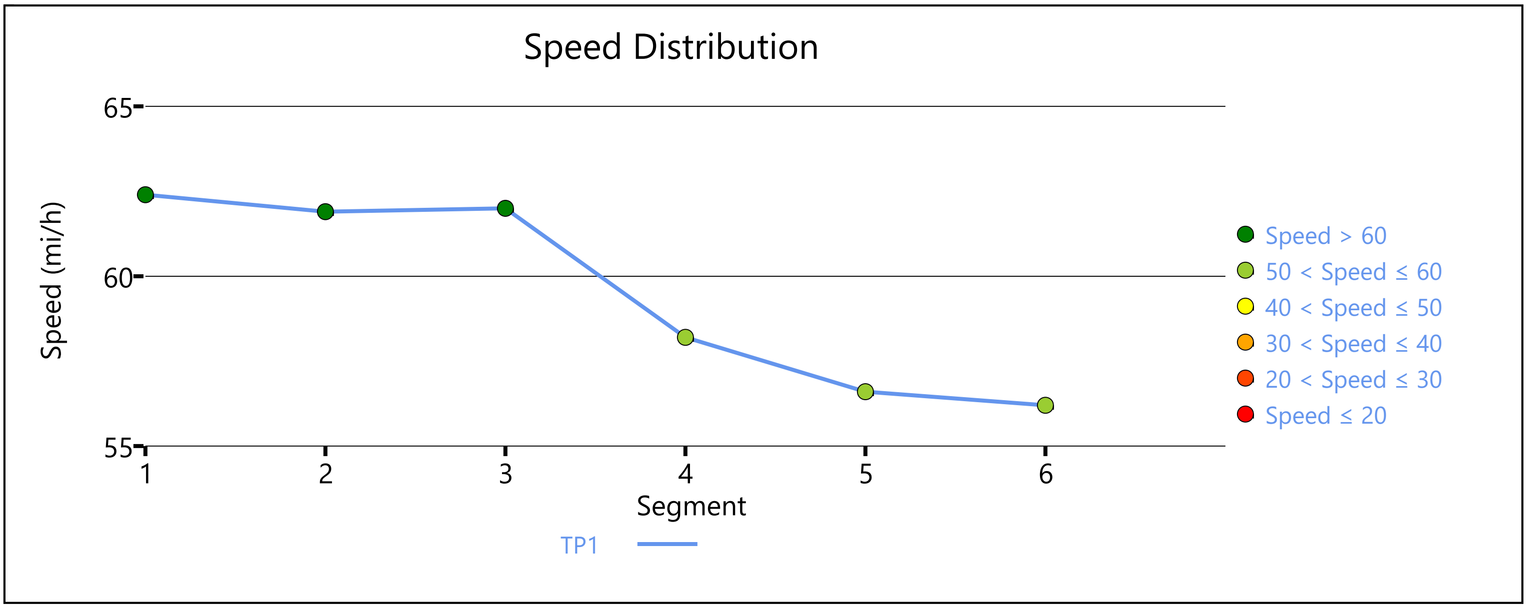
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
65
60
55
1
2
3
4
5
6
Segment
TP1
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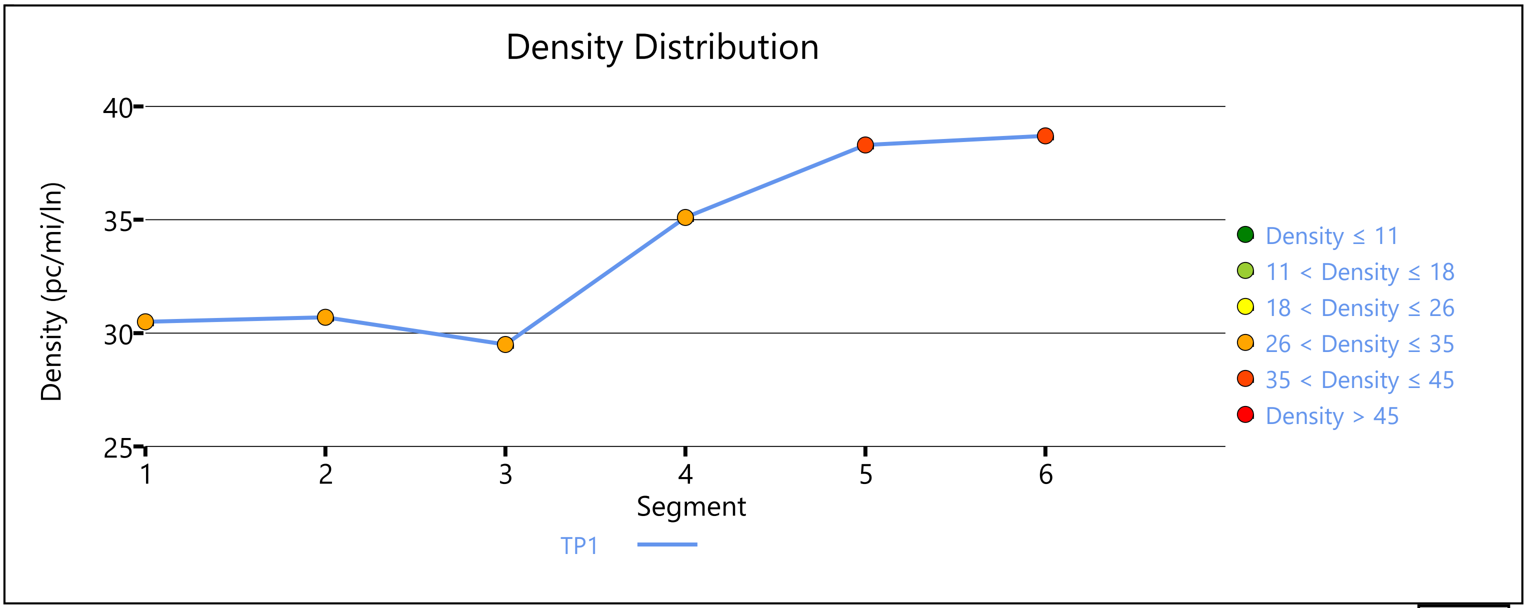
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
40
35
30
25
1
2
3
4
5
6
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst	LSA	Date	3/10/2023
Agency		Analysis Year	Cumulative Year (2046) WP
Jurisdiction	Caltrans	Time Period Analyzed	P.M. Peak Hour
Project Description	Shepherd North Project	Unit	United States Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	6
Total Time Periods	1	Time Period Duration, min	15
Facility Length, mi	1.40		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	Between Fowler Avenue On-Ramp and Herndon Avenue Off-Ramp	355	2
2	Diverge	Diverge	Herndon Avenue Off-Ramp	1500	2
3	Basic	Basic	Between Herndon Avenue Off-Ramp and Herndon Avenue Loop On-Ramp	1755	2
4	Merge	Merge	Herndon Avenue Loop On-Ramp	1500	2
5	Merge	Basic	Herndon Avenue Slip On-Ramp	1500	3
6	Basic	Basic	Between Herndon Avenue Slip On-Ramp and Bullard Avenue Off-Ramp	760	3

Facility Segment Data

Segment 1: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	4235	4716	1.09	35.4	59.8	F

Segment 2: Diverge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.995	4186	516	4800	2000	1.07	0.26	33.5	59.6	62.5	44.7	F

Segment 3: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	3575	4672	0.98	23.4	76.5	F

Segment 4: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.985	4470	895	4800	2000	1.14	0.45	54.6	54.6	40.9	36.6	F

Segment 5: Merge

Time Period	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.938	0.989	5125	655	7200	2000	0.86	0.33	65.1	-	26.2	-	D

Segment 6: Basic

Time Period	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.938	5125	7008	0.89	62.6	27.3	D

Facility Time Period Results

T	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	40.4	47.1	44.2	2.10	F

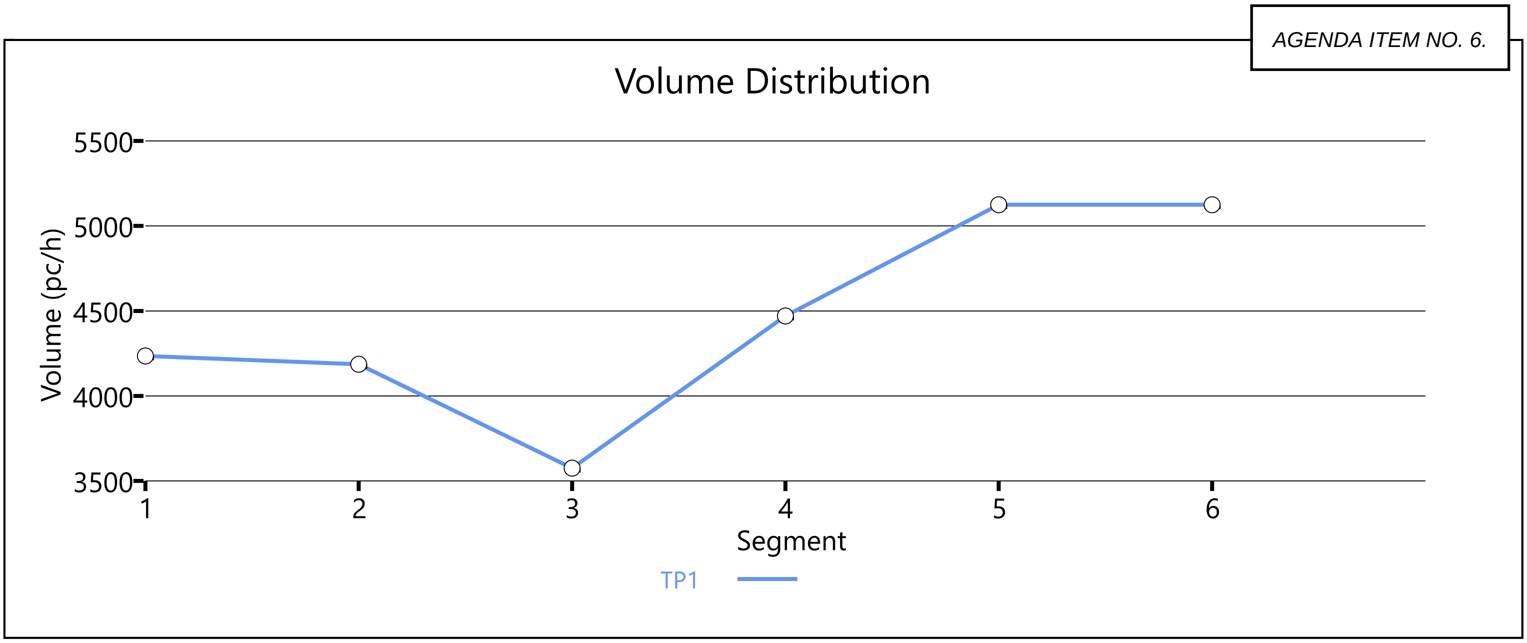
Facility Overall Results

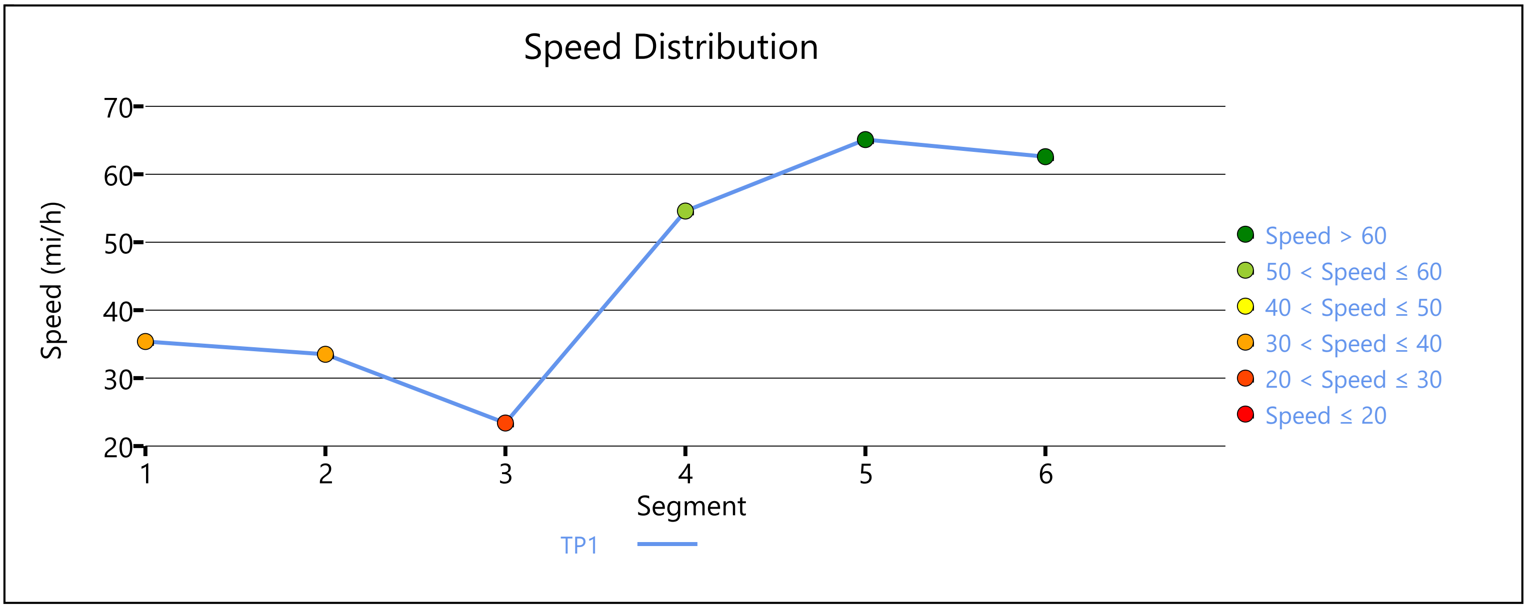
Space Mean Speed, mi/h	40.4	Density, veh/mi/ln	44.2
Average Travel Time, min	2.10	Density, pc/mi/ln	47.1

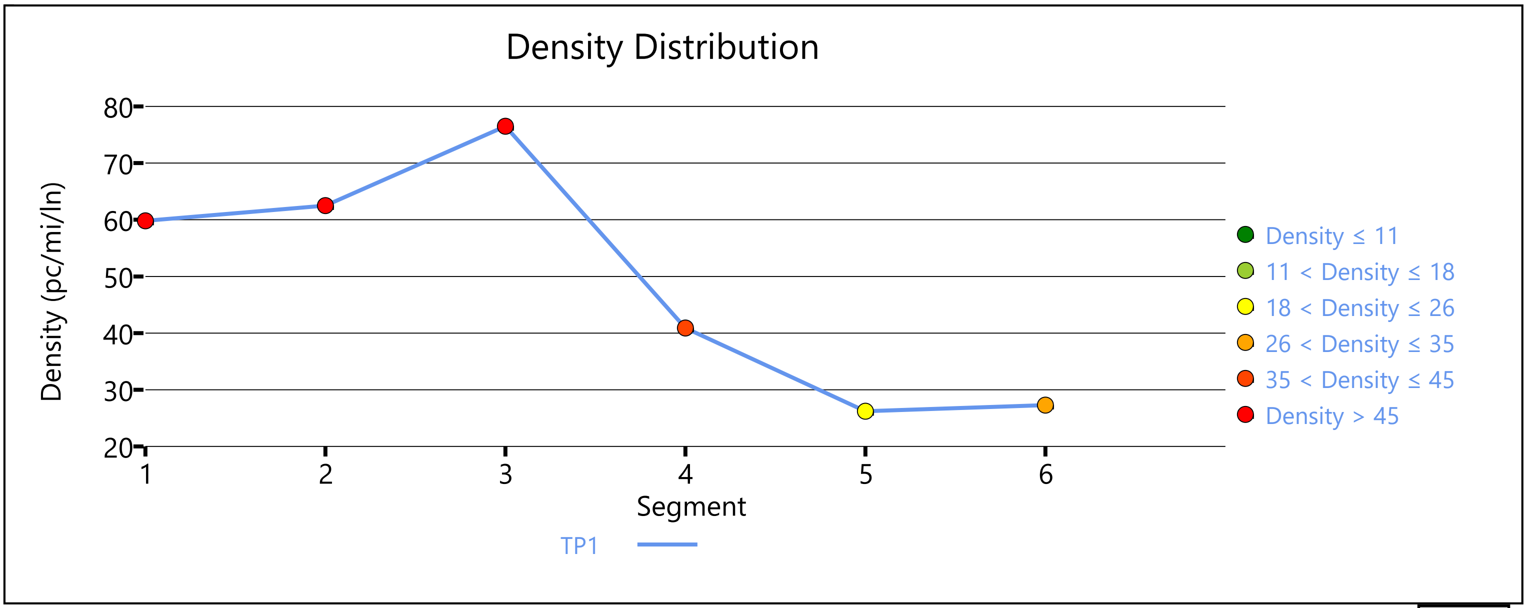
Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary time period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Queue extends past the beginning of the facility on time period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.

Comments


Volume Distribution
Volume (pc/h)
5500
5000
4500
4000
3500
1
2
3
4
5
6
Segment
TP1


Speed Distribution
Speed (mi/h)
70
60
50
40
30
20
1
2
3
4
5
6
Segment
TP1
● Speed > 60
● 50 < Speed ≤ 60
● 40 < Speed ≤ 50
● 30 < Speed ≤ 40
● 20 < Speed ≤ 30
● Speed ≤ 20


Density Distribution
Density (pc/mi/ln)
80
70
60
50
40
30
20
1
2
3
4
5
6
Segment
TP1
● Density ≤ 11
● 11 < Density ≤ 18
● 18 < Density ≤ 26
● 26 < Density ≤ 35
● 35 < Density ≤ 45
● Density > 45

Appendix J

Water Supply

City of Clovis

Water Supply Assessment

Tract 6205

Northwest Sphere of Influence Expansion Area

December 2022

Prepared for:
City of Clovis

Prepared by:
Provost & Pritchard Consulting Group
455 W Fir Avenue, Clovis, CA 93611

Report Prepared for:

Client Name

City of Clovis
1033 5th Street
Clovis, CA 93612

Contact:

Sean Smith
(559) 324-2363

Report Prepared by:

Provost & Pritchard Consulting Group

Heather Bashian, PE
Brittney Darnell

Contact:

Heather Bashian, PE

(559) 449-2700

PROFESSIONAL ENGINEER
Heather E. Bashian
No. 73,075
Civil
STATE OF CALIFORNIA

Table of Contents

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Abbreviations

AF	acre-feet
AFY	acre-feet per year
Boswell	Boswell Banking Facility
City	City of Clovis
County	Fresno County
CVP	Central Valley Project
CWC	California Water Code
FID	Fresno Irrigation District
GP	General Plan
GWD	Garfield Water District
IWD	International Water District
MGD	million gallons per day
MHDR	Medium High Density Residential
NKGSP	North Kings Groundwater Sustainability Plan
SFR	Single-Family Residential
SOI	Sphere of Influence
SWTP	City of Clovis Surface Water Treatment Plant
UWMP	City of Clovis Urban Water Management Plan
Waldron	Waldron Banking Facility
WDF	water demand factors
WMP	City of Clovis, Water Master Plan Update, Phase III
WRF	City of Clovis Sewage Treatment/Water Reuse Facility
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan

1 Introduction

1.1 Purpose and Need for the Water Supply Assessment

California Water Code (CWC) §10912(a) requires preparation of a Water Supply Assessment (WSA) meeting the requirements of CWC §10910 et seq for projects within cities and counties that meet one of several water demand triggers, or the equivalent. These triggers include construction of 500 or more residential units, construction of a shopping center or business establishment having 500,000 square feet of floor space, construction of a commercial office building having more than 250,000 square feet, a proposed hotel or motel having more than 500 rooms, or another project having a water demand equivalent to or greater than the 500-unit development.

This WSA evaluates the adequacy of available water supplies for the proposed Tract 6205, including a Sphere of Influence (SOI) Expansion Area north of Shepherd Avenue, east of Sunnyside Avenue (Project), located in the City of Clovis, Fresno County, California. The Project would entail the development of 605 single family residential lots, more than the "500 residential units" trigger; therefore, a WSA is required. The City of Clovis operates the water system to which the Project proposes to connect. This water system meets the standards for a "Public Water System" as set forth in CWC §10912(c); the City is therefore responsible for preparation of the required WSA in accordance with CWC §10910(b).

This WSA discusses the estimated water demands and water supply for the proposed Project. The Project is located in Fresno County (County), adjacent to the City of Clovis (City) limits; the area will be annexed as part of the Project's progress and the entire Project will be supplied water from the City.

1.2 Reliance on a Related Urban Water Management Plan

If the Project falls within the boundaries of a current Urban Water Management Plan (UWMP) prepared by the water purveyor, CWC §10910(c)(1) requires that the WSA determine whether projected water demand associated with the Project is included as part of that duly adopted UWMP.

The 2020 Clovis UWMP covers the SOI for the City as well as an area north of Shepherd Avenue, bounded on the west and east by Sunnyside and Fowler Avenues, respectively, as it was understood the area may be annexed and the SOI boundary modified in near future. This Project lies within the area north of Shepherd, east of Sunnyside Avenue, and is therefore, part of the study area of the 2020 Clovis UWMP, which was adopted by the City of Clovis by resolution of the City Council on July 12, 2021 (Provost & Pritchard Consulting Group, 2021). Thus, in accordance with the CWC, the preparers have relied on information from the UWMP wherever possible in preparing the various elements of this Assessment.

1.3 Document Organization

This WSA is organized as follows:

- *Section 2 describes the Project and its location.*
- *Section 3 describes the Project's potable and non-potable water demands in addition to those of other existing and planned uses, and how these vary from the numbers used in the UWMP.*
- *Section 4 provides an overview of the City's primary water supplies.*
- *Section 5 discusses the adequacy of water supplies during normal years.*
- *Section 6 discusses the adequacy of water supplies during single-dry and multiple-dry years.*
- *Section 7 discusses operational reliability on a daily basis.*
- *Section 8 concludes whether supplies would be adequate during normal, dry-year, and multiple-dry years during a 20-year projection.*
- *Section 9 lists references cited in this WSA.*

2 Project Description

2.1 Project Location and Setting

The City limits currently encompasses 25.9 square miles. The City's SOI covers 34.9 square miles, while the City's General Plan (GP) encompasses approximately 74.3 square miles. The City's General Plan (Placeworks, 2014) identified three Urban Centers to focus growth, including Loma Vista, the Northwest area, and the Northeast area; this Project lies within the Northwest area. **Figure 2-1** identifies the location of the Project in relation to the surrounding Clovis/Fresno region.

The Project would entail development of 605 single-family residential lots on approximately 77.5 gross acres. The Project is a proposed Medium High Density Residential (MHDR) development with associated neighborhood green space. The project site includes 77.5 gross acres bounded Shepherd Avenue to the south, Perrin Avenue to the north, and Sunnyside Avenue to the west. The project site encompasses three parcels: APNs 557-021-19 through 21. Located just outside the city limits and the SOI, the area north and east of the Project is primarily rural residential uses, the area directly west of the Project is planned for low and medium density residential and public/quasi-public facilities, and the area to the south is mainly rural residential with a small area of medium high density residential and neighborhood commercial just southeast of the Project.

The Project area is currently designated , in the Fresno County General Plan, as AL-20 and current land uses are rural residential and a pecan orchard. The existing estimated water demand for the Project area, in long-time use as a pecan orchard, is shown in **Table 2-1** below, in acre-feet per year (AFY) per acre.

Table 2-1. Existing Demand Estimates per Existing Use

Existing Use	Unit Demand (AFY/acre)	Acreage (acres)	Groundwater Usage (AFY)
Deciduous Fruits and Nuts[1]	2.39[2]	77.5	185.4
Rural Residential[3]	0.7	1.4	1.0
Totals:		78.9	186.4

2.2 Water Supply and Distribution

The Project will receive water supply from the City's water distribution system, which relies on both groundwater and surface water supplies. Built in 2004, the City's Surface Water Treatment Plan (SWTP) has a current treatment capacity of 22.5 million gallons per day (MGD); expansion to 45 MGD is planned.

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[1] Consumptive use calculations are based on agronomic water rates published by the University of California Experiment Station.

[2] Agronomic water rates include a rainfall component; this value has been reduced by 10.3 inches per year to reflect actual groundwater extracted for irrigation purposes.

[3] Demand for Rural Residential based on WDFs in the WMP.

In addition to the supply from the SWTP, the City has more than 30 groundwater wells located throughout the City, with the nearest being approximately one mile south of the Project, at Sunnyside and Nees Avenues. While the City's system is divided into two pressure zones, there are interconnections between the two to balance supply and demands throughout the year in various water demand scenarios.

Water will be delivered to the Project via the City's existing and planned distribution system. The water distribution system is shown in full in the Water Master Plan Update, Phase III (WMP) (Provost & Pritchard Consulting Group, 2018), and in detail for this area on **Figure 2-2**. The master-planned infrastructure is being constructed via another project along Shepherd Avenue between Sunnyside and Fowler Avenue and along Sunnyside Avenue, north of Shepherd Avenue. The master-planned 16-inch distribution mains in Shepherd Avenue, west of Sunnyside Avenue and east of Fowler Avenue both exist, also. The master-planned infrastructure along Sunnyside Avenue, south of Shepherd Avenue has not yet been constructed. Connectivity in both directions along Shepherd Avenue and/or in Sunnyside Avenue are required to reliability supply water to the Project.

AGENDA ITEM NO. 6.

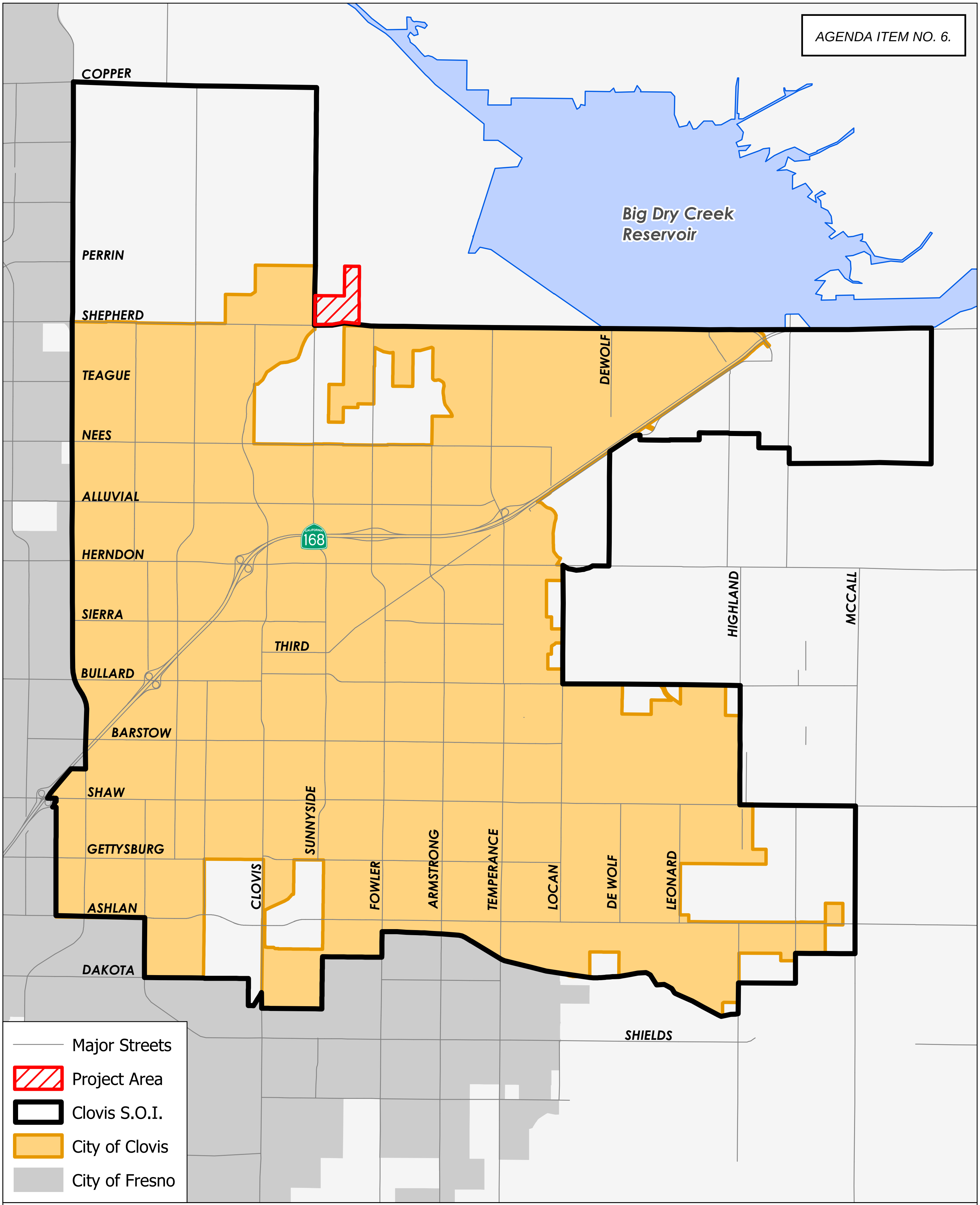

Figure 2-1: Project Location

Water Supply Assessment

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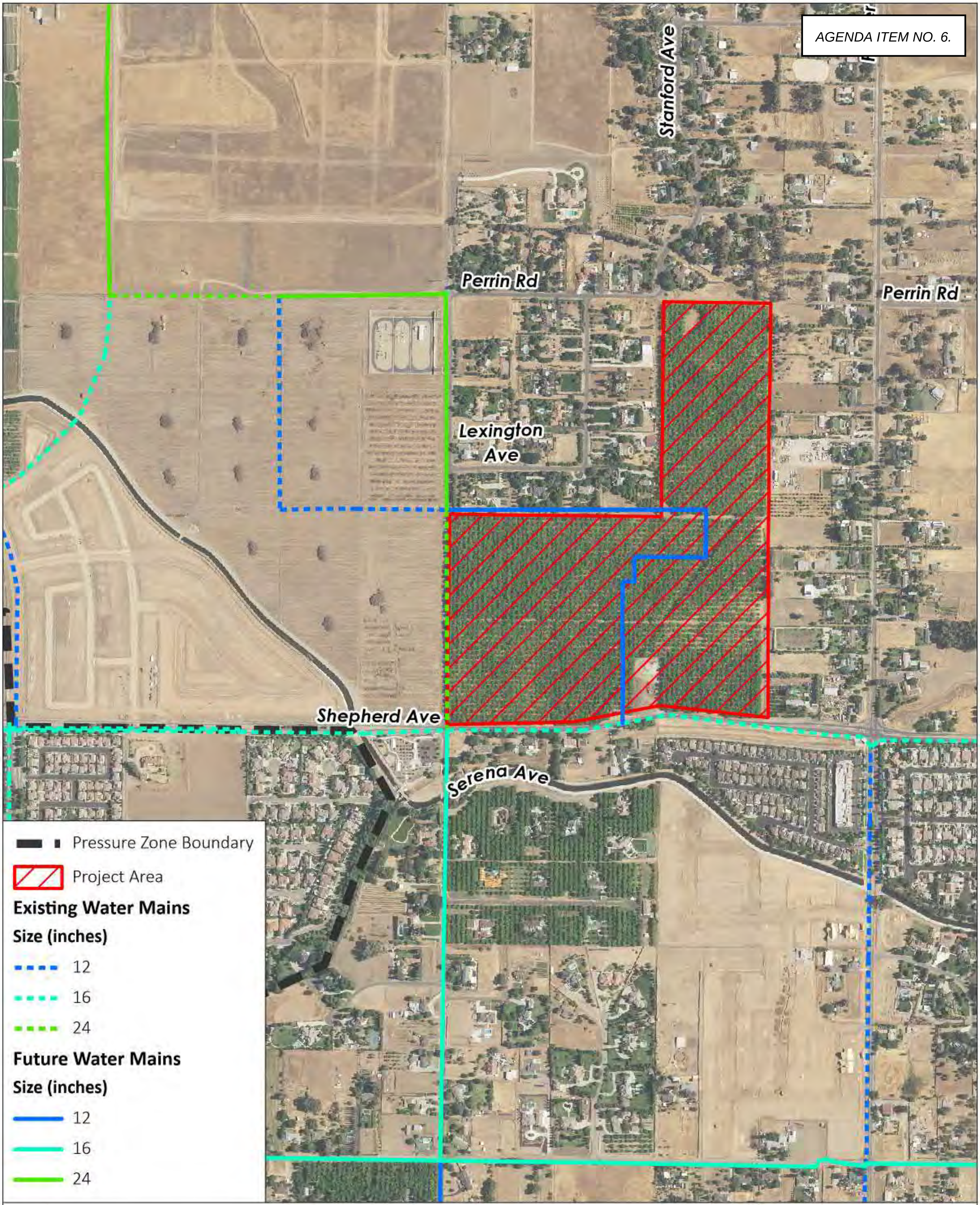

Figure 2-2: Water Infrastructure at Buildout

Water Supply Assessment

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3 Water Demands

This section summarizes projected water demands of the Project, assuming full buildout by 2030. The area was not included in either the WMP; therefore, there are no “planned” demands to compare the “proposed” demand against. Proposed Project water demands have been estimated based on the proposed land uses and the WDFs shown in the adopted WMP. This section compares water demand estimates developed as part of this study with the City’s existing plans.

3.1 Project Demands

As the Project area was not included in either the WMP, it does not have a “planned” water demand. The existing land use designation in the GP is Rural Residential (shown in **Figure 3-1**), with an associated Land Use-based Water Demand Factor (WDF) of 0.7 AFY/acre, which is significantly lower than the proposed WDF of 3.3 AFY/acre associated with MHDR. Based on the proposed land use designation, the proposed water demands for the Project area are shown in **Table 3-1**.

Table 3-1. Proposed Demand Estimates

Proposed Land Use Designation	Unit Factor (AFY/acre)	Acreage	Demand (AFY)
Medium High Density Residential	3.3	77.5	255.8
Total:		77.5	255.8

While the proposed land uses are residential, the intensity of the residential development is greater than the GP land uses. At the same time, the area was not included in demand estimates in the WMP; therefore, the City must plan to obtain additional supplies to meet the proposed demands for the Project. The total proposed water demand amounts to approximately 1.6% of the excess supply for year 2030 the City has in a normal year as shown in Table ES-3 of the 2020 UWMP[4]. This indicates an ability of the City to serve this project in the interim while additional supplies are acquired to accommodate full build-out of the GP.

Additionally, as noted in **Section 2**, there is an existing water demand on the property, currently satisfied via a private agriculture groundwater well, associated with the Project area of 186.4 AFY; the proposed demand is 69.4 AFY more than the existing uses.

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[4] The excess supply in a normal year in 2030 is shown in the UWMP as 16,113 AFY; the proposed demand is 255.8 AFY, equating to 1.6% of the excess supply (255.8/16113 = 1.6%).

The water usage projection for the Project was developed based on the Water Demand Factor in the WMP for the proposed Project land use. Project water demands were calculated in 5-year increments, as shown in **Table 3-2**. This table is based upon the understanding the Project will be entirely constructed by 2030[5].

Table 3-2. Proposed Demands in 5-Year Increments

Criteria	2025	2030	Total
Estimated Demand (AFY)	63.9	191.9	255.8

3.2 Demands of Other Existing and Planned Development

The UWMP report the planned demands for similar types of uses proposed with this Project within the City, referred to collectively as Single-Family Residential uses (SFR). These demands are summarized in UWMP Table 4-5, which is reproduced, in part, below.

Table 3-3. Planned Water Demands by Use Type

Use Type	UWMP Projected Demands in 2030 (AFY)	Projected Project Demands in 2030 (AFY)	% Increase over UWMP Projected SFR Demands
Single Family Residential	18,558	255.8	1.4%
Totals	18,558	255.8	1.4%

Comparing the total proposed Project water demands in **Table 3-1** with the total water demand area analyzed in the UWMP and shown in **Table 3-3**, the Project makes up a very small portion of the overall water anticipated to be delivered by the City to similar types of uses.

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[5] The anticipated demands timing is an estimate and development of the Project will be determined by the Project Applicant. This WSA does not govern the development timeline.

AGENDA ITEM NO. 6.

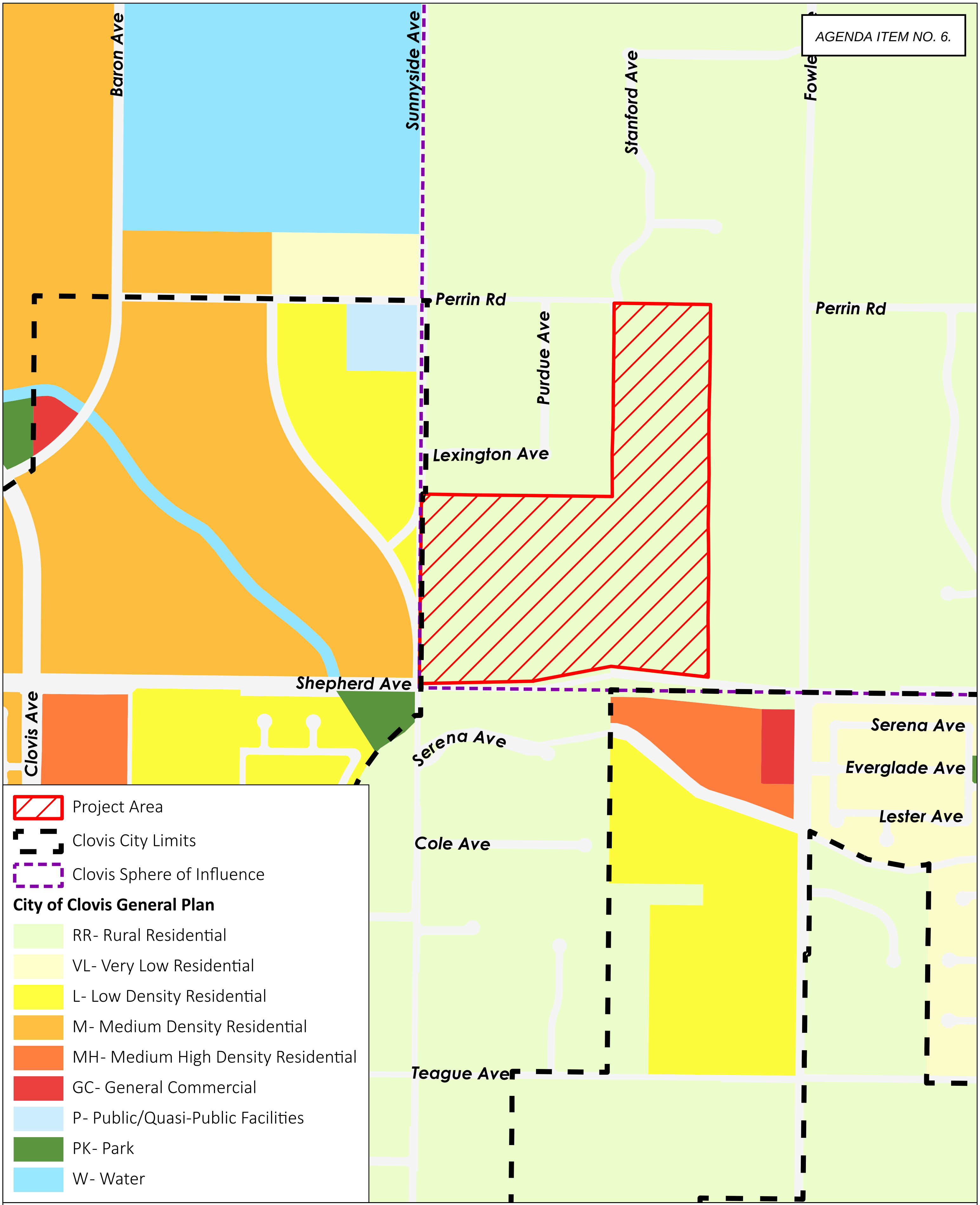

Figure 3-1: Land Use Plan in Project Area

Water Supply Assessment

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4 Overview of Water Supplies

CWC §10910(c)(2) allows reliance on the City’s UWMP to determine overall water supply reliability if the Project’s planned water demand was included in the UWMP. The Project demand was included in the City’s UWMP calculations and, while, the overall demand of this area was not included in the WMP, the calculations and analysis from the UWMP are utilized as a current baseline for the City’s supply and demand comparison. The Project’s demands are over and above the WMP demands, as discussed in **Section 3** and later in this WSA. The overall additional demand is relatively small in comparison to the City’s total demands but will still require planning on the City’s part to account for it in the future build-out of the City’s GP. This WSA relies, in large part, on the UWMP.

§10910(d) requires that a WSA identify any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, including any such existing entitlements, rights, or contracts held by the public water system or city or county preparing the WSA. These descriptions appear in detail in Chapter 6 of the UWMP and are summarized below.

4.1 Surface Water

The City’s surface water supply is provided through agreements with Fresno Irrigation District (FID), which allows the City to receive a share of FID’s Kings River and Friant Central Valley Project (CVP) entitlements. Garfield Water District (GWD) and International Water District (IWD) are located within the City’s General Plan boundaries. As the districts’ service areas are urbanized over time, surface supplies available to the two districts will be added to the City’s surface water supply. As those supplies are added to the City’s water supply portfolio, they will be available throughout the City’s service area as part of the general water supply. Currently, all surface water available to the City comes from the FID contract. The boundaries of each of the districts are shown on **Figure 4-1**.

4.1.1 Kings River

FID obtains much of its surface water from the Kings River. FID is a member of the Kings River Water Association, which holds water rights licenses for all the Kings River and storage rights licenses on Kings River reservoirs. FID is entitled to water based upon a prorated monthly schedule determined by the natural flow of the Kings River as it would occur without reservoir storage above the historic Piedra gauging station. FID is entitled to water from the Kings River at all flows, but the percentage is higher at relatively low Kings River flows. If the snowmelt is slow, the District receives a greater entitlement. FID’s average gross annual entitlement is 452,541 acre-feet (AF). Within the last fifty years, the smallest entitlement received was 158,109 AF, which occurred in 2015.

The City’s allocation from the Kings River is proportional to the total acreage of the City's included area to the total FID area receiving water; the total amounts available to the City are discussed in greater detail in **Section 6**.

4.1.2 Central Valley Project Water Allocation: Friant Division

The water obtained from the CVP comes from the diversion and storage of water from the San Joaquin River behind Friant Dam. The total available water on the San Joaquin River has been estimated at 2,200,000 AF. Of that, 800,000 AF have been designated as Class I supply (Bureau of Reclamation, 2005). Class I supply is considered to be dependable in most years with shortages only in very dry years. Class II water is in excess of Class I and is therefore much less dependable. FID has a contract with the United States Bureau of Reclamation for 75,000 AF of Class II water from this source (Bureau of Reclamation, 2005). The agreement between the City and FID requires the District to make available to the City the proportional share of all surface water available to the District although it does not allow the City to directly receive FID's CVP supplies. Therefore, FID is required to make a like amount of Kings River (or any other surface) water available to the City for its proportional share of Class II CVP supplies. FID's Class II contract has received an average 13,577 AFY with the actual number ranging from zero to the full 75,000 AF depending upon the nature of each water year over that period. **Table 4-1** lists the projected surface water volume through 2040.

4.1.3 Garfield Water District

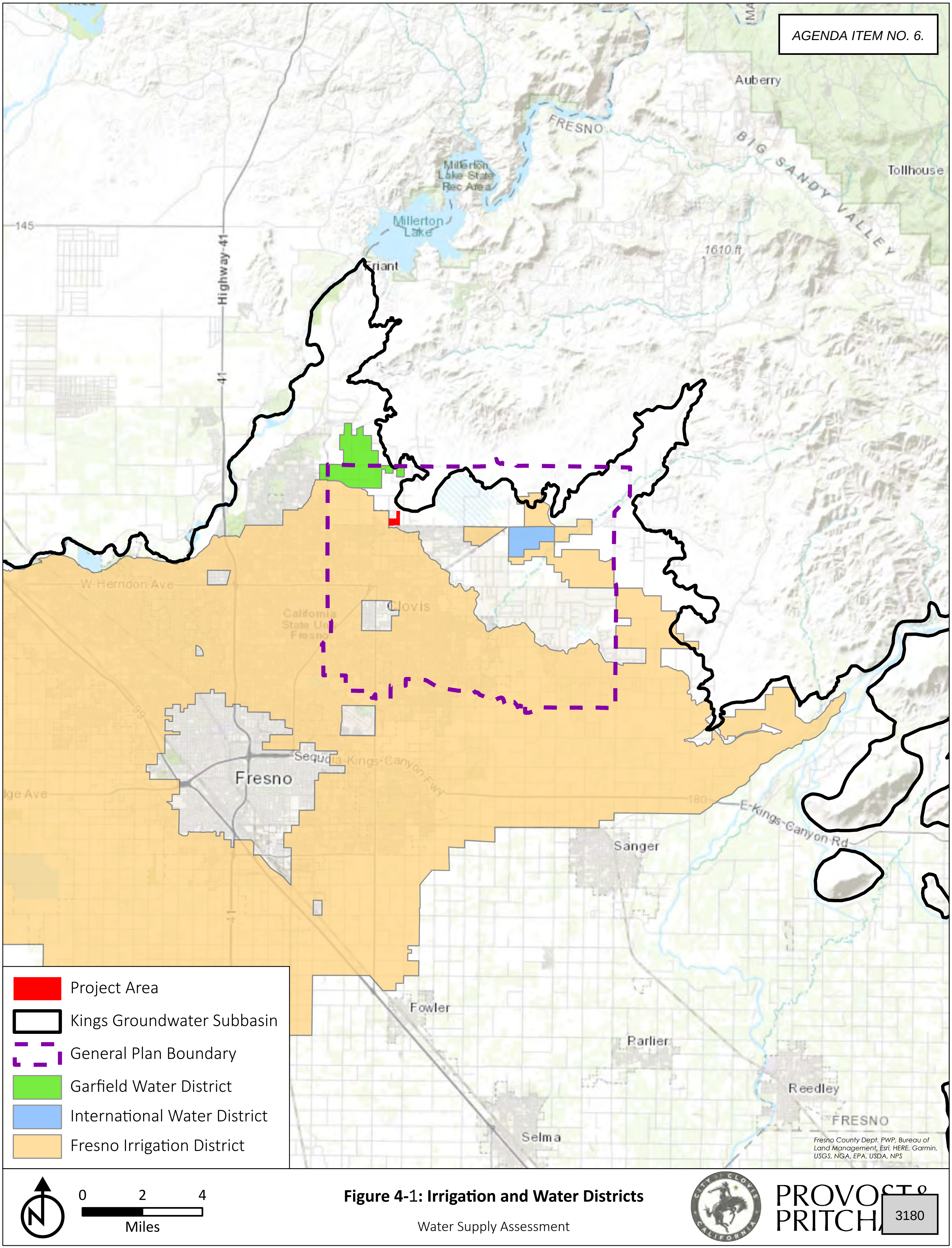
GWD is located north of the City with a portion of the district in the City's SOI. The GWD holds a Class 1 CVP contract for 3,500 AFY. With half of GWD within the City's SOI, an estimated 1,750 AFY is expected to be added to the City's supply upon development. As noted in the UWMP, the first portion of GWD supplies is not anticipated to be available to the City until 2025, with the total 1,750 AFY not accounted for in the supply totals until 2040.

4.1.4 International Water District

IWD is located east of the City's SOI within the general plan's boundary. The IWD holds a Class 1 CVP contract for 1,200 AFY. The City's General Plan designates a portion of the District's area as industrial and residential use. At build-out it is estimated that the entire 1,200 AFY supply will be added to the City's supply. As noted in the UWMP, the first portion of GWD supplies is not anticipated to be available to the City until 2030, with the total 1,200 AFY not accounted for in the supply totals until 2040.

4.2 Supply from Storage

Since 2004, the City has been storing water in the aquifer to create a stable source of supply over the years. The City has been working with FID to recharge surface water, using the City's contracted shares of capacity in FID's Waldron Banking Facility and Boswell Groundwater Banking Facility, to build up credit in those facilities which allows for annual water withdrawals, on an as-needed or as-requested basis. The surface water banked includes portions of FID's Kings and CVP supplies and may in the future also include other surface water supplies that FID is able to secure on the spot market. Recharged water is purchased under separate agreements with FID and is not included in the surface water totals in the previous section, so this is truly a separate and additional water supply. This process is fully explained in the UWMP.



Fresno County Dept. PWP, Bureau of Land Management, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

Figure 4-1: Irrigation and Water Districts

Water Supply Assessment

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Two banking facilities, the Waldron Banking Facility (Waldron) and Boswell Groundwater Banking Facility (Boswell), have been constructed in central Fresno County. The City entered into an agreement with the FID to participate in the financing of the construction of a dedicated water banking facility called the Waldron Banking Facilities. The City is entitled to receive up to ninety percent (9,000 AF) of the annual yield. The City and FID have entered into a similar agreement regarding the Boswell Groundwater Banking Facility whereby the City will have access up to 4,500 AFY of additional surface water supplies. The recharged water will be "banked" for future recovery during dry periods or to accommodate planned growth.

The City has created a recharge plan accounting for historic variations in surface water supplies that will allow it to withdraw an annual 13,500 AF, the maximum withdrawal allowed under the City's agreements with FID. This is considered a firm supply. The 13,500 AF maximum annual withdrawal is built into the water supply projections in the UWMP for each year over the planning horizon.

4.3 Groundwater

The City is located within the Kings Groundwater sub-basin, a part of the Tulare Lake Hydrogeologic Basin as described in the Department of Water Resources Bulletin 118 (Department of Water Resources, 2003). The groundwater basin is in overdraft and has been for many years. However, it has not been adjudicated.

Chapter 6 of the UWMP discusses a sustainable groundwater yield for the service area and concludes the sustainable yield to be 9,400 AFY, as discussed in greater detail in the WMP. While the North Kings Groundwater Sustainability Plan (NKGSP) has been written and adopted, it does not yet include a firmer approximation of sustainable yield, although development of one is anticipated. The sustainable yield from the UWMP and WMP has been used for this assessment.

4.4 Recycled Water

Most of the City's wastewater flow is treated at the Regional Water Reclamation Facility, located southwest of the City of Fresno on Jensen Avenue. In 2009, the City of Clovis completed a new Water Reclamation Facility (WRF). In 2020, the WRF produced approximately 2,496 AFY. Of that total, 28 percent was recycled for mostly landscape and agricultural irrigation, with the remainder being discharged to FID's Fancher Creek for agricultural irrigation.

Ultimately the WRF will be expanded to be able to treat 8.4 MGD, or 9,400 AF per year, and will make a substantial contribution to the City's overall water resources. According to the 2020 UWMP, recycled water is used for irrigation of public and private landscape within the service area. Areas receiving or planned to receive recycled water include the Freeway 168 corridor between Shepherd and Sierra Avenues, the existing Clovis Community Medical Center campus, and multiple City parks and landscape areas.

Landscape irrigation will continue to be the main use of recycled water in the future. All public landscape areas within three-quarters of a mile of the distribution system are considered potential recycled water use areas. Clovis Unified School District is evaluating the use of recycled water for its landscape areas. Caltrans has expanded their use of recycled water along State Route 168 from Armstrong Avenue west to Sierra Avenue. Concurrent with the Project's development, the City will expand its use of recycled water and broaden its range of beneficial uses to potentially include irrigating the public landscape space to be developed with the Project.

To affect that increase in use, the City now requires all new development of public landscape near recycled water transmission lines to use recycled water. Additional actions include extending the recycled water distribution system to discharge at groundwater recharge facilities and reducing the cost of recycled water. The UWMP indicates planned use of recycled water supply will be 9,400 AFY by 2040 (UWMP Table 6-13). With a planned[6] recycled water transmission main in Shepherd Avenue, it is possible this Project may use recycled water for landscape irrigation, but the City will make final determination of that at a later date.

4.5 Exchanges

Water exchanges, transfers, and water banking allow purveyors to manage demand and supply variability by ensuring water will be available for the near future. The majority of the City's wastewater is treated at the RWRF. Under an agreement with FID, the City of Fresno receives 0.92 AF of Kings River surface water in exchange for each two AF of reclaimed water produced by the RWRF (46 percent exchange). Clovis is in discussions with the City of Fresno and FID on documenting its pro-rata share of RWRF effluent and the most efficient recover and beneficial use of that effluent. This will require a new effluent exchange agreement with FID, and potentially the City Fresno, to appropriately allocate Clovis' pro-rata share of the treated water. This water is limited by agreement to being used for groundwater recharge activities.

4.6 Water Supply Summary

The five sources discussed above make up the City's water resources. These are tabulated overall for 2025 and for each subsequent 5-year period through 2040 in **Table 4-1**.

The City's overall water resources are projected to increase from 50,739 AF per year in 2025 to 74,650 AF per year in 2040. Nearly all this increase will come from increasing surface water resources from 18,039 AF per year in 2020 to 39,400 AF per year in 2040. The mix of water supplies the City plans to use to meet these demands is changing over time and, while the surface water supplies will be the primary source, a mixture of groundwater and supply from storage will be used to meet demands.

Table 4-1. Water Supplies – Normal Year (UWMP Tables 6-12 and 6-13)

Water Supply	Projected Water Supply (AF)			
	2025	2030	2035	2040
Groundwater [1]	11,429	10,753	10,076	9,400
Surface Water [2]	22,160	27,584	32,508	39,400

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[6] As noted in the City's 2018 Recycled Water Master Plan

Supply from Storage (Waldron and Boswell facilities)	13,500	13,500	13,500	13,500
Recycled Water	3,100	5,500	6,300	9,400
Transfers (GWD and IWD)	550	1,600	2,650	2,950
Total	50,739	58,937	65,034	74,650

Notes:

[1] Reasonably available volume shows a steady reduction in reliance on groundwater supply, as planned, to the sustainable yield volume in 2040; discussed in greater detail in the UWMP.

[2] Surface water quantities shown in greater detail in the UWMP.

5 Normal Year Water Operations

This section evaluates the ability of the City to meet the overall water demands during normal water years. A normal year is a year, or averaged range of years, that most closely represents the average water supply available to the City. In this case, the normal year reflects the overall water supply summary discussed in **Section 4**.

This Chapter relies on information taken from Sections 6 and 7 of the UWMP. **Table 5-1** compares the City's water demands and compares them with the normal year water supplies (see **Table 4-1**) for the 5-year increments the Project is anticipated to be constructed, and through 2040, as shown in the UWMP. As shown, total supplies would exceed total demands. Adequate supplies are available to serve the City and its water customers in normal rainfall years such as those discussed in this section. The excess water supply is more than adequate to meet the estimated Project water demands.

Table 5-1. Comparison of Normal Year Supplies and Demands

Condition	Water Supply (AFY)			
	2025	2030	2035	2040
Water Demand	39,737	42,824	46,422	52,598
Water Supply	50,739	58,937	65,034	74,650
Excess/Shortage	11,002	16,113	18,612	22,052

6 Single-Dry and Multiple-Dry Year Water Supplies

This section evaluates the availability of City water supplies during single-dry and multiple-dry water years, based on Project buildout in 2030. Numerous factors will work to change the relative quantities of water the City receives from its several water sources. Since each of these has a different reliability in dry years, the overall water supply reliability will change over time. The following sections discuss how this will occur.

During a single-dry year, surface water allotments are anticipated to be reduced by as much as 66 percent for Kings River surface water supplies, and CVP Class II supplies are eliminated completely in dry years. In the future, as the City becomes more reliant on surface water supplies, the impact of surface water reductions in dry years will be more significant.

A multiple-dry year period represents the lowest average supply available to the Project for a consecutive five-year period. This analysis is referred to as a “multi-dry” condition in the UWMP. The WSA analysis is based on the five consecutive driest years of record for the Project’s surface water supplies, which were water years 2011/12 through 2015/16.

6.1 Water Year Effects on Water Sources

6.1.1 Kings River Surface Water

Both the single-dry and multiple-dry analyses are most affected by the variations in Kings River entitlement in dry years. FID’s entitlement does not vary directly in proportion to overall annual runoff; rather it favors FID versus all the other Kings River diverters. When river flows are low due to slow runoff, low annual precipitation or both, FID’s share of the daily river flow increases.

The effect of this is that FID’s entitlement, as a percentage of its average entitlement, is higher than the overall water year percentage flow, for virtually any below-average water year. As noted in the UWMP, the anticipated share of Kings River water is shown as 32,100 AFY (UWMP Table 6-4) in 2040 for an average water year. As discussed in the UWMP, the City has recently executed a contract with FID for development of a new firm water supply starting at 1,000 AFY in 2020 and increasing to a maximum of 7,000 AFY by 2045 and thereafter. This new supply will not have the variability of the existing supply based on water year type.

6.1.2 Friant CVP Surface Water

Over the period of 1986 through 2016, the average Class II allocation has been 38 percent of contracted amount. However, Class II supplies are particularly subject to the water year type. However, these supplies are relatively small and would not have significant impact on the total supply.

While Class I entitlements do not currently affect the City's FID supplies, they will affect the future-year GWD and IWD entitlements. Class I allocations in the five multiple-dry years were 0 percent of the contracted amount for all five years.

6.1.3 Supply from Storage

The contract for the Waldron facility allows annual withdrawals of up to approximately 9,000 AFY, while the Boswell Facility allows up 4,500 AFY. According to the UWMP, the combined withdrawal limit from the two facilities is 13,500 AFY. In any year where surface water deliveries are substantially limited, the City would want to use these resources to the limit.

A related matter is how contributions are made to supply storage. Whereas in normal years the City is making deposits to both facilities, in a drier year those contributions would be reduced or halted since the surface supplies necessary for the deposits would not be available. Since the deposits come from surface water resources not counted in the City's water balance, being acquired under separate FID agreements, the curtailment of deposits does not reduce the City's water demand.

6.1.4 Groundwater

As of the preparation of the 2020 UWMP, the City of Clovis obtains groundwater from more than 30 wells, located throughout the service area. The total well production is estimated at 37,290 gallons per minute.

According to the UWMP, the City aims to reduce its direct groundwater consumption whenever possible. Most the City's water demands will be met by a combination of surface water and supplies from storage, in water years when those two resources are sufficient to meet demands. In drier years, when surface water supplies are limited, the City will pump groundwater, potentially beyond the 9,400 AFY accounted for in a normal year, to make up the shortfall but not to an unsustainable level as discussed in the NKGSP. The City will also recharge surface waters when available to allow for additional groundwater pumping when needed.

Planning to make that objective possible is very important, as Chapter 6 of the UWMP states that the sustainable groundwater supply in the City service area is 9,400 AF per year, for normal, dry, and multi-dry years. For the time being, there is no restriction against pumping groundwater above the sustainable aquifer yield; however, the NKGSP indicates the City must sustainably use groundwater.

This WSA uses 9,400 AF per year as the sustainable groundwater pumping amount, as stated in the UWMP. Due to the very large size of the aquifer underlying the City, available groundwater is not quickly affected by the type of water year. Anticipating a mix of wet and dry years similar to what has been historically seen, this WSA does not reduce available groundwater in dry or multiple-dry years; however, the City will be prioritizing use of other supplies over groundwater when possible.

6.1.5 Recycled Water

Recycled water production, being tied directly to indoor water use, does not vary significantly with the water year type, and is not adjusted from normal for this analysis.

6.2 Changes in Water Source Reliability Over the Planning Horizon

In 2020, surface water made up 58 percent of the City's direct water supply. In 2030, the surface water supply is planned to be 53 percent of the total while the supply from storage will have increased to 18 percent in a normal year. Groundwater will remain an important component of the water supply in the near future.

This means the City's reliance on surface water supplies, either directly used or pumped from subsurface storage, will have increased to 71 percent of the total. While there is a margin of normal year supply available over planned demand over the entire planning horizon, some provision may have to be made for additional reliable storage to account for such a large portion of surface water being subject to water year variability. See the reliability analysis in Section 6.3 following.

6.3 Summary of Single-Dry and Multiple-Dry Year Reliability Over the Planning Horizon

Supply for dry years would be drawn from a combination of Kings River surface water, supply from storage, groundwater, and recycled water. As shown in the UWMP, it is anticipated that surface water supplies from the FID Firm Water Agreement would still be available during drought years. Other firm water supply sources are groundwater, banked water, and recycled water, all of which are considered resilient against drought compared to surface water supplies. Groundwater banking activities would decrease to accommodate the decreased surface water supplies while still being able to use previously banked groundwater supplies from the Waldron and Boswell facilities. Project demand was assumed to be constant across all water years.

The supplies that would be available during single-dry and multiple-dry years in 2030 (at assumed Project buildout) are summarized in **Table 6-1**. As shown, adequate supplies would be available to supply the City and along with the estimated Project demand of 255.8 AFY, under all studied conditions. Further, the total demand associated with the Project (255.8 AFY), accounts for 33.5% of the excess supply without conservation and 4.1% of excess supply with conservation in the most critical year analyzed – the Single Dry Year, while the difference between existing uses and proposed land use (69.4 AFY) accounts for 9.1% and 1.1% of the same year, respectively. The City has a Water Shortage Contingency Plan (WSCP) (Provost & Pritchard Consulting Group 2021) in place that could be partially or fully implemented if needed or mandated. The 'demand with conservation' values are reduced to reflect implementation of various stages of the WSCP, as discussed in the UWMP.

Table 6-1. Dry Year Supply and Demand Comparison in 2030 (UWMP Tables 7-2, 7-3, and 7-4)

Scenario	Single-Dry Year [1]	Multiple-Dry Year [2]				
		Year 1	Year 2	Year 3	Year 4	Year 5
Baseline demand	42,824	42,824	42,824	42,824	42,824	42,824
Demand with Conservation as shown in UWMP	37,359	39,422	36,962	33,969	30,474	40,757
Total Supply	43,587	54,607	52,576	48,310	43,586	57,992
Excess/<Deficit> in Supply	763	11,783	9,752	5,486	762	15,168
Excess/<Deficit> in Supply with Conservation	6,228	15,185	15,614	14,341	13,112	17,235

Note: Refer to the 2020 UWMP for details on how these values were calculated.

6.4 Climate-Based Reliability Factors

This WSA defers to the UWMP for consideration of the overall effects of climate change upon supply reliability. Climate change has been considered in the preparation of the UWMP.

7 Operational Reliability

The City's surface water entitlement does not accrue all at once during a given water year. Rather, the Kings River entitlement accrues daily throughout the year based on actual river runoff and the Kings River Water Association entitlement schedule. The daily nature of the Kings River supply is especially important early in the water year, which begins October 1. The very low river flows in October and November mean that supply is low, and the City must rely on other water supplies during those months. The relatively large supplies available from storage help mitigate the seasonal nature of the surface water supply, and these are further backed up by groundwater supplies equivalent to almost half the City's total annual demand.

The City has not had any issue with temporary water shortages to date. The City's WMP and UWMP indicates a need to increase their surface water and groundwater supplies to meet future demands and provides detail on how much of each supply is needed compared to the existing supplies. The WMP also includes a Capital Improvements Program identifying capital projects that are necessary to acquire and facilitate the movement of current and future water supplies throughout the City's system in a reliable manner. The City's adherence to their planning documents and consistent development of these water supplies and infrastructure is critical for the City's continued growth and development and will provide operational reliability into the future.

8 Conclusions

As summarized in **Table 8-1**, the City has adequate supplies to meet the needs of all the City's water customers including the Project, in normal water years, over the 20-year planning horizon. However, the water supply used for this Project will need to be replaced to support full buildout of the GP.

In the buildout year, if demand is as projected, the City will have sufficient water to meet dry year demands all dry year event types. Conservation measures, detailed in the Water Shortage Contingency Plan, have been developed that would mitigate possible shortfalls by reducing demand approximately 15 percent. Evidence from the 2013 to 2015 drought suggests that those results, and more, are achievable. Additionally, as the City has surplus water supplies in normal years, short-term additional groundwater extraction in the single-dry and multiple-dry years is also planned as part of their water portfolio.

As discussed in Section 7, the City has plans to continue to acquire water supplies and construct infrastructure to supply current and future water users. Therefore, we conclude the City of Clovis has adequate water supplies to meet the needs of the City in normal, dry, and multi-dry years given the previously discussed potential demand reductions and supply augmentations.

8.1 Conclusions Including Additional WSAs

Since the 2020 UWMP was adopted, three WSAs have been prepared for the City, including this one. It is important to understand the cumulative impact of the additional demands associated with WSAs over and beyond the demands analyzed in the 2020 UWMP.

The demands in **Table 8-1** include those demands noted in the UWMP and **Table 6-1** above, and the demands associated with the Project evaluated in this WSA, as discussed in **Section 2.2**. Similarly, the noted Excess/Deficit reflects the difference between these summated demands and the total supply noted in the UWMP and in **Table 5-1**, above. This approach accounts for the additional demands associated with the proposed land use type above the demands associated with the originally planned land use type. There is still an excess of supply in all conditions, even with the additional demand.

As noted above, additional groundwater supplies may not be necessary in the critical year or multiple year drought depending on operational decisions regarding conservation; however, the City's UWMP notes additional groundwater supplies would be available on a short-term basis during a drought condition.

Table 8-1. Summary of Project Water Supplies and Demands including WSAs

2020 UWMP Supply and Demand Comparison Results	Normal Year (2030)	Single-Dry Year	Multiple-Dry Year				
			Year 1	Year 2	Year 3	Year 4	Year 5
Excess/<Deficit> in Supply	16,113	763	11,783	9,752	5,486	763	15,168
Excess/<Deficit> in Supply with Conservation	--	6,228	15,185	15,614	14,341	13,112	17,235
Additional Demands Associated with WSAs prepared since 2020 UWMP							
Home Place Master Plan (Approved March 2021)	No Additional Demand Associated with WSA						
Tract 6205, SOI Expansion (Estimated Approval December 2022)	256	256	256	256	256	256	256
Tract 6343 (Approved December 2022)	79	79	79	79	79	79	79
Excess/<Deficit> in Supply including Additional Demands from Approved WSAs	15,779	429	11,449	9,418	5,152	428	14,834
Excess/<Deficit> in Supply with Conservation including Additional Demands Approved WSAs [1]	--	5,944	14,901	15,330	14,057	12,827	16,951

Notes:

[1] Calculation includes a reduction in the Additional Demands from Additional WSAs of 15 percent, as discussed above.

9 References

Provost & Pritchard Consulting Group (2021). *City of Clovis, 2020 Urban Water Management Plan Update.* Clovis.

Placeworks. (2014). *General Plan, City of Clovis.* Clovis.

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City of Clovis

Water Supply Assessment

Tract 6205

Northwest Sphere of Influence Expansion Area

December 2022

Prepared for:
City of Clovis

Prepared by:
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Abbreviations

AF	acre-feet
AFY	acre-feet per year
Boswell	Boswell Banking Facility
City	City of Clovis
County	Fresno County
CVP	Central Valley Project
CWC	California Water Code
FID	Fresno Irrigation District
GP	General Plan
GWD	Garfield Water District
IWD	International Water District
MGD	million gallons per day
MHDR	Medium High Density Residential
NKGSP	North Kings Groundwater Sustainability Plan
SFR	Single-Family Residential
SOI	Sphere of Influence
SWTP	City of Clovis Surface Water Treatment Plant
UWMP	City of Clovis Urban Water Management Plan
Waldron	Waldron Banking Facility
WDF	water demand factors
WMP	City of Clovis, Water Master Plan Update, Phase III
WRF	City of Clovis Sewage Treatment/Water Reuse Facility
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan

1 Introduction

1.1 Purpose and Need for the Water Supply Assessment

California Water Code (CWC) §10912(a) requires preparation of a Water Supply Assessment (WSA) meeting the requirements of CWC §10910 et seq for projects within cities and counties that meet one of several water demand triggers, or the equivalent. These triggers include construction of 500 or more residential units, construction of a shopping center or business establishment having 500,000 square feet of floor space, construction of a commercial office building having more than 250,000 square feet, a proposed hotel or motel having more than 500 rooms, or another project having a water demand equivalent to or greater than the 500-unit development.

This WSA evaluates the adequacy of available water supplies for the proposed Tract 6205, including a Sphere of Influence (SOI) Expansion Area north of Shepherd Avenue, east of Sunnyside Avenue (Project), located in the City of Clovis, Fresno County, California. The Project would entail the development of 605 single family residential lots, more than the “500 residential units” trigger; therefore, a WSA is required. The City of Clovis operates the water system to which the Project proposes to connect. This water system meets the standards for a “Public Water System” as set forth in CWC §10912(c); the City is therefore responsible for preparation of the required WSA in accordance with CWC §10910(b).

This WSA discusses the estimated water demands and water supply for the proposed Project. The Project is located in Fresno County (County), adjacent to the City of Clovis (City) limits; the area will be annexed as part of the Project’s progress and the entire Project will be supplied water from the City.

1.2 Reliance on a Related Urban Water Management Plan

If the Project falls within the boundaries of a current Urban Water Management Plan (UWMP) prepared by the water purveyor, CWC §10910(c)(1) requires that the WSA determine whether projected water demand associated with the Project is included as part of that duly adopted UWMP.

The 2020 Clovis UWMP covers the SOI for the City as well as an area north of Shepherd Avenue, bounded on the west and east by Sunnyside and Fowler Avenues, respectively, as it was understood the area may be annexed and the SOI boundary modified in near future. This Project lies within the area north of Shepherd, east of Sunnyside Avenue, and is therefore, part of the study area of the 2020 Clovis UWMP, which was adopted by the City of Clovis by resolution of the City Council on July 12, 2021 (Provost & Pritchard Consulting Group, 2021). Thus, in accordance with the CWC, the preparers have relied on information from the UWMP wherever possible in preparing the various elements of this Assessment.

1.3 Document Organization

This WSA is organized as follows:

- *Section 2 describes the Project and its location.*
- *Section 3 describes the Project's potable and non-potable water demands in addition to those of other existing and planned uses, and how these vary from the numbers used in the UWMP.*
- *Section 4 provides an overview of the City's primary water supplies.*
- *Section 5 discusses the adequacy of water supplies during normal years.*
- *Section 6 discusses the adequacy of water supplies during single-dry and multiple-dry years.*
- *Section 7 discusses operational reliability on a daily basis.*
- *Section 8 concludes whether supplies would be adequate during normal, dry-year, and multiple-dry years during a 20-year projection.*
- *Section 9 lists references cited in this WSA.*

2 Project Description

2.1 Project Location and Setting

The City limits currently encompasses 25.9 square miles. The City's SOI covers 34.9 square miles, while the City's General Plan (GP) encompasses approximately 74.3 square miles. The City's General Plan (Placeworks, 2014) identified three Urban Centers to focus growth, including Loma Vista, the Northwest area, and the Northeast area; this Project lies within the Northwest area. **Figure 2-1** identifies the location of the Project in relation to the surrounding Clovis/Fresno region.

The Project would entail development of 605 single-family residential lots on approximately 77.5 gross acres. The Project is a proposed Medium High Density Residential (MHDR) development with associated neighborhood green space. The project site includes 77.5 gross acres bounded Shepherd Avenue to the south, Perrin Avenue to the north, and Sunnyside Avenue to the west. The project site encompasses three parcels: APNs 557-021-19 through 21. Located just outside the city limits and the SOI, the area north and east of the Project is primarily rural residential uses, the area directly west of the Project is planned for low and medium density residential and public/quasi-public facilities, and the area to the south is mainly rural residential with a small area of medium high density residential and neighborhood commercial just southeast of the Project.

The Project area is currently designated , in the Fresno County General Plan, as AL-20 and current land uses are rural residential and a pecan orchard. The existing estimated water demand for the Project area, in long-time use as a pecan orchard, is shown in **Table 2-1** below, in acre-feet per year (AFY) per acre.

Table 2-1. Existing Demand Estimates per Existing Use

Existing Use	Unit Demand (AFY/acre)	Acreage (acres)	Groundwater Usage (AFY)
Deciduous Fruits and Nuts[1]	2.39[2]	77.5	185.4
Rural Residential[3]	0.7	1.4	1.0
Totals:		78.9	186.4

2.2 Water Supply and Distribution

The Project will receive water supply from the City's water distribution system, which relies on both groundwater and surface water supplies. Built in 2004, the City's Surface Water Treatment Plan (SWTP) has a current treatment capacity of 22.5 million gallons per day (MGD); expansion to 45 MGD is planned.

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[1] Consumptive use calculations are based on agronomic water rates published by the University of California Experiment Station.

[2] Agronomic water rates include a rainfall component; this value has been reduced by 10.3 inches per year to reflect actual groundwater extracted for irrigation purposes.

[3] Demand for Rural Residential based on WDFs in the WMP.

In addition to the supply from the SWTP, the City has more than 30 groundwater wells located throughout the City, with the nearest being approximately one mile south of the Project, at Sunnyside and Nees Avenues. While the City's system is divided into two pressure zones, there are interconnections between the two to balance supply and demands throughout the year in various water demand scenarios.

Water will be delivered to the Project via the City's existing and planned distribution system. The water distribution system is shown in full in the Water Master Plan Update, Phase III (WMP) (Provost & Pritchard Consulting Group, 2018), and in detail for this area on **Figure 2-2**. The master-planned infrastructure is being constructed via another project along Shepherd Avenue between Sunnyside and Fowler Avenue and along Sunnyside Avenue, north of Shepherd Avenue. The master-planned 16-inch distribution mains in Shepherd Avenue, west of Sunnyside Avenue and east of Fowler Avenue both exist, also. The master-planned infrastructure along Sunnyside Avenue, south of Shepherd Avenue has not yet been constructed. Connectivity in both directions along Shepherd Avenue and/or in Sunnyside Avenue are required to reliability supply water to the Project.

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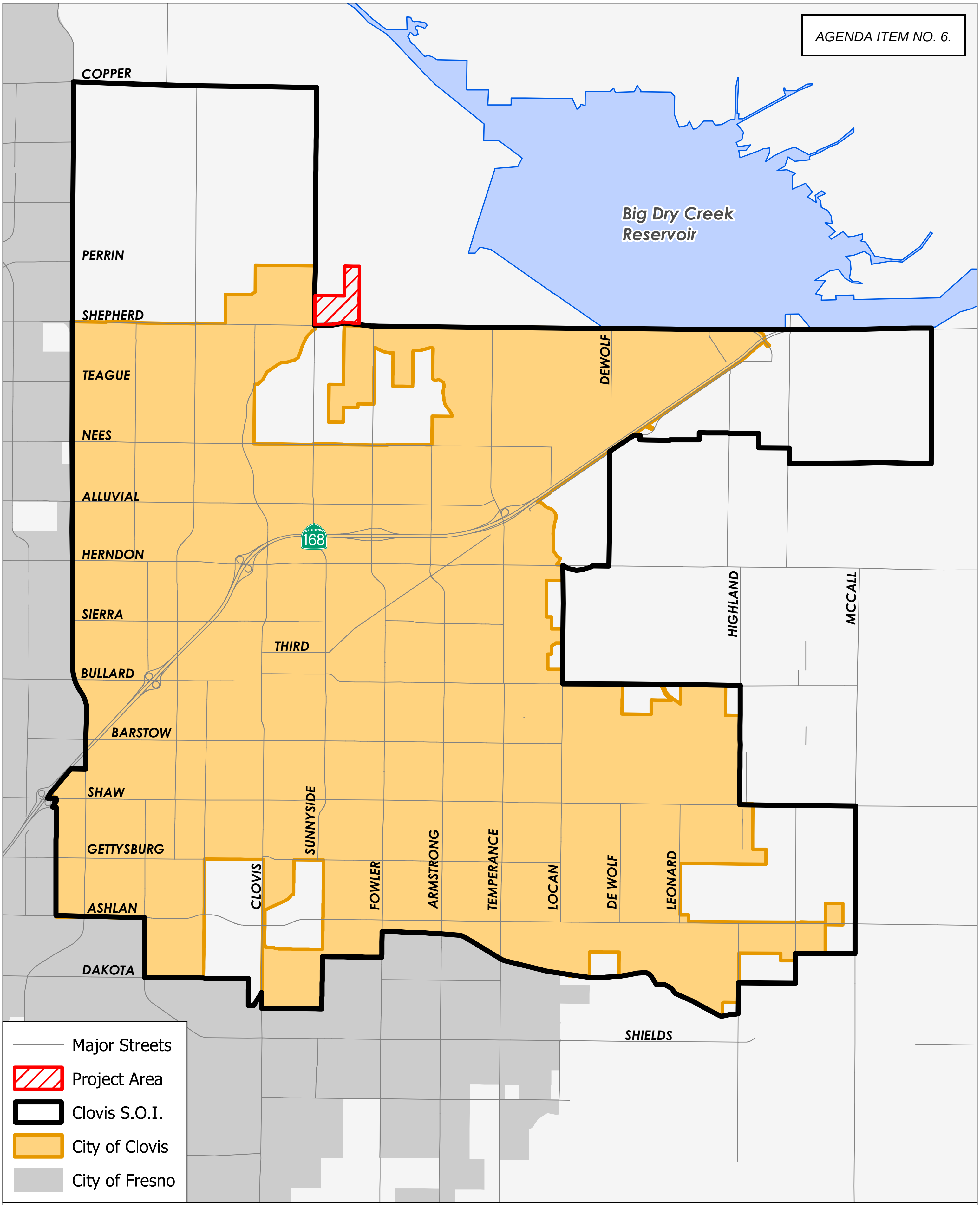

Figure 2-1: Project Location

Water Supply Assessment

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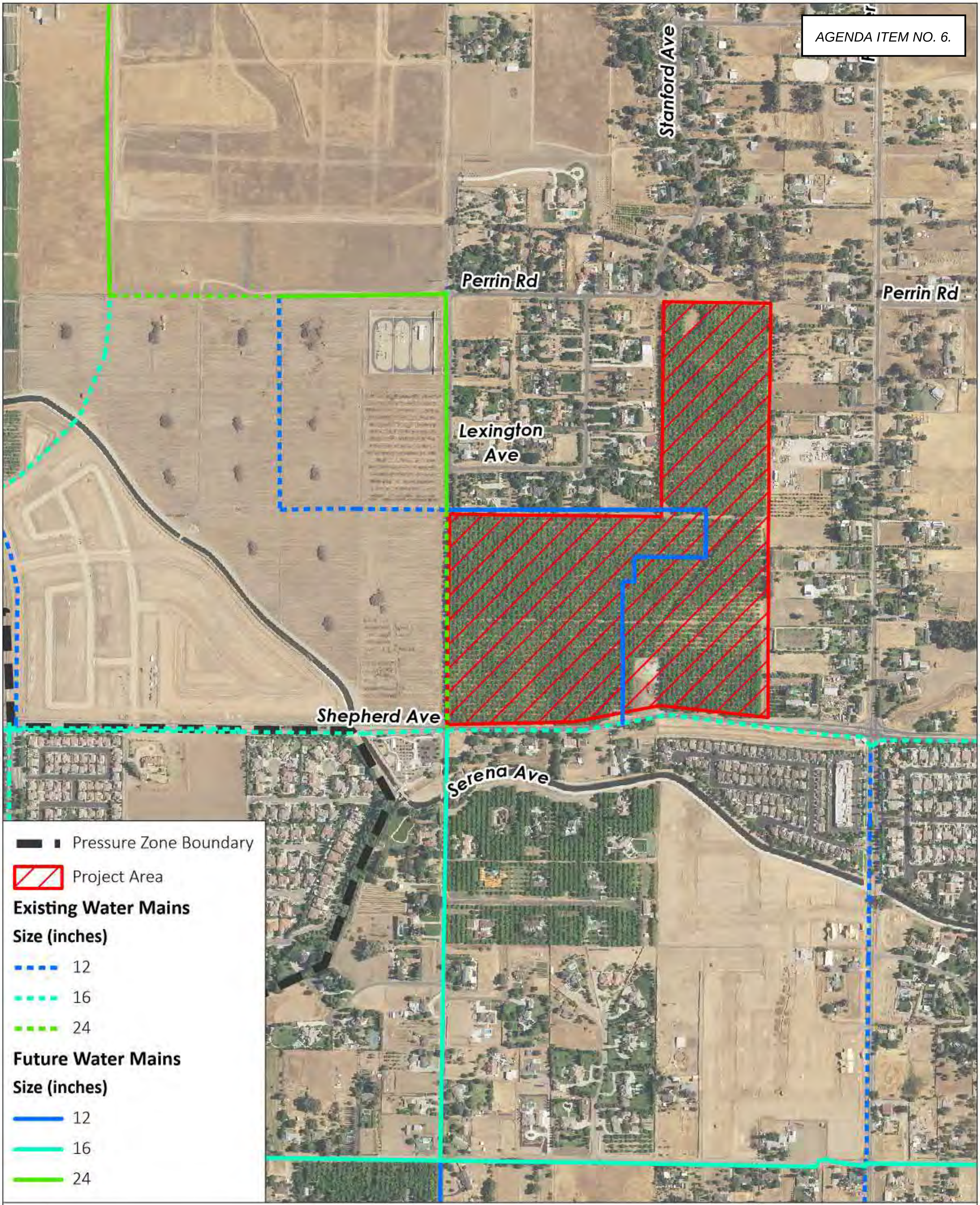

Figure 2-2: Water Infrastructure at Buildout

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3 Water Demands

This section summarizes projected water demands of the Project, assuming full buildout by 2030. The area was not included in either the WMP; therefore, there are no "planned" demands to compare the "proposed" demand against. Proposed Project water demands have been estimated based on the proposed land uses and the WDFs shown in the adopted WMP. This section compares water demand estimates developed as part of this study with the City's existing plans.

3.1 Project Demands

As the Project area was not included in either the WMP, it does not have a "planned" water demand. The existing land use designation in the GP is Rural Residential (shown in **Figure 3-1**), with an associated Land Use-based Water Demand Factor (WDF) of 0.7 AFY/acre, which is significantly lower than the proposed WDF of 3.3 AFY/acre associated with MHDR. Based on the proposed land use designation, the proposed water demands for the Project area are shown in **Table 3-1**.

Table 3-1. Proposed Demand Estimates

Proposed Land Use Designation	Unit Factor (AFY/acre)	Acreage	Demand (AFY)
Medium High Density Residential	3.3	77.5	255.8
Total:		77.5	255.8

While the proposed land uses are residential, the intensity of the residential development is greater than the GP land uses. At the same time, the area was not included in demand estimates in the WMP; therefore, the City must plan to obtain additional supplies to meet the proposed demands for the Project. The total proposed water demand amounts to approximately 1.6% of the excess supply for year 2030 the City has in a normal year as shown in Table ES-3 of the 2020 UWMP[4]. This indicates an ability of the City to serve this project in the interim while additional supplies are acquired to accommodate full build-out of the GP.

Additionally, as noted in **Section 2**, there is an existing water demand on the property, currently satisfied via a private agriculture groundwater well, associated with the Project area of 186.4 AFY; the proposed demand is 69.4 AFY more than the existing uses.

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[4] The excess supply in a normal year in 2030 is shown in the UWMP as 16,113 AFY; the proposed demand is 255.8 AFY, equating to 1.6% of the excess supply (255.8/16113 = 1.6%).

The water usage projection for the Project was developed based on the Water Demand Factor in the WMP for the proposed Project land use. Project water demands were calculated in 5-year increments, as shown in **Table 3-2**. This table is based upon the understanding the Project will be entirely constructed by 2030[5].

Table 3-2. Proposed Demands in 5-Year Increments

Criteria	2025	2030	Total
Estimated Demand (AFY)	63.9	191.9	255.8

3.2 Demands of Other Existing and Planned Development

The UWMP report the planned demands for similar types of uses proposed with this Project within the City, referred to collectively as Single-Family Residential uses (SFR). These demands are summarized in UWMP Table 4-5, which is reproduced, in part, below.

Table 3-3. Planned Water Demands by Use Type

Use Type	UWMP Projected Demands in 2030 (AFY)	Projected Project Demands in 2030 (AFY)	% Increase over UWMP Projected SFR Demands
Single Family Residential	18,558	255.8	1.4%
Totals	18,558	255.8	1.4%

Comparing the total proposed Project water demands in **Table 3-1** with the total water demand area analyzed in the UWMP and shown in **Table 3-3**, the Project makes up a very small portion of the overall water anticipated to be delivered by the City to similar types of uses.

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[5] The anticipated demands timing is an estimate and development of the Project will be determined by the Project Applicant. This WSA does not govern the development timeline.

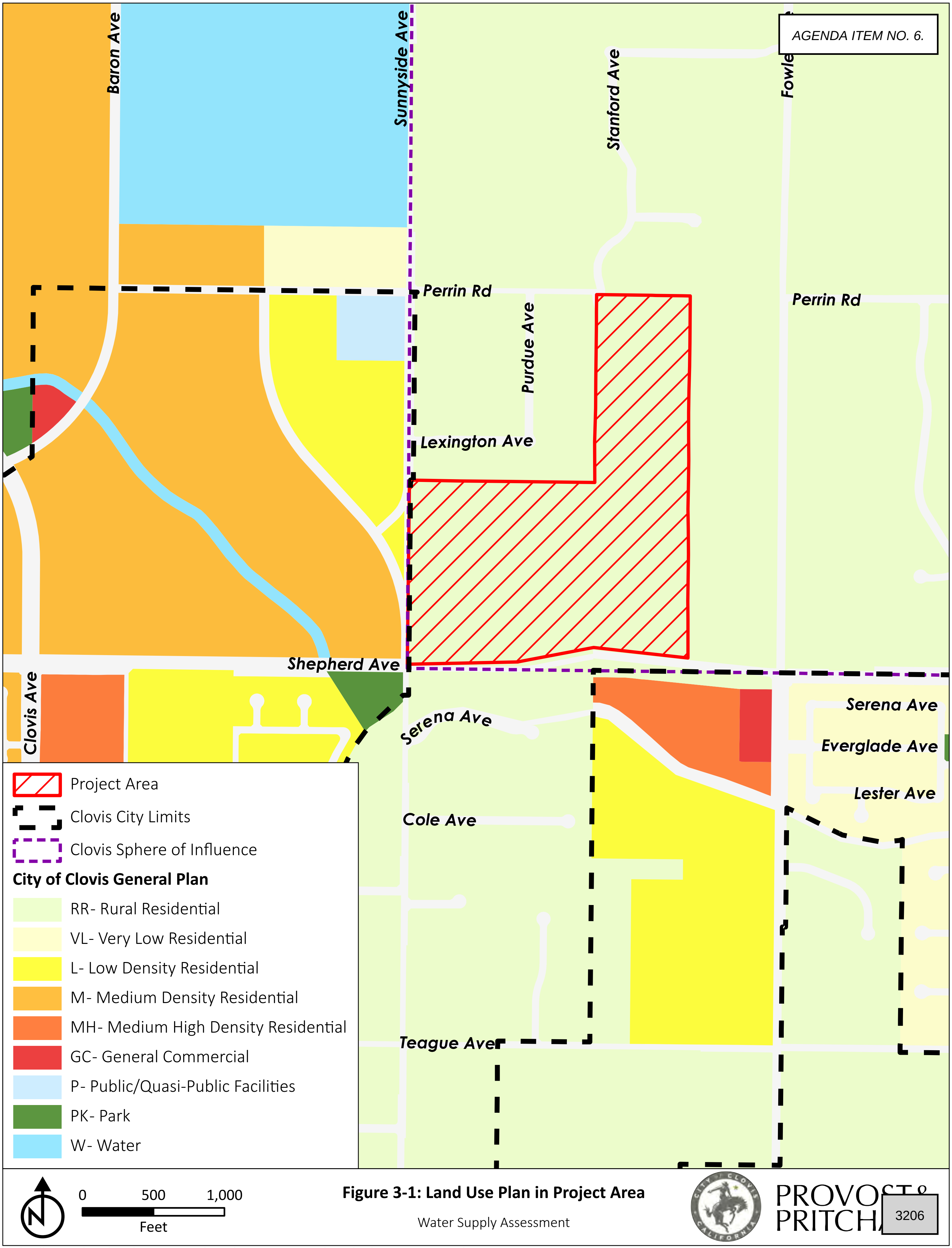

Figure 3-1: Land Use Plan in Project Area

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4 Overview of Water Supplies

CWC §10910(c)(2) allows reliance on the City's UWMP to determine overall water supply reliability if the Project's planned water demand was included in the UWMP. The Project demand was included in the City's UWMP calculations and, while, the overall demand of this area was not included in the WMP, the calculations and analysis from the UWMP are utilized as a current baseline for the City's supply and demand comparison. The Project's demands are over and above the WMP demands, as discussed in **Section 3** and later in this WSA. The overall additional demand is relatively small in comparison to the City's total demands but will still require planning on the City's part to account for it in the future build-out of the City's GP. This WSA relies, in large part, on the UWMP.

§10910(d) requires that a WSA identify any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, including any such existing entitlements, rights, or contracts held by the public water system or city or county preparing the WSA. These descriptions appear in detail in Chapter 6 of the UWMP and are summarized below.

4.1 Surface Water

The City's surface water supply is provided through agreements with Fresno Irrigation District (FID), which allows the City to receive a share of FID's Kings River and Friant Central Valley Project (CVP) entitlements. Garfield Water District (GWD) and International Water District (IWD) are located within the City's General Plan boundaries. As the districts' service areas are urbanized over time, surface supplies available to the two districts will be added to the City's surface water supply. As those supplies are added to the City's water supply portfolio, they will be available throughout the City's service area as part of the general water supply. Currently, all surface water available to the City comes from the FID contract. The boundaries of each of the districts are shown on **Figure 4-1**.

4.1.1 Kings River

FID obtains much of its surface water from the Kings River. FID is a member of the Kings River Water Association, which holds water rights licenses for all the Kings River and storage rights licenses on Kings River reservoirs. FID is entitled to water based upon a prorated monthly schedule determined by the natural flow of the Kings River as it would occur without reservoir storage above the historic Piedra gauging station. FID is entitled to water from the Kings River at all flows, but the percentage is higher at relatively low Kings River flows. If the snowmelt is slow, the District receives a greater entitlement. FID's average gross annual entitlement is 452,541 acre-feet (AF). Within the last fifty years, the smallest entitlement received was 158,109 AF, which occurred in 2015.

The City's allocation from the Kings River is proportional to the total acreage of the City's included area to the total FID area receiving water; the total amounts available to the City are discussed in greater detail in **Section 6**.

4.1.2 Central Valley Project Water Allocation: Friant Division

The water obtained from the CVP comes from the diversion and storage of water from the San Joaquin River behind Friant Dam. The total available water on the San Joaquin River has been estimated at 2,200,000 AF. Of that, 800,000 AF have been designated as Class I supply (Bureau of Reclamation, 2005). Class I supply is considered to be dependable in most years with shortages only in very dry years. Class II water is in excess of Class I and is therefore much less dependable. FID has a contract with the United States Bureau of Reclamation for 75,000 AF of Class II water from this source (Bureau of Reclamation, 2005). The agreement between the City and FID requires the District to make available to the City the proportional share of all surface water available to the District although it does not allow the City to directly receive FID's CVP supplies. Therefore, FID is required to make a like amount of Kings River (or any other surface) water available to the City for its proportional share of Class II CVP supplies. FID's Class II contract has received an average 13,577 AFY with the actual number ranging from zero to the full 75,000 AF depending upon the nature of each water year over that period. **Table 4-1** lists the projected surface water volume through 2040.

4.1.3 Garfield Water District

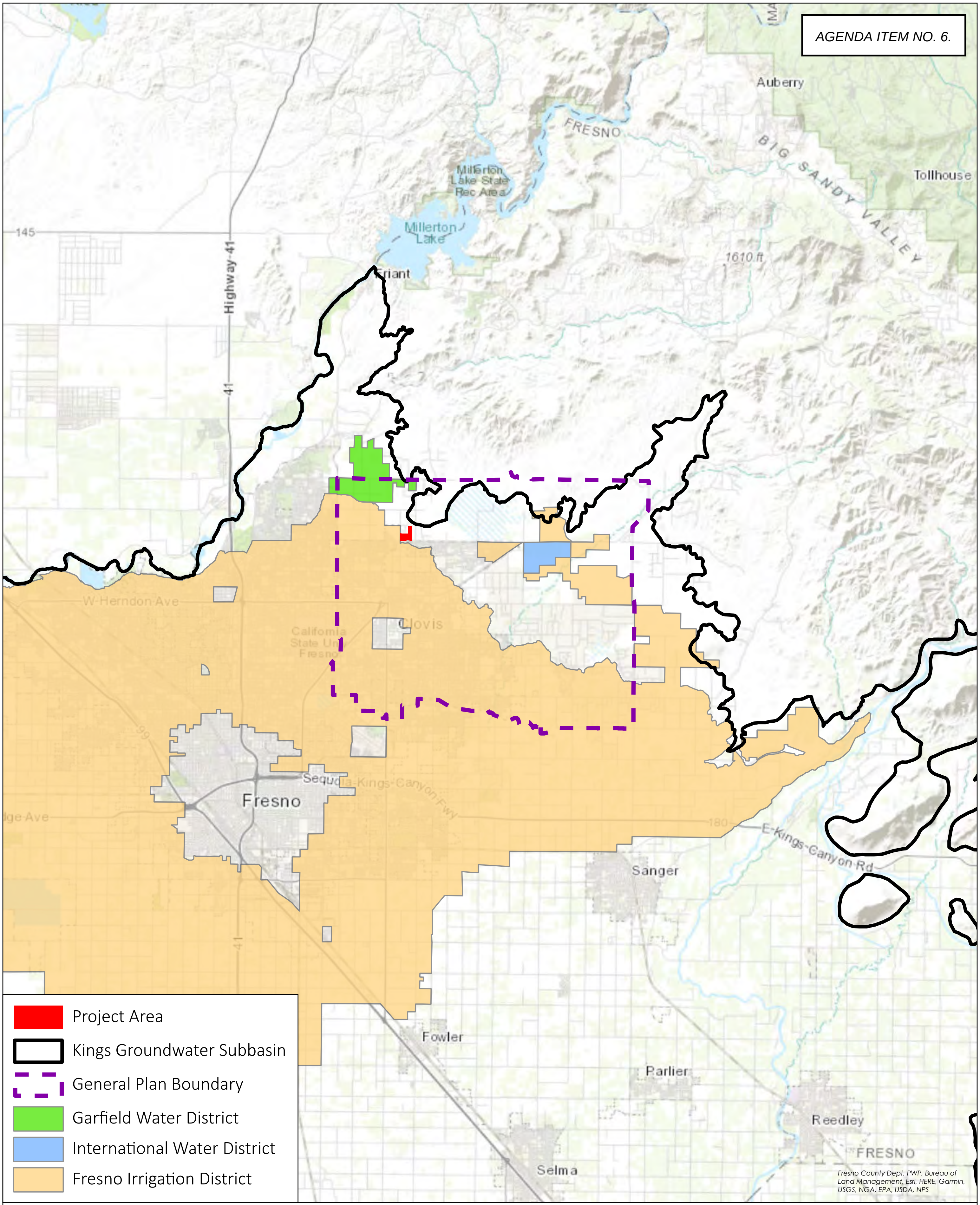
GWD is located north of the City with a portion of the district in the City's SOI. The GWD holds a Class 1 CVP contract for 3,500 AFY. With half of GWD within the City's SOI, an estimated 1,750 AFY is expected to be added to the City's supply upon development. As noted in the UWMP, the first portion of GWD supplies is not anticipated to be available to the City until 2025, with the total 1,750 AFY not accounted for in the supply totals until 2040.

4.1.4 International Water District

IWD is located east of the City's SOI within the general plan's boundary. The IWD holds a Class 1 CVP contract for 1,200 AFY. The City's General Plan designates a portion of the District's area as industrial and residential use. At build-out it is estimated that the entire 1,200 AFY supply will be added to the City's supply. As noted in the UWMP, the first portion of GWD supplies is not anticipated to be available to the City until 2030, with the total 1,200 AFY not accounted for in the supply totals until 2040.

4.2 Supply from Storage

Since 2004, the City has been storing water in the aquifer to create a stable source of supply over the years. The City has been working with FID to recharge surface water, using the City's contracted shares of capacity in FID's Waldron Banking Facility and Boswell Groundwater Banking Facility, to build up credit in those facilities which allows for annual water withdrawals, on an as-needed or as-requested basis. The surface water banked includes portions of FID's Kings and CVP supplies and may in the future also include other surface water supplies that FID is able to secure on the spot market. Recharged water is purchased under separate agreements with FID and is not included in the surface water totals in the previous section, so this is truly a separate and additional water supply. This process is fully explained in the UWMP.



Fresno County Dept. PWP, Bureau of Land Management, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

Figure 4-1: Irrigation and Water Districts

Water Supply Assessment

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Two banking facilities, the Waldron Banking Facility (Waldron) and Boswell Groundwater Banking Facility (Boswell), have been constructed in central Fresno County. The City entered into an agreement with the FID to participate in the financing of the construction of a dedicated water banking facility called the Waldron Banking Facilities. The City is entitled to receive up to ninety percent (9,000 AF) of the annual yield. The City and FID have entered into a similar agreement regarding the Boswell Groundwater Banking Facility whereby the City will have access up to 4,500 AFY of additional surface water supplies. The recharged water will be "banked" for future recovery during dry periods or to accommodate planned growth.

The City has created a recharge plan accounting for historic variations in surface water supplies that will allow it to withdraw an annual 13,500 AF, the maximum withdrawal allowed under the City's agreements with FID. This is considered a firm supply. The 13,500 AF maximum annual withdrawal is built into the water supply projections in the UWMP for each year over the planning horizon.

4.3 Groundwater

The City is located within the Kings Groundwater sub-basin, a part of the Tulare Lake Hydrogeologic Basin as described in the Department of Water Resources Bulletin 118 (Department of Water Resources, 2003). The groundwater basin is in overdraft and has been for many years. However, it has not been adjudicated.

Chapter 6 of the UWMP discusses a sustainable groundwater yield for the service area and concludes the sustainable yield to be 9,400 AFY, as discussed in greater detail in the WMP. While the North Kings Groundwater Sustainability Plan (NKGSP) has been written and adopted, it does not yet include a firmer approximation of sustainable yield, although development of one is anticipated. The sustainable yield from the UWMP and WMP has been used for this assessment.

4.4 Recycled Water

Most of the City's wastewater flow is treated at the Regional Water Reclamation Facility, located southwest of the City of Fresno on Jensen Avenue. In 2009, the City of Clovis completed a new Water Reclamation Facility (WRF). In 2020, the WRF produced approximately 2,496 AFY. Of that total, 28 percent was recycled for mostly landscape and agricultural irrigation, with the remainder being discharged to FID's Fancher Creek for agricultural irrigation.

Ultimately the WRF will be expanded to be able to treat 8.4 MGD, or 9,400 AF per year, and will make a substantial contribution to the City's overall water resources. According to the 2020 UWMP, recycled water is used for irrigation of public and private landscape within the service area. Areas receiving or planned to receive recycled water include the Freeway 168 corridor between Shepherd and Sierra Avenues, the existing Clovis Community Medical Center campus, and multiple City parks and landscape areas.

Landscape irrigation will continue to be the main use of recycled water in the future. All public landscape areas within three-quarters of a mile of the distribution system are considered potential recycled water use areas. Clovis Unified School District is evaluating the use of recycled water for its landscape areas. Caltrans has expanded their use of recycled water along State Route 168 from Armstrong Avenue west to Sierra Avenue. Concurrent with the Project's development, the City will expand its use of recycled water and broaden its range of beneficial uses to potentially include irrigating the public landscape space to be developed with the Project.

To affect that increase in use, the City now requires all new development of public landscape near recycled water transmission lines to use recycled water. Additional actions include extending the recycled water distribution system to discharge at groundwater recharge facilities and reducing the cost of recycled water. The UWMP indicates planned use of recycled water supply will be 9,400 AFY by 2040 (UWMP Table 6-13). With a planned[6] recycled water transmission main in Shepherd Avenue, it is possible this Project may use recycled water for landscape irrigation, but the City will make final determination of that at a later date.

4.5 Exchanges

Water exchanges, transfers, and water banking allow purveyors to manage demand and supply variability by ensuring water will be available for the near future. The majority of the City's wastewater is treated at the RWRF. Under an agreement with FID, the City of Fresno receives 0.92 AF of Kings River surface water in exchange for each two AF of reclaimed water produced by the RWRF (46 percent exchange). Clovis is in discussions with the City of Fresno and FID on documenting its pro-rata share of RWRF effluent and the most efficient recover and beneficial use of that effluent. This will require a new effluent exchange agreement with FID, and potentially the City Fresno, to appropriately allocate Clovis' pro-rata share of the treated water. This water is limited by agreement to being used for groundwater recharge activities.

4.6 Water Supply Summary

The five sources discussed above make up the City's water resources. These are tabulated overall for 2025 and for each subsequent 5-year period through 2040 in **Table 4-1**.

The City's overall water resources are projected to increase from 50,739 AF per year in 2025 to 74,650 AF per year in 2040. Nearly all this increase will come from increasing surface water resources from 18,039 AF per year in 2020 to 39,400 AF per year in 2040. The mix of water supplies the City plans to use to meet these demands is changing over time and, while the surface water supplies will be the primary source, a mixture of groundwater and supply from storage will be used to meet demands.

Table 4-1. Water Supplies – Normal Year (UWMP Tables 6-12 and 6-13)

Water Supply	Projected Water Supply (AF)			
	2025	2030	2035	2040
Groundwater [1]	11,429	10,753	10,076	9,400
Surface Water [2]	22,160	27,584	32,508	39,400

---

[6] As noted in the City's 2018 Recycled Water Master Plan

Supply from Storage (Waldron and Boswell facilities)	13,500	13,500	13,500	13,500
Recycled Water	3,100	5,500	6,300	9,400
Transfers (GWD and IWD)	550	1,600	2,650	2,950
Total	50,739	58,937	65,034	74,650

Notes:

[1] Reasonably available volume shows a steady reduction in reliance on groundwater supply, as planned, to the sustainable yield volume in 2040; discussed in greater detail in the UWMP.

[2] Surface water quantities shown in greater detail in the UWMP.

AGENDA ITEM NO. 6.

5 Normal Year Water Operations

This section evaluates the ability of the City to meet the overall water demands during normal water years. A normal year is a year, or averaged range of years, that most closely represents the average water supply available to the City. In this case, the normal year reflects the overall water supply summary discussed in **Section 4**.

This Chapter relies on information taken from Sections 6 and 7 of the UWMP. **Table 5-1** compares the City's water demands and compares them with the normal year water supplies (see **Table 4-1**) for the 5-year increments the Project is anticipated to be constructed, and through 2040, as shown in the UWMP. As shown, total supplies would exceed total demands. Adequate supplies are available to serve the City and its water customers in normal rainfall years such as those discussed in this section. The excess water supply is more than adequate to meet the estimated Project water demands.

Table 5-1. Comparison of Normal Year Supplies and Demands

Condition	Water Supply (AFY)			
	2025	2030	2035	2040
Water Demand	39,737	42,824	46,422	52,598
Water Supply	50,739	58,937	65,034	74,650
Excess/Shortage	11,002	16,113	18,612	22,052

6 Single-Dry and Multiple-Dry Year Water Supplies

This section evaluates the availability of City water supplies during single-dry and multiple-dry water years, based on Project buildout in 2030. Numerous factors will work to change the relative quantities of water the City receives from its several water sources. Since each of these has a different reliability in dry years, the overall water supply reliability will change over time. The following sections discuss how this will occur.

During a single-dry year, surface water allotments are anticipated to be reduced by as much as 66 percent for Kings River surface water supplies, and CVP Class II supplies are eliminated completely in dry years. In the future, as the City becomes more reliant on surface water supplies, the impact of surface water reductions in dry years will be more significant.

A multiple-dry year period represents the lowest average supply available to the Project for a consecutive five-year period. This analysis is referred to as a “multi-dry” condition in the UWMP. The WSA analysis is based on the five consecutive driest years of record for the Project’s surface water supplies, which were water years 2011/12 through 2015/16.

6.1 Water Year Effects on Water Sources

6.1.1 Kings River Surface Water

Both the single-dry and multiple-dry analyses are most affected by the variations in Kings River entitlement in dry years. FID’s entitlement does not vary directly in proportion to overall annual runoff; rather it favors FID versus all the other Kings River diverters. When river flows are low due to slow runoff, low annual precipitation or both, FID’s share of the daily river flow increases.

The effect of this is that FID’s entitlement, as a percentage of its average entitlement, is higher than the overall water year percentage flow, for virtually any below-average water year. As noted in the UWMP, the anticipated share of Kings River water is shown as 32,100 AFY (UWMP Table 6-4) in 2040 for an average water year. As discussed in the UWMP, the City has recently executed a contract with FID for development of a new firm water supply starting at 1,000 AFY in 2020 and increasing to a maximum of 7,000 AFY by 2045 and thereafter. This new supply will not have the variability of the existing supply based on water year type.

6.1.2 Friant CVP Surface Water

Over the period of 1986 through 2016, the average Class II allocation has been 38 percent of contracted amount. However, Class II supplies are particularly subject to the water year type. However, these supplies are relatively small and would not have significant impact on the total supply.

While Class I entitlements do not currently affect the City's FID supplies, they will affect the future-year GWD and IWD entitlements. Class I allocations in the five multiple-dry years were 0 percent of the contracted amount for all five years.

6.1.3 Supply from Storage

The contract for the Waldron facility allows annual withdrawals of up to approximately 9,000 AFY, while the Boswell Facility allows up 4,500 AFY. According to the UWMP, the combined withdrawal limit from the two facilities is 13,500 AFY. In any year where surface water deliveries are substantially limited, the City would want to use these resources to the limit.

A related matter is how contributions are made to supply storage. Whereas in normal years the City is making deposits to both facilities, in a drier year those contributions would be reduced or halted since the surface supplies necessary for the deposits would not be available. Since the deposits come from surface water resources not counted in the City's water balance, being acquired under separate FID agreements, the curtailment of deposits does not reduce the City's water demand.

6.1.4 Groundwater

As of the preparation of the 2020 UWMP, the City of Clovis obtains groundwater from more than 30 wells, located throughout the service area. The total well production is estimated at 37,290 gallons per minute.

According to the UWMP, the City aims to reduce its direct groundwater consumption whenever possible. Most the City's water demands will be met by a combination of surface water and supplies from storage, in water years when those two resources are sufficient to meet demands. In drier years, when surface water supplies are limited, the City will pump groundwater, potentially beyond the 9,400 AFY accounted for in a normal year, to make up the shortfall but not to an unsustainable level as discussed in the NKGSP. The City will also recharge surface waters when available to allow for additional groundwater pumping when needed.

Planning to make that objective possible is very important, as Chapter 6 of the UWMP states that the sustainable groundwater supply in the City service area is 9,400 AF per year, for normal, dry, and multi-dry years. For the time being, there is no restriction against pumping groundwater above the sustainable aquifer yield; however, the NKGSP indicates the City must sustainably use groundwater.

This WSA uses 9,400 AF per year as the sustainable groundwater pumping amount, as stated in the UWMP. Due to the very large size of the aquifer underlying the City, available groundwater is not quickly affected by the type of water year. Anticipating a mix of wet and dry years similar to what has been historically seen, this WSA does not reduce available groundwater in dry or multiple-dry years; however, the City will be prioritizing use of other supplies over groundwater when possible.

6.1.5 Recycled Water

Recycled water production, being tied directly to indoor water use, does not vary significantly with the water year type, and is not adjusted from normal for this analysis.

6.2 Changes in Water Source Reliability Over the Planning Horizon

In 2020, surface water made up 58 percent of the City's direct water supply. In 2030, the surface water supply is planned to be 53 percent of the total while the supply from storage will have increased to 18 percent in a normal year. Groundwater will remain an important component of the water supply in the near future.

This means the City's reliance on surface water supplies, either directly used or pumped from subsurface storage, will have increased to 71 percent of the total. While there is a margin of normal year supply available over planned demand over the entire planning horizon, some provision may have to be made for additional reliable storage to account for such a large portion of surface water being subject to water year variability. See the reliability analysis in Section 6.3 following.

6.3 Summary of Single-Dry and Multiple-Dry Year Reliability Over the Planning Horizon

Supply for dry years would be drawn from a combination of Kings River surface water, supply from storage, groundwater, and recycled water. As shown in the UWMP, it is anticipated that surface water supplies from the FID Firm Water Agreement would still be available during drought years. Other firm water supply sources are groundwater, banked water, and recycled water, all of which are considered resilient against drought compared to surface water supplies. Groundwater banking activities would decrease to accommodate the decreased surface water supplies while still being able to use previously banked groundwater supplies from the Waldron and Boswell facilities. Project demand was assumed to be constant across all water years.

The supplies that would be available during single-dry and multiple-dry years in 2030 (at assumed Project buildout) are summarized in **Table 6-1**. As shown, adequate supplies would be available to supply the City and along with the estimated Project demand of 255.8 AFY, under all studied conditions. Further, the total demand associated with the Project (255.8 AFY), accounts for 33.5% of the excess supply without conservation and 4.1% of excess supply with conservation in the most critical year analyzed – the Single Dry Year, while the difference between existing uses and proposed land use (69.4 AFY) accounts for 9.1% and 1.1% of the same year, respectively. The City has a Water Shortage Contingency Plan (WSCP) (Provost & Pritchard Consulting Group 2021) in place that could be partially or fully implemented if needed or mandated. The 'demand with conservation' values are reduced to reflect implementation of various stages of the WSCP, as discussed in the UWMP.

Table 6-1. Dry Year Supply and Demand Comparison in 2030 (UWMP Tables 7-2, 7-3, and 7-4)

Scenario	Single-Dry Year [1]	Multiple-Dry Year [2]				
		Year 1	Year 2	Year 3	Year 4	Year 5
Baseline demand	42,824	42,824	42,824	42,824	42,824	42,824
Demand with Conservation as shown in UWMP	37,359	39,422	36,962	33,969	30,474	40,757
Total Supply	43,587	54,607	52,576	48,310	43,586	57,992
Excess/<Deficit> in Supply	763	11,783	9,752	5,486	762	15,168
Excess/<Deficit> in Supply with Conservation	6,228	15,185	15,614	14,341	13,112	17,235

Note: Refer to the 2020 UWMP for details on how these values were calculated.

6.4 Climate-Based Reliability Factors

This WSA defers to the UWMP for consideration of the overall effects of climate change upon supply reliability. Climate change has been considered in the preparation of the UWMP.

7 Operational Reliability

The City’s surface water entitlement does not accrue all at once during a given water year. Rather, the Kings River entitlement accrues daily throughout the year based on actual river runoff and the Kings River Water Association entitlement schedule. The daily nature of the Kings River supply is especially important early in the water year, which begins October 1. The very low river flows in October and November mean that supply is low, and the City must rely on other water supplies during those months. The relatively large supplies available from storage help mitigate the seasonal nature of the surface water supply, and these are further backed up by groundwater supplies equivalent to almost half the City’s total annual demand.

The City has not had any issue with temporary water shortages to date. The City’s WMP and UWMP indicates a need to increase their surface water and groundwater supplies to meet future demands and provides detail on how much of each supply is needed compared to the existing supplies. The WMP also includes a Capital Improvements Program identifying capital projects that are necessary to acquire and facilitate the movement of current and future water supplies throughout the City’s system in a reliable manner. The City’s adherence to their planning documents and consistent development of these water supplies and infrastructure is critical for the City’s continued growth and development and will provide operational reliability into the future.

8 Conclusions

As summarized in **Table 8-1**, the City has adequate supplies to meet the needs of all the City's water customers including the Project, in normal water years, over the 20-year planning horizon. However, the water supply used for this Project will need to be replaced to support full buildout of the GP.

In the buildout year, if demand is as projected, the City will have sufficient water to meet dry year demands all dry year event types. Conservation measures, detailed in the Water Shortage Contingency Plan, have been developed that would mitigate possible shortfalls by reducing demand approximately 15 percent. Evidence from the 2013 to 2015 drought suggests that those results, and more, are achievable. Additionally, as the City has surplus water supplies in normal years, short-term additional groundwater extraction in the single-dry and multiple-dry years is also planned as part of their water portfolio.

As discussed in Section 7, the City has plans to continue to acquire water supplies and construct infrastructure to supply current and future water users. Therefore, we conclude the City of Clovis has adequate water supplies to meet the needs of the City in normal, dry, and multi-dry years given the previously discussed potential demand reductions and supply augmentations.

8.1 Conclusions Including Additional WSAs

Since the 2020 UWMP was adopted, three WSAs have been prepared for the City, including this one. It is important to understand the cumulative impact of the additional demands associated with WSAs over and beyond the demands analyzed in the 2020 UWMP.

The demands in **Table 8-1** include those demands noted in the UWMP and **Table 6-1** above, and the demands associated with the Project evaluated in this WSA, as discussed in **Section 2.2**. Similarly, the noted Excess/Deficit reflects the difference between these summated demands and the total supply noted in the UWMP and in **Table 5-1**, above. This approach accounts for the additional demands associated with the proposed land use type above the demands associated with the originally planned land use type. There is still an excess of supply in all conditions, even with the additional demand.

As noted above, additional groundwater supplies may not be necessary in the critical year or multiple year drought depending on operational decisions regarding conservation; however, the City's UWMP notes additional groundwater supplies would be available on a short-term basis during a drought condition.

Table 8-1. Summary of Project Water Supplies and Demands including WSAs

2020 UWMP Supply and Demand Comparison Results	Normal Year (2030)	Single-Dry Year	Multiple-Dry Year				
			Year 1	Year 2	Year 3	Year 4	Year 5
Excess/<Deficit> in Supply	16,113	763	11,783	9,752	5,486	763	15,168
Excess/<Deficit> in Supply with Conservation	--	6,228	15,185	15,614	14,341	13,112	17,235
Additional Demands Associated with WSAs prepared since 2020 UWMP							
Home Place Master Plan (Approved March 2021)	No Additional Demand Associated with WSA						
Tract 6205, SOI Expansion (Estimated Approval December 2022)	256	256	256	256	256	256	256
Tract 6343 (Approved December 2022)	79	79	79	79	79	79	79
Excess/<Deficit> in Supply including Additional Demands from Approved WSAs	15,779	429	11,449	9,418	5,152	428	14,834
Excess/<Deficit> in Supply with Conservation including Additional Demands Approved WSAs [1]	--	5,944	14,901	15,330	14,057	12,827	16,951

Notes:

[1] Calculation includes a reduction in the Additional Demands from Additional WSAs of 15 percent, as discussed above.

9 References

Provost & Pritchard Consulting Group (2021). *City of Clovis, 2020 Urban Water Management Plan Update.* Clovis.

Placeworks. (2014). *General Plan, City of Clovis.* Clovis.

Department of Water Resources. (2003). *Bulletin 118 - California's Groundwater.* Sacramento.

Provost & Pritchard Consulting Group. (2018). *City of Clovis, Water Master Plan Update, Phase III.* Clovis.

Provost & Pritchard Consulting Group (2021). *City of Clovis 2021 Water Shortage Contingency Plan*. Clovis.

Appendix K

Water Infrastructure

AGENDA ITEM NO. 6.

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Memorandum

To: Gene Abella, PE, City of Clovis

From: Nick Jacobson, PE
Heather Bashian PE (QAQC)

Subject: Water Infrastructure Investigation SOI Expansion for Tentative Map 6205

Date: February 2, 2023

Provost and Pritchard Consulting Group (Provost & Pritchard) has prepared this memorandum summarizing the findings of our investigation into the water system infrastructure required to serve a proposed single-family residential development located northeast of the intersection of Sunnyside and Shepherd Avenues.

Project Information

The Project would entail development of 603 single-family residential lots on approximately 77.5 gross acres. The Project is a proposed Medium High Density Residential (MHDR) development with associated neighborhood green space. The project site includes 77.5 gross acres bounded Shepherd Avenue to the south, Perrin Avenue to the north, and Sunnyside Avenue to the west. The project site encompasses three parcels: APNs 557-021-19 through 21. Located just outside the city limits and the SOI, the area north and east of the Project is primarily rural residential uses, the area directly west of the Project is planned for low and medium density residential and public/quasi-public facilities, and the area to the south is mainly rural residential with a small area of medium high density residential and neighborhood commercial just southeast of the Project.

It is understood the following new transmission main, not shown in the WMP, will be constructed with the Project:

- 12-inch main along Heirloom (Pryor) Avenue that connects through the Project from Sunnyside Avenue to Shepherd Avenue

There are several proposed transmission mains in the Project area, currently conditioned for construction with the Tract 6200 project and assumed to be operational for the purposes of this analysis, including:

- 16-inch transmission main in Shepherd Avenue between Sunnyside and Fowler Avenues
- 12-inch main in Marion Avenue from Perrin Road to Heirloom (Pryor) Avenue
- 12-inch main in Heirloom (Pryor) Avenue from Marion Avenue to Sunnyside Avenue

- 16-inch main in Baron Avenue from Clovis Avenue to Perrin Road
- 24-inch transmission main in Sunnyside Avenue from Shepherd Avenue to Pryor Avenue
- 24-inch transmission main in Perrin Road from Marion Avenue to Sunnyside Avenue
- 12-inch transmission main in Clovis Avenue from Shepherd Avenue to Baron Avenue

There are several proposed transmission mains in the Project area, currently conditioned for construction with the Tract 6343 project and assumed to be operational for the purposes of this analysis, including:

- 24-inch main in Behymer Avenue from the west limits of Tract 6343 to Baron Avenue
- 24-inch main in Baron Avenue from Behymer Avenue to Perrin Road

Collectively, these existing and planned facilities convey or will convey water from the surface water treatment plant to and around the Project area to meet demands. This portion of Clovis' potable water system is within the pressure zone called "Zone 2." Figure 1 shows the existing and proposed infrastructure in the area.

There are several other master planned water system improvements near the Project site that are not conditioned for construction with any project at this time but may be conditioned for construction on this Project, based on the analysis results below, including:

- 16-inch main in Sunnyside Avenue from Shepherd Avenue to Teague Avenue (P-3)
- 12-inch main in Sunnyside Avenue from Teague Avenue to Nees Avenue (P-4
- 12-inch main in Nees Avenue from Sunnyside Avenue east to Renn Avenue (P-7)

The entire Project is outside the Kings River service area for FID, which means the Project does not have access to water from the Kings River as its source of supply. The existing project site consists of a residential dwelling and associated pecan orchard. The proposed use will consist of a new 603-unit single family residential development on 77.5 gross acres

Assumptions

The following assumptions apply to this investigation:

- The City requires a minimum of two points of connection to the existing water system.
- Developer is responsible for sizing all water mains and other water related infrastructure internal to the Project.
- The Clovis Fire Department (CFD) requires a minimum fire flow of 1,800 gallons per minute (gpm) and a minimum residual pressure of 35 psi, per CFD Standard #2.3.
- Tract 6205 will be modeled as medium high density residential; existing and proposed water system demands will be based on unit demands from the *Water Master Plan Update Phase III – Facilities Plan* (Provost & Pritchard, 2018).
- Existing infrastructure sizes based on GIS data from City (see Attachment A).
- Recycled water will not be applied to public landscaping surrounding the Project.

- Infrastructure conditioned on Tract 6200 will be constructed prior to development of Tract 6205 (See Figure 1)
- Infrastructure conditioned for Tract 6200 and 6343 as described above (shown in Figure 1-7 as future) will be existing when Tract 6205 is constructed.
- T-9 Tank and Pump Station at intersection of Perrin Road and Sunnyside Avenue is not assumed to be constructed or operational for the purposes of the analysis contained herein.
- The analysis will reflect the demands associated with existing developments in the area based on actual land use; undeveloped areas are modeled utilizing land use designations specified in the General Plan. Proposed demands will be modeled using the above referenced land use designations rather than that shown in the General Plan.
- The analysis assumed the transmission grid main infrastructure shown as existing in Figure 1 as well as the 24-inch transmission mains in Sunnyside Avenue between Pryor and Perrin Roads and in Perrin Road between Marion and Sunnyside Avenues has been constructed and is operational or is under construction and is assumed to be operational for the purposes of this modeling effort.
- The system is operating with all valves open.
- System velocities should not exceed 10 feet per second (fps).
- Model demands for scenarios where the SWTP is not operational have been reduced and are representative of typical City demands during November each year when the SWTP is taken offline for canal maintenance.

This investigation will include analysis of whether the existing (or soon to be existing) water system, as described above and shown on the attached Figure 1, will be sufficient to provide up to maximum day demand and also meet Maximum Day Demand plus Fire Flow (MDD+FF) demands per the WMP requirements both with and without the City's Surface Water Treatment Plant (SWTP) in operation.

Water Demand

Potable water demands for the Project were estimated using land use based unit water demand factors from the WMP. Table LU-2 in the Land Use Element of the City General Plan (GP) states that medium high density residential has an allowable density ranging from 7.1 – 15.0 du/ac. The proposed use will consist of a new 603-unit single family residential development on approximately 72.40 net acres (77.5 gross acres) (based on the submitted tentative map dated 4/22/21), which equates to a dwelling unit density of approximately 8.32 du/ac, consistent with medium high density residential land use. A separate water supply assessment (WSA) was prepared by Provost & Pritchard in December 2022. The WSA estimated water demands for the Project. For consistency, the demand estimates stated in the WSA were used for this analysis. For specifics surrounding Project water demands refer to the WSA.

Infrastructure

The Project is comprised of three (3) parcels of mostly undeveloped land located to the northeast of the intersection of Sunnyside and Shepherd Avenues. Because of the limited existing backbone infrastructure in the area, this development will depend on the construction of infrastructure conditioned for Tracts 6200 and 6343, as described above. The other transmission mains near the Project are understood to be existing, as shown on Figure 1.

Water Supply

Urbanization within Clovis occurs both inside and outside the Kings River service area for Fresno Irrigation District (FID), therefore not all lands have access to this water source. Since the entirety of the Project is outside the FID service area, water from the Kings River is not available to offset the anticipated annual demand of 255.8 acre-feet; therefore, the Project will need to pay for supplies, as shown below. For additional details on water supply for the Project, refer to the WSA (Provost & Pritchard, December 2022) prepared for the Project.

Evaluation

The City has requested an investigation, utilizing the current City hydraulic model, to determine whether the proposed infrastructure in the vicinity of the Project (Figure 1) will provide adequate service under several scenarios including:

- MDD with the SWTP in operation (Figure 2)
- MDD without the City SWTP in operation (Figure 3)
- MDD+FF with the City SWTP in operation (Figure 4)
- MDD+FF without the City SWTP in operation (Figure 5)
- MDD+FF without either the City SWTP or the 16-Inch main in Shepherd between Sunnyside and Fowler (Figure 6)
- MDD+FF without the City SWTP, without the 16-Inch main in Shepherd between Sunnyside and Fowler, and with 12-inch and 16-inch transmission mains in Sunnyside and Needs Avenues, south of Shepherd as shown in Figure 12.4-1 of the WMP, identified as Capital Improvement Plan (CIP) projects P-3, P-4, and P-7 (Figure 7)

As shown on Figure 1, infrastructure associated with Tract 6205, was modeled with 8-inch mains internal to the Project. Also, the results of this evaluation rely on the infrastructure that has been conditioned on Tracts 6200 and 6343 and as described above being constructed and operational.

The scenarios discussed below are based on the assumptions noted above, including fire flow requirements and reduced demands associated with fall/winter times of use.

Maximum Day Demand Analyses

With an Operational SWTP

The hydraulic model analysis results with the SWTP operational indicates no pressure deficiencies internal to the Project (see Figure 2). Minimum pressures in Tract 6205 during the MDD scenario are all above 40 psi. System pressures for the remainder of the system are generally above 35 psi.

Without an Operational SWTP

The hydraulic model analysis results with the SWTP not operational indicates no pressure deficiencies (less than 40 psi for new development) in Tract 6205 (see Figure 3).

The model results did show a portion of the system with minimum pressures below 35 psi in the Harlan Ranch neighborhood. The WMP states that minimum pressure for existing development should be above 35 psi. Minimum pressures in Harlan Ranch dropped to approximately 26 psi during the scenario without the SWTP operational. The area where pressures dropped below 26 psi is generally east of Sanders Avenue. Pressures below 35 psi have been observed in Harlan Ranch prior to this evaluation. The model results show that the addition of Tract 6205 causes the pressures to drop in the Harlan Rach area by about 0.5 psi when compared to system results prior to the addition of Tract 6205. The deficiencies identified in the model only last for a short duration during the morning hour from 6:00 AM until about 7:00 AM.

Maximum Day Demand Plus Fire Flow

With an Operational SWTP

The MDD+FF hydraulic model analysis results show available hydrant pressures during MDD+FF internal to the Project range from approximately 35 psi to nearly 52 psi (see Figure 4). One location showed a deficiency (1,566 gpm at 35 psi) in this scenario and that was due to a dead end 8-inch main where the flow velocity exceeds 10 fps.

Without an Operational SWTP

Hydraulic model analysis results show available pressures during the scenario internal to the Project range from approximately 35 psi to nearly 54 psi (See Figure 5). One location (same location as above) showed a deficiency (less than 1,566 gpm at 35 psi) in this scenario and that was due to a dead end 8-inch main where the flow velocity is over 10 fps.

Available pressures are higher under this scenario, than the scenario where the SWTP is operational because this analysis takes place during a lower demand period described previously. Should the SWTP go offline during a typically high demand period like summer, the analysis would yield different results with potential for pressure drops below 20 psi.

AGENDA ITEM NO. 6.

Without an Operational SWTP or the 16-inch Main in Shepherd Avenue

Hydraulic model analysis results show available pressures during the scenario internal to the Project range from approximately 35 psi to nearly 47 psi (See Figure 6). Several locations in this scenario showed deficiencies during fire flow conditions. 3 locations showed deficiencies due to flow velocities exceeding 10 fps (1,422 gpm at 47 psi, 1,493 gpm at 41 psi, and 1,566 gpm at 35 psi). One of these velocity exceedances is due to a dead end main. The other two are associated with the looped portions of Tract 6205 and are locations where the configuration of the distribution mains within Tract 6205 create flow velocities that exceed 10 fps during fire flow events. The remaining 30 deficiencies identified in this scenario are attributable to the system lacking the infrastructure to adequately convey fire flow due to the simulated loss of the SWTP and the main in Shepherd between Fowler and Sunnyside Avenues being offline. Available hydrant flows and pressures for the remaining 30 deficiencies identified in this scenario range from 1,494 gpm to 1,793 gpm at 35 psi.

As with the other scenarios where the SWTP is offline during a lower demand period, should the SWTP go offline during a typically high demand period like summer, the analysis would yield different results with potential for pressure drops below 20 psi.

Without an Operational SWTP or the 16-inch Main in Shepherd Offline, With CIPs P-3, P-4, P-7 in Sunnyside and Nees Avenues, South of Shepherd

Results show available pressures during the scenario internal to the Project range from approximately 35 psi to nearly 57 psi (See Figure 7). Three locations in this scenario showed deficiencies (1,425 gpm at 56 psi, 1,494 gpm at 51 psi, and 1,566 gpm at 45 psi) during fire flow conditions due to a dead end 8-inch main where the flow velocities exceed 10 fps.

As with the other scenarios where the SWTP is offline during a lower demand period, should the SWTP go offline during a typically high demand period like summer, the analysis would yield different results with potential for pressure drops below 20 psi.

Conclusion

Operational SWTP

The modeling analysis indicates that the Project and associated existing or proposed but assumed to be operational infrastructure, as described above, should be able to receive adequate flow and pressure during an MDD scenario and during an MDD+FF scenario with the SWTP operational (with the exception of the single location identified during MDD+FF scenario as shown in Figure 4).

Non-Operational SWTP

With the SWTP not in operation, the analysis shows that the system should be able to deliver adequate flow and pressure for normal operating scenarios for a system demand representative of typical City demands in November, with noted pressure drops in the system. With the SWTP offline, the results show that Tract 6205 does show added deficiencies during fire flow scenarios within the Project footprint. Some of these deficiencies are due to flow velocity exceedances, while some are due to inadequate available pressure to meet minimum fire flow requirements.

The Shepherd Avenue main (between Sunnyside and Fowler), is critical to providing adequate water supply to this area in Zone 2. Without this main, there is insufficient infrastructure to convey adequate supply for Tract 6205 for fire flow needs.
If the Shepherd Avenue main is not constructed or operational, constructing the CIP mains in Sunnyside from Shepherd to Nees (P-3 and P-4) and the Nees from Sunnyside to the existing main connection point near Renn Avenue (P-7) will alleviate most of the fire flow deficiencies shown in the analyses and provide a needed measure of system redundancy to this area of the system.

Recommendations

Based on information collected during this investigation and the City's adherence to recommendations from prior water supply planning efforts, to serve the Project within the parameters set by the City, infrastructure associated with Tract 6200 and 6343 should be operational, and either the main in Shepherd Avenue between Sunnyside and Fowler or the mains noted in the WMP as P-3, P-4, and P-7 should be constructed and operational. Failure to build these pieces of infrastructure may lead to the deficiencies as noted in the modeling summaries above.

Serving this Project should not negatively impact the City's ability to provide a supply and delivery of water to reasonably foreseeable users within the City assuming adherence to recommendations from prior water resources planning efforts. However, to understand the cumulative impacts to supplies and other major water infrastructure, the City should be tracking changes in demand as part of the development process in order to determine when projects with greater demand are offset by projects with demands lower than originally planned.

Respectfully,

NICHOLAS DAVID JACOBSON
No. 84,909
Civil

DATE SIGNED 2/2/2023

Nicholas Jacobson

Enclosure:

- Figure 1 – Potable Water Infrastructure
- Figure 2 – Maximum Day Demand With Operational SWTP
- Figure 3 – Maximum Day Demand without Operational SWTP
- Figure 4 – Maximum Day Demand + Fire Flow With Operational SWTP
- Figure 5 – Maximum Day Demand + Fire Flow Without Operational SWTP
- Figure 6 – Maximum Day Demand Plus Fire Flow Without an Operational SWTP and 16-Inch Main in Shepherd
- Figure 7 – Maximum Day Demand Plus Fire Flow with CIPs and Without an Operational SWTP

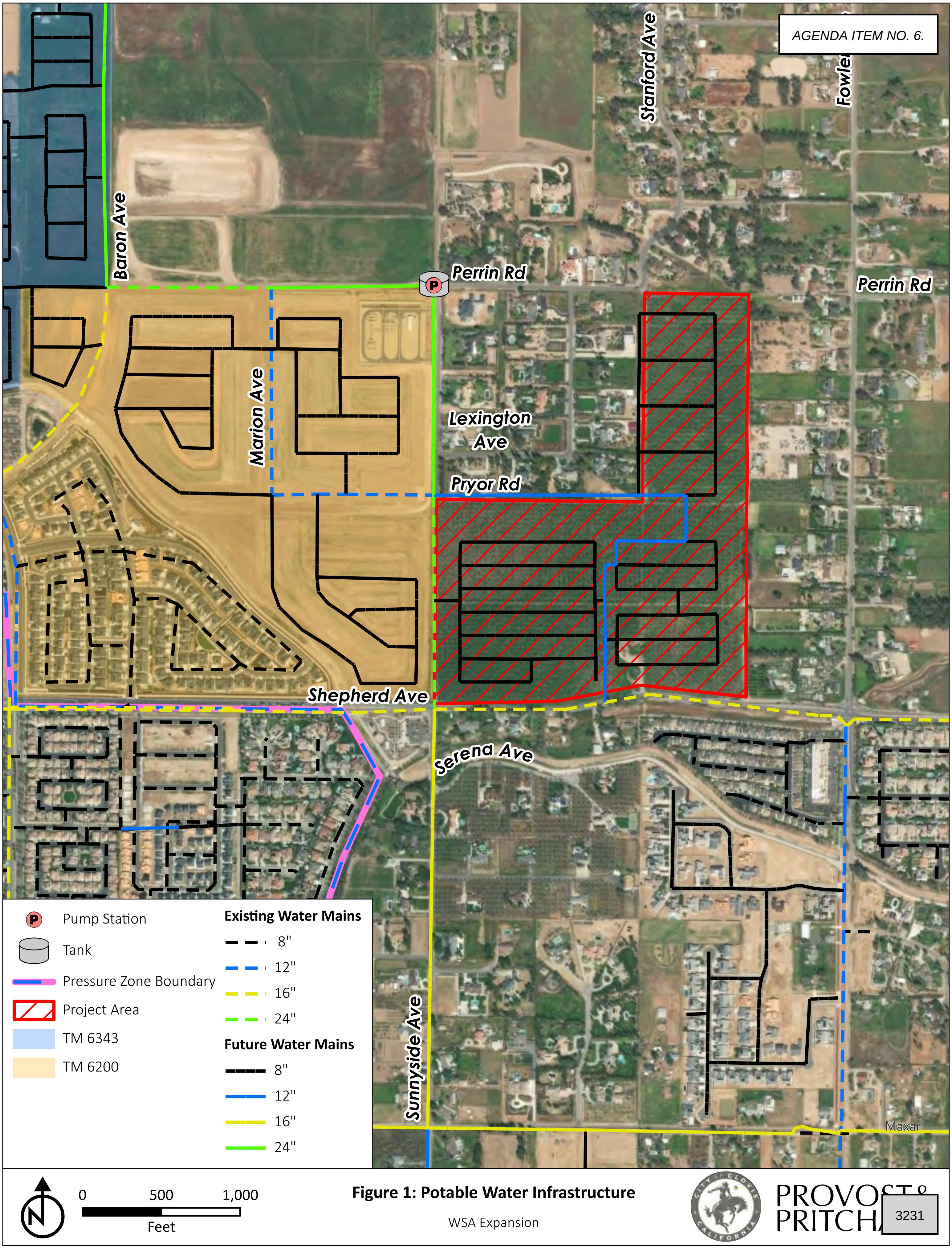

Figure 1: Potable Water Infrastructure

WSA Expansion

AGENDA ITEM NO. 6.

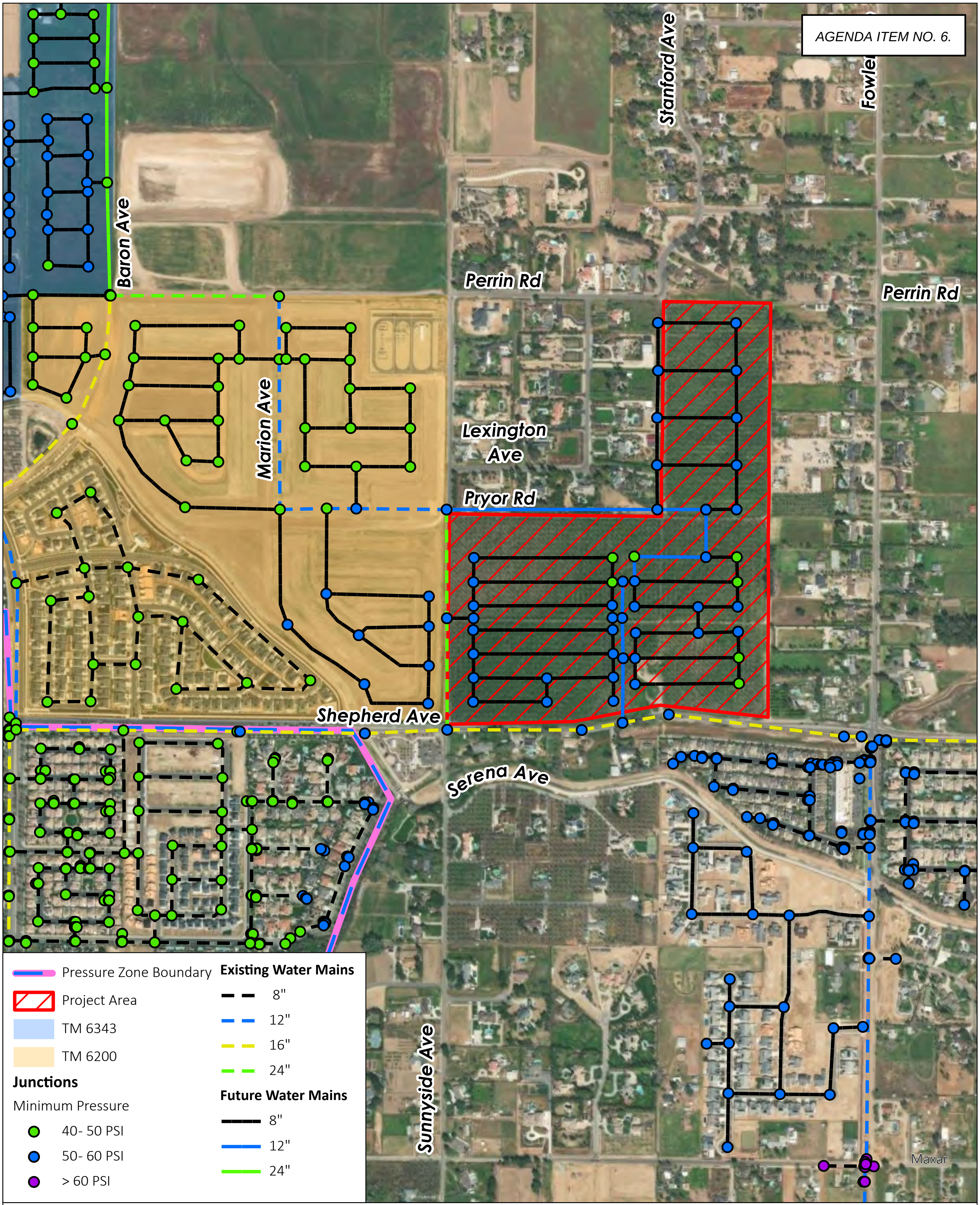

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Figure 2: Maximum Day Demand with an Operational SWTP

WSA Expansion

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AGENDA ITEM NO. 6.

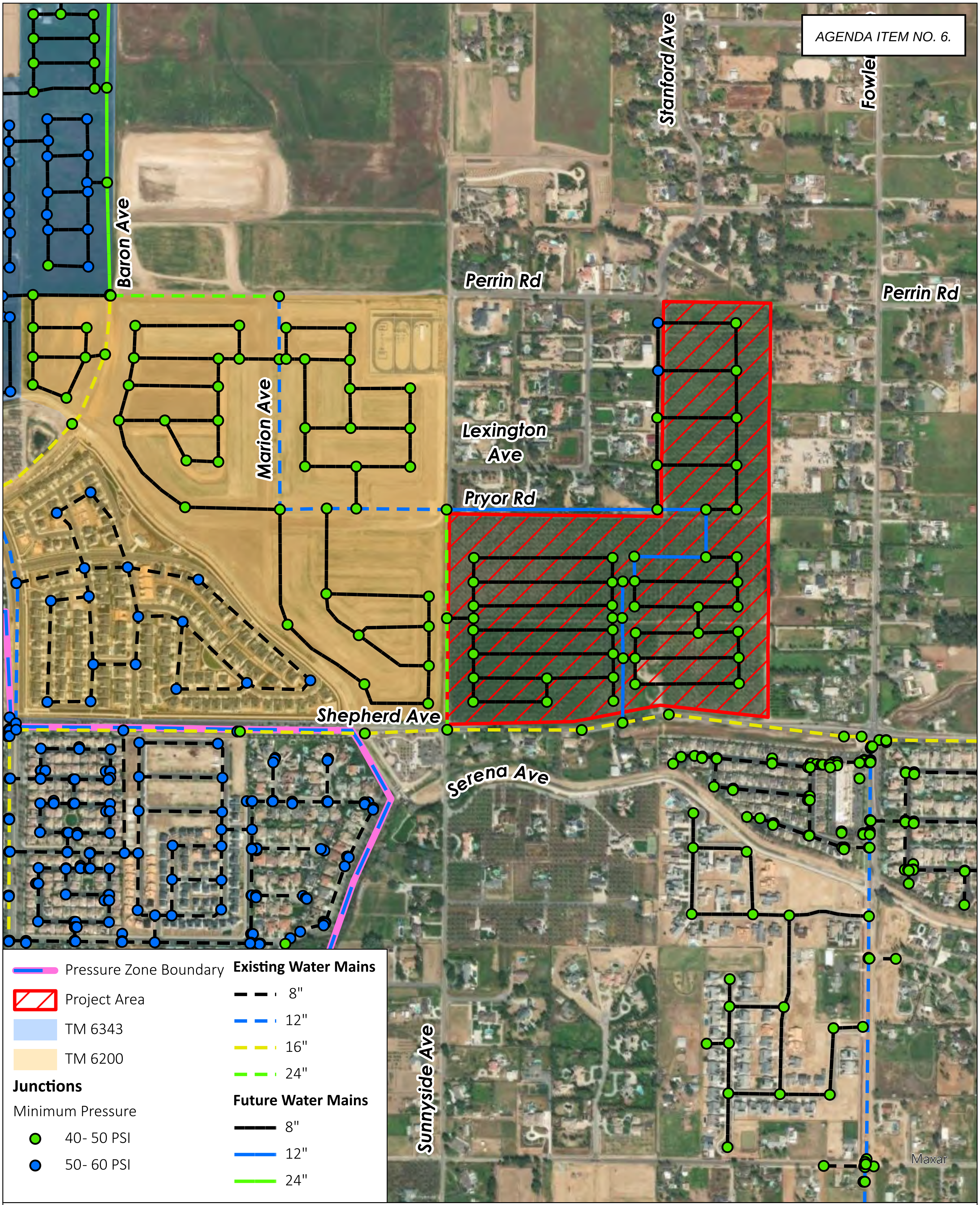

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Figure 3: Maximum Day Demand without an Operational SWTP

WSA Expansion

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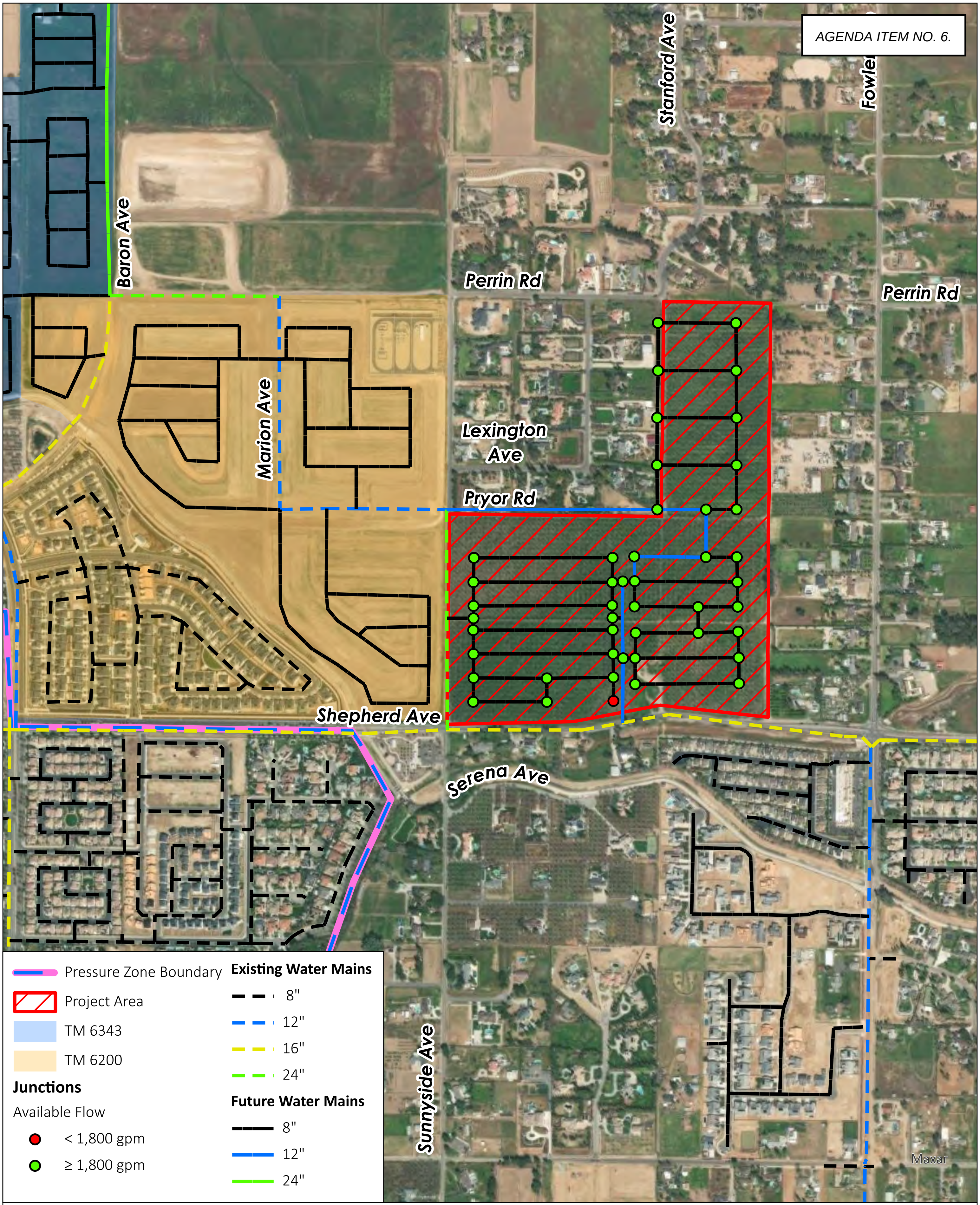

Figure 4: Maximum Day Demand Plus Fire Flow with an Operational SWTP

WSA Expansion

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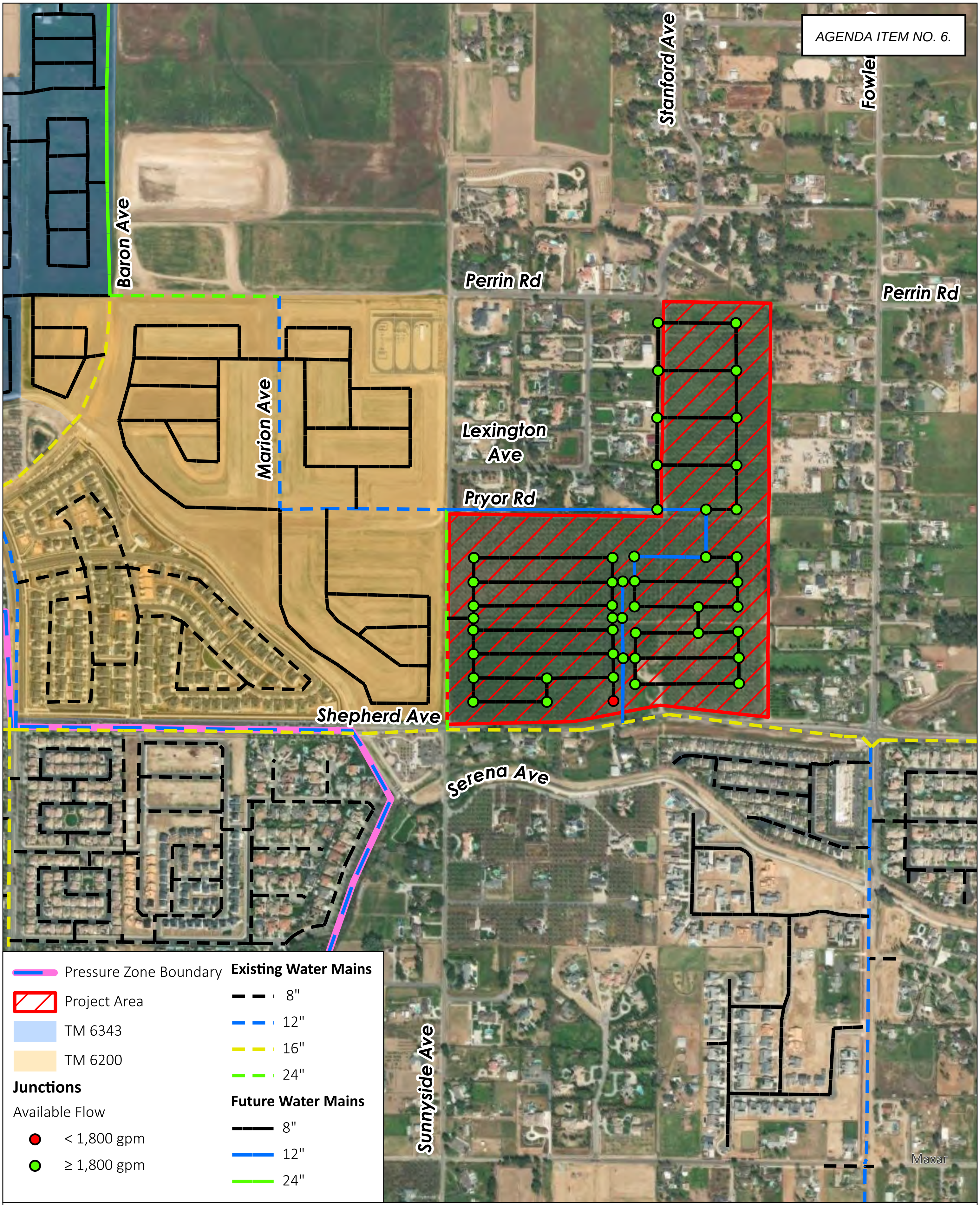

0 500 1,000
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Figure 5: Maximum Day Demand Plus Fire Flow without an Operational SWTP

WSA Expansion

AGENDA ITEM NO. 6.

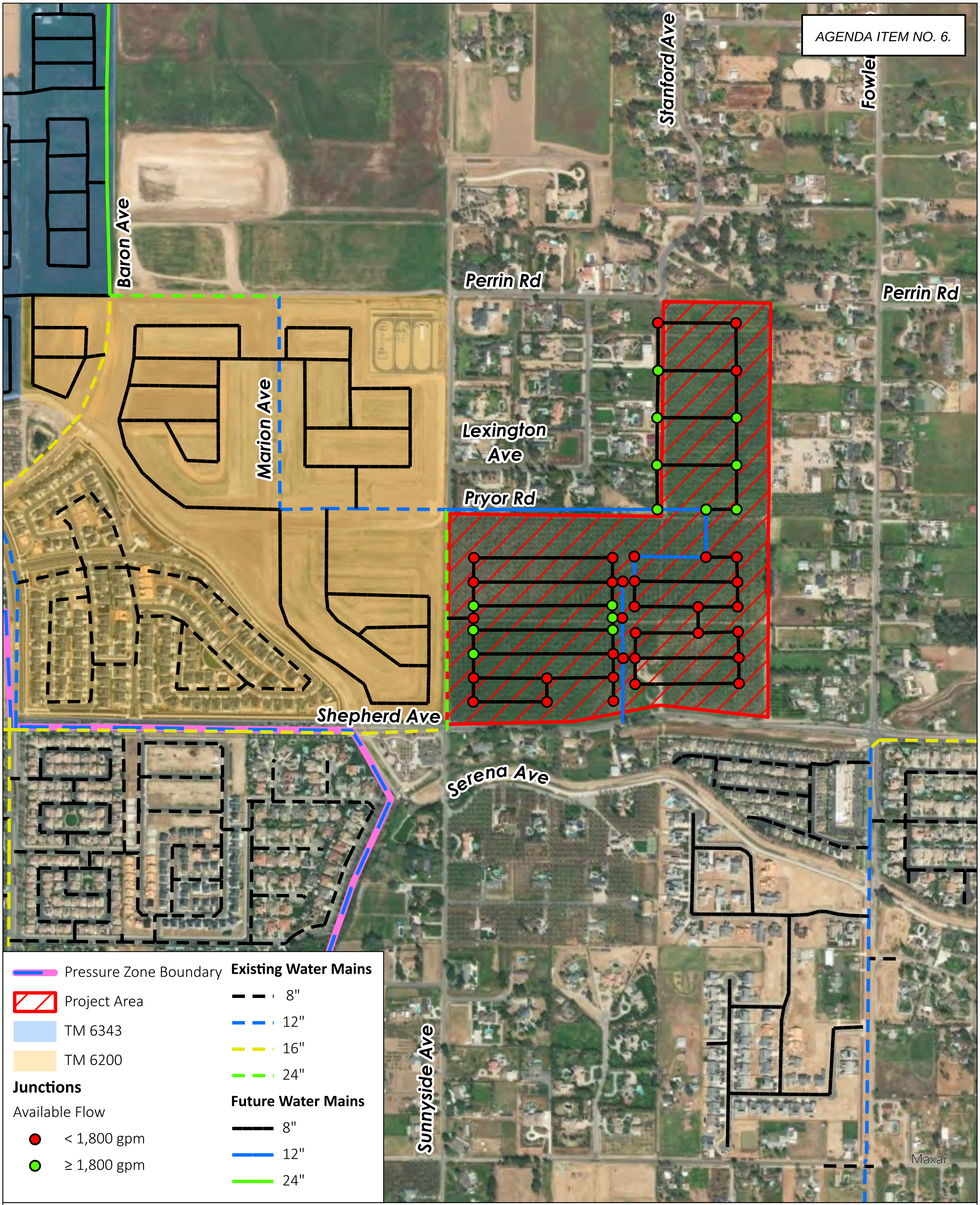

Fig 6: Maximum Day Demand Plus Fire Flow Without an Operational SWTP and 16-Inch Main in Shepherd

WSA Expansion

AGENDA ITEM NO. 6.

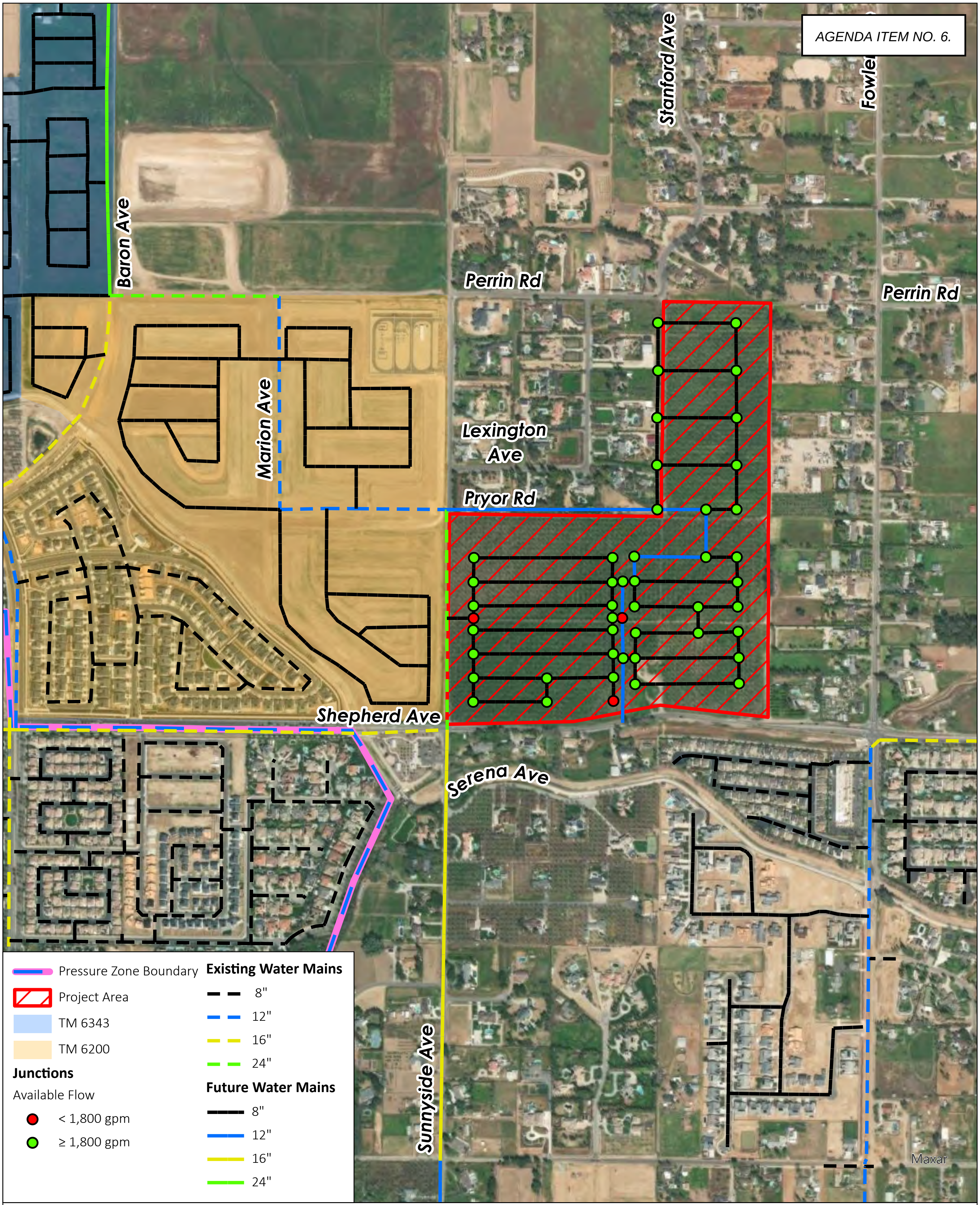

Figure 7: Maximum Day Demand Plus Fire Flow With CIPs and Without an Operational SWTP

WSA Expansion

12/29/2022 \\ppeng.com\pzdata\clients\Clovis_City of - 1017\Projects\101722003-SOI Expansion Tract 6205\400 GIS\Map\Model_Results\SOI_Expansion_Model_Results.aprx

AGENDA ITEM NO. 6.

REVISED
FINAL ENVIRONMENTAL IMPACT REPORT

FOR THE

SHEPHERD NORTH PROJECT

MARCH 1, 2024

Prepared for:

City of Clovis
Planning Division
1033 Fifth Street
Clovis, CA 93612
(559) 324-2340

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

ATTACHMENT 19

REVISED
FINAL ENVIRONMENTAL IMPACT REPORT

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AGENDA ITEM NO. 6.

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INTRODUCTION

The City of Clovis (City) determined that a Project-level environmental impact report (EIR) was required for the proposed Shepherd North (proposed Project) pursuant to the requirements of the California Environmental Quality Act (CEQA).

A Project EIR is an EIR which examines the environmental impacts of a specific development project. This type of EIR focuses primarily on the changes in the environment that would result from the proposed Project. A Project EIR examines all phases of a project including planning, construction, and operation. The Project EIR approach is appropriate for the proposed Project because it allows comprehensive consideration of the reasonably anticipated scope of the proposed Project, including development and operation of the proposed Project, as described in greater detail below.

PROJECT DESCRIPTION

The following provides a summary and overview of the proposed Project. Chapter 2.0 of the Draft EIR includes a detailed description of the proposed Project, including maps and graphics. The reader is referred to Chapter 2.0 for a more complete and thorough description of the components of the proposed Project.

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 2.0-3 illustrates the Annexation Area).

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.[1]
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.

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[1] It should be noted that the term 'Project Area' is used interchangeably with 'Project Site,' throughout this EIR.

  - Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval, and subsequent development of the Development Area.

The City has established five additional project goals and objectives of the proposed development that more fully inform the Project purpose. These goals and objectives are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice to modestly increase urban density*.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

The Project goals and objectives presented above, were developed by the City in response to the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and the City's desire to facilitate the construction of new housing in the face of the housing crisis. The City staff has responded with adequate attention to the economic, environmental, and social costs of reduced housing density by establishing a quantified target density that provided the City with significant flexibility to evaluate different scenarios for residential projects on the Project site while also considered the critical need for additional housing.

ALTERNATIVES TO THE PROPOSED PROJECT

Section 15126.6 of the CEQA Guidelines requires an EIR to describe a reasonable range of alternatives to the proposed Project or to the location of the Project site which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed Project. Four alternatives to the proposed Project were developed based on input from City staff and the technical analysis performed to identify the environmental effects of the proposed Project. The alternatives analyzed in this EIR include the following four alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Mixed Use Alternative:** Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium-high density residential use, 10 acres would be developed with 195 apartments under the high-density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.
- **Reduced Density Alternative:** Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.
- **Reduced Sphere of Influence Alternative:** Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

Alternatives are described in detail in Chapter 5 of the Draft EIR. Table ES-1 provides a comparison of the alternatives using a qualitative matrix that compares each alternative relative to the other Project alternatives.

TABLE ES-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	NO PROJECT (NO BUILD) ALTERNATIVE	INCREASED DENSITY MIXED USE ALTERNATIVE	REDUCED DENSITY ALTERNATIVE	REDUCED SPHERE OF INFLUENCE ALTERNATIVE
Aesthetics and Visual Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Agricultural Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Air Quality	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Cultural and Tribal Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Geology and Soils	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Hydrology and Water Quality	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Land Use, Population, and Housing	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Noise	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Public Services and Recreation	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Transportation and Circulation	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT

LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

Table ES-1 presents a comparison of the alternative Project impacts with those of the proposed Project. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Density Alternative would be the environmentally superior alternative because all environmental issues would have reduced impacts compared to the proposed Project. It is noted that the Reduced Density Alternative does not fully meet all the Project objectives. The following two project objectives are not fully met:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in A Landscape of Choice to modestly increase urban density.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City Requirements as stated in the latest Regional Housing Needs Analysis (RHNA).

The Reduced Density Alternative would provide housing (150 units), but it would be 455 units less then what is proposed. The first objective listed above references “A Landscape of Choice” which is a regional document that provides direction for the region to utilize urban land as efficiently as possible while providing an adequate supply of a broad range of housing types and densities to meet market demand. One of the guiding principles recommends measures to facilitate and encourage compact growth to all urban land uses, including commercial, industrial, and institutional uses. The Reduced Density Alternative is not consistent with this guidance for the region.

The second objective listed above references establishing a mix of housing to provide for local and regional housing demand, and consistent with the City requirements in the latest Regional Housing Needs Analysis (RHNA). In light of the Legislature’s repeated determinations in recent years that California is facing a statewide housing crisis, the State has provided the City with good reason to exercise its legislative discretion to facilitate the construction of new housing. Government Code section 65889.5, subdivision (a)(1)(A), states that “[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California.” Subdivision (a)(1)(D) of that section adds that “[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects.” The Reduced Density Alternative would result in 455 fewer units then the proposed Project, which is not consistent with Legislature’s guidance for solving California statewide housing crisis.

COMMENTS RECEIVED

The Draft EIR addressed environmental impacts associated with the proposed Project that are known to the City, were raised during the Notice of Preparation (NOP) process or raised during preparation of the Draft EIR. The Draft EIR discusses impacts associated with aesthetics, agricultural resources, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gas and climate resources, hazards and hazardous materials, hydrology and water quality, land use, population and housing, noise, public services and recreation, transportation and circulation, and utilities and service systems.

During the NOP process, several comments were received related to the analysis that were included in the Draft EIR. These comments are included as Appendix A of the Draft EIR and were considered during preparation of the Draft EIR.

The City received twenty-four (24) comment letters regarding the Draft EIR, twenty from interested citizens or organizations and four from public agencies. These comment letters on the Draft EIR are identified in Table 2.0-1 of this Final EIR. The comments received during the Draft EIR review processes were addressed within a Final EIR circulated in November 2023 prior to a hearing by the Planning Commission.

After the release of the Final EIR (November 2023), there were an additional sixteen comments provided to the City of Clovis. City staff makes every attempt to respond to public comment in writing, however, given that twelve of the comments were provided on the day of, or in the days after, the Planning Commission hearing, and the other four comments were provided just days before the hearing, it was not possible for City staff to adequately address the comments in writing in time for the hearing. The City staff did review the comments prior to the Planning Commission hearing, and indicated that they were not able to provide a written response at that time, but that they would make every attempt to provide a written response prior to a hearing by the City Council. As such, the City staff has prepared this Revised Final EIR to provide a written response to each of the sixteen additional comments, and to make text revisions necessary to clarify or correct Draft EIR text in response to the comments. The contents of this Revised Final EIR does not involve any new significant impacts or “significant new information” that would require recirculation of the DEIR pursuant to CEQA Guidelines Section 15088.5. This Revised Final EIR includes supplemental information, and is intended to supersede the Final EIR published in November 2023.

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INTRODUCTION 1.0

A Final Environmental Impact Report (Final EIR) was prepared and circulated in November 2023 prior to a Planning Commission hearing. After the release of the Final EIR, there were an additional sixteen (16) comments provided to the City of Clovis (City). City staff makes every attempt to respond to public comment in writing, however, given that twelve (12) of the comments were provided on the day of, or in the days after, the Planning Commission hearing, and the other four (4) comments were provided just days before the hearing, it was not possible for City staff to adequately address the comments in writing in time for the hearing. The City staff did review the comments prior to the Planning Commission hearing, and indicated that they were not able to provide a written response at that time, but that they would make every attempt to provide a written response prior to a hearing by the City Council. As such, the City staff has prepared this Revised Final EIR to provide a written response to each of the sixteen (16) additional comments, and to make text revisions necessary to clarify or correct Draft EIR text in response to the comments. The contents of this Revised Final EIR does not involve any new significant impacts or "significant new information" that would require recirculation of the DEIR pursuant to CEQA Guidelines Section 15088.5. This Revised Final EIR includes supplemental information (i.e. additional written responses, and additional text revisions), and is intended to supersede the Final EIR published in November 2023.

1.1 PURPOSE AND INTENDED USES OF THE EIR

CEQA REQUIREMENTS FOR A FINAL EIR

This Revised Final EIR for the proposed Project has been prepared in accordance with the CEQA Guidelines. CEQA Guidelines Section 15132 requires that a Final EIR consist of the following:

- the Draft EIR or a revision of the draft;
- comments and recommendations received on the Draft EIR, either verbatim or in summary;
- a list of persons, organizations and public agencies commenting on the Draft EIR;
- the responses of the lead agency to significant environmental concerns raised in the review and consultation process; and
- any other information added by the lead agency.

In accordance with CEQA Guidelines Section 15132, subdivision (a), the Draft EIR (July 2023) is incorporated by reference into this Revised Final EIR.

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed Project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

PURPOSE AND USE

The City, as the lead agency, has prepared this Revised Final EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from approval, construction, and operation of the proposed Project. Responsible and trustee agencies that may use the EIR are identified in Chapters 1.0 and 2.0 of the Draft EIR.

The environmental review process enables interested parties to evaluate the proposed Project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the proposed Project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used as the primary environmental document to evaluate all aspects of construction and operation of the proposed Project. The details and operational characteristics of the proposed Project are identified in Chapter 2.0, Project Description, of the Draft EIR.

1.2 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION AND INITIAL STUDY

The City circulated a Notice of Preparation (NOP) of an EIR for the proposed Project on May 9, 2022 to the State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, Organizations and Interested Persons. A public scoping meeting was held on May 25, 2022, to present the Project Description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and responses to the NOP by interested parties are presented in Appendix A of the Draft EIR.

NOTICE OF AVAILABILITY AND DRAFT EIR

The City published a public Notice of Availability (NOA) for the Draft EIR on July 21, 2023, inviting comment from the general public, agencies, organizations, and other interested parties. The NOA was filed with the State Clearinghouse (SCH # 2022050180) and the County Clerk and was published in a local newspaper pursuant to the public noticing requirements under CEQA. The Draft EIR was available for public review and comment from July 21, 2023 through September 6, 2023.

Additionally, the Draft EIR was made available at the City’s Planning and Development Department and was posted on the City’s website at:

https://cityofclovis.com/planning-and-development/planning/planning-projects/shepherd-north-soi/

The Draft EIR contains the Project Description, Environmental Setting, identification of Project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The Draft EIR identifies issues determined to have no impact or a less-than-significant impact and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in the Draft EIR.

RESPONSE TO COMMENTS/FINAL EIR

The City received twenty-four (24) comment letters regarding the Draft EIR. These comment letters on the Draft EIR, and minor text edits to the Draft EIR, were provided in a Final EIR dated November 2023.

PLANNING COMMISSION HEARING

The City of Clovis Planning Commission reviewed and considered the November 2023 Final EIR at a hearing on November 16, 2023. The Planning Commission adopted resolutions recommending that the Clovis City Council deny Shepherd North project.

RESPONSE TO COMMENTS RECEIVED AFTER FEIR PUBLIC CIRCULATION/REVISED FINAL EIR

The City received an additional sixteen comment letters after the 45-day public review period for the Draft EIR. These comment letters, in addition to the twenty-four received during the 45-day public review period, are identified in Table 3.0-1 of this document. This document includes a written response to each of the forty comment letters received. In addition, this document includes a revised Errata (Chapter 4.0) and revised Mitigation Monitoring and Reporting Program (Chapter 5.0). The Revised Final EIR supersedes November 2023 Final EIR.

CITY COUNCIL HEARING

The City Council will review and consider the EIR. The EIR consists of the Draft EIR, and the Revised Final EIR (February 2024). If the City Council finds that the EIR is "adequate and complete," the City Council may certify the EIR in accordance with CEQA and the City’s environmental review procedures and codes. The rule of adequacy generally holds that an EIR can be certified if:

1) The EIR shows a good faith effort at full disclosure of environmental information; and
2) The EIR provides sufficient analysis to allow decisions to be made regarding the proposed project which intelligently take account of environmental consequences.

Upon review and consideration of the EIR, the City Council may take action to approve, revise, or reject the proposed Project. A decision to approve the proposed Project, for which this EIR identifies significant environmental effects, must be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring and Reporting Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6, subdivision (a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the proposed Project to reduce or avoid significant effects on the environment. This Mitigation Monitoring and Reporting Program has been designed to ensure that these measures are carried out during Project implementation, in a manner that is consistent with the EIR.

1.3 ORGANIZATION OF THE REVISED FINAL EIR

This Final EIR is organized in the following manner:

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the purpose of the environmental evaluation, identifies the lead, agency, summarizes the process associated with preparation and certification of an EIR, and identifies the content requirements and organization of the Final EIR.

CHAPTER 2.0 – COMMENTS TO DRAFT EIR AND RESPONSES

Chapter 2.0 provides a list of commenters, copies of written and electronic comments made on the Draft EIR (coded for reference), and responses to those written comments. The Chapter 2.0 contained in this Revised Final EIR is the same as the Chapter 2.0 contained in the November 2023 Final EIR.

CHAPTER 3.0 – RESPONSE TO COMMENTS RECEIVED AFTER FEIR PUBLIC CIRCULATION

Chapter 3.0 provides a list of commenters, and copies of written and electronic comments made after the Final EIR was circulated. The dates of the comments range from November 13, 2023 to November 30, 2023. To distinguish these comments from those circulated in the Final EIR (those contained in Chapter 2.0), each comment is coded with the Letter L (i.e. L-1 through L-16).

CHAPTER 4.0 – ERRATA

Chapter 4.0 consists of minor revisions to the Draft EIR in response to comments received on the Draft EIR. The Chapter 4.0 contained in this Revised Final EIR is intended to supersede the Chapter 3.0 contained in the November 2023 Final EIR.

CHAPTER 5.0 – FINAL MMRP

Chapter 5.0 consists of a Mitigation Monitoring and Reporting Program (MMRP). The MMRP is presented in a tabular format that presents the impacts, mitigation measure, and responsibility, timing, and verification of monitoring. The Chapter 5.0 contained in this Revised Final EIR is intended to supersede the Chapter 4.0 contained in the November 2023 Final EIR.

2.1 INTRODUCTION

No new significant environmental impacts or issues, beyond those already covered in the Draft EIR for the proposed Project, were raised during the comment period. Responses to comments received during the comment period do not involve any new significant impacts or add "significant new information" that would require recirculation of the Draft EIR pursuant to CEQA Guidelines Section 15088.5.

CEQA Guidelines Section 15088.5 states that: New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement.

Sections 2.0 and 3.0 of this Final EIR include information that has been added to the EIR since the close of the public review period in the form of responses to comments and revisions.

2.2 LIST OF COMMENTERS

Table 2.0-1 lists the comments on the Draft EIR that were submitted to the City of Clovis (City) during the 45-day public review period for the Draft EIR. The assigned comment letter or number, letter date, letter author, and affiliation, if presented in the comment letter or if representing a public agency, are also listed. Letters received are coded with letters (A, B, etc.). During the 45-day review period for the Draft EIR from July 21, 2023 to September 4, 2023, the City received twenty-four (24) comment letters. These letters include Letters A through X.

TABLE 2.0-1 LIST OF COMMENTERS ON DRAFT EIR

RESPONSE LETTER	*INDIVIDUAL OR SIGNATORY*	*AFFILIATION*	*DATE*
A	Laurence Kimura, P.E.	Fresno Irrigation District	8-1-23
B	Charles Belemjian	Resident of Clovis	8-15-23
C	Robert and Kathy Shuman 1	Residents of Clovis	8-18-23
D	Judith Henry	Resident of Clovis	8-18-23
E	Eric Poulsen, MD	Resident of Clovis	8-28-23
F	Jill Poulsen	Resident of Clovis	8-28-23
G	Hedieh and Neal Goodwin	Residents of Clovis	8-26-23
H	Brian and Cindy Reinke	Residents of Clovis	8-30-23
I	Curtis and Pamela Cookingham	Residents of Clovis	8-30-23
J	Robert Shuman 2	Resident of Clovis	8-31-23
K	Julie A. Vance	Department of Fish and Wildlife	8-31-23
L	Patrick and Debbie Menagh	Residents of Clovis	8-31-23
M	Eric Poulsen, MD	Resident of Clovis	8-31-23
N	Charles Keller	Resident of Clovis	9-4-23
O	Curtis and Pamela Cookingham 2	Residents of Clovis	9-4-23

RESPONSE LETTER	*INDIVIDUAL OR SIGNATORY*	*AFFILIATION*	*DATE*
P	Kirk and Sandra Warner	Residents of Clovis	9-4-23
Q	Jared Callister	Resident of Clovis	9-4-23
R	Norman D. Morrison IV	Attorney	9-4-23
S	David Padilla	Department of Transportation	9-5-23
T	Jacqueline and Matthew Ruiz	Residents of Clovis	9-5-23
U	Denise Wade	Fresno Metropolitan Flood Control District	9-5-23
V	Harmeet Gurm	Resident of Clovis	9-5-23
W	Kevin Kercher	Resident of Clovis	9-5-23
X	Kristin and Christian Diener	Resident of Clovis	9-6-23

2.3 COMMENTS AND RESPONSES

REQUIREMENTS FOR RESPONDING TO COMMENTS ON A DRAFT EIR

CEQA Guidelines Section 15088 requires that lead agencies evaluate and respond to all comments on the Draft EIR that regard an environmental issue. The written response must address the significant environmental issue raised and provide a detailed response, especially when specific comments or suggestions (e.g., additional mitigation measures) are not accepted. In addition, the written response must be a good faith and reasoned analysis. However, lead agencies need only to respond to significant environmental issues associated with the proposed Project and do not need to provide all the information requested by the commenter, as long as a good faith effort at full disclosure is made in the EIR (CEQA Guidelines Section 15204).

CEQA Guidelines Section 15204 recommends that commenters provide detailed comments that focus on the sufficiency of the Draft EIR in identifying and analyzing the possible environmental impacts of the proposed Project and ways to avoid or mitigate the significant effects of the proposed Project, and that commenters provide evidence supporting their comments. Pursuant to CEQA Guidelines Section 15064, an effect shall not be considered significant in the absence of substantial evidence.

CEQA Guidelines Section 15088 also recommends that revisions to the Draft EIR be noted as a revision in the Draft EIR or as a separate section of the Final EIR. Chapter 3.0 of this Final EIR identifies all revisions to the Clovis Shepherd North Draft EIR.

RESPONSES TO COMMENT LETTERS

Written comments on the Draft EIR are reproduced on the following pages, along with responses to those comments. To assist in referencing comments and responses, the following coding system is used:

- Each letter is lettered or numbered (i.e., Letter A) and each comment within each letter is numbered (i.e., comment A-1, comment A-2).

MASTER RESPONSE TO COMMENTS

The master responses presented in this chapter address comments related to topics that are common to several comment letters. The intent of a master response is to provide a comprehensive response to a topic in a coordinated, organized manner in one location that clarifies and elaborates on the analysis in the DEIR. The following master responses are included in this chapter and are presented in more detail below:

- Master Response 1: Water Quality
- Master Response 2: Storm Drainage/Flooding
- Master Response 3: Groundwater/Surface Water Supply
- Master Response 4: Infiltration/Natural Recharge
- Master Response 5: Groundwater Extraction
- Master Response 6: Access
- Master Response 7: Traffic generation
- Master Response 8: Traffic volume
- Master Response 9: Pedestrian and Cyclist Traffic
- Master Response 10: Traffic calming/Improvements
- Master Response 11: Safety for children playing
- Master Response 12: Fire gate
- Master Response 13: Traffic on Stanford, Perrin, Ticonderoga, and Fowler
- Master Response 14: Annexation, SOI Expansion, and the Provision of City Services
- Master Response 15: Neighborhood Meeting
- Master Response 16: Parks/Greenspace
- Master Response 17: Noise
- Master Response 18: Aesthetics/Lights
- Master Response 19: Air Quality, GHG, Energy

Master Response 1: Water Quality. Water quality is addressed in DEIR Section 3.9 Hydrology and Water Quality. Water Quality is specifically addressed for the construction and operational phases of the project. During the construction phase, the DEIR indicates that Project construction activities are covered under SWRCB Order No. 2009-0009-DWQ, and that the proposed Project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. (DEIR, p. 3.9-12 through 3.9-13, and 3.9-20 through 3.9-24). Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP may be reviewed by the Regional Water Quality Control Board (RWQCB) as part of the permitting process. The SWPPP is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency. Upon completion of the proposed Project, the applicant would be required to submit a Notice of Termination to the State Regional Water Quality Control Board to indicate that construction is completed. Mandatory compliance with the SWPPP would ensure that the proposed Project would not violate any water quality standards or waste discharge requirements during construction activities. Additionally, the proposed Project would be required to demonstrate compliance with all of the requirements of the Fresno-Clovis Storm Water Quality Management Program (SWQMP), and the City of Clovis Municipal Code, which regulate stormwater and prohibits non-stormwater discharges except where regulated by an NPDES permit. The DEIR concluded that water quality impacts associated with construction activities would be less than significant. (DEIR, p. 3.9-22)

During the long-term operations of the proposed Project (all phases) drainage infrastructure will be required to comply with the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations, standards, and specifications, which ensures that stormwater runoff from the Project Area is treated per the standards in the Phase II Small MS4 General Permit.

The DEIR concluded that with compliance with existing standards and rules, including the implementation of BMPs, the water quality impacts associated with operation of the Project have a less than significant impact.

Master Response 2: Storm Drainage/Flooding: Storm Drainage/Flooding is addressed in DEIR Section 3.9 Hydrology and Water Quality and in Section 3.14 Utilities. The Draft EIR indicates that stormwater runoff in the City of Clovis is conveyed through a system of street gutters, underground storm drains, retention/detention basins, pumping stations, and open channels that are maintained by the Fresno Metropolitan Flood Control District (FMFCD). (DEIR p3.9-3). The FMFCD is the agency that provides flood control and urban storm water services in a 399-square mile watershed located between the Kings and San Joaquin Rivers (FMFCD, 2022a).

The Fresno/Clovis urban area is served by a system of roughly 700 miles of pipeline and more than 150 stormwater retention basins. FMFCD's stormwater drainage system discharges to irrigation canals, creeks, and the San Joaquin River (FMFCD, 2013). The system is designed to retain and infiltrate as much runoff as possible into the underlying groundwater aquifer. On average, FMFCD's regional stormwater basin system captures 92 percent of annual rainfall, of which, 70-85 percent of the captured stormwater runoff is recharged into the local groundwater aquifer (FMFCD, 2020). The stormwater basins also remove 50-80 percent of the typical stormwater pollutants.

The FMFCD Master Plan storm drainage pipeline system is designed to accept the peak flow rate of runoff from a two-year intensity storm event (a storm that has a 50 percent probability of occurring in any given year) (FMFCD, 2022b). When storm events occur that exceed the two-year intensity, ponding begins to occur in the streets until the pipeline system can remove the water. If the storm is of sufficient intensity to generate more water than the street can store, the water will continue to rise until it reaches a topographic outlet where it can escape down gradient. This escape route is a feature of the major storm routing system, implemented in 1998, that protects properties from damage in rainfall or runoff events that exceed system design capacities. The Project site is located within Drainage Area BY1.

Master Response 3: Groundwater/Surface Water Supply: Groundwater and water supply is addressed in DEIR Section 3.9 Hydrology and Water Quality and in Section 3.14 Utilities. The DEIR references the *City of Clovis Urban Water Management Plan 2020 Update* (Provost & Pritchard, 2021B), *City of Clovis Water Shortage Contingency Plan 2020 Update* (Provost & Pritchard, 2021A)*;* the *City of Clovis Water Master Plan Update Phase III* (Provost & Pritchard, 2017)*,* and the *California's Groundwater: Bulletin 118 - San*

Joaquin Valley Groundwater Basin/Kings Subbasin (DWR 2006) as a source of information to support the analysis of water supply.

Surface Water Supply: The DEIR indicates that the City has access to surface water through several different contracts, all of which are delivered to the City by the Fresno Irrigation District (FID). (DEIR p. 3.9-4). The various surface water supplies are from the Kings River and Central Valley Project. The average delivery the City has received of its total allocation is just over 17,000 AF per year, with the smallest delivery being 9,452 AF in 2015 and the largest of 24,958 in 2017. The City executed a new, firm water supply, agreement with FID in 2019 that provides a surface water supply that does not fluctuate with the FID entitlement or allocation and will be available to the City on a consistent basis. This agreement provides for up to 7,000 AF per year by 2045, beginning at 1,000 AF in 2020. As the City grows and annexes portions of the Garfield and International Water Districts, those CVP, Class I water rights will be transferred to the City and added to the overall water supply portfolio. (Provost & Pritchard, 2021B).

FID’s average gross annual entitlement is 452,541 AF. Within the last fifty years, the smallest entitlement received was 158,109 AF, which occurred in 2015. The City’s allocation from the Kings River is proportional to the total acreage of the City's included area to the total FID area receiving water. Over time, the City has received on average 17,011 AFY, though this has varied from 9,452 AF in the severe drought of 2015 to over 24,958 AF in 2017. (Provost & Pritchard, 2021B).

Two additional water districts are located within the City’s General Plan Boundaries: Garfield Water District (GWD) and International Water District (IWD). Both have access to Class I CVP surface water supplies. The GWD holds a Class 1 CVP contract for 3,500 AFY. With half of GWD within the City’s SOI, an estimated 1,750 AFY is expected to be added to the City’s supply upon development. The IWD holds a Class 1 CVP contract for 1,200 AFY. The City’s General Plan designates a portion of the District’s area as industrial and residential use. At build-out, it is estimated that the entire 1,200 AFY supply will be added to the City’s Supply. As the districts urbanize, supplies associated with these areas are expected to be added to the City’s supply. The City uses their surface water supplies in two primary ways: (1) as potable water supply after being treated at the City’s Surface Water Treatment Plant (SWTP) or (2) as groundwater recharge in various basins located in and around the City’s service area. (Provost & Pritchard, 2021B).

Groundwater Supply: The DEIR indicates that the City’s groundwater supplies stem from the basin underlying the area, the Kings Subbasin; the Subbasin holds a status of being critically over drafted. The Kings Subbasin, a non-adjudicated basin, is a high-priority basin, which lies within the Tulare Lake Hydrologic Basin. This Basin contains multiple interconnected subbasins that transmit, filter and store water. These subbasins are Kaweah and Tulare Lake to the south, Westside and Delta Mendota to the west, and Madera to the North. (Provost & Pritchard, 2021B).

The Kings Subbasin (Subbasin 5-22.08) covers a surface area of approximately 976,000 acres (1,530 square miles). The Department of Water Resources estimated that the total basin storage was about 93,000,000 AF to a depth of more than 1,000 feet. The two major rivers overlying the subbasin are the San Joaquin River and Kings River. The Fresno Slough and James Bypass are along the western edge of the southern basin and connect the Kings River to the San Joaquin River. (Provost & Pritchard, 2021B).

The subbasin does have localized water quality impairments, including Dibromochloropropane (DBCP); Nitrate; Ethylene-Dibromide; 1,2,3-Trichloropropane (TCP); Methyl Tert-butyl Ether (MTBE); uranium; arsenic; hexavalent chromium; perfluoroalkyl substances (PFAS) and petroleum hydrocarbons. High concentrations of fluoride, boron, and sodium can be found in localized areas of the subbasin. (Provost & Pritchard, 2021B).

In 2014, the Sustainable Groundwater Management Act (SGMA) was signed into law to provide a framework for management of groundwater supplies by local agencies and restricts state intervention, if required. SGMA provides an opportunity for local agencies overlying the basin to form a Groundwater Sustainability Agency (GSA), which is the primary agency responsible for achieving sustainability. As part of the region’s compliance with SGMA, the North Kings Groundwater Sustainability Agency (NKGSA) was formed and includes representatives from Bakman Water Company, Biola Community Services District, City of Fresno, City of Clovis, City of Kerman, County of Fresno, Fresno Irrigation District, Fresno Metropolitan Flood Control District, Garfield Water District, and International Water District. The North Kings Groundwater Sustainability Agency adopted a Groundwater Sustainability Plan (GSP) in late 2019.

North Kings Groundwater Sustainability Agency: The City is a member of the North Kings Groundwater Sustainability Agency (NKGSA). The NKGSA is working collaboratively, under a coordination agreement with the other six (6) Groundwater Sustainability Agencies in the Kings Subbasin to achieve sustainable groundwater conditions by 2040, in accordance with the Sustainable Groundwater Management Act of 2014 (SGMA) for critically over drafted groundwater basins, such as the Kings Subbasin. (Provost & Pritchard, 2021B).

SGMA identifies six (6) sustainability indicators to be monitored and reported in order to document sustainability: lowering groundwater levels, reduced [groundwater] storage, seawater intrusion, degraded [groundwater] quality, land subsidence, and surface water depletion. The NKGSA documents five (5) of those with seawater intrusion not being applicable to this region. (Provost & Pritchard, 2021B).

The City will continue increasing its surface water and recycled water supply usage to a point where the groundwater extraction is not greater than the sustainable yield in a normal year. The sustainable yield is currently estimated at 9,400 AF per year (AFY) for the SOI. (Provost & Pritchard, 2021B).

Potable water production consists of municipal groundwater wells and a surface water treatment plant (SWTP). The total groundwater pumping that occurs within the City boundaries include City-owned municipal wells and City-owned park irrigation wells. The following section provides a summary of the estimated groundwater pumping that occurs within the current City limits and planning area.

City-Produced Groundwater: The City’s system contains more than 30 wells with a total capacity of approximately 37,690 gallons per minute with another 4,750 gpm of additional capacity planned in the next few years. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B).

Wells are spaced at intervals across the City and are connected to a distribution system. The pipes are sized for local distribution and have, in certain instances, presented some restrictions to cross-town water supply distribution. The transmission network consists primarily of 12-inch mains on a one-half mile grid with extensive looping. The wells are controlled by a telemetry system that controls pump operation as well as independent controls in case of remote computer failure. (Provost & Pritchard, 2017).

As of 2016, there are 34 wells operating in the City of Clovis system. Of these 34 wells, there are two functioning for standby purposes only. There are also three additional wells operating within the Tarpey system. Typically, wells are put on standby status as a result of water quality problems and are maintained for emergency use. The production rate of the existing wells varies from approximately 300 gallons per minute (gpm) to approximately 2,200 gpm. The total production for the City of Clovis in the year 2014 was approximately 15,500 acre-feet. The Tarpey Village wells accounted for approximately 540 acre-feet of this total. (Provost & Pritchard, 2017).

Existing wells are not evenly distributed across the service area, but rather generally located in the western one-half of the City of Clovis. In general, older wells are in the southwest quarter of the City and the newest wells are located to the northwest quarter of the City. The northern portion of the City of Clovis (north of Herndon Avenue), has experienced the highest growth in recent years, and has dramatically shifted the production and demand characteristics of the City's water system. (Provost & Pritchard, 2017).

Pumping rates for individual City wells in recent years have ranged from about 200 gpm to almost 1,500 gpm. However, the pumping rates for most wells have ranged from about 600 to 1,300 gpm. (Provost & Pritchard, 2017).

The average water level-decline in the City's wells from 2007 to 2014 was 1.5 feet per year. These wells represent an area of about 15,200 acres. When extrapolated over the acreage associated with the SOI boundary (21,100 acres) and the General Plan boundary (47,500 acres), the change in storage is 3,800 and 8,550 acre-feet per year, respectively. (Provost & Pritchard, 2017).

Historical Groundwater Pumping: The water system was initially constructed near the turn of the 20th century, when the first municipal well was installed, and, up until July 2004, the City's sole source of drinking water was groundwater. The City currently obtains groundwater from 36 active wells and one standby well, which have a total capacity of approximately 37,690 gallons per minute (gpm). There are also six planned wells, adding an additional planned capacity of 4,750 gpm, bringing the total well capacity to 42,440 gpm. Two of the existing active wells (Wells 10 and T-5) are offline due to TCP and PFAS water quality concerns, and one well is listed as standby due to iron and manganese concerns. TCP, PFAS, DBCP and high iron (Fe) and manganese (Mn) are the main water quality constraints in the Clovis area. Five (5) more of the City's wells are currently on inactive status due to being dry or producing too much sand (Wells 3, 11, 33, T-1, and T-3). (Provost & Pritchard, 2021B).

In 2020, groundwater provided approximately 49 percent of the total potable water use. The historical volume of groundwater pumped by the City over the past five years is ranged from 10,956 in 2019 to as high as 13,187 in 2016. The groundwater extraction has reduced since 2016 and is expected to continue to be reduced, as discussed later in this section. (Provost & Pritchard, 2021B).

In 2020, recharge was 5,316 AF, while the City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. In the past 30 years, the groundwater table has dropped 48 feet, from a depth of 92 feet in 1991 to a depth of 140 feet in 2019. Recharge efforts began in 1974, and in 2004, the City began utilizing surface water with the goal of reducing groundwater extraction. Recharge efforts by the City have not been enough to stem the decline as the basin is shared with other users who either don't recharge or inadequately recharge. (Provost & Pritchard, 2021B).

Master Response 4: Infiltration/Natural Recharge: The DEIR indicates that the proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement, significantly reduce infiltration capacity and increase surface water runoff. (DEIR p3.9-24 through 3.9-27).

The DEIR indicates that the soils contained on the Project site have a hydrologic rating ranging from "A," which is indicative of soils having a high infiltration rate (low runoff potential) when thoroughly wet, to "D," which is indicative of soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. Figure 3.2-2 in the DEIR identifies Project site soils, and Table 3.9-2 provides a list of the soils and hydrologic rating of each soil, including the percentage of the project area.

The infiltration rate of the soils on the Project site ranges from low to high. As indicated in the Geotechnical Report (Krazan & Associates, 2019), cemented silty sand and silty sand with trace clay, locally referred to as "hardpan," were encountered in several of the borings at the Project site. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system and eventually flow into the San Joaquin River.

The Project site is located in the Kings Groundwater Subbasin. The Kings Subbasin is recharged by water from sources including streams, percolation of rainfall and irrigation water, inflow from other groundwater basins, and intentional recharge at numerous facilities. Intentional recharge is conducted in recharge ponds and on some farm fields with compensation to landowners. The hardpan encountered on the Project site generally does not allow for a high infiltration rate. While the proposed Project would result in an increase in the amount of impervious surfaces within the Project site when compared to existing conditions, it is not anticipated that the proposed development would interfere with groundwater recharge, as much of the groundwater recharge in the basin occurs in the sand and gravels along the San Joaquin River from Sierra Nevada snowmelt flowing downstream.

Moreover, as further evidence that the reduction in onsite recharge capabilities and elimination of onsite extraction will not result in significant environmental effects, onsite water extraction for orchard trees will be replaced by City of Clovis infrastructure and water supplies, which come from wells located in a different location than the project site. The water usage on a per acre basis for residences on the Site is far less than the prior agricultural use for orchard trees. Additionally, on-farm recharge does not result in the return of all pumped irrigation water. Evaporation, evapotranspiration, and osmosis occur during irrigation and plant growth, which results in a net loss of water. While rain events can provide some recharge, given the hardpan limitations, recharge opportunities at the Site from precipitation are limited. As a result, the amount of water saved from not pumping for agricultural irrigation will be far more than any recharge on the Site from agricultural irrigation. It is also anticipated that recharge will continue to occur from flows through City and FMFCD infrastructure to collect in FMFCD basins which are sources of recharge for the local aquifer.

Master Response 5: Groundwater Extraction: Since the 2015 UWMP, SGMA has become effective and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040, as required. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. In the 2010 and 2015 UWMPs, the City's groundwater supplies were shown to be increasing with population growth into the future. The historical volume of groundwater pumped by the City from 2016 to 2020 ranged from 10,956 in 2019 to as high as 13,187 in 2016. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B). The City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

The City has been searching for additional land to construct another dedicated groundwater recharge facility in the City. The facility will likely be in North Clovis upgradient of City wells. A minimum of 20 to 40 acres is desired with a minimum recharge capability of 1,500 to 3,000 AF per year. An additional project that the City is pursuing in cooperation with FID, FMFCD, and the City of Fresno, is either reoperation of Big Dry Detention Basin, known as the Redbank-Fancher Creeks Flood Control Project, to allow storage of East Side Stream Flood releases or a project to increase recharge capabilities upstream of the Basin. This is currently in the study phase. (Provost & Pritchard, 2021B).

In addition, there are two banking facilities, the Waldron Banking Facilities (WBF) and Boswell Groundwater Banking Facility (BGBF), have been constructed in central Fresno County. The City entered into an agreement with the FID to participate in the financing of the construction of a dedicated water banking facility called the Waldron Banking Facilities. The City is entitled to receive up to ninety percent (9,000 AF) of the annual yield. The City plans on taking the water in dry years to augment supply. (Provost & Pritchard, 2021B).

The groundwater supplies the City relies upon are not in the process of adjudication. The surface water supplies have either long-range contracts or newly executed contracts to document quantities and availability to the City. (Provost & Pritchard, 2021B).

Recycled water is considered a consistent source; however, because it is mainly dependent upon indoor residential use, it is susceptible to water rationing. In 2020, the City utilized approximately 28 percent of its treated wastewater, an increase over past years; however, the use primarily was limited by its existing infrastructure and seasonal need. The amount of recycled water the City intends to use for beneficial purposes is expected to increase as additional infrastructure is built, wastewater generation increases, and the Clovis Water Reuse Plant expands. (Provost & Pritchard, 2021B).

Groundwater supply projections include approved developments outside of the City boundaries, but within the planning area and estimated groundwater pumping by others within the planning area. The projected groundwater supply reliability does not account for groundwater pumping outside the City's planning area, nor undocumented privately owned domestic or irrigation wells. Groundwater use may increase as population increases and groundwater use by others (including school districts and agricultural users) may also increase in single dry years and multiple dry years (when surface water cutbacks occur).

The 'sustainable yield' is defined as the amount of groundwater pumping that can occur while maintaining groundwater at sustainable levels and avoiding undesirable results. The sustainable yield can be estimated as the total groundwater recharge (from natural and artificial sources) minus the groundwater outflow (as shown below). The GSP of the North Kings Groundwater Sustainability Agency indicates that the sustainable yield of the groundwater basin is approximately 1,140,000 AFY/acre (1,360,000 AF -220,000 AF).

A water supply assessment (*Tract 6205, Northwest Sphere of Influence Expansion Area. Water Supply Assessment*) was prepared by Provost & Pritchard (2022) and is summarized in Section 3.14 Utilities. The technical analyses shows that the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. The water supply for the City as a whole is shifting more toward surface water supplies since 2015 and will continue on that path through 2040 to ensure compliance with the Kings sub basin groundwater sustainability plan (GSP). The DEIR (p3.14-30) concludes that the proposed Project would not cause the substantial depletion of groundwater supplies or interfere substantially with groundwater recharge.

The Applicant retained Kenneth D. Schmidt and Associates to prepare an analysis of the groundwater conditions in the vicinity of the Project Site. The report is dated September 2023 and was submitted to the City of Clovis for their review and consideration. The City's Supervising Engineer reviewed the report and concurs with the opinions provided. Furthermore, the City's Supervising Engineer indicated that the author has been an expert in this field for many decades.

After the City had reviewed and concurred with the report, it was provided to the City's EIR consultant for a second independent review. The City's EIR consultant found that the opinions in the report are consistent with, and supportive of, the original findings in the DEIR. It was found that the report is a good source of information for further affirmation of the DEIR conclusions, and it was determined that including the report as an Appendix to the EIR would amplify and clarify information already provided in the EIR.

The conclusion of the report is that the proposed project would use water from the City of Clovis distribution system as opposed to on-site wells. In terms of groundwater, there would be an overall reduction in groundwater pumpage of about 400 acre-feet per year. This would be beneficial to the local groundwater supplies. The full report is included in Section 3.0 Errata.

The DEIR's conclusion that the Project's onsite groundwater usage would be less than existing conditions, is based on several factors, most notably the fact that the Project's onsite groundwater usage would be less than existing conditions. At full build-out, total water demand for the Project would be approximately 255.8 AFY. Since at least 2020, less than half of the City's water supplies have derived from groundwater pumping; instead, most of the City's supplies come from the City's surface water rights or stored water. In other words, actual groundwater usage following the completion of the Project will be less than half (*i.e.*, less than 127.9 AFY, and decreasing over time) of the Project's total consumptive water use. As such, the Project's groundwater usage will be less than historic groundwater usage at the site as estimated in either the Schmidt Report or the WSA. Moreover, the proportion of the City's water supply needs that will be served by groundwater extractions will continue to decrease through at least 2030. In addition, unlike the historic agricultural uses on the Property, the City's water supplies do not draw from onsite wells, but rather from wells located in other locations within and around the City of Clovis. Further, a significant amount of the site will remain pervious (i.e. landscaping front and backyards, parks, open space, etc.). To the extent that runoff occurs offsite because of impervious surfaces, groundwater recharge associated with runoff would occur in nearby FMFCD stormwater facilities. The presence of hardpan soils in some of the geotechnical bore samples at the project site was provided in the DEIR for appropriate context. However, the presence of hardpan was not the basis for the DEIR's conclusion that the project would have a less than significant impact on groundwater recharge. Because the project's groundwater usage is less than the status quo (*i.e.*, the pecan orchard), the Project would not impede sustainable groundwater management under the applicable GSA or result in any potentially significant impacts related to groundwater resources.

Master Response 6: Access: Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road (Stanford/Perrin), and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway at Stanford/Perrin is a requirement of the City of Clovis Fire Department, it provides secondary access to only the101 lot gated subdivision. The driveway at Stanford/Perrin will be an exit only driveway to the 101-lot gated subdivision and will provide emergency access. Because this point has limited access to major thoroughfares, it is not anticipated to generate significant traffic and the TIA has estimated approximately 10% to use this egress. As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage.

Master Response 7: Traffic generation: The project proposes to construct 605 single-family residences. The surrounding areas in the neighborhood also mostly constitute of similar single-family residential developments. Additionally, several new projects within the area also proposes single-family residential developments. As such, the project does not propose any land use atypical to the area, or any land use that is estimated to change the neighborhood traffic pattern. Therefore, trip generation and distribution pattern from the project is also expected to be similar to the neighborhood trip patterns. In fact, implementation of recommended improvements as included in the TIA would help alleviate traffic congestion and safety related issues within the project vicinity, as well as existing and future residential communities in the area. As stipulated by statutory directives in SB743, congestion is not an environmental impact and the City is voluntarily addressing these issues only to help the public better understand. The project would be conditioned to require construction of improvements, payment of Development impact fees and Regional Transportation Mitigation fee and payment of fair-share contributions towards improvements not included in any existing fee programs.

Master Response 8: Traffic volume: The TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

Master Response 9: Pedestrian and Cyclist Traffic: The project will be implementing several project design features that will help eliminate gaps in the pedestrian circulation network around the project site. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue and Shepherd Avenue, Fordham Avenue, and Heirloom Avenue and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings have been recommended to enhance, pedestrian safety in the neighborhood. This includes a signal that has been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), which will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location.

In addition, Shepherd Avenue will be constructed curb to curb between Sunnyside and Fowler Avenue including a trail/sidewalk along the north side of Shepherd Avenue and bike lanes along this segment of Shepherd Avenue. This will enhance both vehicular safety and pedestrian safety along this corridor.

Master Response 10: Traffic calming/Improvements: the project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

Master Response 11: Safety for children playing: The project will be implementing several project design features around the project site that will improve safety for children. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue, Shepherd Avenue, Heirloom Avenue, and Fordham Avenue, and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location. As such, implementation of the signal and said sidewalks would help address speeding and safety issues along these corridors.

Master Response 12: Fire gate: The project will have four separate access points. As such, in case of any fire related events, Firefighters can access the project through multiple access points around the project site. Therefore, the project is not estimated to have any fire related access concerns.

Master Response 13: Traffic on Stanford, Perrin, Ticonderoga, and Fowler: The project is estimated to add only nominal trips to the local roads including Stanford, Perrin, and Ticonderoga. Similarly, it is estimated to add nominal trips to Fowler Avenue north of Shepherd Avenue. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue. Based on the TIA, only 15 percent of project traffic is anticipated to utilize Fowler Avenue heading south of Shepherd Avenue towards SR-168. As such, the project is not estimated to create any traffic related issues along the local streets or Fowler Avenue. A signal at the intersection of Fowler Avenue/Teague Avenue is in the City's Development Impact Fee program and will be constructed when warranted but not as a requirement of the project. It should be noted that the segment of Fowler Avenue between Ticonderoga and Shepherd Avenue is forecast to operate at a deficient LOS under Cumulative (2046) without and plus project conditions. However, this segment is designated as a Rural collector (2-lanes) in the City's General Plan Circulation Element, and already constructed as per the General Plan Circulation Element designation. Additionally, the project is not estimated to add any traffic at this segment during either peak hours. Therefore, no improvement has been recommended for this roadway segment.

Master Response 14: Annexation, SOI Expansion, and the Provision of City Services: Annexations and Sphere of Influence (SOI) expansions are regulated by the Cortese-Knox-Hertzberg Local Government Reorganization Act. (DEIR p.3.10-3 through 3.10-4) The regulations establish procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. In approving an annexation, the Local Agency Formation Commission (LAFCo) will consider the following factors:

- Population and population density; land area and land use; per capita assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas; and the likelihood of significant growth in the area and in adjacent incorporated and unincorporated areas during the next ten years.
- The need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for those services and controls; and the probable effect of the proposed incorporation, formation, annexation, exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas.
- The effect of the proposed action and of alternative actions on adjacent areas, on mutual social and economic interests, and on the local government structure of the county.
- The conformity of both the proposal and its anticipated effects with both the adopted commission policies on providing planned, orderly, and efficient patterns of urban development, and the policies and priorities set forth in Government Code section 56377.
- The effect of the proposal on maintaining the physical and economic integrity of agricultural lands, as defined by Government Code section 56016.

- The definiteness and certainty of the boundaries of the territory, nonconformance of proposed boundaries with lines of assessment or ownership, creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.
- Consistency with city or county general and specific plans.
- The sphere of influence of any local agency that may be applicable to the proposal being reviewed.
- The comments of any affected local agency.
- The ability of the newly formed or receiving entity to provide the services that are the subject of the application to the area, including the sufficiency of revenues for those services following the proposed boundary change.
- Timely availability of water supplies adequate for projected needs as specified in Government Code section 65352.5.
- The extent to which the proposal will affect a city or cities and the county in achieving their respective fair shares of the regional housing needs, as determined by the appropriate council of governments consistent with Housing Element laws.
- Any information or comments from lawmakers.
- Any information relating to existing land use designations.

In addition to the above factors, LAFCo may also consider any resolution raising objections to the action that may be filed by an affected agency; and any other matters which the commission deems material.

In Fresno County, including the City of Clovis, the Fresno LAFCo is responsible for coordinating orderly reorganization to local jurisdictional boundaries, including annexations. (DEIR p. 3.10-6 through 3.10-9). Any annexation of the Project site to the City is subject to LAFCo approval, and LAFCo will review proposed annexations for consistency with LAFCo's Annexation Policies and Procedures.

Fresno LAFCo has adopted Policies and Procedures for Annexation and Detachment to and from all agencies within their jurisdiction. It is Fresno LAFCo policy (102-01) that "within the sphere of influence each agency should implement an orderly, phased annexation program. A proposal should not be approved solely because the area falls within the sphere of influence of an agency." The City of Clovis follows the Policies and Procedures for Annexation and Detachment when annexing land into the City. LAFCo recommends that each local agency fulfill this policy through the exercise of several basic principles and actions that are outlined on page 3.10-6 through 3.10-9 of the DEIR.

The DEIR includes an evaluation of the Project's consistency with the LAFCo policies on page 3.10-26 through 3.10-30 of the DEIR. The DEIR indicates that Fresno LAFCo will review the proposed annexation for consistency with the Annexation Policies and Procedures. The DEIR presents the following policies that will be reviewed as part of the annexation process by the Fresno LAFCo, and provides a specific project discussion for each.

1. The annexation program is consistent with LAFCo's Sphere of influence (SOI) for the City.

Suggested actions:

- City and county shall reach agreement on development standards and planning and zoning requirements within the sphere to ensure that development within the sphere occurs in a manner that reflects the concerns of the affected City and is accomplished in a manner that promotes the logical and orderly development of areas within the sphere. GC §56425

- City responds to a request to extend service outside of its City limits and SOIs in consultation with GC §56133 and Fresno LAFCo policy.

Project discussion:

The proposed Project includes an amendment of the City's SOI to include the entirety the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno LAFCo. The SOI amendment would be reviewed by the City and LAFCo prior to proceeding with the requested annexation. If the SOI Amendment is approved, the Project would then be able to begin the annexation process.

2. The annexation program clearly implements the City's general plan.

Suggested actions:

- City annexation applications shall describe how the proposal implements the City's general plan, and support these statements with information from other official sources such as the annual budget, capital improvement plan, and so forth.
- A prezoning ordinance shall not be encumbered with extraneous conditions that preclude the ordinance's effective date by the time of LAFCo hearing on the annexation.

Project discussion:

The proposed Project includes the adoption of pre-zoning for the proposed annexation area, which will serve to regulate the uses of land and structures within the Project area. The Project site is currently located outside of the Clovis City limits, and therefore does not have City-designated zoning. The proposed Project includes a request for Development Area pre-zoning (which is consistent with the proposed General Plan Land Use designation). The pre-zoning request is for Single-Family Planned Residential Development Zoning (R-1-PRD) zoning designation over the Development Area lots. The R-1-PRD district is consistent with the proposed Medium-High Density Residential land use designation of the General Plan. The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-9. The Project will be subject to the development standards as described in the Municipal Code. The Municipal Code is proposed to ensure consistency between land use and zoning designations.

3. The annexation program emphasizes the use of cities' resolution of application versus property owner/registered voter petitions.

Suggested action:

- For the City to consider opposing property owner petition-initiated reorganizations as these would not have proceeded through the process of City development review and approval, which is an important step in the management of a City's general plan.

Project discussion:

No opposing property owner petition-initiated reorganizations exist for this Project.

4. The annexation program supports orderly growth by identifying areas to be annexed, general time frames for growth, and a plan for extension of services to these areas.

Suggested actions:

- Capital improvement plan and/or facilities plans include all lands within the SOI;
- Development impact fees that fund the extension of services are established and maintained;
- Impacts to service delivery are assessed in the City's EIR or project-specific CEQA documents and appropriately-scaled mitigation is approved and implemented.
- The City coordinates its public policy documents in support of the annexation program.

Project discussion:

The Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan.

5. The annexation program anticipates changes of organization of existing service districts and service areas in the SOI or adjacent to the SOI.

Suggested action:

- The Program should describe the transition of services that will occur when the City annexes/detaches (CID, NCFPD, FCFPD, KRCD, etc.); inversely, the document describes the status of or continuation of services when annexations do not result in detachment (FID, FMFCD, etc.).

Project discussion:

As noted previously, the Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan.

6. The annexation program anticipates the location of Disadvantaged Unincorporated Communities within a City's sphere of influence.

Suggested action:

- Cities should become proficient in implementing their responsibilities under Senate Bill 244, should review Fresno LAFCo DUC policy and review Senate Bill 244 Technical Advisory.

Project discussion:

The Project site is not located in or adjacent to a Disadvantaged Unincorporated Communities.

7. The annexation program informs citizens in annexation areas of their rights, benefits, and changes that will occur on annexation.

Suggested actions:

- City to establish and maintain on its website a description of the information above, how citizens can engage the process, how the City engages citizens and stakeholders and other information related to annexation. This information should include a description of the SOI, protest processes, and how LAFCo is involved.
- For those portions of a City's SOI that contain a large number of rural residential parcels that are planned for urban uses, the City is strongly encouraged to develop a long-term plan to annex and serve these areas.

Project discussion:

As noted previously, the Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan. It is noted, however, the proposed annexation area was not included in the City's latest Municipal Service Review.

8. The annexation program will be coordinated with LAFCo's Municipal Services Review (MSR) for the City.

Suggested action:

- City applications should include an assessment of current MSR determinations and recommendations.

Project discussion:

As noted previously, the Draft EIR assesses service capacity and demands for utilities services and public services. There are not any service deficiencies noted by the City of Clovis, or contained within this EIR that are anticipated to occur after installation of infrastructure. The Project site is also designated for residential uses by the City's General Plan. It is noted, however, the proposed annexation area was not included in the City's latest Municipal Service Review.

9. The annexation program is managed by an assigned and responsible City staff member.

Suggested action:

- City identifies a staff member to serve as a genuine point of contact with LAFCo, that is, a staff member responsible and accountable for managing applications, knowledgeable of the project and of LAFCo's process, and empowered to facilitate the City's annexation program.

Project discussion:

This requirement applies to the City and not individual development projects.

H10. City entitlement analysis is integrated with LAFCo policies

Suggested action:

- Local agencies, including Fresno County, are strongly advised to include Fresno LAFCo in their initial request for comments.

- When initial planning applications that will eventually require annexation are submitted to cities, they are encouraged to submit a pre-application to LAFCo so that LAFCo can track the project at its beginning and provide comments that would facilitate annexation in time for these to be considered in a timely and efficient manner.

Project discussion:

> This City has coordinated with LAFCo through the release of the Notice of Preparation and invitation to the Scoping meeting. The City will ultimately coordinate with LAFCo if the City decides that the Project site should be annexed into the City of Clovis. At that time, the City would submit the appropriate applications and documentations for LAFCo's consideration of the City's annexation approval.

The DEIR indicates that the policies discussed above are intended to ensure orderly reorganization to local jurisdictional boundaries, including annexations. Ultimately, LAFCo will determine whether the proposed annexation would first require an update to the *Clovis Municipal Service Review* in order to approve the annexation. This LAFCo policy was not specifically adopted to avoid or mitigate an environmental effect, rather it is intended to ensure orderly and logical reorganization to local jurisdiction boundaries, including annexations. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts. As such, implementation of the proposed Project will have a less than significant impact relative to this topic.

It is noted that several comments received by the City suggested that an SOI expansion of the non-development area should include extension of City services (i.e., water/sewer) to the areas. For clarification, the non-development area is not proposed for annexation into the City. Rather, it is proposed to be included in the City's SOI, which would make it eligible for annexation at some future time. A future annexation of the non-development area would require the property owners of those parcels to organize and agree to be annexed into the City, which has not been done as part of the current proposal. Additionally, it does not appear that the current sentiment from parcel owners in the non-development area would be supportive of annexation into the City at this time. It is noted, however, that the SOI expansion, which does not require the approval of the parcel owners, would allow for future annexation of the non-development area into the City of Clovis if desired by the property owners at some later date. If the SOI expansion were approved, the non-development area would remain in the unincorporated County, but would be within the City's SOI. If annexed at some future time, the parcels could be served by City water and sewer. However, annexing these parcels and providing City water and sewer services is not currently proposed.

Master Response 15: Neighborhood Meeting: There are certain mandated meetings that are required under procedures provided in the California Environmental Quality Act. The first is a public scoping meeting when an EIR is to be prepared. The City of Clovis circulated a Notice of Preparation (NOP) of an EIR for the proposed Project on May 9, 2022 to the State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, Organizations and Interested Persons. A public scoping meeting was then held on May 25, 2022 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and comments received on the NOP by interested parties are presented in Appendix A.

Several comments were provided to the City regarding a neighborhood meeting that was administered by the Applicant. This is not procedurally a meeting that is held under CEQA for the purposes of preparing an EIR, and it was not a meeting that was sponsored by the City staff. The City staff was made aware of the meeting through email communication from citizens/neighbors requesting answers to their questions. Instead, the meeting was organized and facilitated by the Applicant and their team. The City staff was in attendance and does consider that meeting part of the City's administrative record on this application.

Master Response 16: Parks/Greenspace: There were comments provided regarding the lack of planned parks, trails, sidewalks, and greenspace. Section 2.0 Project Description presents the parks/greenspace that is proposed, and Section 3.12 Public Services and Recreation provides an analysis of the proposal relative to the park requirements.

It should be noted that the proposed Project includes the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks as described in DEIR Section 2.0 Project Description. The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the Dry Creek Trail and Clovis Old Town Trail to the south.

As described on page 3.12-5, the Clovis General Plan establishes a goal of four acres of parkland per 1,000 residents, which exceeds the requirement set forth by the Quimby Act. Page 3.12-24 through 3.12-25 includes an analysis of the proposed Project relative to the City's parkland requirements. The DEIR indicates that the Project is estimated to increase the population by 1,700 residents (based on 2.81 persons per household), and that the proposed parkland offered by the Project would not provide the park land needed to meet the four acres per 1,000 people. However, the DEIR references the Municipal Code Chapter 3.4, Park Acquisition and Development, which states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. As a results of the requirement, the Project will dedicate the proposed parkland and pay an in-lieu fee for the difference in accordance with the Clovis Municipal Code Chapter 3.04. This is consistent with State law and the City's requirements for parkland dedication and in-lieu fee payments for parkland.

Master Response 17: Noise: Comments were provided regarding increased noise from traffic, construction (i.e., cement/asphalt), and that the existing neighborhood is quiet and will change dramatically.

Effects of Noise on People and Ambient Noise: The DEIR discusses the fundamentals of noise on page 3.11-2, and provides examples of typical noise levels associated with various activities in Table 3.11-1. Page 3.11-3 through 3.11-4 provide a discussion of the effects of noise on people, which can be broken down into the following three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

The DEIR indicate that environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. The DEIR states that there is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

The DEIR indicates that an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a 1 dB change cannot be perceived;
- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference;
- A change in level of at least 5-dB is required before any noticeable change in human response would be expected; and
- A 10-dB change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

Existing noise levels is discussed on page 3.11-4. Noise data indicates that traffic along Shepherd Avenue is the primary source of noise impacting the Project site and the adjacent uses. The results of the short-term noise data are presented in Table 3.11-2 on page 3.11-4 of the Draft EIR. To quantify the existing ambient noise environment in the Project Vicinity, three 15-min ambient noise measurements were conducted at or near the Project site. The noise measurements were taken to determine the existing ambient noise levels. Noise data indicates that traffic along Shepherd Avenue is the primary source of noise impacting the Project site and the adjacent uses. Noise data shown in Table 3.11-2 indicates the ambient noise level ranged from 46 to 69 dBA Leq at the Project site. Maximum levels reached up to 82 dBA as a result of traffic of heavy trucks along Shepherd Avenue.

Traffic Noise: An analysis of operational noise associated with the Project is presented on page 3.11-5 through 3.11-19. Table 3.11-9 presents the existing plus project noise levels along various roadways. As noted on page 3.11-5 of the DEIR, A change of 3 dB or more is required to have a perceptible difference in noise levels. The DEIR identifies Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue as having the potential for a significant impact with an increase of more than 3 dB. There are no other potentially significant impacts identified from traffic noise increases of 3dB or more.

The DEIR discusses cumulative traffic noise on pages 3.11-20 through 3.11-22. Tables 3.11-9 and 3.11-10 compare the without and with project scenario and shows the change in traffic noise levels as a result of the proposed Project. Again, it takes a change of 3 dB or more to hear a perceptible difference. The analysis shows that the Cumulative 2046 scenario has a maximum change in noise level of 0.7 dBA CNEL. Sunnyside Avenue from Project Intersection 1 to Shepherd Avenue has a 0.5 dBA CNEL change. Future residential uses will be in the normally compatible level along that segment. Therefore, a less than significant impact would occur with regard to this cumulative impact.

Construction Noise: An analysis of construction noise associated with the Project is presented on page 3.11-19 through 3.11-20. The DEIR indicates that during the construction of the Project, including roads, water, sewer lines, and related infrastructure, noise from construction activities would add to the noise environment in the Project vicinity. Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the Project vicinity. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Noise levels will be the loudest during the grading phase.

The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences. Unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave.

The DEIR also indicates that noise reduction policies within the General Plan and standards within the Municipal Code are provided to further reduce construction noise. Mitigation Measure 3.11-3, presented on page 3.11-20 of the DEIR, embodies a preexisting legal requirement from City of Clovis Municipal Code Section 5.27.604 that ensures that construction activities are performed within specific hours. Mitigation Measure 3.11-4, also presented on page 3.11-20 of the DEIR, provides specific requirements for attenuating noise during construction. With implementation of the Mitigation Measure 3.11-3 and 3.11-4, the potential impacts of construction noise are reduced to a less than significant level.

Master Response 18: Aesthetics/Lights: Comments were provided regarding the change of agricultural and rural character, increase in the presence of people in the area, increased lighting, and also regarding the visual presence of two-story homes backing up to existing homes.

Visual Character: The visual character of the Site is discussed on page 3.1-4 of the DEIR. Here the region and vicinity are described as follows: The City of Clovis is in California's San Joaquin Valley, and like most communities in the region, features a flat landscape organized around an orthogonal system of roadways. Due to its rapid growth in recent years and its adjacency to the City of Fresno, Clovis has a largely suburban character. A majority of the City's land area is devoted to low density residential neighborhoods. However, because the community has grown from a small farming town and is still surrounded by agricultural land uses on three sides, it retains a rural atmosphere. The suburban/rural interface is most prominent on the City's eastern, southeastern, and southern edges. In these locations, new housing subdivisions are sited between working farms and large residential estate lots of two to five acres. The SOI beyond the City's Limits to the east, northeast, and north is dominated by agricultural uses and undeveloped open spaces. The Project site is located in the north, and the immediately surrounding area is best characterized as a mix of agricultural, suburban residential, and large estate lots with existing residences.

The impact on the visual character is evaluated in the DEIR on pages 3.1-10 through 3.1-13. Here the proposed Project is described as involving an expansion of the City's Sphere of Influence (SOI) to add approximately 155 acres into the City of Clovis' SOI, including the annexation/reorganization of the proposed 77-acre Development Area to develop 605 single-family detached units, open space totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements. The DEIR indicates that the non-Development Area includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development and no new development or improvements are proposed as part of this proposed Project for the Non-development Area. The DEIR concludes that the existing visual character of the Non-development Area would not change as part of this proposed Project.

The DEIR indicates that development of the proposed Project would convert the 77-acre Development Area from its existing use as primarily agricultural land to a residential neighborhood. The neighborhoods within the Development Area would include a network of streets to provide an efficient flow of traffic through the area. Other uses to support and compliment the proposed residential development include underground (non-visible) wet and dry utility infrastructure, roadways with curb/gutters/sidewalks, bicycle/pedestrian facilities, street lighting, and street signage.

The Project site is not designated as a scenic vista by the City of Clovis General Plan or the Fresno County General Plan, nor does it contain any unique or distinguishing features that would qualify the site for designation as a scenic vista. However, the City's General Plan EIR considers Shepherd Avenue a scenic corridor under the General Plan Open Space and Conservation Element. The City's General Plan EIR notes that new development will impact current views of open space, which are primarily vistas of agricultural fields and orchards. These public views are primarily available to motorists traveling along roadways which bound the Development Area. Implementation of the proposed Project would change the existing visual character of the Development Area from a primarily agricultural site to a developed suburban neighborhood. These impacts related to a change in visual character may be considered "attractive" to one viewer and "unattractive" to other viewers. It is noted that the Clovis General Plan EIR concluded that adoption of the General plan which contemplated urbanization of the agricultural lands within the General Plan study area, was a less than significant environmental impact.

The Draft EIR references Policy 2.3 of the Clovis General Plan Update's Open Space and Conservation Element, which gives substantial consideration to the preservation of scenic vistas, corridors, and scenic resources, such as maintaining public views of open spaces, parks, and natural features; enhancing views along roadways and trails; preserving Clovis' viewshed of the surrounding foothills; and orienting new development to capitalize on views of the Sierra Nevada. Chapter 9 of the Clovis Development Code also establishes requirements for fences, walls, and hedges to ensure that these elements minimize screening of scenic views and sunlight by outlining provisions such as height limitations, design and construction materials, site plan review requirements, allowable fencing materials, etc. per Section 9.24.060 (Fences, Walls, and Hedges); and screening and buffering requirements of adjoining land uses, utility equipment, and refuse areas are detailed in Section 9.24.090 (Screening and Buffering). Development in accordance with these code requirements would ensure that the implantation of the proposed Project would not have a substantial adverse impact on scenic vistas, corridors, or resources in the City of Clovis.

The Draft EIR indicates that the Project site currently consists primarily of agricultural lands, primarily a pecan orchard that is currently being removed due to the tree mortality. The DEIR states that the agricultural land provides visual relief from urban and suburban developments, and helps to define the character of a region. The proposed Project would develop the last remaining property in agricultural use in an area surrounded by urban and Rural Residential uses. Supporting infrastructure would be extended to the area, which would result in the permanent loss of these agricultural uses. The DEIR indicates that under some circumstances, loss of agricultural lands could have an adverse cumulative impact on the overall visual character and quality of a region, but that the orchard portion of the Project site is an island of agricultural land use surrounded by developed homes to the east, north, and south, and an entitled residential subdivision to the west. What this means is that the orchard is a relic agricultural piece of property that has remained intact and operational despite the properties in the immediate surrounding aesthetically changing to suburban residential aesthetic. The DEIR indicates that the proposed Project would change the existing aesthetic of the Project site to be consistent with the urban landscaping theme established for Shepherd Avenue by the City of Fresno and its urban projects as well as the City of Clovis and its urban projects that generally continues that urban landscaping theme along Shepherd Avenue. With few exceptions, both cities have required residential projects to construct a uniform 6 ft. tall concrete block wall setback at least 30 feet from the street with landscaping, sidewalks and bike lanes. Trees of a small to medium size and a variety of shrubs create a generally consistent shared landscape theme by both cities.

The DEIR also indicates that a change in the visual character of a project site does not necessarily mean the visual character of the project site or the surrounding area will be degraded. The Project applicant has submitted a conceptual plan for the project detailing the Shepherd Avenue and open space landscaping for the proposed developed prepared by a licensed landscape architect. That conceptual landscape plan includes visual components that will enhance the appearance of the neighborhood once developed similar to those constructed by adjacent residential projects along Shepherd Avenue. These improvements include landscaping improvements like new street trees and other neighborhood greenery along Shepherd and Sunnyside Street frontages of the Project. The proposed Project would also result in the construction of park and open space areas which provides some visual relief within residential subdivisions. While implementation of the proposed Project would change the existing visual character of the area, the development components of the subdivisions are in alignment with the City's requirements for residential subdivisions in the region.

The DEIR indicates that development within the Project site is required to be consistent with the General Plan and the Clovis Zoning Ordinance, which includes design standards. The City of Clovis zoning ordinance and ministerial permits design, construction and maintenance standards will ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design, construction, and maintenance requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel similar to that of the surrounding urban uses.

The loss of the visual appearance of the agricultural land on the site will change the visual character of the Project site in perpetuity, which some people are expected to view as a loss of an isolated visually attractive amenity. Compliance with the requirements within the General Plan, as well as the Municipal Code (specifically Title 7 Public Works, Title 8 Building Regulations, Title 9 Development Code, and Title 10 Parks and Recreation), for the design, construction, and maintenance of the project will be required. Title 9 Development Code Division 3 includes a series of Development and Operational Standards that are aimed at creating uniform performance standards which are designed to minimize and mitigate the potential impacts of development within the City and promote compatibility with surrounding areas and land uses. These standards cover topics such as exterior light and glare (Section 9.22.050), fences, walls, and hedges (Section 9.24.060), height measure and height limit exceptions (9.24.080), screening and buffering (Section 9.24.090), setback regulations and exceptions (Section 9.24.100), landscaping standards (Chapter 9.28), tree protection standards (Chapter 9.30), and signs (Chapter 9.34). Some of these standards and requirements from pre-existing regulations are implemented after Project entitlement when more detailed site planning, engineering, and architecture is performed. The final approval of these items is ministerial. Some examples of requirements that the Project will follow are:

1. The Project will be required to submit and obtain approval form the City of Clovis of a comprehensive landscape and irrigation plan prepared by a licensed landscape architect that is in substantial conformity with the submitted project conceptual landscaping plan, entry treatment and park improvements. The City of Clovis ministerial permits for landscaping, irrigation and grading will assure said landscaping and irrigation complies with applicable state and local plant type and irrigation and grading standards.
2. The Project will be required to annex into a City of Clovis landscaping lighting and maintenance district (LLMD) that will assure that all landscaping and lighting within the public easements along Shepherd and Sunnyside Avenues are properly maintained in manner acceptable to the City of Clovis.
3. The Project will form a common interest association for the purpose of, among other things, common area maintenance. Said maintenance will be at the Project owner's expense. The common interest association will be subject to California Department of Real Estate operational and financial surety requirements.
4. Each Project lot will be subject to the City of Clovis requirement that a Residential Site Plan Review be submitted and approved by the City of Clovis. The Residential Site Plan Review process will require, among other things, that all lots meet applicable development standards; share a

compatible architectural, landscaping and color scheme and conform to mandatory grading and drainage standards.

The Municipal Code implements the policies of the Clovis General Plan by classifying and regulating the uses of land and structures within the City of Clovis. The Municipal Code is adopted to protect and to promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses in the City. These existing requirements provide standards for the orderly growth and development of the City to establish and maintain the community's history and quality characteristics in appropriate locations. It requires high quality planning and design for development that enhances the visual character of the City, avoids conflicts between land uses, encourages the appropriate mix of uses, and preserves the scenic qualities of the City. It also creates a comprehensive and stable pattern of land uses upon which to plan sewerage, transportation, water supply, and other public facilities and utilities. Overall, these mandatory requirements are deemed effective in reducing potential visual impacts. This is particularly true here where the project site is an isolated and remnant agricultural use surrounded by residential and rural residential land uses. Therefore, the Project's potential to adversely impact aesthetics is considered less than significant.

<u>Light:</u> Light is addressed on page 3.1-3, and 3.1-14 through 1.1-15 of the DEIR. The DEIR notes that the proposed Project involves the development of up to 605 single-family residential units, open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements. The DEIR indicates that several roadways would be constructed within the Development Area to serve the proposed single-family residential uses and that these roadways would result in the introduction of street lighting into a currently undeveloped site. The DEIR indicates that the proposed single-family residential uses and local roadway would be typical of what is already experienced as a result of the existing single-family residential uses and local roadways that occur within the surrounding area. The proposed single-family residential uses would be an extension of single-family residential uses adjacent to the Project site.

The DEIR indicates that the proposed Project would be required to implement existing City regulations aimed at reducing light impacts to ensure that no unusual nighttime lighting is produced. Specifically, Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. The DEIR indicates that while implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light, the impacts would not be eliminated entirely, and the overall level of light and glare in the Project site would increase in general as urban development occurs.

Overall, the proposed Project would introduce new sources of nighttime lighting within the Project site that do not currently exist. However, it is noted there are no specific features within the proposed Project that would create unusual light and glare. Light sources from the proposed Project can have an adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, light sources can create light spillover impacts on surrounding land uses in the absence of a lighting plan that includes photometrics of the lighting. Any new lighting associated with implementation of the proposed Project would be pedestrian-scale lighting and the fixtures would be consistent with the style and technical specifications approved by the City, including compliance with the City's light and glare regulations under Section 9.22.050 of the Clovis Development Code, which requires that light be shielded so that light does not spill onto adjacent properties. The City's existing requirements require a lighting plan to be submitted to the City for review and approval for the improvement plans, as well as for the building plans. All proposed outdoor lighting is required to meet applicable City standards regulating outdoor lighting, including 9.22.050 Exterior light and glare of the City's Development code, in order to minimize any impacts resulting from outdoor lighting on adjacent properties. Implementation of the existing City standards would reduce potential impacts associated with nighttime lighting and light spillage onto adjacent properties to a less than significant level.

<u>Two Story Homes:</u> Comments were received regarding concerns that two story houses would back up to their houses. It is noted that the project is not proposed as a pre-plotted subdivision that identifies specific housing architecture or floor plans on each lot. For example, we do not have any knowledge of whether a one- or two-story residence would be built backing up to the commenter's residence. The zoning code dictates the development standards for zones throughout the City, and it will dictate the standards that apply to the proposed subdivision. One- and two-story residences are allowed up to the height limits defined in the zone. The concept of limiting the height of homes backing up to the commenter's residence can be presented as a concept for the Applicant to consider, but City's zoning code does not restrict the height to a one story. This concern does not present an environmental impact pursuant to CEQA.

Master Response 19: Air Quality, GHG, Energy: Air Quality is addressed in DEIR Section 3.3 Air Quality, GHG and Energy is addressed in DEIR Section 3.7. The analysis utilized the California Emission Estimator Model (CalEEMod)™ developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with California air districts, was used to estimate emissions for the proposed Project. Project buildout was assumed to be completed in 2028, consistent with the Transportation Impact Analysis, prepared by LSA (LSA, 2023). The DEIR indicates that this may prove to be a conservative estimate because criteria pollutant emission rates are reduced over time (due to state and federal mandates) and would be expected to be even lower than reported in the analysis, should the Project buildout be completed after 2028. Table 3.3-6 located on page 3.3-27 of the DEIR indicates that operational emissions would not exceed any of the SJVACPD operational thresholds of significance.

The DEIR also evaluated the effects of the Project on public health, where it found that the increases of pollutants generated by the proposed Project are not on their own likely to generate an increase in the number of days exceeding the NAAQS or CAAQS standards, based on the size of the proposed Project in comparison to Fresno County as a whole. However, the DEIR indicates that the increases in ROG and NOx generated by the proposed Project when combined with the existing ROG and NOx emitted regionally, would affect people, especially those with impaired respiratory systems located in the immediate vicinity of the Project site. Nevertheless, the proposed Project's operational criteria pollutant would not exceed the applicable SJVAPCD thresholds of significance. Therefore, the Project's criteria pollutant emissions would be considered to have a less than significant impact.

The DEIR also evaluated construction emissions, which represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Air quality impacts can nevertheless be acute during construction periods, resulting in significant localized impacts to air quality. Construction-related activities would result in Project-generated emissions from demolition, site preparation, grading, paving, building construction, and architectural coatings.

If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for construction-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation are required to be implemented to reduce emissions. Table 3.3-7 on page 3.3-30 of the DEIR shows the maximum construction emissions would not exceed the SJVAPCD thresholds of significance. Nevertheless, regardless of emission quantities, the SJVAPCD requires construction related control measures in accordance with their rules and regulations. Implementation of these control measures (provided in on page 3.3-31 of the DEIR) would further reduce proposed Project construction related emissions to the extent possible.

The DEIR indicates that the project is located in an area that is designated attainment and attainment-unclassified for carbon monoxide, and that substantial concentrations of carbon monoxide are not expected at or along any streets or intersections affected by the development of the Project site. Impacts associated with carbon monoxide hotspots would be less than significant, and no additional mitigation is required.

GHG and Energy is analyzed in Section 3.7 of the DEIR. The DEIR indicates that the Project, including the off-site improvements, would be consistent with the plans, policies, regulations, and GHG emissions reduction actions/strategies outlined in the 2022 Scoping Plan Update, the Fresno COG's 2022 RTP/SCS, and the Clovis General Plan. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions as described above would not result in a significant impact on the environment. Therefore, Project-related impacts related to GHG emissions would be less than significant relative to this topic.

The proposed Project would use energy resources for the operation of Project buildings (electricity), outdoor lighting (electricity), for on-road vehicle trips (e.g. gasoline and diesel fuel) rerouted by the proposed Project, and from off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through statewide and local measures.

The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has achieved at least a 33% mix of renewable energy resources in 2020 and is on track to achieve 60% mix of renewable energy by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the thresholds as described by the CEQA Guidelines. This is a less than significant impact.

FRESNO IRRIGATION DISTRICT
EST. 1920

2907 S. Maple Avenue
Fresno, California 93725-2208
Telephone: (559) 233-7161
Fax: (559) 233-8227

CONVEYANCE. COMMITMENT. CUSTOMER SERVICE.

August 1, 2023

Mr. George Gonzalez
City of Clovis
Department of Planning and Development Services
1033 Fifth Street
Clovis, CA 93612

RE: Notice of Availability of a Draft EIR for the Shepherd North Project, Clovis, CA
N/E Shepherd and Sunnyside avenues

Dear Mr. Gonzalez:

The Fresno Irrigation District (FID) has reviewed the Notice of Availability of a Draft EIR for the proposed Shepherd North Project led by the City of Clovis, APNs: 557-021-19, 20, & 21. The project site is approximately 155-acres and includes an approximate 77-acre Development Area and an approximate 78-acre Non-Development Area. The development area includes parcels that will be annexed and will be entitled for subdivision and development of up to 605 residential units, parkland, and private infrastructure. FID has the following comments:

1. FID previously reviewed and commented on the proposed project on June 7, 2022, as Notice of Availability of a Draft EIR for the Shepherd North Project. The comments and conditions still apply and a copy has been attached for your review.

A-1

Thank you for submitting this for our review. We appreciate the opportunity to review and comment on the subject documents for the proposed project. If you have any questions, please feel free to contact Jeremy at (559) 233-7161 extension 7407 or jlandrith@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment

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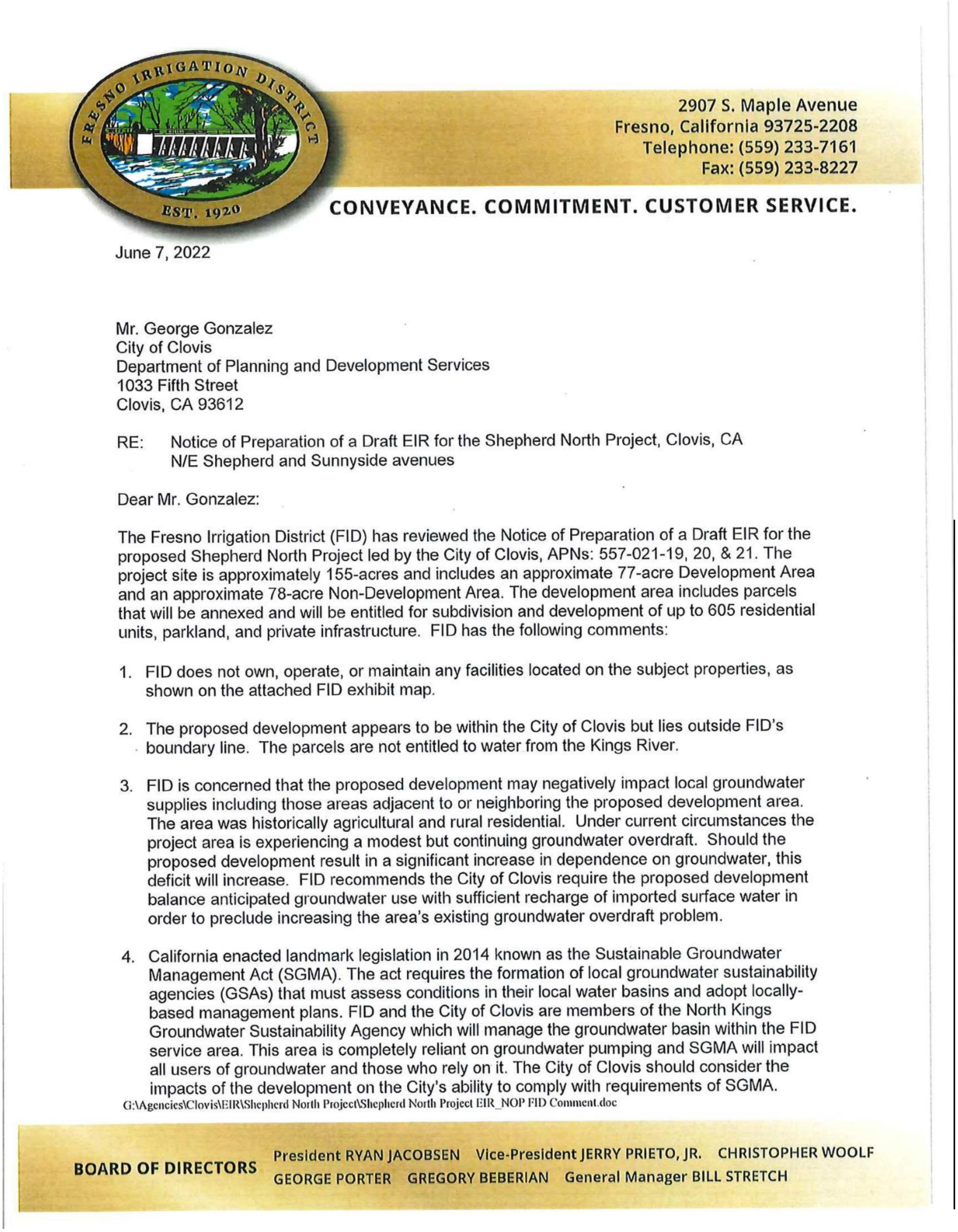

FRESNO IRRIGATION DISTRICT
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2907 S. Maple Avenue
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CONVEYANCE. COMMITMENT. CUSTOMER SERVICE.

June 7, 2022

Mr. George Gonzalez
City of Clovis
Department of Planning and Development Services
1033 Fifth Street
Clovis, CA 93612

RE: Notice of Preparation of a Draft EIR for the Shepherd North Project, Clovis, CA
N/E Shepherd and Sunnyside avenues

Dear Mr. Gonzalez:

The Fresno Irrigation District (FID) has reviewed the Notice of Preparation of a Draft EIR for the proposed Shepherd North Project led by the City of Clovis, APNs: 557-021-19, 20, & 21. The project site is approximately 155-acres and includes an approximate 77-acre Development Area and an approximate 78-acre Non-Development Area. The development area includes parcels that will be annexed and will be entitled for subdivision and development of up to 605 residential units, parkland, and private infrastructure. FID has the following comments:

1. FID does not own, operate, or maintain any facilities located on the subject properties, as shown on the attached FID exhibit map.
2. The proposed development appears to be within the City of Clovis but lies outside FID's boundary line. The parcels are not entitled to water from the Kings River.
3. FID is concerned that the proposed development may negatively impact local groundwater supplies including those areas adjacent to or neighboring the proposed development area. The area was historically agricultural and rural residential. Under current circumstances the project area is experiencing a modest but continuing groundwater overdraft. Should the proposed development result in a significant increase in dependence on groundwater, this deficit will increase. FID recommends the City of Clovis require the proposed development balance anticipated groundwater use with sufficient recharge of imported surface water in order to preclude increasing the area's existing groundwater overdraft problem.
4. California enacted landmark legislation in 2014 known as the Sustainable Groundwater Management Act (SGMA). The act requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally-based management plans. FID and the City of Clovis are members of the North Kings Groundwater Sustainability Agency which will manage the groundwater basin within the FID service area. This area is completely reliant on groundwater pumping and SGMA will impact all users of groundwater and those who rely on it. The City of Clovis should consider the impacts of the development on the City's ability to comply with requirements of SGMA.

A-2

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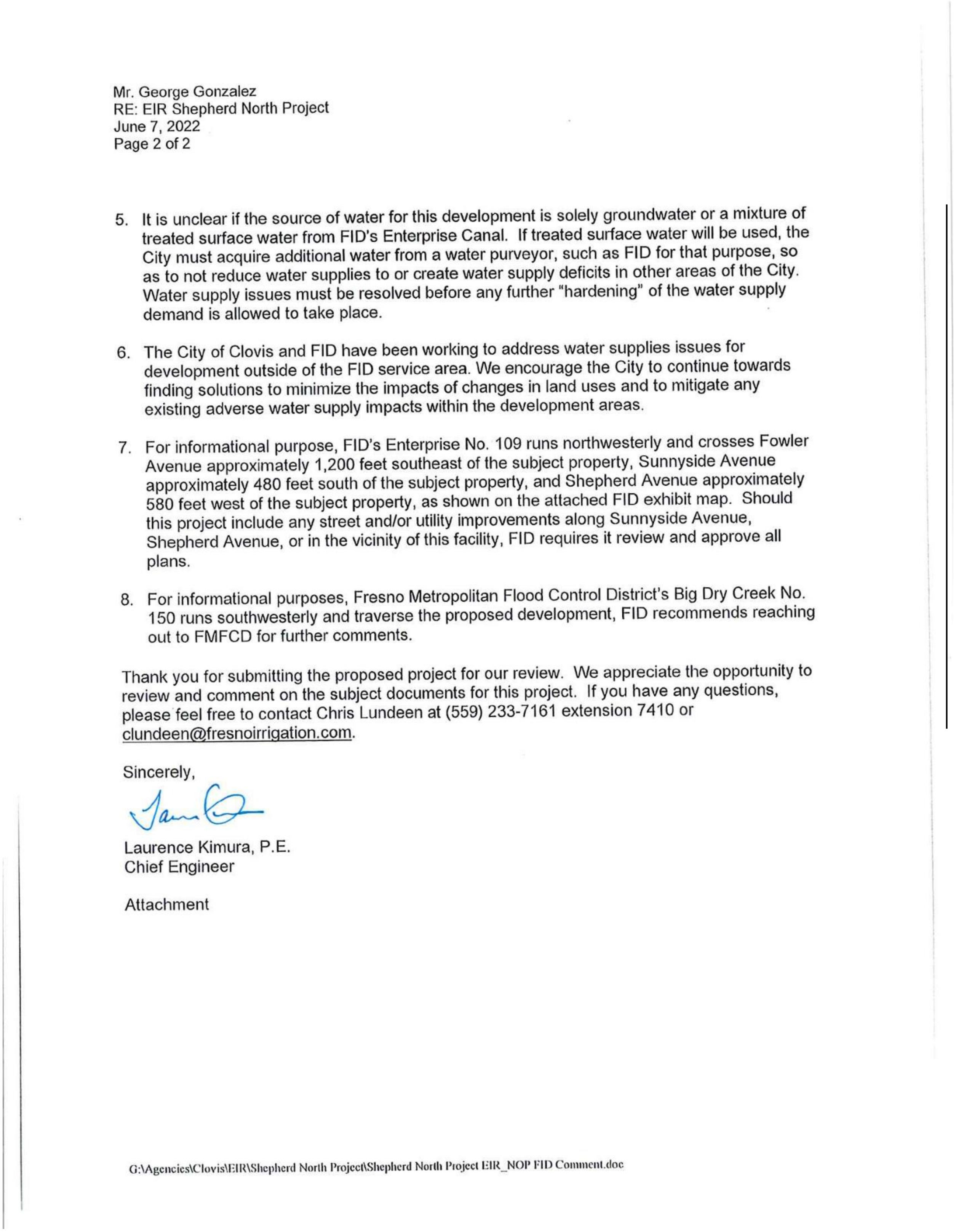

Mr. George Gonzalez
RE: EIR Shepherd North Project
June 7, 2022
Page 2 of 2

5. It is unclear if the source of water for this development is solely groundwater or a mixture of treated surface water from FID's Enterprise Canal. If treated surface water will be used, the City must acquire additional water from a water purveyor, such as FID for that purpose, so as to not reduce water supplies to or create water supply deficits in other areas of the City. Water supply issues must be resolved before any further "hardening" of the water supply demand is allowed to take place.
6. The City of Clovis and FID have been working to address water supplies issues for development outside of the FID service area. We encourage the City to continue towards finding solutions to minimize the impacts of changes in land uses and to mitigate any existing adverse water supply impacts within the development areas.
7. For informational purpose, FID's Enterprise No. 109 runs northwesterly and crosses Fowler Avenue approximately 1,200 feet southeast of the subject property, Sunnyside Avenue approximately 480 feet south of the subject property, and Shepherd Avenue approximately 580 feet west of the subject property, as shown on the attached FID exhibit map. Should this project include any street and/or utility improvements along Sunnyside Avenue, Shepherd Avenue, or in the vicinity of this facility, FID requires it review and approve all plans.
8. For informational purposes, Fresno Metropolitan Flood Control District's Big Dry Creek No. 150 runs southwesterly and traverse the proposed development, FID recommends reaching out to FMFCD for further comments.

A-2 Cont'd

Thank you for submitting the proposed project for our review. We appreciate the opportunity to review and comment on the subject documents for this project. If you have any questions, please feel free to contact Chris Lundeen at (559) 233-7161 extension 7410 or clundeen@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment

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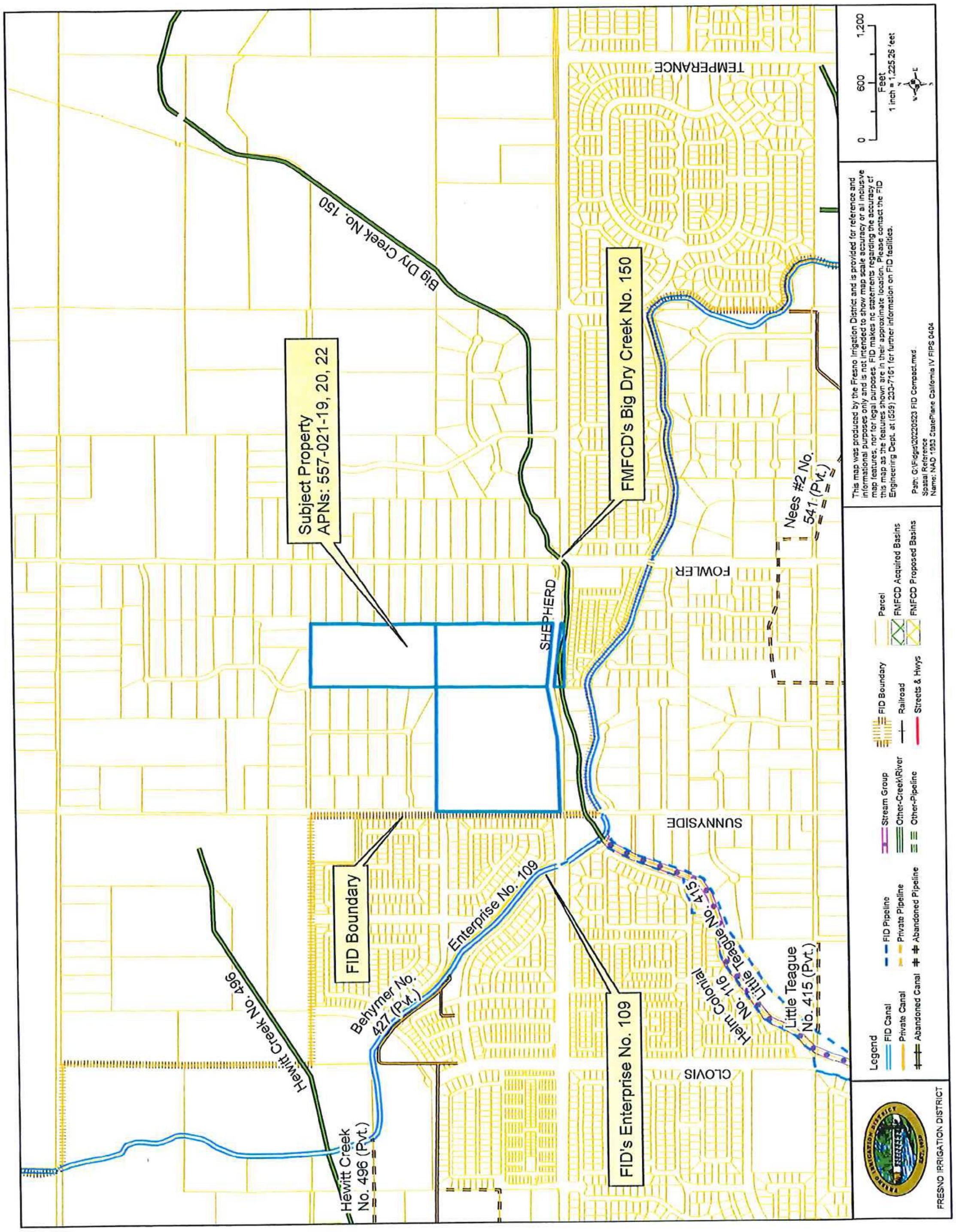

Big Dry Creek No. 150
Subject Property
APNs: 557-021-19, 20, 22
FMFCD's Big Dry Creek No. 150
TEMPERANCE
FOWLER
SHEPHERD
SUNNYSIDE
CLOVIS
Nees #2 No. 541 (Pvt.)
FID Boundary
Enterprise No. 109
FID's Enterprise No. 109
Behymer No. 427 (Pvt.)
Hewitt Creek No. 496
Hewitt Creek No. 496 (Pvt.)
Little Teague No. 415
Helm Colonial No. 116
Little Teague No. 415 (Pvt.)
Legend
FID Canal
Private Canal
Abandoned Canal
FID Pipeline
Private Pipeline
Abandoned Pipeline
Stream Group
Other-Creek\River
Other-Pipeline
FID Boundary
Railroad
Streets & Hwys
Parcel
FMFCD Acquired Basins
FMFCD Proposed Basins
This map was produced by the Fresno Irrigation District and is provided for reference and informational purposes only and is not intended to show map scale accuracy or all inclusive map features, nor for legal purposes. FID makes no statements regarding the accuracy of this map as the features shown are in their approximate location. Please contact the FID Engineering Dept. at (559) 233-7161 for further information on FID facilities.
Path: G:\Fidgis\20220523 FID Compact.mxd
Spatial Reference
Name: NAD 1983 StatePlane California IV FIPS 0404
0 600 1,200
Feet
1 inch = 1,225.25 feet
FRESNO IRRIGATION DISTRICT

Response to Letter A: Laurence Kimura, P.E., Fresno Irrigation District

Response A-1: The commentor provides a brief paragraph describing that their agency provided a comment letter on the NOP for the project and the comments from that letter still apply.

- This comment is noted. The comment on the NOP was provided in Appendix A of the Draft EIR, and the content of the comments were addressed, in part, in Section 3.9 Hydrology and Water Quality, and Section 3.14 Utilities.
- **FID NOP Bullet #1**: It is noted that FID does not own, operate, or maintain any facilities located on the Project site.
- **FID NOP Bullet #2**: It is noted that the proposed development is not currently within the City of Clovis. The proposed Project is an annexation, where if approved, would move the Development Area into the city limits. The City recognizes that water service is provided to property within the city limits, and the City intends to supply water to planned growth when it annexes land into its jurisdiction. As such, the City prepared a Water Supply Assessment to evaluate the supply of water to future citizens in the Development Area. The Water Supply Assessment is summarized in Section 3.14 of the EIR, and is included as an Appendix to the EIR.

  Page 3.14-9 of the EIR indicates that "*The City began operations of the Surface Water Treatment Plant (SWTP), located on the Enterprise Canal on the east side of Clovis, in 2004. Kings River water is supplied to the plant via Fresno Irrigation District's (FID) Enterprise Canal. This 22.5 million-gallons-per-day plant allows Clovis to serve existing users and new growth areas, while lessening the demand on groundwater*."

  Page 3.14-12 states "*The City has access to surface water through several different contracts, all of which are delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River. The Central Valley Project is a planned supply for the future. The average delivery the City has received of its total allocation is just over 17,000 AF per year, with the smallest delivery being 9,452 AF in 2015 and the largest of 24,958 in 2017. The City executed a new, firm water supply, agreement with FID in 2019 that provides a surface water supply that does not fluctuate with the FID entitlement or allocation and will be available to the City on a consistent basis. This agreement provides for up to 7,000 AF per year by 2045, beginning at 1,000 AF in 2020. As the City grows and annexes portions of the Garfield and International Water Districts, those CVP, Class I water rights will be transferred to the City and added to the overall water supply portfolio. (Provost & Pritchard, 2021B)…FID's average gross annual entitlement is 452,541 AF. Within the last fifty years, the smallest entitlement received was 158,109 AF, which occurred in 2015. The City's* *allocation from the Kings River is proportional to the total acreage of the City's included area to the total FID area receiving water. Over time, the City has received on average 17,011 AFY, though this has varied from 9,452 AF in the severe drought of 2015 to over 24,958 AF in 2017. (Provost & Pritchard, 2021B)…Two additional water districts are located within the City's General Plan Boundaries: Garfield Water District (GWD) and International Water District (IWD). Both have access to Class I CVP surface water supplies. The GWD holds a Class 1 CVP contract for 3,500 AFY. With half of GWD within the City's SOI, an estimated 1,750 AFY is expected to be added to the City's supply upon development. The IWD holds a Class 1 CVP contract for 1,200 AFY. The City's General Plan designates a portion of the District's area as industrial and residential use. At build-out it is estimated that the entire 1,200 AFY supply will be added to the City's Supply. As the districts urbanize, supplies associated with these areas are expected to be added to the City's supply. The City uses their surface water supplies in two primary ways: (1) as potable water supply after being treated at the City's Surface Water Treatment Plant (SWTP) or (2) as groundwater recharge in various basins located in and around the City's service area. (Provost & Pritchard, 2021B)."*

Page 3.14-16 of the EIR states "*Surface water is supplied from the Kings River and conveyed to the City by the FID. The Kings River is impacted by the level of snowmelt and precipitation received in the area and is susceptible to dry conditions. The City's contract with FID ensures that the City receives a percentage of the total FID entitlement, approximately 2.1 AF per acre within the FID boundary; the City's area is capped at 7.12 percent of the FID boundary or approximately 32,100 AFY in a normal water year. Additionally, the City has recently executed an additional contract with FID for development of a new, firm water supply starting at 1,000 AFY in 2020 and increasing to a maximum of 7,000 AFY by 2045 and thereafter; this new supply will not have the variability of the existing supply based on water year. Historically, FID's entitlement on the Kings River has been considered reliable although it was affected significantly by the recent drought.*"

Page 3.14-26 states "*The Project area will be annexed to the City and will require an extension of existing potable and non-potable systems. The proposed water system will be located within the proposed public utilities easements and be connected to existing City mains and will comply with City Master Plans and standards. The City of Clovis provides water supplies to the City of Clovis. The City has three main water supply sources: groundwater, surface water, and recycled water. The City extracts groundwater from the Kings Subbasin. Surface water is delivered to the City by the Fresno Irrigation District (FID). The various surface water supplies are from the Kings River and Central Valley Project. The City's ST-*

WRF produces tertiary treated effluent that can be used for agriculture or landscape irrigation."

- **FID NOP Bullet #3**: Groundwater and water supply is addressed in DEIR Section 3.9 Hydrology and Water Quality and in Section 3.14 Utilities. The DEIR references the *City of Clovis Urban Water Management Plan 2020 Update* (Provost & Pritchard, 2021B), *City of Clovis Water Shortage Contingency Plan 2020 Update* (Provost & Pritchard, 2021A)*;* the *City of Clovis Water Master Plan Update Phase III* (Provost & Pritchard, 2017)*,* and the *California's Groundwater: Bulletin 118 - San Joaquin Valley Groundwater Basin/Kings Subbasin* (DWR 2006) as a source of information to support the analysis of water supply.

The DEIR indicates that the City has access to surface water through several different contracts, all of which are delivered to the City by the Fresno Irrigation District (FID). (DEIR p. 3.9-4). The various surface water supplies are from the Kings River and Central Valley Project. The average delivery the City has received of its total allocation is just over 17,000 AF per year, with the smallest delivery being 9,452 AF in 2015 and the largest of 24,958 in 2017. The City executed a new, firm water supply, agreement with FID in 2019 that provides a surface water supply that does not fluctuate with the FID entitlement or allocation and will be available to the City on a consistent basis. This agreement provides for up to 7,000 AF per year by 2045, beginning at 1,000 AF in 2020. As the City grows and annexes portions of the Garfield and International Water Districts, those CVP, Class I water rights will be transferred to the City and added to the overall water supply portfolio. (Provost & Pritchard, 2021B).

The DEIR indicates that the City's groundwater supplies stem from the basin underlying the area, the Kings Subbasin; the Subbasin holds a status of being critically over drafted. The Kings Subbasin, a non-adjudicated basin, is a high-priority basin, which lies within the Tulare Lake Hydrologic Basin. This Basin contains multiple interconnected subbasins that transmit, filter and store water. These subbasins are Kaweah and Tulare Lake to the south, Westside and Delta Mendota to the west, and Madera to the North. (Provost & Pritchard, 2021B).

In response to public comments regarding groundwater concerns, the Applicant retained Kenneth D. Schmidt and Associates to prepare an analysis of the groundwater conditions in the vicinity of the Project Site. The report is dated September 2023 and was submitted to the City of Clovis for their review and consideration. The City's Supervising Engineer reviewed the report and concurs with the opinions provided. Furthermore, the City's Supervising Engineer indicated that the author has been an expert in this field for many decades.

After the City had reviewed and concurred with the report, it was provided to the City's EIR consultant for a second independent review. The City's EIR consultant found that the opinions in the report are consistent with, and supportive of, the original findings in the DEIR. It was found that the report is a good source of information for further affirmation of the DEIR conclusions, and it was determined that including the report as an Appendix to the EIR would amplify and clarify information already provided in the EIR.

The conclusion of the report is that the proposed project would use water from the City of Clovis distribution system as opposed to on-site wells. In terms of groundwater, there would be an overall reduction in groundwater pumpage of about 400 acre-feet per year. This would be beneficial to the local groundwater supplies. The full report is included in Section 3.0 Errata.

The DEIR also indicates that the proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement, significantly reduce infiltration capacity and increase surface water runoff. (DEIR p3.9-24 through 3.9-27).

The DEIR indicates that the soils contained on the Project site have a hydrologic rating ranging from “A,” which is indicative of soils having a high infiltration rate (low runoff potential) when thoroughly wet, to “D,” which is indicative of soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. Figure 3.2-2 in the DEIR identifies Project site soils, and Table 3.9-2 provides a list of the soils and hydrologic rating of each soil, including the percentage of the project area.

The infiltration rate of the soils on the Project site ranges from low to high. As indicated in the Geotechnical Report (Krazan & Associates, 2019), cemented silty sand and silty sand with trace clay, locally referred to as "hardpan," were encountered in several of the borings at the Project site. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. Therefore, it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. Development of the Project site with impervious surfaces is unlikely to reduce rainwater infiltration and groundwater recharge when compared to existing conditions. The open space areas of the development totaling approximately 5.54 acres will remain largely pervious. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project’s storm drainage system and eventually flow into the San Joaquin River.

- **FID NOP Bullet #4**: The EIR addresses the Sustainable Groundwater Management Act (SGMA) in Section 3.9 Hydrology and Water Quality, and in Section 3.14 Utilities. The EIR notes that SGMA was signed into law to provide a framework for management of groundwater supplies by local agencies and restricts state intervention, if required. SGMA provides an opportunity for local agencies overlying the basin to form a Groundwater Sustainability Agency (GSA), which is the primary agency responsible for achieving sustainability. As part of the region's compliance with SGMA, the North Kings Groundwater Sustainability Agency (NKGSA) was formed and includes representatives from Bakman Water Company, Biola Community Services District, City of Fresno, City of Clovis, City of Kerman, County of Fresno, Fresno Irrigation District, Fresno Metropolitan Flood Control District, Garfield Water District, and International Water District. The North Kings Groundwater Sustainability Agency adopted a Groundwater Sustainability Plan (GSP) in late 2019.

The EIR notes that the City is a member of the North Kings Groundwater Sustainability Agency (NKGSA). The NKGSA is working collaboratively, under a coordination agreement with the other six (6) Groundwater Sustainability Agencies in the Kings Subbasin to achieve sustainable groundwater conditions by 2040, in accordance with the Sustainable Groundwater Management Act of 2014 (SGMA) for critically over drafted groundwater basins, such as the Kings Subbasin. (Provost & Pritchard, 2021B).

The EIR notes that the City will continue increasing its surface water and recycled water supply usage to a point where the groundwater extraction is not greater than the sustainable yield in a normal year. The sustainable yield is currently estimated at 9,400 AF per year (AFY) for the SOI. (Provost & Pritchard, 2021B).

- **FID NOP Bullet #5**: Page 3.14-28 of the EIR states "Water demands for the proposed Project will be served using the City's existing and future portfolio of water supplies. The inclusion of existing and planned future supplies is specifically allowed by the Water Code:

  > *Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

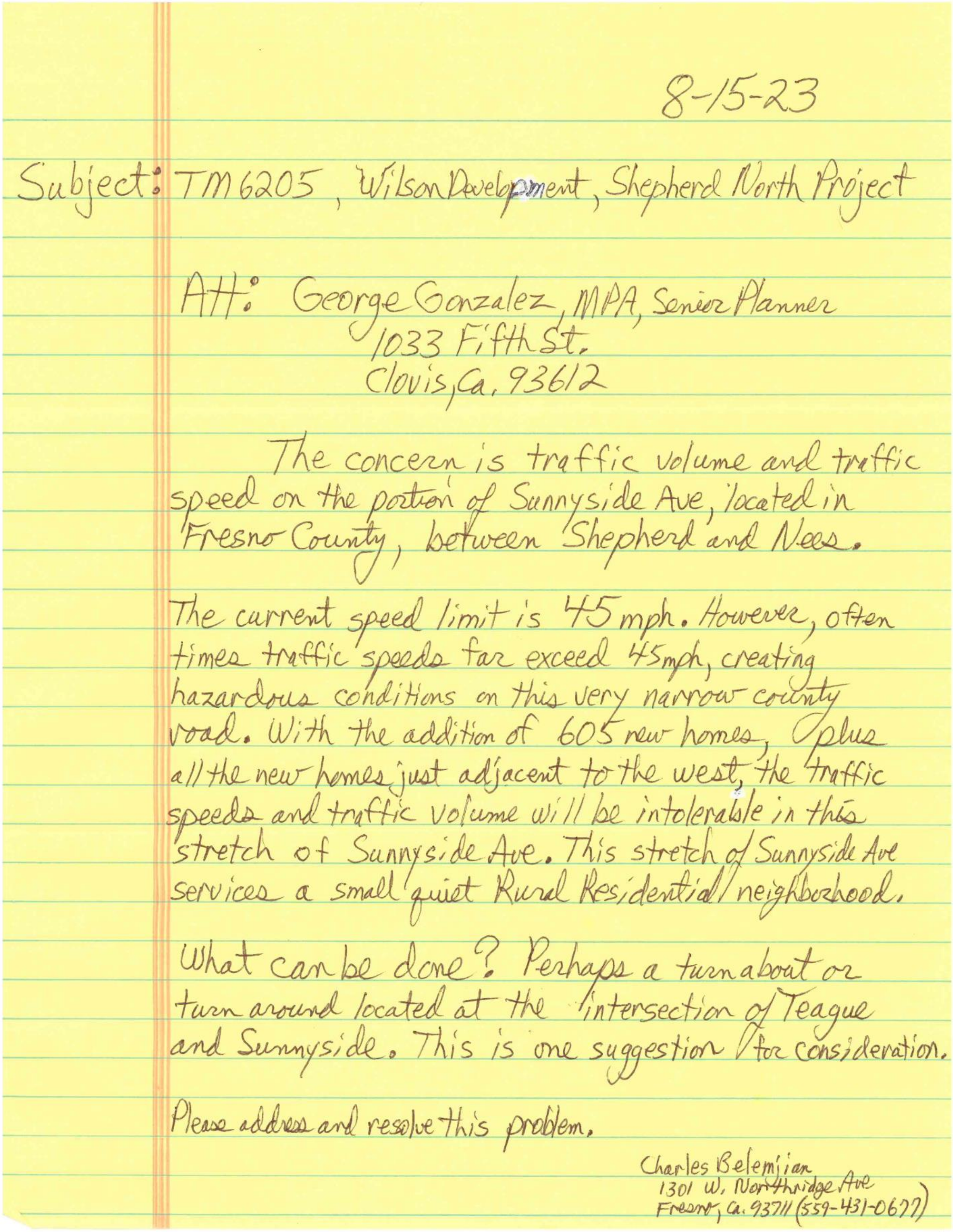
  The EIR indicates states "The applicants for the proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable water supplies to the Project site." It is noted that FID has indicated that "If treated surface water will be used, the City must acquire additional water from a water purveyor, such as FID for that purpose, so as to not reduce water supplies to or create water supply deficits in other areas of the City. Water supply issues must be resolved before any further "hardening" of the water supply demand is allowed to take place."

- **FID NOP Bullet #6**: This comment is noted, the City of Clovis desires to continue working with FID to address water supply issues for development outside of the

FID service area. The City will continue towards finding solutions to minimize the impacts of changes in land uses and to mitigate any existing adverse water supply impacts within the development areas.

- **FID NOP Bullet #7**: This comment is noted, FID's Enterprise No. 109 runs northwesterly and crosses Fowler Avenue approximately 1,200 feet southeast of the subject property, Sunnyside Avenue approximately 480 feet south of the subject property, and Shepherd Avenue approximately 580 feet west of the subject property, as shown on the attached FID exhibit map. Should this project include any street and/or utility improvements along Sunnyside Avenue, Shepherd Avenue, or in the vicinity of this facility, FID requires it review and approve all plans.
- **FID NOP Bullet #8**: This comment is noted. Fresno Metropolitan Flood Control District's Big Dry Creek No. 150 runs southwesterly and traverse the proposed development, FID recommends reaching out to FMFCD for further comments.

Response A-2: The comment is the NOP comment letter that was previously submitted by the commentor. As noted in Response A-1, this letter is included an Appendix A in the Draft EIR. Additionally, Response A-1 includes individual responses to the eight individual comments that were provided in the NOP comment letter. No further response to this comment is warranted.



8-15-23

Subject: TM6205, Wilson Development, Shepherd North Project

Att: George Gonzalez, MPA, Senior Planner
1033 Fifth St.
Clovis, Ca. 93612

The concern is traffic volume and traffic speed on the portion of Sunnyside Ave, located in Fresno County, between Shepherd and Nees.

The current speed limit is 45 mph. However, often times traffic speeds far exceed 45mph, creating hazardous conditions on this very narrow county road. With the addition of 605 new homes, plus all the new homes just adjacent to the west, the traffic speeds and traffic volume will be intolerable in this stretch of Sunnyside Ave. This stretch of Sunnyside Ave services a small quiet Rural Residential neighborhood.

What can be done? Perhaps a turnabout or turn around located at the intersection of Teague and Sunnyside. This is one suggestion for consideration.

Please address and resolve this problem.

Charles Belemjian
1301 W. Northridge Ave
Fresno, Ca. 93711 (559-431-0677)

B-1

Response to Letter B: Charles Belemjian, Resident of Clovis

Response B-1: The commentor provides a brief paragraph identifying their place of residence, and outlining their concerns. Their concerns include traffic volume and traffic speed on Sunnyside Avenue between Shepherd and Nees. The commenter suggests a turnabout or turn around located at the intersection of Teague and Sunnyside.

- A few of the concerns in this comment are addressed in Master Response 7, 8, and 9. The TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

  Currently, there is no signalized control along Sunnyside Avenue between Perrin Avenue and Alluvial Avenue. Among the major intersections along this corridor, the intersection of Sunnyside Avenue/Shepherd Avenue is an all-way stop-controlled intersection, Sunnyside Avenue/Teague Avenue is a two-way stop-controlled intersection, and Sunnyside Avenue/Nees Avenue is an all-way stop-controlled intersection.

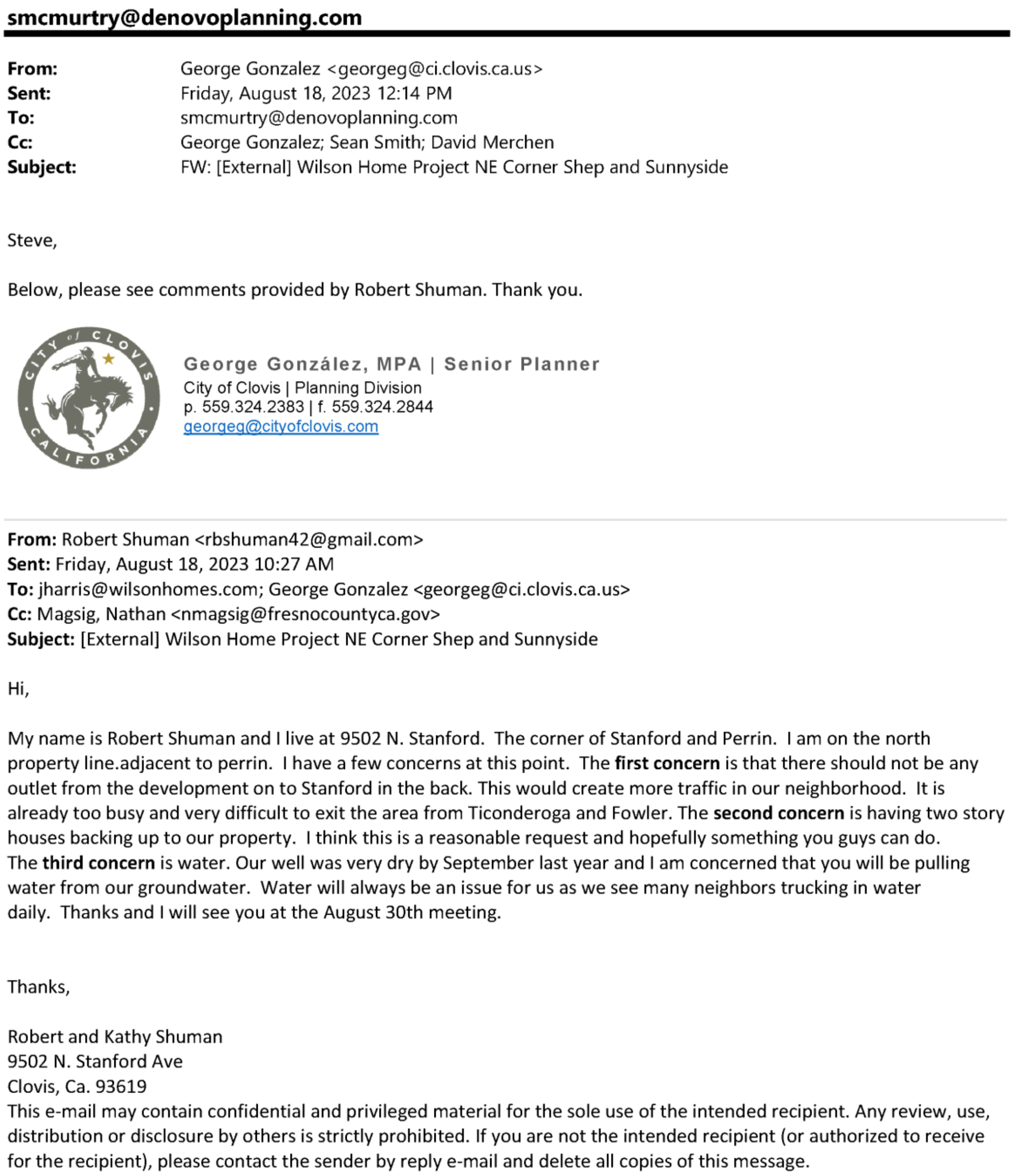
  Signals at the intersection of Sunnyside Avenue/Shepherd Avenue, and Sunnyside Avenue/Nees Avenue, along with other improvements at these locations, are in the City's Development Impact Fee program. As such, with implementation of these improvements along this corridor, the corridor is anticipated to experience improved traffic flow, and alleviate current safety concerns. This is after account ting for the traffic from the project and other adjacent projects in the vicinity. The City will be implementing these improvements when warranted but not as a requirement of the project.

  The project also will be implementing several project design features that will help eliminate gaps in the pedestrian circulation network around the project site. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue and Shepherd Avenue, Fordham Avenue, and Heirloom Avenue and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings have been recommended to enhance, pedestrian safety in the neighborhood. This includes a signal that has been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), which will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location.

In addition, Shepherd Avenue will be constructed curb to curb between Sunnyside and Fowler Avenue including a trail/sidewalk along the north side of Shepherd Avenue and bike lanes along this segment of Shepherd Avenue. This will enhance both vehicular safety and pedestrian safety along this corridor.

The project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

The project will be implementing several project design features around the project site that will improve safety for children. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue, Shepherd Avenue, Heirloom Avenue, and Fordham Avenue, and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location. As such, implementation of the signal and said sidewalks would help address speeding and safety issues along these corridors.



smcmurtry@denovoplanning.com

From: George Gonzalez <georgeg@ci.clovis.ca.us>
Sent: Friday, August 18, 2023 12:14 PM
To: smcmurtry@denovoplanning.com
Cc: George Gonzalez; Sean Smith; David Merchen
Subject: FW: [External] Wilson Home Project NE Corner Shep and Sunnyside

Steve,

Below, please see comments provided by Robert Shuman. Thank you.

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

From: Robert Shuman <rbshuman42@gmail.com>
Sent: Friday, August 18, 2023 10:27 AM
To: jharris@wilsonhomes.com; George Gonzalez <georgeg@ci.clovis.ca.us>
Cc: Magsig, Nathan <nmagsig@fresnocountyca.gov>
Subject: [External] Wilson Home Project NE Corner Shep and Sunnyside

Hi,

My name is Robert Shuman and I live at 9502 N. Stanford. The corner of Stanford and Perrin. I am on the north
property line.adjacent to perrin. I have a few concerns at this point. The **first concern** is that there should not be any C-1
outlet from the development on to Stanford in the back. This would create more traffic in our neighborhood. It is
already too busy and very difficult to exit the area from Ticonderoga and Fowler. The **second concern** is having two story
houses backing up to our property. I think this is a reasonable request and hopefully something you guys can do. C-2
The **third concern** is water. Our well was very dry by September last year and I am concerned that you will be pulling
water from our groundwater. Water will always be an issue for us as we see many neighbors trucking in water C-3
daily. Thanks and I will see you at the August 30th meeting.

Thanks,

Robert and Kathy Shuman
9502 N. Stanford Ave
Clovis, Ca. 93619

Response to Letter C: Robert and Kathy Shuman, Residents of Clovis

Response C-1: The commentor provides a brief paragraph identifying their place of residence, and outlining three concerns. (Note: the first concern is addressed in this response, and the other two concerns are addressed in the following responses.) The first concern is that there should not be any outlet from the development on to Stanford in the back. This would create more traffic in our neighborhood. It is already too busy and very difficult to exit the area from Ticonderoga and Fowler.

- The first concern is regarding traffic, which is addressed in Master Response 6, and 13. Specifically, the comment concerns outlets/access, and too much traffic.

  Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road (Stanford/Perrin), and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway at Stanford/Perrin is a requirement of the City of Clovis Fire Department, it provides secondary access to the gated subdivision. The driveway at Stanford/Perrin will be an exit only driveway to the 101-lot gated subdivision and will provide emergency access. Because this point has limited access to major thoroughfares, it is not anticipated to generate significant traffic and the TIA has estimated approximately 10% to use this egress.

  The project is also estimated to add only nominal trips to the local roads including Stanford, Ticonderoga, or to Fowler Avenue north of Shepherd Avenue. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue, as shown in the TIA. As such, the project traffic will have nominal effects on the local roads in the neighborhood, north of Shepherd Avenue.

  New traffic will be generated by the future residents of the 605 single-family residences. The DEIR identifies the traffic that would be generated by the proposed Project, including trips and vehicle miles traveled. The proposed Project does not propose any land use atypical to the area, or any land use that is estimated to change the neighborhood traffic pattern. The trip distribution pattern from the proposed Project is expected to be similar to the neighborhood trip patterns. Implementation of recommended improvements as included in the TIA would help alleviate traffic congestion and safety related issues within the project vicinity, as well as existing and future residential communities in the area. The traffic improvements recommended as part of the TIA accounts for cumulative traffic impact from all future projects, as well as the proposed Project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the TIA would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

Response C-2: The commentor second concern is having two story houses backing up to our property. I think this is a reasonable request and hopefully something you guys can do.

- The project is not proposed as a pre-plotted subdivision that identifies specific housing architecture or floor plans on each lot. For example, it has not been decided whether a one- or two-story residence would be built backing up to the commenter’s residence. The zoning code dictates the development standards for zones throughout the City, and it will dictate the standards that apply to the proposed subdivision. One- and two-story residences are allowed up to the height limits defined in the zone. The concept of limiting the height of homes backing up to the commenter’s residence can be presented as a concept for the Applicant to consider, but City’s zoning code does not restrict the height to a one story. Under any circumstances, the project will be consistent with the City Codes, including requirements for building height, setbacks and screening, all of which are designed to create an orderly interface between different uses. This concern does not present an environmental impact pursuant to CEQA.

Response C-3: The commentor third concern is regarding water. The commenter mentioned that their well was very dry by September last year and they are concerned that the project will be pulling water from their groundwater. The commenter notes that water will always be an issue for them as them see many neighbors trucking in water daily.

- The third concern is regarding water, which is addressed in detail under Master Response 3, 4, and 5. Groundwater and water supply is addressed in DEIR Section 3.9 Hydrology and Water Quality and in Section 3.14 Utilities. The DEIR references the *City of Clovis Urban Water Management Plan 2020 Update* (Provost & Pritchard, 2021B), *City of Clovis Water Shortage Contingency Plan 2020 Update* (Provost & Pritchard, 2021A)*;* the *City of Clovis Water Master Plan Update Phase III* (Provost & Pritchard, 2017)*,* and the *California’s Groundwater: Bulletin 118 - San Joaquin Valley Groundwater Basin/Kings Subbasin* (DWR 2006) as a source of information to support the water analysis.

  The City’s system contains more than 30 wells with a total capacity of approximately 37,690 gallons per minute with another 4,750 gpm of additional capacity planned in the next few years. Existing wells are not evenly distributed across the service area, but rather generally located in the western one-half of the City of Clovis. In general, older wells are in the southwest quarter of the City and the newest wells are located to the northwest quarter of the City. The northern portion of the City of Clovis (north of Herndon Avenue), has experienced the highest growth in recent years, and has dramatically shifted the production and demand characteristics of the City's water system. (Provost & Pritchard, 2017).

In 2020, recharge was 5,316 AF, while the City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. In the past 30 years, the groundwater table has dropped 48 feet, from a depth of 92 feet in 1991 to a depth of 140 feet in 2019. Recharge efforts began in 1974, and in 2004, the City began utilizing surface water with the goal of reducing groundwater extraction. Recharge efforts by the City have not been enough to stem the decline as the basin is shared with other users who either don't recharge or inadequately recharge. (Provost & Pritchard, 2021B).

Since the 2015 UWMP, SGMA has become effective and the City is working collaboratively with other agencies reliant on the groundwater basin to reach sustainable management of the groundwater aquifer prior to 2040, as required. The supply from groundwater sources has been modified to reflect this change in the City's supply portfolio. In the 2010 and 2015 UWMPs, the City's groundwater supplies were shown to be increasing with population growth into the future. The historical volume of groundwater pumped by the City from 2016 to 2020 ranged from 10,956 in 2019 to as high as 13,187 in 2016. In 2020, the City extracted 12,105 AF and conducted 5,316 AF of intentional recharge activities, which put the net extraction below the sustainable yield. It is presently understood that 9,400 AF per year can be sustainably used from the aquifer. (Provost & Pritchard, 2021B). The City's 30-year average groundwater recharge quantity is approximately 8,412 AFY. The projected groundwater supply in the 2020 UWMP shows it decreasing to the estimated sustainable amount of 9,400 AFY. (Provost & Pritchard, 2021B). The overall water supply is met with an increase in surface and recycled water sources to offset the reduced use of groundwater resources.

It is noted that in response to public comments regarding groundwater concerns, the Applicant retained Kenneth D. Schmidt and Associates to prepare a supplementary analysis of the groundwater conditions in the vicinity of the Project Site. The conclusion of the report is that the proposed project would use water from the City of Clovis distribution system as opposed to on-site wells. In terms of groundwater, there would be an overall reduction in groundwater pumpage of about 400 acre-feet per year. This would be beneficial to the local groundwater supplies. The full report is included in Section 3.0 Errata.

Joyce Roach

From:	George Gonzalez
Sent:	Friday, August 18, 2023 10:50 AM
To:	Judith Henry
Cc:	George Gonzalez; Sean Smith; Gene Abella; Mariham Iskandar; Joyce Roach
Subject:	RE: [External] Nobody talks about the water delivery system through the attic in these houses.

Thank you for clarifying, Judith.

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

-----Original Message-----
From: Judith Henry <judie.henscratch@gmail.com>
Sent: Friday, August 18, 2023 10:46 AM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: Re: [External] Nobody talks about the water delivery system through the attic in these houses.

You are correct. The meeting is 8/30.

Sent from my iPhone

> On Aug 18, 2023, at 10:25 AM, George Gonzalez <georgeg@ci.clovis.ca.us> wrote:
>
> Thank you for the additional information, Judith.
>
> Just to clarify, I'm not aware of any meeting yesterday evening pertaining to Wilson's proposed TM6205. Did you receive a notice from the developer about a meeting last night? Thanks.
>
> Also, thank you for your comments on the Draft EIR.
>
>
> George González, MPA | Senior Planner
> City of Clovis | Planning Division
> p. 559.324.2383 | f. 559.324.2844
> georgeg@cityofclovis.com
>
>
> -----Original Message-----
> From: Judith Henry <judie.henscratch@gmail.com>
> Sent: Thursday, August 17, 2023 2:16 PM
> To: George Gonzalez <georgeg@ci.clovis.ca.us>
> Subject: Re: [External] Nobody talks about the water delivery system through the attic in these houses.
>

D-1

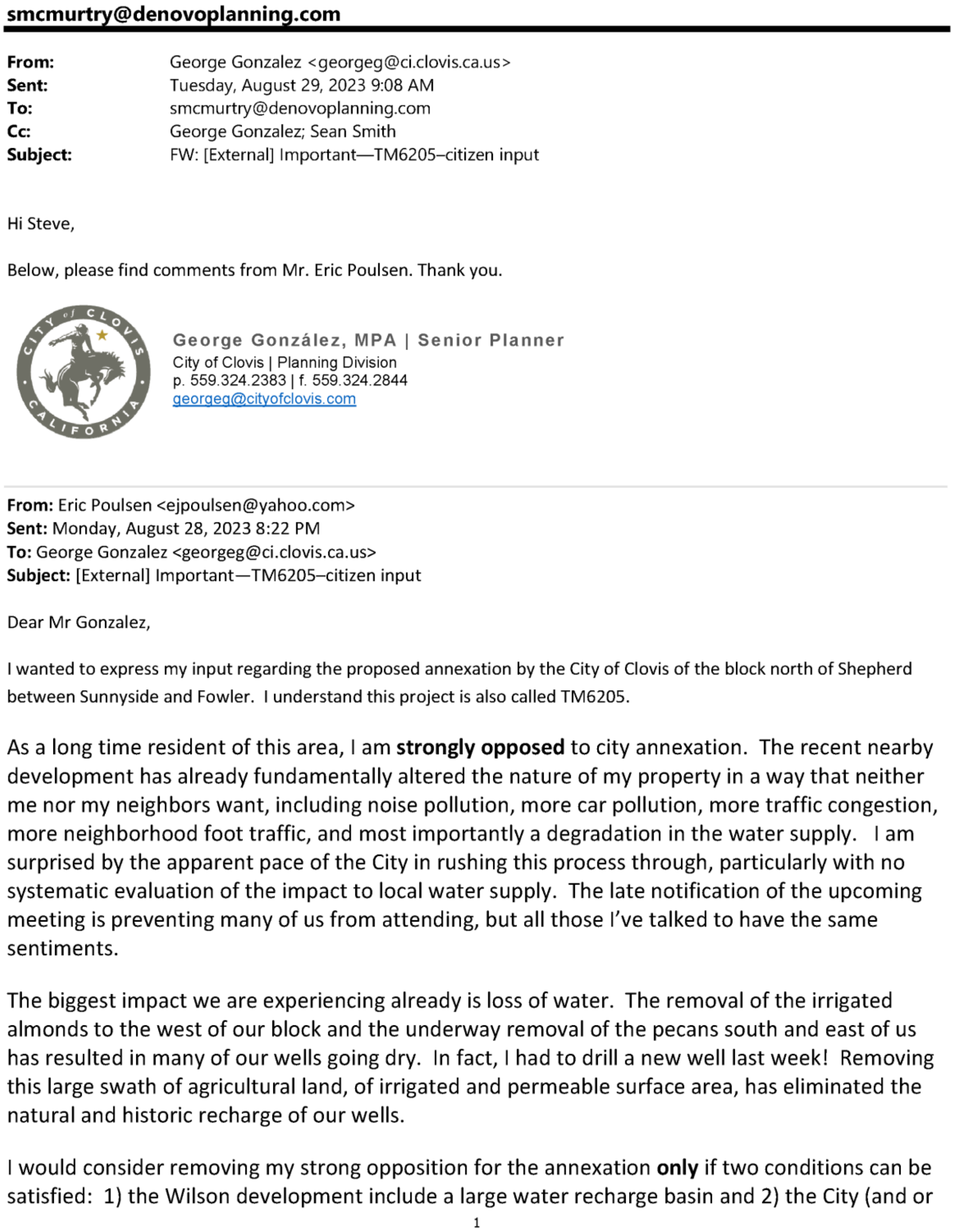
> Yes, for the meeting this evening on Wilson development. I am 82 and
> unable to attend. Our last house could be boosted by a Grunfro pump to
> avoid waste. Not these new constructions. Thanks for reading. Judie
>
> Sent from my iPhone
>
>> On Aug 17, 2023, at 8:24 AM, George Gonzalez <georgeg@ci.clovis.ca.us> wrote:
>>
>> Hi Judith,
>>
>> Are you providing these comments on a specific project? Thank you.
>>
>>
>>
>> George González, MPA | Senior Planner City of Clovis | Planning
>> Division p. 559.324.2383 | f. 559.324.2844 georgeg@cityofclovis.com
>>
>>
>> -----Original Message-----
>> From: Judith Henry <judie.henscratch@gmail.com>
>> Sent: Wednesday, August 16, 2023 5:20 PM
>> To: George Gonzalez <georgeg@ci.clovis.ca.us>
>> Subject: [External] Nobody talks about the water delivery system through the attic in these houses.
>>
>>
>> Our water bill must be half for wasted household use waiting for hot water in winter and cold water in summer. Another605 systems to waste our precious and expensive water.
>> Also I hope traffic has been anticipated. It's going to be rough for some time to come.
>> Judie Henry
>> European Glen
>> Sent from my iPhone
>>
>> This e-mail may contain confidential and privileged material for the sole use of the intended recipient. Any review, use, distribution or disclosure by others is strictly prohibited. If you are not the intended recipient (or authorized to receive for the recipient), please contact the sender by reply e-mail and delete all copies of this message.

D-1 Cont.

Response to Letter D: Judie Henry, Resident of Clovis

Response D-1: The commentor provides a several email communications between the commenter and the City. The general concerns are with traffic, water bills, water waste, and a neighborhood meeting.

- These concerns are addressed in Master Response 3, 4, 5, 6, and 8.



smcmurtry@denovoplanning.com

From: George Gonzalez <georgeg@ci.clovis.ca.us>
Sent: Tuesday, August 29, 2023 9:08 AM
To: smcmurtry@denovoplanning.com
Cc: George Gonzalez; Sean Smith
Subject: FW: [External] Important—TM6205–citizen input

Hi Steve,

Below, please find comments from Mr. Eric Poulsen. Thank you.

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

From: Eric Poulsen <ejpoulsen@yahoo.com>
Sent: Monday, August 28, 2023 8:22 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Important—TM6205–citizen input

Dear Mr Gonzalez,

E-1

I wanted to express my input regarding the proposed annexation by the City of Clovis of the block north of Shepherd between Sunnyside and Fowler. I understand this project is also called TM6205.

As a long time resident of this area, I am **strongly opposed** to city annexation. The recent nearby development has already fundamentally altered the nature of my property in a way that neither me nor my neighbors want, including noise pollution, more car pollution, more traffic congestion, more neighborhood foot traffic, and most importantly a degradation in the water supply. I am surprised by the apparent pace of the City in rushing this process through, particularly with no systematic evaluation of the impact to local water supply. The late notification of the upcoming meeting is preventing many of us from attending, but all those I've talked to have the same sentiments.

E-2

The biggest impact we are experiencing already is loss of water. The removal of the irrigated almonds to the west of our block and the underway removal of the pecans south and east of us has resulted in many of our wells going dry. In fact, I had to drill a new well last week! Removing this large swath of agricultural land, of irrigated and permeable surface area, has eliminated the natural and historic recharge of our wells.

I would consider removing my strong opposition for the annexation **only** if two conditions can be satisfied: 1) the Wilson development include a large water recharge basin and 2) the City (and or

Wilson) choreograph and pay for bringing a city water line to the edges of the properties being annexed. E-2 Cont.

With serious concerns,

Eric J Poulsen, MD

(559) 999-9075 mobile
ejpoulsen@yahoo.com

9324 N Purdue Ave
Clovis, CA 93619

Response to Letter E: Eric Poulsen, MD, Resident of Clovis

Response E-1: The commentor provides a discussion describing their opposition to the Project. The commenter notes that recent nearby development has caused impacts including noise pollution, more car pollution, more traffic congestion, more neighborhood foot traffic, and a degradation in the water supply. The commenter notes that they are surprised by the apparent pace of the City in rushing this process through, particularly with no systematic evaluation of the impact to local water supply. They also note the late notification of the upcoming meeting is preventing many of the neighbors from attending, but all those they've talked to have the same sentiments.

The topics of noise, air quality (car pollution), traffic congestion, and degradation of water supply are addressed in the Draft EIR in Sections 3.3 Air Quality, 3.9 Hydrology and Water Quality, 3.11 Noise, 3.13 Transportation and Circulation, and 3.14 Utilities. These topics are also discussed in additional detail in Master Response 3, 4, 5, 6, and 10. The reference to the meeting is addressed in Master Response 15.

The TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

The project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

The comment regarding "more neighborhood foot traffic" is not fully clear. It would be expected that pedestrian traffic would occur by residents within the proposed project. Pedestrian traffic in existing neighborhoods to the north and east of the Project site are not expected to significantly change from the existing condition as there is not a clear destination within or beyond those existing residential neighborhoods. The project will be implementing several project design features that will help eliminate gaps in the pedestrian circulation network around the project site. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue and Shepherd

Avenue, Fordham Avenue, and Heirloom Avenue and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings have been recommended to enhance, pedestrian safety in the neighborhood. This includes a signal that has been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), which will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location.

In addition, Shepherd Avenue will be constructed curb to curb between Sunnyside and Fowler Avenue including a trail/sidewalk along the north side of Shepherd Avenue and bike lanes along this segment of Shepherd Avenue. This will enhance both vehicular safety and pedestrian safety along this corridor.

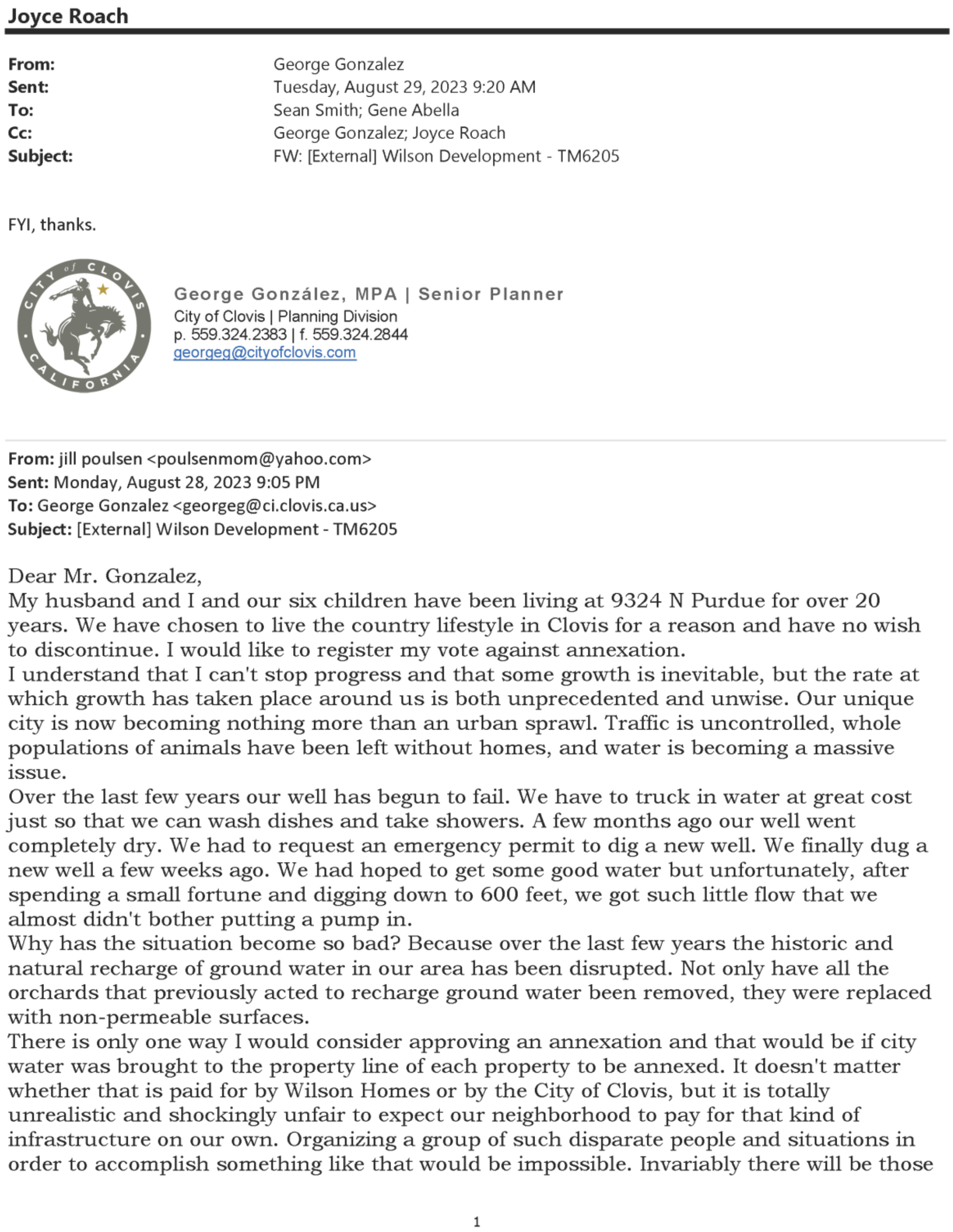
The project will be implementing several project design features around the project site that will improve safety for children. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue, Shepherd Avenue, Heirloom Avenue, and Fordham Avenue, and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location. As such, implementation of the signal and said sidewalks would help address speeding and safety issues along these corridors.

Response E-2: The commentor commenter notes that the biggest impact they are experiencing already is loss of water. They note that the removal of the irrigated almonds to the west of their block and the underway removal of the pecans south and east of them has resulted in many of our wells going dry. The commenter notes that they had to drill a new well last week. They note that removing this large swath of agricultural land, of irrigated and permeable surface area, has eliminated the natural and historic recharge of wells.

- This concern is addressed in Master Response 3, 4, and 5. Groundwater, recharge, agricultural irrigation, and past agriculture is discussed in the Master Responses.

The commenter notes that they would consider removing their strong opposition for the annexation only if two conditions can be satisfied: 1) the Wilson development include a large water recharge basin and 2) the City (and or Wilson) choreograph and pay for bringing a city water line to the edges of the properties being annexed.

- The project does not propose condition 1 or condition 2 as presented by the commenter. Master Response 3, 4, and 5 provides detailed discussion of groundwater extraction and recharge. Also, it should be noted that SOI expansion of the non-development area allows for future annexation of the non-development area into the City of Clovis if desired by the property owners. If annexed, the properties could be served by City water. However, annexing these properties and providing City water is not currently proposed. The commenter's strong opposition is noted and will be provided to the City Council for their consideration.



Joyce Roach

From: George Gonzalez
Sent: Tuesday, August 29, 2023 9:20 AM
To: Sean Smith; Gene Abella
Cc: George Gonzalez; Joyce Roach
Subject: FW: [External] Wilson Development - TM6205

FYI, thanks.

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

From: jill poulsen <poulsenmom@yahoo.com>
Sent: Monday, August 28, 2023 9:05 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Wilson Development - TM6205

Dear Mr. Gonzalez,

My husband and I and our six children have been living at 9324 N Purdue for over 20 years. We have chosen to live the country lifestyle in Clovis for a reason and have no wish to discontinue. I would like to register my vote against annexation.

I understand that I can't stop progress and that some growth is inevitable, but the rate at which growth has taken place around us is both unprecedented and unwise. Our unique city is now becoming nothing more than an urban sprawl. Traffic is uncontrolled, whole populations of animals have been left without homes, and water is becoming a massive issue.

F-1

Over the last few years our well has begun to fail. We have to truck in water at great cost just so that we can wash dishes and take showers. A few months ago our well went completely dry. We had to request an emergency permit to dig a new well. We finally dug a new well a few weeks ago. We had hoped to get some good water but unfortunately, after spending a small fortune and digging down to 600 feet, we got such little flow that we almost didn't bother putting a pump in.

Why has the situation become so bad? Because over the last few years the historic and natural recharge of ground water in our area has been disrupted. Not only have all the orchards that previously acted to recharge ground water been removed, they were replaced with non-permeable surfaces.

F-2

There is only one way I would consider approving an annexation and that would be if city water was brought to the property line of each property to be annexed. It doesn't matter whether that is paid for by Wilson Homes or by the City of Clovis, but it is totally unrealistic and shockingly unfair to expect our neighborhood to pay for that kind of infrastructure on our own. Organizing a group of such disparate people and situations in order to accomplish something like that would be impossible. Invariably there will be those

F-3

that can not participate, for reasons of age or ability, and then the entire organization will fall apart without a centralized governing authority.

The very suggestion that our neighborhood should be annexed without city services is frankly, shocking. I have so many questions about how that would even work. How can you possibly consider surrounding us with pavement, impacting our water supply and leaving us basically stranded on a desert island? Would you require us to pay city taxes but not receive services? What kind of precedence is there for this?

F-3 Cont.

To sum up, I oppose annexation of our neighborhood unless water is brought to each property. All of the neighbors that I have spoken to have the same feelings. Many of them are not able to attend the meeting. We were not given enough time to plan for this meeting. Frankly, I am very suspicious of all the activity that has already begun to take place as if decisions have been made already when in fact, they have not.

F-4

You all need to slow down and take a look around you,

Jill Poulsen

property owner and concerned citizen

Response to Letter F: Jill Poulsen, Resident of Clovis

Response F-1: The commentor provides a brief paragraph identifying their family, home, and lifestyle in Clovis. They describe their opposition to the Project and annexation. The comment also notes concerns with the rate of growth, urban sprawl, uncontrolled traffic, animal populations, and water.

- Water is addressed in Master Response 1 through 5. Traffic is discussed in Master Response 6 through 13. Annexation is addressed in Master Response 14. It is noted that one of the objectives of the project is to establish a mix of housing to provide for local and regional housing demand, and consistent with the City requirements in the latest Regional Housing Needs Analysis (RHNA). In light of the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, the State has provided the City with good reason to exercise its legislative discretion to facilitate the construction of new housing. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects." The proposed Project is not considered urban sprawl, rather it is the last remaining property in agricultural use in an area surrounded by urban and Rural Residential uses.

Response F-2: The commentor provides a discussion of water concerns at their property, and their recent need to truck water in at a great cost. They also note that they needed to recently have a new well installed at a depth of 600 feet. They note their concern with the lack of recharge of the groundwater as a result of orchards being converted to impervious surfaces.

- The water concerns noted in this comment are addressed in Master Response 3, 4, and 5.

Response F-3: The commenter notes that they would consider removing their strong opposition for the annexation only if the City brought water to the property lines of the properties being annexed. They note that it is not realistic to expect the neighborhood to pay for the water service to these properties.

- Master Response 14 provides detailed discussion of annexation/SOI expansion. For clarification, an annexation involves an adjustment to the city limit line to bring land into the incorporated city limits. This involves shifting the governmental jurisdiction from unincorporated Fresno County to the incorporated City of Clovis. An SOI expansion is not synonymous with an annexation. Instead, an SOI expansion, or SOI boundary change, simply adjusts an SOI boundary that is intended to be benchmark for future annexations. The non-development area is not proposed for annexation into the City. Rather, it is proposed to be included in the City's SOI, which would make it eligible for annexation at some future time. A future annexation of the non-development area would require the property owners of those parcels to organize and agree to be annexed into the City, which has not been done as part of the current proposal. Additionally, it does not appear that the current sentiment from parcel owners in the non-development area would be supportive of annexation into the City at this time. It is noted, however, that the SOI expansion, which does not require the approval of the parcel owners, would allow for future annexation of the non-development area into the City of Clovis if desired by the property owners at some later date. If the SOI expansion were approved, the non-development area would remain in the unincorporated County, but would be within the City's SOI. If annexed at some future time, the parcels could be served by City water and sewer. However, annexing these parcels and providing City water and sewer services is not currently proposed. The commenter's strong opposition is noted and will be provided to the City Council for their consideration.

Response F-4: The commenter provides a closing statement reiterating their opposition unless water is brought to each property. They also note that they were not able to attend the neighborhood meeting.

- Master Response 15 provides a detailed discussion of the neighborhood meeting.

Dear Mr. Gonzalez,

We received a letter from Lorren Smith post-marked August 9th to attend a meeting on August 30th to review the neighborhood overdevelopment of project now called TM6205. Such short notice precludes us from attending this crucial meeting. Since we are rendered unable to attend, we have responded in writing with our concerns.

We were notified by Leo Wilson in 2019 of his intent to develop the current acreage of the Pecan farms wit 200-300 homes. His presentation was in stark contrast to the current proposal. During that meeting Mr. Wilson also informed several homeowners that their homes will be worth nothing unless we signed on to his proposal with the city of Clovis and put petitions to sign before us. I moved to this neighborhood from Fresno specifically for the rural setting and the belief that Clovis stood for peaceful, lawful, and organized community where a family could thrive. This behavior was shocking, and I was certain that it would not be supported. We were also told later by communications through the city of Clovis that the city would only annex blocks of neighborhoods as not to create dysfunctional islands devoid of city services.

At this point, I can see that I was foolishly optimistic. I will not spend time discussing the traffic impact of the residents of the future Lennar and Wilson homes all descending on the 4-way country stop sign on Sunnyside and Shephard aves, the lack of green space nor the myriad of issues that will accompany the rapid construction of 1000 homes around said area. G-1

My only focus at this time is access to water. The previous agricultural lands (previous almond orchards currently Lennar homes and current pecan orchard) served as a recharge for the local ground water, without which our wells have and will continue to fail. Planning for and providing city utilities has to be done at this time while the city is allowing for TM6205 to proceed up to our doorstep. The homes bordered by Sunnyside and perrin aves and those along fowler will have to be included in the expansion of Sphere of Influence of the city of Clovis if TM6205 is to be allowed to proceed. We would need access to city utilities equal to that provided to project TM6205. Planning and providing city utilities to citizens is the purview of city governance. The private citizens in the homes mentioned above cannot be expected to form a governing body and independently apply for city utilities. That is why we have city leadership! Putting us in a situation to have no access to potable water is inhumane and unethical. The only common-sense action to take is to extend city services to our homes at the same time that all the infrastructure is being placed to accommodate TM6205. G-2

Thank you for your consideration

Hedieh and Neal Goodwin
8/26 2023

Response to Letter G: Hedieh and Neal Goodwin, Residents of Clovis

Response G-1: The commentor stated that they received a letter from Lorren Smith post-marked August 9th to attend a meeting on August 30th to review the neighborhood overdevelopment of the project now called TM6205. They note that such a short notice precludes them from attending this crucial meeting. They note that since they are rendered unable to attend, they have responded in writing with their concerns.

- This concern is addressed in Master Response 15.

The commenter continues by indicating that they were notified by Leo Wilson in 2019 of his intent to develop the current acreage of the Pecan farms with 200-300 homes. They note that his presentation was in stark contrast to the current proposal. They note that during that meeting, Mr. Wilson informed several homeowners that their homes will be worth nothing unless they signed on to his proposal with the City of Clovis and put petitions to sign before them. The commenter notes that they moved to the neighborhood from Fresno specifically for the rural setting and the belief that Clovis stood for peaceful, lawful, and organized community where a family could thrive. This behavior was shocking, and I was certain that it would not be supported. The commenter also notes that they were also told later by communications through the City of Clovis that the City would only annex blocks of neighborhoods as not to create dysfunctional islands devoid of City services.

- These concerns are noted. The Project that is proposed by the Applicant is defined in Section 2.0 Project Description of the Draft EIR. The environmental impacts of the project are discussed throughout the various EIR sections. Topics surrounding the desirability of rural living, and community values are important social topics, but they fall outside the scope of an EIR as defined by the California Environmental Quality Act. These important concerns, however, will be provided to the City Council for their consideration.

  Section 3.10-6 discusses annexations, including the role of Fresno LAFCo. Page 3.10-6 indicates that Fresno LAFCo is responsible for coordinating orderly reorganization to local jurisdictional boundaries, including annexations. Any annexation of the Project site to the City is subject to LAFCo approval, and LAFCo will review proposed annexations for consistency with LAFCo's Annexation Policies and Procedures.

  The DEIR indicates that the proposed Project includes an amendment of the City's SOI to include the entirety the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno LAFCo. The SOI amendment would be reviewed by the City and LAFCo prior to proceeding with the requested annexation. If the SOI Amendment is approved, the Project would then be able to begin the annexation process.

The proposed annexation includes lands contiguous with the current City limits and parcels that would be within the expanded SOI. It is noted, though as the commenter indicates, that parcels proposed for annexation would involve the creation of an island of unincorporated territory to the south of the site. It is noted that LAFCo may approve an annexation that creates an island where it finds that the application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation, but that inclusion is not feasible at this time. The island area is designated as Focus Area 7 in the General Plan, and is located within the Herndon – Shepherd Specific Plan Area. The General Plan identifies Focus Area 7 for Residential Use, which would require all proposed projects within Focus Area 7 to be consistent with the Dry Creek Preserve Master Plan if it were to be annexed into the City. This area is currently within the SOI, but the property owners in Focus Area 7 do not currently desire to annex into the City. The City has continued to plan for orderly growth to the north of the City, including the area that includes the Project site.

Master Response 14 provides detailed discussion of annexation. For clarification, the Development Area is proposed for annexation, while the Non-development Area is not proposed for annexation. This means that the Development Area would receive City services once annexed, and the Non-development Area would be eligible for annexation at some future time. A future annexation of the Non-development area would require the property owners of those parcels to organize and agree to be annexed into the City, which has not been done as part of the current proposal. Additionally, it does not appear that the current sentiment from parcel owners in the non-development area would be supportive of annexation into the City at this time. It is noted, however, that the SOI expansion, which does not require the approval of the parcel owners, would allow for future annexation of the non-development area into the City of Clovis if desired by the property owners at some later date. If the SOI expansion were approved, the non-development area would remain in the unincorporated County, but would be within the City's SOI. If annexed at some future time, the parcels could be served by City water and sewer. However, annexing these parcels and providing City water and sewer services is not currently proposed.

The commenter notes that they are foolishly optimistic and will not spend time discussing the traffic impact of the residents of the future Lennar and Wilson homes all descending on the 4-way country stop sign on Sunnyside and Shephard Aves, the lack of green space nor the myriad of issues that will accompany the rapid construction of 1000 homes around said area.

- Concerns regarding traffic are addressed in Master Response 6 through 13. The project proposes to construct 605 single-family residences. The surrounding areas in the neighborhood also mostly constitute of similar single-family residential developments. Additionally, several new projects within the area also proposes single-family residential developments. As such, the project does not propose any land use atypical to the area, or any land use that is estimated to change the neighborhood traffic pattern. Therefore, trip generation and distribution pattern from the project is also expected to be similar to the neighborhood trip patterns. In fact, implementation of recommended improvements as included in the TIA would help alleviate traffic congestion and safety related issues within the project vicinity, as well as existing and future residential communities in the area.

  The TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

  The project will be implementing several project design features that will help eliminate gaps in the pedestrian circulation network around the project site. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue and Shepherd Avenue, Fordham Avenue, and Heirloom Avenue and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings have been recommended to enhance, pedestrian safety in the neighborhood. This includes a signal that has been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), which will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location.

  In addition, Shepherd Avenue will be constructed curb to curb between Sunnyside and Fowler Avenue including a trail/sidewalk along the north side of Shepherd Avenue and bike lanes along this segment of Shepherd Avenue. This will enhance both vehicular safety and pedestrian safety along this corridor.

The project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

The project will be implementing several project design features around the project site that will improve safety for children. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue, Shepherd Avenue, Heirloom Avenue, and Fordham Avenue, and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location. As such, implementation of the signal and said sidewalks would help address speeding and safety issues along these corridors.

Concerns regarding parks/greenspace are addressed in Master Response 16. Section 2.0 Project Description presents the parks/greenspace that is proposed, and Section 3.12 Public Services and Recreation provides an analysis of the proposal relative to the park requirements. It should be noted that the proposed Project includes the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks as described in DEIR Section 2.0 Project Description. The main park would be located within the central portion of the Development Area, which would connect to a network of promenades and trails located within and along the perimeter of a portion of the Development Area. The promenade and trail network would also link to adjacent trails located in the planned residential community to the west, as well as the Dry Creek Trail and Clovis Old Town Trail to the south.

As described on page 3.12-5, the Clovis General Plan establishes a goal of four acres of parkland per 1,000 residents, which exceeds the requirement set forth by the Quimby Act. Page 3.12-24 through 3.12-25 includes an analysis of the proposed Project relative to the City's parkland requirements. The DEIR indicates that the Project is estimated to increase the population by 1,700 residents (based on 2.81 persons per household), and that the proposed parkland offered by the Project would not provide the park land needed to meet the four acres per 1,000 people. However, the DEIR references the Municipal Code Chapter 3.4, Park Acquisition and Development, which states that any developer who plans for dwelling units to be constructed in the City shall pay, in addition to any other fees required to be paid by the City, a fee which shall be calculated on the basis of park acreage designated in the Clovis General Plan consisting of the estimated total land acquisition and construction cost distributed on the basis of the remaining developable area within the sphere of influence. In accordance with the Municipal Code, fees are deposited in specific funds that shall be used solely for the acquisition, improvement and expansion of public parks and recreation facilities as outlined in the park acquisition and improvement fee update. As a results of the requirement, the Project will dedicate the proposed parkland and pay an in-lieu fee for the difference in accordance with the Clovis Municipal Code Chapter 3.04. This is consistent with State law and the City's requirements for parkland dedication and in-lieu fee payments for parkland.

Response G-2: The commentor indicates that their only focus at this time is access to water. The previous agricultural lands (previous almond orchards currently Lennar homes and current pecan orchard) served as a recharge for the local ground water, without which our wells have and will continue to fail. They state that planning for and providing City utilities has to be done at this time while the City is allowing for TM6205 to proceed up to their doorstep. They suggest that the homes bordered by Sunnyside and Perrin Aves and those along Fowler will have to be included in the expansion of Sphere of Influence of the City of Clovis if TM6205 is to be allowed to proceed. They note that they would need access to City utilities equal to that provided to project TM6205. They suggest that planning and providing City utilities to citizens is the purview of city governance and that the private citizens in the homes mentioned above cannot be expected to form a governing body and independently apply for City utilities. The commenter indicates that putting them in a situation to have no access to potable water is inhumane and unethical and that the only common-sense action to take is to extend City services to their homes at the same time that all the infrastructure is being placed to accommodate TM6205.

- Concerns regarding water are addressed in Master Response 3, 4, and 5. Concerns regarding annexation and the provision of City utility services are addressed in Master Response 14.

Dear Mr. Gonzalez,

My name is Cindy Reinke, my husband and I live at 9432 N. Purdue Ave, Clovis. We are writing to you regarding the project TM6205, Wilson development on Shepherd and Sunnyside. We are currently out of town and cannot attend today's meeting. We have lived in this home since 2016. We have seen our water supply diminish, especially after Mr. Wilson stopped watering the pecans two years ago. The watering of the pecan trees naturally replenishes our wells. We are now having to order water 3 times a week with the cost of $750.00 per week. If this development is completed, the rainwater will be diverted away via storm drains leaving us zero recharge for our water. We must be annexed into the City of Clovis and have city utilities for this project to go forward. We look to you, our elected city official, to help us with this potential issue. H-1

Thank you,

Brian and Cindy Reinke

Response to Letter H: Brian and Cindy Reinke, Residents of Clovis

Response H-1: The commentor provides a brief introduction, notes their place of residence, and how long they have lived at the residence. The commenter then indicates that they are currently out of town and cannot attend today's meeting (the neighborhood meeting).

- Concerns the neighborhood meeting are addressed in Master Response 15.

The commenter notes that they have seen their water supply diminish, especially after Mr. Wilson stopped watering the pecans two years ago. They note that watering of the pecan trees naturally replenishes their wells and that they are now having to order water 3 times a week with the cost of $750.00 per week. They indicated that if development occurs rainwater will be diverted away via storm drains leaving them with zero recharge for their water. The commenter concludes that they must be annexed into the City of Clovis and have City utilities for this project to go forward.

- Concerns regarding water are addressed in Master Response 3, 4, and 5. Concerns regarding annexation and the provision of City utility services are addressed in Master Response 14.

Mr Gonzales,

My name is Curtis Cookingham and I have lived in the Quail Run development with my family since 2011. I grew up on a farm in Clovis and always wanted to raise my kids in a "rural setting". Our neighborhood was the perfect setting for this and the last decade has been great for our family.

When we bought the home/property, we were surrounded by almond orchards and the large pecan orchard to the south. The almond orchard is now the Lennar development and the Pecans are slowly being taken out. My neighbors and I have done all we can to fight encroachment of the city, but construction and development moves forward on 3 sides. I-1

My biggest concern and opposition to this latest project (as with the Lennar project), is water. I continue to watch my neighbors drill new wells with marginal results and I personally have water delivered to my home 2 times/week in the summer at the cost of nearly $500.00/week. Construction to the west and now the possibility of construction to the south and East WILL HAVE A NEGATIVE IMPACT ON THE QUAIL RUN WATER SUPPLY. Our county development has relied on natural processes of replenishing our underground water supply for 30+ years. If this next phase of development is allowed to proceed to the south and east of us, we will be an isolated island. Access to water will be more of a challenge and more cost. My family and my neighbors moved to this development to to get away from the city, but the city is now in our backyards. We will soon be staring at cinder block fences and houses that are built very close together. I-2

I am a strong "NO" vote for this project. Coupled with the Lennar project to our west - there is a sense that the Wilson project "is being shoved down our throats". This is not "the Clovis way of life" any more. I have witnessed the road closures and watched the pecans being bulldozed, so it seems like the the City of Clovis and Wilson Homes are further along than indicated in the letter that announced the meeting 8-30-23. If this is true and the 'fix is in", then I want to make sure there is a resolution or agreement between the developers and the officials who are elected to represent us to give us a simple and extremely cost-effective option for access to city water. If we are left a county island - well water access will continue to diminish and property values will drop. Providing access to water is a reasonable compromise to the sidewalks, hard scape, traffic, noise, dust, lights, and high density housing that is pressing in around us. It's a reasonable compromise for rural life being transformed to city life. I-3

Thank you
Curtis and Pamela Cookingham

Response to Letter I: Curtis and Pamela Cookingham, Residents of Clovis

Response I-1: The commentor provides a brief paragraph describing where they live, the history of the residence in the neighborhood, and the encroachment of development over time. This comment is largely an introduction to the following two comments which more fully detail the commenters concerns.

- These introductory statements are noted. There is no response warranted.

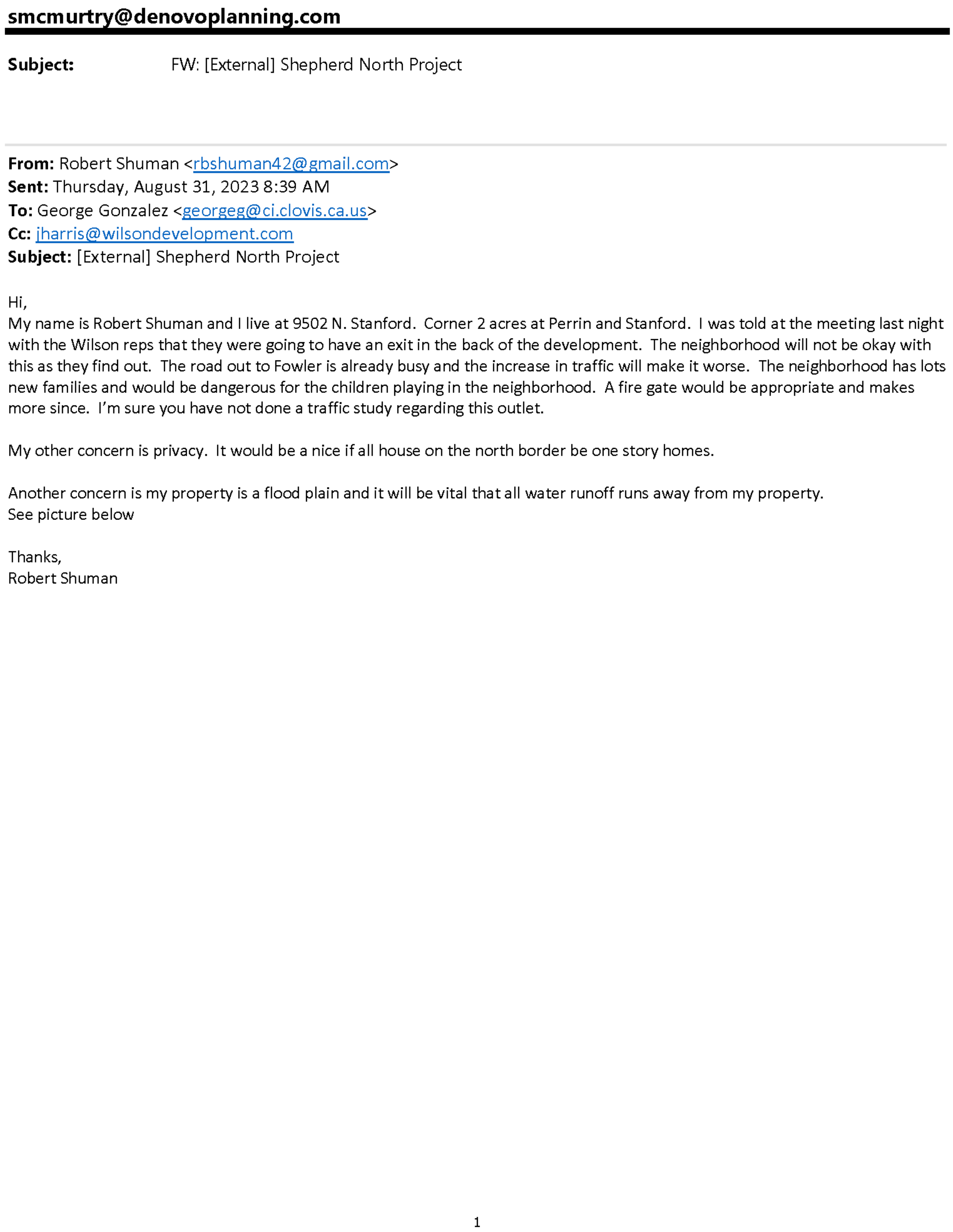
Response I-2: The commentor states the following: "*My biggest concern and opposition to this latest project (as with the Lennar project), is water. I continue to watch my neighbors drill new wells with marginal results and I personally have water delivered to my home 2 times/week in the summer at the cost of nearly $500.00/week. Construction to the west and now the possibility of construction to the south and East WILL HAVE A NEGATIVE IMPACT ON THE QUAIL RUN WATER SUPPLY. Our county development has relied on natural processes of replenishing our underground water supply for 30+ years. If this next phase of development is allowed to proceed to the south and east of us, we will be an isolated island. Access to water will be more of a challenge and more cost. My family and my neighbors moved to this development to city get away from the city, but the city is now in our backyards. We will soon be staring at cinder block fences and houses that are built very close together*."

Concerns regarding water are addressed in Master Response 1, 2, 3, 4, and 5. Master Response 14 provides detailed discussion of annexation. A future annexation of the Non-development area would require the property owners of those parcels to organize and agree to be annexed into the City, which has not been done as part of the current proposal. Additionally, it does not appear that the current sentiment from parcel owners in the non-development area would be supportive of annexation into the City at this time. It is noted, however, that the SOI expansion, would allow for future annexation of the Non-development area into the City of Clovis if desired by the property owners at some later date. If the SOI expansion were approved, the non-development area would remain in the unincorporated County, but would be within the City's SOI. If annexed at some future time, the parcels could be served by City water and sewer. However, annexing these parcels and providing City water and sewer services is not currently proposed.

The proposed annexation includes lands contiguous with the current City limits and parcels that would be within the expanded SOI. It is noted that parcels proposed for annexation would involve the creation of an island of unincorporated territory to the south of the site. It is noted that LAFCo may approve an annexation that creates an island where it finds that the application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation, but that inclusion is not feasible at this time. The island area is designated as Focus Area 7 in the General Plan, and is located within the Herndon – Shepherd Specific Plan Area. The General Plan identifies Focus Area 7 for Residential Use, which would require all proposed projects within Focus Area 7 to be consistent with the Dry Creek Preserve Master Plan if it were to be annexed into the City. This area is currently within the SOI, but the property owners in Focus Area 7 do not currently desire to annex into the City. The City has continued to plan for orderly growth to the north of the City, including the area that includes the Project site.

Response I-3: The commentor states the following: "*I am a strong "NO" vote for this project. Coupled with the Lennar project to our west - there is a sense that the Wilson project "is being shoved down our throats". This is not "the Clovis way of life" any more. I have witnessed the road closures and watched the pecans being bulldozed, so it seems like the city City of Clovis and Wilson Homes are further along than indicated in the letter that announced the meeting 8-30-23. If this is true and the 'fix is in", then I want to make sure there is a resolution or agreement between the developers and the officials who are elected to represent us to give us a simple and extremely cost-effective option for access to city water. If we are left a county island - well water access will continue to diminish and property values will drop. Providing access to water is a reasonable compromise to the sidewalks, hard scape, traffic, noise, dust, lights, and high density housing that is pressing in around us. It's a reasonable compromise for rural life being transformed to city life*."

- Concerns regarding water are addressed in Master Response 3, 4, and 5. Concerns regarding the provision of City utility services are addressed in Master Response 14. Concerns regarding county islands is addressed in Response I-2. The balance of the topics discussed in this comment express the commenter opposition to the Project, which is noted and will be provided to the City for their consideration.



smcmurtry@denovoplanning.com

Subject: FW: [External] Shepherd North Project

From: Robert Shuman <rbshuman42@gmail.com>
Sent: Thursday, August 31, 2023 8:39 AM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Cc: jharris@wilsondevelopment.com
Subject: [External] Shepherd North Project

Hi,
My name is Robert Shuman and I live at 9502 N. Stanford. Corner 2 acres at Perrin and Stanford. I was told at the meeting last night with the Wilson reps that they were going to have an exit in the back of the development. The neighborhood will not be okay with this as they find out. The road out to Fowler is already busy and the increase in traffic will make it worse. The neighborhood has lots new families and would be dangerous for the children playing in the neighborhood. A fire gate would be appropriate and makes more since. I'm sure you have not done a traffic study regarding this outlet.

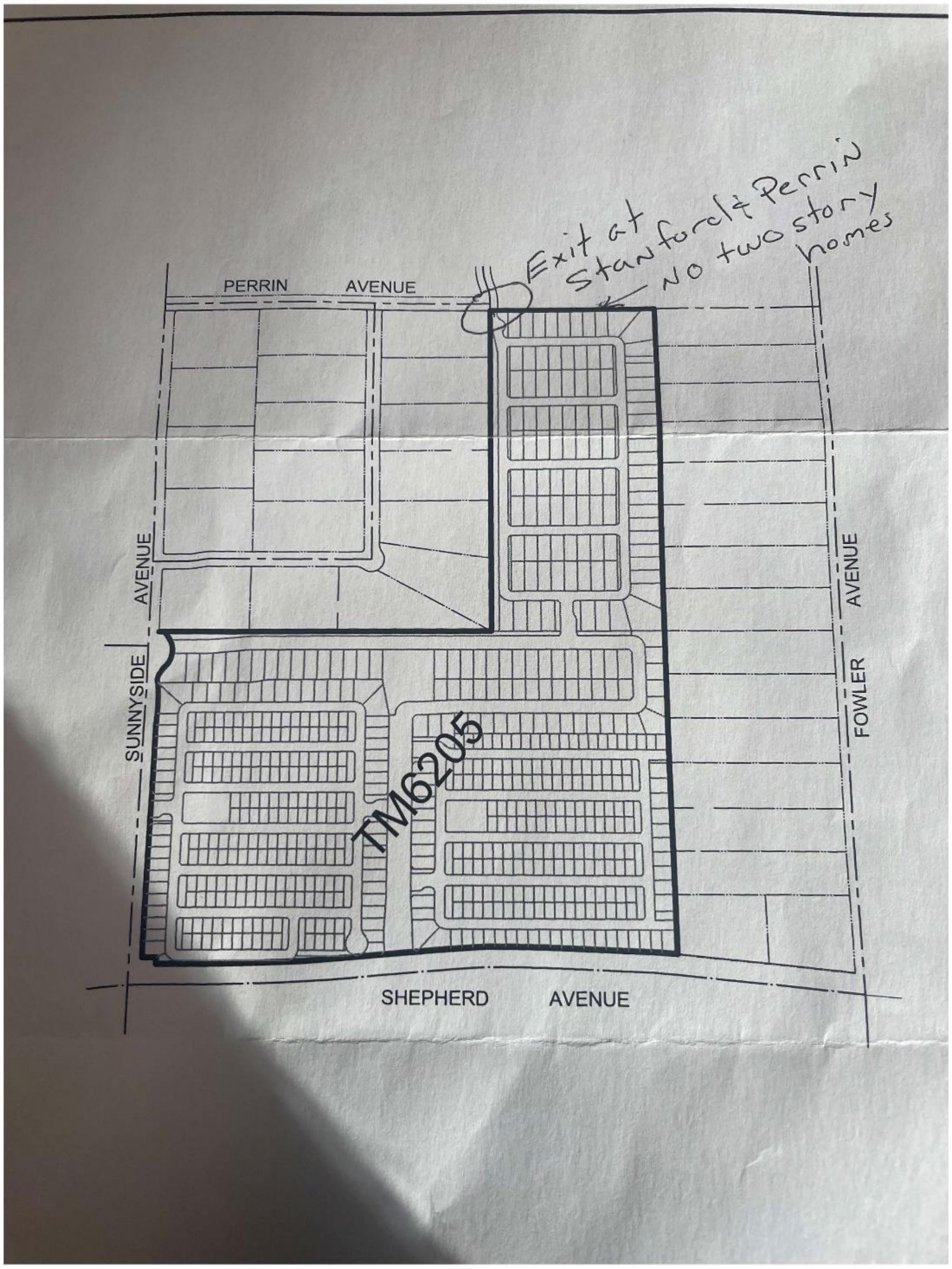
My other concern is privacy. It would be a nice if all house on the north border be one story homes.

Another concern is my property is a flood plain and it will be vital that all water runoff runs away from my property.
See picture below

J-1

Thanks,
Robert Shuman

1



Exit at Stanford & Perrin

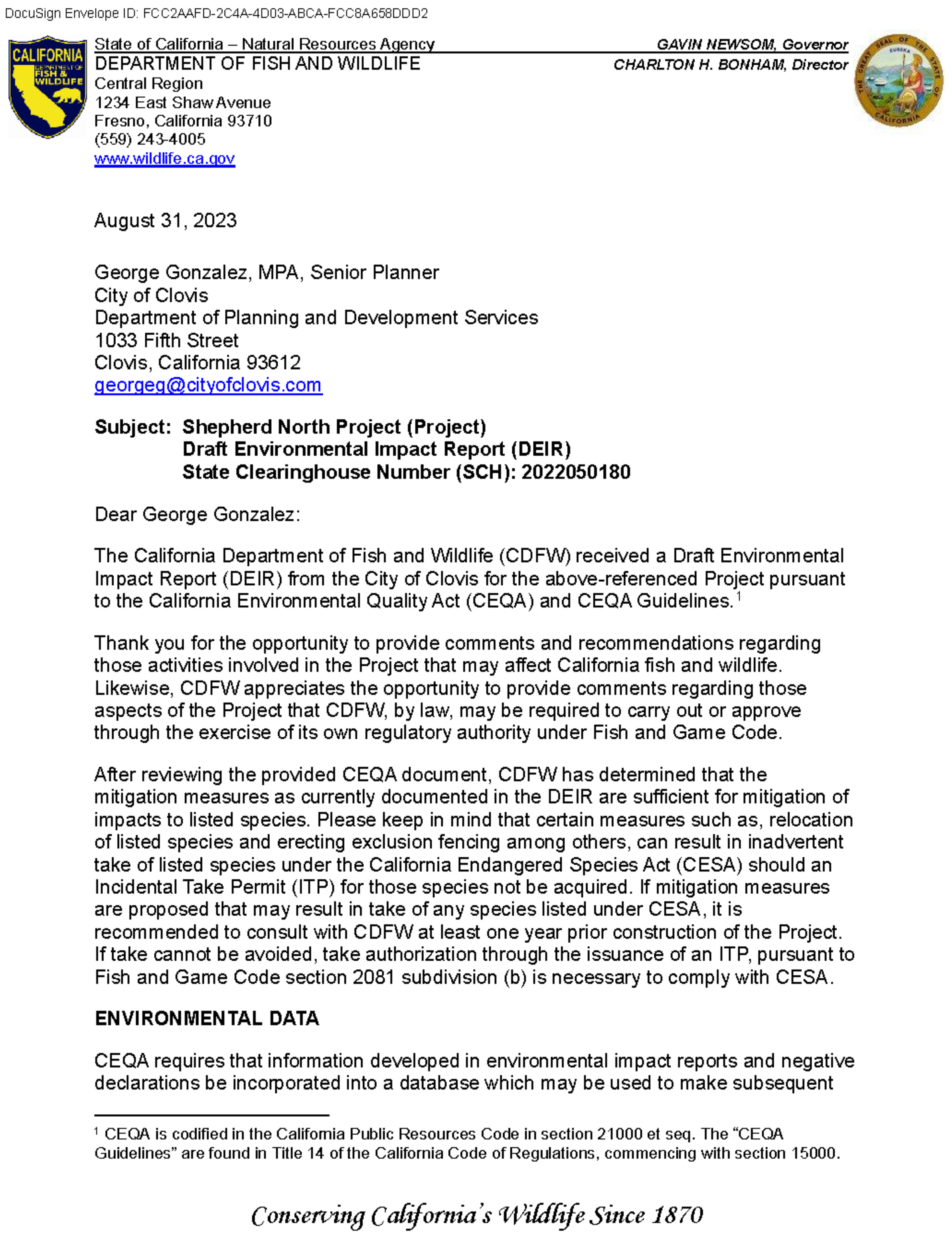
No two story homes

Response to Letter J: Robert Shuman 2, Resident of Clovis

Response J-1: The commentor provides a brief paragraph identifying their address. They indicate that they were at the neighborhood meeting. They indicate that they have concerns with an exit in the back of the development, traffic on Fowler, safety with children playing in the neighborhood. They suggest a fire gate being more appropriate. They also indicated that they were concerned with privacy, and suggest that one story homes should back up to the northern border. Lastly, they note that their property is a flood plain and that it is vital that all water runoff away from their property.

- Concerns regarding floodplains and drainage are addressed in Master Response 1 and 2. Concerns regarding traffic are addressed under Master Response 6 through 13. The project will have four separate access points. As such, in case of any fire related events, Firefighters can access the project through multiple access points around the project site. Therefore, the project is not estimated to have any fire related access concerns. Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road, and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway on Perrin will be an exit only driveway and will provide emergency access. The project is estimated to add only nominal trips on Perrin Road. Stanford or Ticonderoga from the driveway on Perrin Road. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue. As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage. As stated previously, the project is estimated to add only nominal traffic along Perrin, Stanford, or Ticonderoga, and will connect to a roundabout at the northerly project driveway along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue and Sunnyside Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site and within the neighborhood.

  Concerns regarding the neighborhood meeting are addressed in Master Response 15. Regarding the commenter’s preference for one story lots along the northern border, the proposed Project is not proposed as a pre-plotted subdivision that identifies specific housing architecture or floor plans on each lot. For example, we do not have any knowledge of whether a one- or two-story residence would be built backing up to the commenter's residence. The zoning code dictates the development standards for zones throughout the City, and it will dictate the standards that apply to the proposed subdivision. One- and two-story residences are allowed up to the height limits defined in the zone. The concept of limiting the height of homes backing up to the commenter's residence can be presented as a concept for the Applicant to consider, but City's zoning code does not restrict the height to a one story. This concern does not present an environmental impact pursuant to CEQA.



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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

August 31, 2023

George Gonzalez, MPA, Senior Planner
City of Clovis
Department of Planning and Development Services
1033 Fifth Street
Clovis, California 93612
georgeg@cityofclovis.com

Subject: Shepherd North Project (Project)
Draft Environmental Impact Report (DEIR)
State Clearinghouse Number (SCH): 2022050180

Dear George Gonzalez:

The California Department of Fish and Wildlife (CDFW) received a Draft Environmental Impact Report (DEIR) from the City of Clovis for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

After reviewing the provided CEQA document, CDFW has determined that the mitigation measures as currently documented in the DEIR are sufficient for mitigation of impacts to listed species. Please keep in mind that certain measures such as, relocation of listed species and erecting exclusion fencing among others, can result in inadvertent take of listed species under the California Endangered Species Act (CESA) should an Incidental Take Permit (ITP) for those species not be acquired. If mitigation measures are proposed that may result in take of any species listed under CESA, it is recommended to consult with CDFW at least one year prior construction of the Project. If take cannot be avoided, take authorization through the issuance of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.

K-1

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent

K-2

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[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Conserving California's Wildlife Since 1870 or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNDDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

K-2 Cont.

CDFW appreciates the opportunity to comment on the Project to assist the City of Clovis in identifying and mitigating the Project's impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (https://www.wildlife.ca.gov/Conservation/Survey-Protocols).

If you have any questions, please contact Kelley Nelson, Environmental Scientist, at the address provided on this letterhead, or by electronic mail at Kelley.Nelson@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Julie Vance
FA83F09FE08945A...

Julie A. Vance
Regional Manager

ec: Krista Tomlinson, Environmental Program Manager
Larry Bonner, Senior Environmental Scientist Supervisor
Kelley Nelson, Environmental Scientist
California Department of Fish and Wildlife

State Clearinghouse
Office of Planning and Research
state.clearinghouse@opr.ca.gov

Response to Letter K: Julie A. Vance, California Department of Fish and Wildlife

Response K-1: The commentor provides a brief introductory paragraph and indicates that after reviewing the provided CEQA document, CDFW has determined that the mitigation measures as currently documented in the DEIR are sufficient for mitigation of impacts to listed species. The commenter provides details regarding relocations, inadvertent takes, and needs for ITPs.

- This comment is noted. The Draft EIR includes discussion regarding the potential for take of special status species, and the appropriate mitigation for avoiding take. The Draft EIR also discusses regulations that call for ITPs in the event of an impacts to a special status species. No further response to this comment is warranted in the EIR.

Response K-2: The commentor provides several paragraphs with statutory details regarding environmental determinations, field surveys, database records, and filing fees.

- This comment is noted. Filing fees would be paid according to the statutory requirements. The biologists performing surveys work within the requirements of the CNDDB, and provide survey forms to the CNDDB when species occurrences are documented. No further response to this comment is warranted in the EIR.

smcmurtry@denovoplanning.com

Subject: FW: [External] Fwd: Resident Concerns Regarding Wilson Homes Development (Shepard and Sunnyside)

From: Patrick Menagh <pcmaltmail27@gmail.com>
Sent: Thursday, August 31, 2023 2:16 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Cc: dlmenagh@hotmail.com
Subject: [External] Fwd: Resident Concerns Regarding Wilson Homes Development (Shepard and Sunnyside)

Dear Mr. Gonzalez,

My name is Patrick Menagh and my family has lived on 9459 N. Purdue Ave, Clovis, CA 93619 since 2010. I attended the Wilson Homes meeting last night (8/30/23) and wanted to voice my concerns for your and the planning commissions consideration. While the representatives from Wilson Homes at the meeting repeatedly reference studies (water, traffic, noise, etc…) that concluded there would be "no significant impact", I for one wanted you to know that there are significant impacts to me personally and our neighborhood that I've outlined below. L-1

1. Water – All our wells have been impacted by the development that has gone on for the last several years. Developers like to blame drought or even agriculture, which obviously have an impact, but urban development has a long term effect that is permanent. Whether it is the sinking a deep wells to feed the new homes (I believe this was done at Harlan Ranch) or in the case of this development, cover up the ground with asphalt and redistributing the water to a holding pond elsewhere, it hurts our aquifer. Reducing our access to water is an infringement on a basic need and I don't see any effort by the developer or City to resolve this. In fact, the comment I heard last night when the Wilson folks were asked if they would be putting water infrastructure in our neighborhood was no, that is not our concern nor requirement and a reference to the almighty study that says there will be no significant impact. I heard that similar comment several times last night and frankly it struck me as arrogant and uncaring. Seems to me a better approach would be to say, how can we work together (Developer, City and Residents) to resolve this issue. I get that putting in a water line though are neighborhood costs money, I get that the city would need to annex the neighborhood, I get that there may be some give and take on certain things, but as it stands now Wilson is saying we are not going to do anything here and there's nothing you can do about it. Is that really an acceptable attitude for the City? I hope not. L-2

2. During the meeting I heard a comment from the Wilson Home folks that they were "bundling studies together" and it struck me that this project is not proceeding in a normal way and is being fast tracked. It appears the City is deviating from long standing protocols and as a L-3

1

result, the impacts to our property may not be given the thorough investigation they deserve. I for one would like to know if things are being done differently and if so how is it different? The City has an obligation to make sure our interests are being protected and not minimized in the effort to get things done fast. I understand that the City needs to grow and it needs developers to fund projects like the widening of Shepard, however I thought that is what the long range plan was for, that include a significant amount of land between Shepard and Copper? For that matter, this land was not even in the plan and now it is? There are a lot of exceptions being made here and it concerns me they are at the expense of thoughtful planning and resolution of issues that typically occur. L-3 Cont.

3. Traffic is a big concern in a couple of ways, one short term and one long term. Short term, we were promised we would have minimal impact due to the current Lennar construction going on around us, however this has been absolutely false! Over the last few years we've been effected by road closers, non-local traffic cutting through our neighborhood (faster that they should!), yards torn up, trash falling off trucks, delays getting to work and school, deterioration of our roads not meant for heavy vehicles, dust over everything, etc... Personally I am tired of it, and the City needs to hold the construction companies accountable for doing everything they can to minimize the impact. Long term, with over 600 homes planned, we are going to have a lot more cars cutting through the neighborhood going to Fowler. Once again the Wilson studies say we will feel minimal impact and traffic is going to use Shepard or Sunnyside, but that's not going to happen. Our neighborhood is in the Clovis North school district and unless these homes are going to be adult only, there will be a lot of Mom's and Dad's following the path of least resistance through to the neighborhood to Fowler on their way to drop kids off at school and go to work. When all these folks hit the intersection of Fowler and Ticondaroga and try to merge onto flowing traffic your going to have a lot of accidents (drive it, you'll see what I mean). In addition, the roads in our neighborhood are not built for traffic especially Stanford which is a narrow curving road with blind corners (drive it, you'll see what I mean). I have witnessed over the last few years an increase in cars avoiding road closures by driving through our neighborhood, way too fast, cutting corners and nearly hit cars and people. My wife, who walks every morning has literally almost been hit on multiple occasions. We have kids playing in front yards and riding bikes through our neighborhood. If someone gets hurt or killed because this was not addressed properly there will be hell to pay. This is no joke and a real issue if not addressed. Also, the increased traffic is going to deteriorate our roads which were not designed to handle it. Who's going to pay for the upkeep? My guess is Fresno County and Clovis City are going to point fingers at one another and nothing will get done and we'll be left holding the bag. L-4

4. Quality of life is my last issue. We all moved into this neighborhood because it was rural, safe and provided us with the lifestyle we wanted when we bought our properties. I know things change, and it's impossible to insulate yourself from it, but it still impacts us and potentially the values of our homes. This being said, I need a better understanding of what impacts sphere of influence and annexation will have on my property. To date, I've heard a lot of different stuff and frankly don't really understand how these thing might affect me and request some clarity from the City about this. L-5

As things stand now, I am very disappointed with how this project has progresses. It's appears to be on a fast track to the benefit of the builder, at the expense of our neighborhood, and with little to no effort to find solutions to our issues. The arrogance of statements made last night by the Builder Reps like (paraphrasing); "we don't care what you do", "it's not our problem", "I wouldn't want to live buy some of the homes in your neighborhood", "studies show minimal impact", "we'll just circumvent to city and put in apartments" all lead me to believe Wilson has no desire to sincerely work with us, they just want to check the boxes and get on with the project. I hope the City feels differently and works to make sure our interests our addressed. L-6

Sincerely,

Pat and Debbie Menagh

9459 N. Purdue Ave

559-392-5547

Response to Letter L: Patrick Menagh, Resident of Clovis

Response L-1: The commentor provides a brief paragraph describing their general concerns with the project, and that they wanted to voice the concerns to the Planning Commission. The comment serves as an introduction to a more detailed discussion of the concerns in the following comments.

- This comment is noted and will be provided to the City for consideration. No further response to this comment is warranted in the EIR.

Response L-2: The commentor states the following: "*Water – All our wells have been impacted by the development that has gone on for the last several years. Developers like to blame drought or even agriculture, which obviously have an impact, but urban development has a long term effect that is permanent. Whether it is the sinking a deep wells to feed the new homes (I believe this was done at Harlan Ranch) or in the case of this development, cover up the ground with asphalt and redistributing the water to a holding pond elsewhere, it hurts our aquifer. Reducing our access to water is an infringement on a basic need and I don't see any effort by the developer or City to resolve this. In fact, the comment I heard last night when the Wilson folks were asked if they would be putting water infrastructure in our neighborhood was no, that is not our concern nor requirement and a reference to the almighty study that says there will be no significant impact. I heard that similar comment several times last night and frankly it struck me as arrogant and uncaring. Seems to me a better approach would be to say, how can we work together (Developer, City and Residents) to resolve this issue. I get that putting in a water line though are neighborhood costs money, I get that the city would need to annex the neighborhood, I get that there may be some give and take on certain things, but as it stands now Wilson is saying we are not going to do anything here and there's nothing you can do about it. Is that really an acceptable attitude for the City? I hope not*."

- This comment regarding water is addressed in Master Response 3, 4, and 5. This includes a discussion of groundwater issues, agricultural irrigation, onsite wells, and how the proposed Project would receive water.

Response L-3: The commentor states the following: "*During the meeting I heard a comment from the Wilson Home folks that they were "bundling studies together" and it struck me that this project is not proceeding in a normal way and is being fast tracked. It appears the City is deviating from long standing protocols and as a result, the impacts to our property may not be given the thorough investigation they deserve. I for one would like to know if things are being done differently and if so how is it different? The City has an obligation to make sure our interests are being protected and not minimized in the effort to get things done fast. I understand that the City needs to grow and it needs developers to fund projects like the widening of Shepard, however I thought that is what the long range plan was for, that include a significant amount of land between Shepard and Copper? For that matter, this* *land was not even in the plan and now it is? There are a lot of exceptions being made here and it concerns me they are at the expense of thoughtful planning and resolution of issues that typically occur*."

- The comment regarding the Neighborhood Meeting is addressed, in part, under Master Response 15. It is noted that the Draft EIR is a result of extensive technical analysis by a team of consultants working closely with City staff since 2021 (over two years). During that time, there was a significant amount of analysis, peer review, design changes, and supplemental analysis necessary to fully analyze the impacts, and reduce or avoid impacts associated with project development. This two-year time frame is inclusive of the environmental review process, but the planning and application process extends even farther back in time. The CEQA process involves the accumulation of numerous technical reports that are summarized in the DEIR. In effect, the CEQA document functions to synthesize numerous technical analyses into a single document that can be distributed out to the public for review for a more simplified review of the technical analyses. The suggestion that the City is "*fast tracking*" and that the process is "*not normal*" is not accurate, as this process is commonplace under CEQA. The City staff has thoroughly examined the details of the application, including the design and the environmental impacts, and will ultimately present their findings to the Planning Commission and City Council for their consideration.

Response L-4: The commentor states the following: "*Traffic is a big concern in a couple of ways, one short term and one long term. Short term, we were promised we would have minimal impact due to the current Lennar construction going on around us, however this has been absolutely false! Over the last few years we've been effected by road closers, non-local traffic cutting through our neighborhood (faster that they should!), yards torn up, trash falling off trucks, delays getting to work and school, deterioration of our roads not meant for heavy vehicles, dust over everything, etc… Personally I am tired of it, and the City needs to hold the construction companies accountable for doing everything they can to minimize the impact. Long term, with over 600 homes planned, we are going to have a lot more cars cutting through the neighborhood going to Fowler. Once again the Wilson studies say we will feel minimal impact and traffic is going to use Shepard or Sunnyside, but that's not going to happen. Our neighborhood is in the Clovis North school district and unless these homes are going to be adult only, there will be a lot of Mom's and Dad's following the path of least resistance through to the neighborhood to Fowler on their way to drop kids off at school and go to work. When all these folks hit the intersection of Fowler and Ticondaroga and try to merge onto flowing traffic your going to have a lot of accidents (drive it, you'll see what I mean). In addition, the roads in our neighborhood are not built for traffic especially Stanford which is a narrow curving road with blind corners (drive it, you'll see what I mean). I have witnessed over the last few years an increase in cars* *avoiding road closures by driving through our neighborhood, way too fast, cutting corners and nearly hit cars and people. My wife, who walks every morning has literally almost been hit on multiple occasions. We have kids playing in front yards and riding bikes through our neighborhood. If someone gets hurt or killed because this was not addressed properly there will be hell to pay. This is no joke and a real issue if not addressed. Also, the increased traffic is going to deteriorate our roads which were not designed to handle it. Who's going to pay for the upkeep? My guess is Fresno County and Clovis City are going to point fingers at one another and nothing will get done and we'll be left holding the bag*."

- This comment regarding traffic is partially addressed in Master Response 6 through 13. The project proposes to construct 605 single-family residences. The surrounding areas in the neighborhood also mostly constitute of similar single-family residential developments. Additionally, several new projects within the area also proposes single-family residential developments. As such, the project does not propose any land use atypical to the area, or any land use that is estimated to change the neighborhood traffic pattern. Therefore, trip generation and distribution pattern from the project is also expected to be similar to the neighborhood trip patterns. In fact, implementation of recommended improvements as included in the TIA would help alleviate traffic congestion and safety related issues within the project vicinity, as well as existing and future residential communities in the area.

  The TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

  The project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

  Also, in the short-term, the City and the project applicant will coordinate to develop a construction management plan for the construction related traffic for the project in the short-term. This will include designated truck routes to and from the project, along with time restriction for inbound and outbound construction related traffic accessing the neighborhood, to help prevent any short-term traffic related issues within the neighborhood.

In the long term, as identified in the TIA and DEIR, improvements would be required to adjacent roadways within the vicinity of the project. Additionally, the TIA identifies regional circulation improvements that would help alleviate traffic congestion and safety related issues. As included in Table 9-H of the TIA, and the DEIR, the project would be directly implementing circulation improvements around the project site and will be paying appropriate fees to the City for the future implementation of additional roadway widening and intersection improvements within the project study area when warranted. As demonstrated in the TIA, implementation of these improvements would help alleviate local congestion issues and provide safe access to local schools that are under the Clovis Unified School District (CUSD).

The project will be implementing several project design features that will help eliminate gaps in the pedestrian circulation network around the project site. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue and Shepherd Avenue, Fordham Avenue, and Heirloom Avenue and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings have been recommended to enhance pedestrian safety in the neighborhood. This includes a signal that has been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), which will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location.

In addition, Shepherd Avenue will be constructed curb to curb between Sunnyside and Fowler Avenue including a trail/sidewalk along the north side of Shepherd Avenue and bike lanes along this segment of Shepherd Avenue. This will enhance both vehicular safety and pedestrian safety along this corridor. **Access:** Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road (Stanford/Perrin), and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway at Stanford/Perrin will be an exit only driveway and will provide emergency access. As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage.

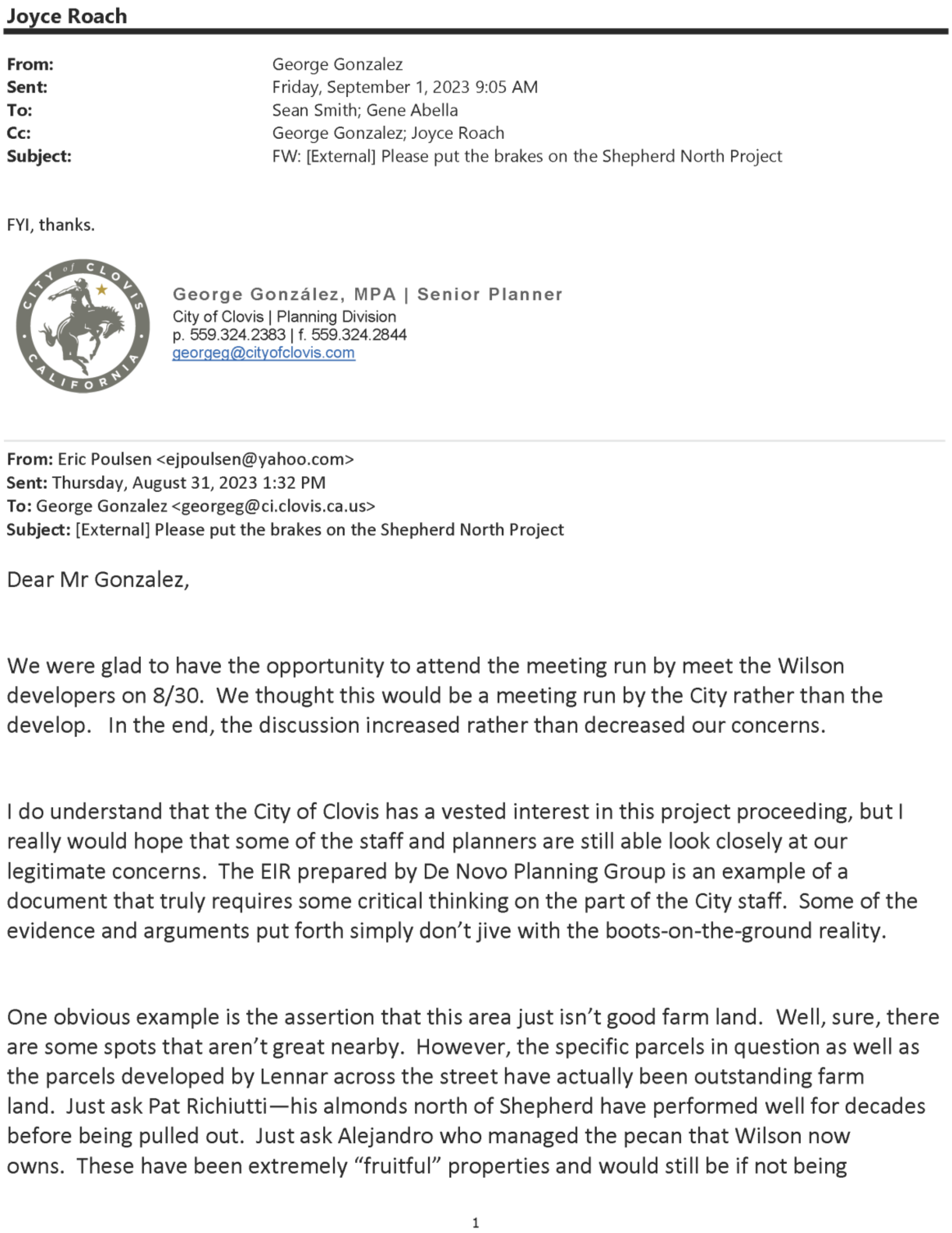
The project will be implementing several project design features around the project site that will improve safety for children. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue, Shepherd Avenue, Heirloom Avenue, and Fordham Avenue, and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location. As such, implementation of the signal and said sidewalks would help address speeding and safety issues along these corridors.

Response L-5: The commentor states the following: "*Quality of life is my last issue. We all moved into this neighborhood because it was rural, safe and provided us with the lifestyle we wanted when we bought our properties. I know things change, and it's impossible to insulate yourself from it, but it still impacts us and potentially the values of our homes. This being said, I need a better understanding of what impacts sphere of influence and annexation will have on my property. To date, I've heard a lot of different stuff and frankly don't really understand how these things might affect me and request some clarity from the City about this*."

- This comment regarding sphere of influence and annexation is addressed in Master Response 14. The comment regarding the quality of life and value to their home is a topic that is outside the scope of an environmental document. This is a social and economic topic that will be provided to the City for consideration.

Response L-6: The commentor states the following: "*As things stand now, I am very disappointed with how this project has progresses. It's appears to be on a fast track to the benefit of the builder, at the expense of our neighborhood, and with little to no effort to find solutions to our issues. The arrogance of statements made last night by the Builder Reps like (paraphrasing); "we don't care what you do", "it's not our problem", "I wouldn't want to live buy some of the homes in your neighborhood", "studies show minimal impact", "we'll just circumvent to city and put in apartments" all lead me to believe Wilson has no desire to sincerely work with us, they just want to check the boxes and get on with the project. I hope the City feels differently and works to make sure our interests our addressed*."

- The comments that express their disappointment with how the Project has progressed is noted. These comments do not address a CEQA topic within the environmental document, but that will be provided to the City for consideration.



Joyce Roach

From: George Gonzalez
Sent: Friday, September 1, 2023 9:05 AM
To: Sean Smith; Gene Abella
Cc: George Gonzalez; Joyce Roach
Subject: FW: [External] Please put the brakes on the Shepherd North Project

FYI, thanks.

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

From: Eric Poulsen <ejpoulsen@yahoo.com>
Sent: Thursday, August 31, 2023 1:32 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Please put the brakes on the Shepherd North Project

Dear Mr Gonzalez,

We were glad to have the opportunity to attend the meeting run by meet the Wilson developers on 8/30. We thought this would be a meeting run by the City rather than the develop. In the end, the discussion increased rather than decreased our concerns.

M-1

I do understand that the City of Clovis has a vested interest in this project proceeding, but I really would hope that some of the staff and planners are still able look closely at our legitimate concerns. The EIR prepared by De Novo Planning Group is an example of a document that truly requires some critical thinking on the part of the City staff. Some of the evidence and arguments put forth simply don't jive with the boots-on-the-ground reality.

One obvious example is the assertion that this area just isn't good farm land. Well, sure, there are some spots that aren't great nearby. However, the specific parcels in question as well as the parcels developed by Lennar across the street have actually been outstanding farm land. Just ask Pat Richiutti—his almonds north of Shepherd have performed well for decades before being pulled out. Just ask Alejandro who managed the pecan that Wilson now owns. These have been extremely "fruitful" properties and would still be if not being

M-2

repurposed. Obviously, a land owner can chose what he or she does with their land. But let the record be clear—this is great farm land.

This is just one example of the self-serving nature of some elements in this EIR, aimed to paint a picture that the reader wants to see. Of course this is normal. I am just asking that the City please read this report with proper analysis and critical thinking. We cannot let an EIR by out-of-town consultants trump the realities known by those of us who have lived here for decades. M-2 Cont.

Let me share a few other thoughts on some of the relevant topics being brought up.

Stopping the pecan orchard ag wells has hurt, not helped local ground water supply. Let me explain. The pecan ag wells are much larger than our residential wells. They pulled water from much deeper, irrigated the trees, flood irrigated, then soaked in and then recharged more shallow residential well. We could all tell the difference in our well productivity when the trees were no longer irrigated. Our wells decreased and some, like ours, have gone dry. So not using the orchard wells has decreased not increased usable residential groundwater. The report can talk about geology and hardpan, but we can talk about reality. M-3

Eliminating the large permeable surface area will further degrade our water supply. Identifying the recharge basin northwest of Perrin and Sunnyside as the destination for water in the proposed development is not in any way helpful for the existing residents. Yes, it may work fine as a flood control measure; but that basin will offer no benefit for recharging the water table for existing residents. The general flow of the aquifers will take that recharge way from existing residents. A recharge basin for the proposed home needs to be in that specific same area, especially considering the very dramatic elimination or permeable surface area.

Noise pollution, air, and light pollution as well as traffic congestion—the report seems to be saying that these will be similar to similar residential density elsewhere, therefore the development is of no impact. This type of argument is laughable because is avoids (likely intentionally) the actual comparison that is relevant—that the baseline level of noise, light, and air pollution will be dramatically increased. The comparison to baseline must be considered. Similarly with traffic congestion—compared to baseline there will be a dramatic increase in vehicle traffic and congestion even with the expansion of the road/intersection. M-4

Finally, proposing Perrin as a north exit for this many houses is not appropriate or even viable. I'm not sure why this would be considered given the nature of the Perrin/Stanford corner and the adjacent roadways. M-5

In summary, please put the brakes on for the moment and let us work through these concerns. While our first instinct is to oppose city annexation, surely a path forward can be found if these problems are acknowledged and addressed.

M-5 Cont.

Sincerely,

____

Eric J Poulsen, MD
9324 N Purdue Ave
Clovis, CA 93619

Response to Letter M: Eric Poulsen 2, Resident of Clovis

Response M-1: The commentor provides a brief paragraph noting their attendance at the neighborhood meeting, and that they thought the meeting would be run by the City. They note that the discussion increased rather than decreased their concerns.

- The comment regarding the neighborhood meeting is addressed in Master Response 15. The City notes the commenters increased concerns.

Response M-2: The commenter then indicates that they understand that the City of Clovis has a vested interest in this project proceeding, but that they hope that some of the staff and planners are still able look closely at their concerns. The comment indicates that the EIR is an example of a document that requires some critical thinking on the part of the City staff, and that some of the evidence and arguments put forth simply don't jive with the boots-on-the-ground reality. The commenter provides the following example: "*One obvious example is the assertion that this area just isn't good farm land. Well, sure, there are some spots that aren't great nearby. However, the specific parcels in question as well as the parcels developed by Lennar across the street have actually been outstanding farm land. Just ask Pat Richiutti—his almonds north of Shepherd have performed well for decades before being pulled out. Just ask Alejandro who managed the pecan that Wilson now owns. These have been extremely "fruitful" properties and would still be if not being repurposed. Obviously, a land owner can choose what he or she does with their land. But let the record be clear—this is great farm land*."

- The Draft EIR is a result of extensive technical analysis by a team of consultants working closely with City staff since 2021 (over two years). During that time there was a significant amount of analysis, peer review, design changes, and supplemental analysis necessary to fully analyze the impacts, and reduce or avoid impacts associated with project development.

  The Draft EIR on page 3.2-16 indicates that the California Department of Conservation has designated approximately 63.60 acres of the Project site as Prime Farmland and 11.44 acres of the Project site as Farmland of Statewide Importance. This is reflected on Figure 3.2-1. Land designated as such generally consists of the qualities that make a site good farmland. However, the Draft EIR also indicates on page 3.2-16, that the California Department of Conservation notes that these designations do not necessarily reflect all relevant factors for agricultural production, and that they developed the Land Evaluation and Site Assessment (LESA) to evaluate the significance of the agricultural conversions such as what is proposed. The City utilized the LESA model to evaluate the site-specific characteristics more closely, and after evaluating the site-specific soil characteristics, project size, surrounding uses, agricultural protection zones, water resources availability, and ongoing economic feasibility of agricultural operations utilizing the LESA Model, the model showed that the conversion of the land on the Project site is not a significant impact according to the Department of Conservation thresholds. Therefore, implementation of the proposed Project would have a less than significant impact relative to agricultural conversion. This environmental conclusion considers site specific characteristics such as the existence of a hardpan within the upper horizon of the soil profile, the project size, surrounding urban uses, lack of agricultural protection zones in the zone of influence, lack of water resources, and ongoing economic feasibility of agricultural operations due to other factors. While farming has historically occurred on the Project site, and on adjacent properties before they too were developed, it currently is an economic challenge to farm the Project site based on the current circumstances of urbanization and an insecure water source for irrigation. The insecurity of groundwater under the Project site is well documented by citizens in the vicinity, and that insecurity of water is not limited to just the neighboring citizens, it applies to the agricultural operation also.

Response M-3: The commentor provides two paragraphs describing their explanation for how stopping irrigation of the pecan orchard ag wells has hurt, not helped, the ground water supply. The comments are as follows: *"…The pecan ag wells are much larger than our residential wells. They pulled water from much deeper, irrigated the trees, flood irrigated, then soaked in and then recharged more shallow residential well. We could all tell the difference in our well productivity when the trees were no longer irrigated. Our wells decreased and some, like ours, have gone dry. So not using the orchard wells has decreased not increased usable residential groundwater. The report can talk about geology and hardpan, but we can talk about reality.*

Eliminating the large permeable surface area will further degrade our water supply. Identifying the recharge basin northwest of Perrin and Sunnyside as the destination for water in the proposed development is not in any way helpful for the existing residents. Yes, it may work fine as a flood control measure; but that basin will offer no benefit for recharging the water table for existing residents. The general flow of the aquifers will take that recharge way from existing residents. A recharge basin for the proposed home needs to be in that specific same area, especially considering the very dramatic elimination or permeable surface area."

- This comment is addressed under Master Response 3, 4, and 5.

Response M-4: The commentor provides a paragraph describing concerns with noise pollution, air, and light pollution, as well as traffic congestion. The commenter states the following: ***"…****the report seems to be saying that these will be similar to similar residential density elsewhere, therefore the development is of no impact. This type of argument is laughable because it avoids (likely intentionally) the actual comparison that is relevant—that the baseline level* *of noise, light, and air pollution will be dramatically increased. The comparison to baseline must be considered. Similarly with traffic congestion—compared to baseline there will be a dramatic increase in vehicle traffic and congestion even with the expansion of the road/intersection*."

- The comment regarding noise is addressed under Master Response 17. The comment regarding light is addressed under Master Response 18. The comment regarding Air pollution is addressed under Master Response 19.

  The comment regarding traffic congestion is addressed under Master Response 6 through 13. The project proposes to construct 605 single-family residences. The surrounding areas in the neighborhood also mostly constitute of similar single-family residential developments. Additionally, several new projects within the area also proposes single-family residential developments. As such, the project does not propose any land use atypical to the area, or any land use that is estimated to change the neighborhood traffic pattern. Therefore, trip generation and distribution pattern from the project is also expected to be similar to the neighborhood trip patterns. In fact, implementation of recommended improvements as included in the TIA would help alleviate traffic congestion and safety related issues within the project vicinity, as well as existing and future residential communities in the area.

  The TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

  The project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

Response M-5: The commentor states that proposing Perrin as a north exit for this many houses is not appropriate or even viable and that they are not sure why this would be considered given the nature of the Perrin/Stanford corner and the adjacent roadways. The commenter then concludes that letter by requesting "…*please put the brakes on for the moment and* *let us work through these concerns. While our first instinct is to oppose city annexation, surely a path forward can be found if these problems are acknowledged and addressed*."

- The traffic related comment is addressed under Master Response 6 through 13. Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road (Stanford/Perrin), and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway on Perrin (Stanford/Perrin) will be an exit only driveway and will provide emergency access. As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage. The project is estimated to add only nominal trips to the local roads including Stanford Avenue and Perrin Road. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue.

  New traffic will be generated by the future residents of the 605 single-family residences. The DEIR identifies the traffic that would be generated by the proposed Project, including trips and vehicle miles traveled. The proposed Project does not propose any land use atypical to the area, or any land use that is estimated to change the neighborhood traffic pattern. The trip distribution pattern from the proposed Project is expected to be similar to the neighborhood trip patterns. Implementation of recommended improvements as included in the TIA would help alleviate traffic congestion and safety related issues within the project vicinity, as well as existing and future residential communities in the area. The traffic improvements recommended as part of the TIA accounts for cumulative traffic impact from all future projects, as well as the proposed Project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the TIA would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

  The comments regarding their opposition and request to "*put the brakes on for the moment and let us work through these concerns*" is noted and will be provided to the City for consideration. No further response to this comment is warranted in the EIR.

smcmurtry@denovoplanning.com

Subject: FW: [External] Shepherd North Project

-----Original Message-----
From: Charles Keller <exadvent@pacbell.net>
Sent: Monday, September 4, 2023 2:06 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>; Vong Mouanoutoua <VongM@ci.clovis.ca.us>
Subject: [External] Shepherd North Project

George,Vong,

My wife, Lisa, and I appreciate that we were included in the informational letters and postcards sent out regarding the Shepherd North Project that Leo Wilson and the City are trying to put together. We are adamantly against this area just north of our home being included in an expansion of OUR Sphere of Influence et al. We are adamantly opposed to another 605 new homes being built by Leo Wilson or any other developer just North of us. We, and pretty much all of our new(Woodside Homes) and old neighbors are adamantly opposed to any more new developments until you have the intestinal fortitude to put all this new development to a vote. That is not a vote by the City Council that bends over backward to placate all developers and never listens to your own voters. Put new development to a vote. Ask your voters if they want more traffic, more schools with more school bonds, more crime, higher insurance rates, more crowded stores, less rural lifestyle, more LA freeways, and just more and more people!! Do you have the guts to ask?? We sincerely doubt it. Who the heck benefits? We don't and we know because you just caused about 175 new homes to be built all around us. The 'Clovis Way of Life' has become more and more like the 'Los Angeles Way of Life'. N-1

We suggest you put all your staff to work bringing in new businesses rather than new homes. All your city planners, all your city engineers, all your city employees….direct them to work to bring in businesses to pay for OUR backlog of infrastructure. More businesses to pay for our police, and fire, and city maintenance. Not More Homes. More businesses to pay for George Gonzalez salary. Not more homes. Very very very few of our current residents benefit from more new homes. Only the developers benefit. List it out. Pros and Cons for the voters/residents of Clovis and put it to a vote…more people, more homes, more school bonds, more traffic….or not???

We, Lisa and I, and our new and old neighbors would like an itemized response for this, please. No more mitigations, no or vastly fewer new homes and certainly not another 605 to make Leo Wilson richer. We look forward to a rational response to our email. thanks, chuck and lisa keller et al… N-2

Response to Letter N: Charles Keller, Resident of Clovis

Response N-1: The commentor states the following: "*My wife, Lisa, and I appreciate that we were included in the informational letters and postcards sent out regarding the Shepherd North Project that Leo Wilson and the City are trying to put together. We are adamantly against this area just north of our home being included in an expansion of OUR Sphere of Influence et al. We are adamantly opposed to another 605 new homes being built by Leo Wilson or any other developer just North of us. We, and pretty much all of our new (Woodside Homes) and old neighbors are adamantly opposed to any more new developments until you have the intestinal fortitude to put all this new development to a vote. That is not a vote by the City Council that bends over backward to placate all developers and never listens to your own voters. Put new development to a vote. Ask your voters if they want more traffic, more schools with more school bonds, more crime, higher insurance rates, more crowded stores, less rural lifestyle, more LA freeways, and just more and more people!! Do you have the guts to ask?? We sincerely doubt it. Who the heck benefits? We don't and we know because you just caused about 175 new homes to be built all around us. The 'Clovis Way of Life' has become more and more like the 'Los Angeles Way of Life'.*

We suggest you put all your staff to work bringing in new businesses rather than new homes. All your city planners, all your city engineers, all your city employees….direct them to work to bring in businesses to pay for OUR backlog of infrastructure. More businesses to pay for our police, and fire, and city maintenance. Not More Homes. More businesses to pay for George Gonzalez salary. Not more homes. Very very very few of our current residents benefit from more new homes. Only the developers benefit. List it out. Pros and Cons for the voters/residents of Clovis and put it to a vote…more people, more homes, more school bonds, more traffic….or not???"

- This comment is a statement of opposition by the commenter. It does not specifically identify an issue with the environmental document, but rather serves as a statement of opposition and a request that the Project be put to a vote. The commenter identifies their concerns regarding traffic, more schools with school bonds, crime, crowds, high insurance rates, and less rural life style. The EIR includes a discussion of traffic, which is also addressed in Master Response 6 through 13. The EIR also includes a discussion of schools and police services, which combat crime. The commenter concerns with insurance rates and rural lifestyle are noted. These comments to not trigger any changes to those discussions. The commenter's recommendation for the City to use the City staff to bring in new business to pay for policy, fire, and city maintenance is noted. These comments are noted and will be provided to the City for consideration. No further response to this comment is warranted in the EIR.

Response N-2: The commentor states the following: "*We, Lisa and I, and our new and old neighbors would like an itemized response for this, please. No more mitigations, no or vastly fewer* *new homes and certainly not another 605 to make Leo Wilson richer. We look forward to a rational response to our email. thanks, chuck and lisa keller et al..."*

- It is noted that one of the objectives of the project is to establish a mix of housing to provide for local and regional housing demand, and consistent with the City requirements in the latest Regional Housing Needs Analysis (RHNA). In light of the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, the State has provided the City with good reason to exercise its legislative discretion to facilitate the construction of new housing. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects." The proposed Project is not considered urban sprawl, rather it is the last remaining property in agricultural use in an area surrounded by urban and Rural Residential uses. The comment will be provided to the City for consideration. No further response to this comment is warranted in the EIR.

smcmurtry@denovoplanning.com

Subject: FW: [External] Quail Run Neighborhood; Wilson Homes

-----Original Message-----
From: curtis cookingham <curtiscookingham@icloud.com>
Sent: Monday, September 4, 2023 7:06 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Quail Run Neighborhood; Wilson Homes

George,
I was at the meeting on the 30th with the home owners. I listened carefully to Dirk give his presentation of the environmental impact study as if it was " observed facts". I'm sure many of my neighbors will send comments to you, but my conclusion is this housing project on Shepherd and Sunnyside provides NO BENEFIT to the current home owners of Quail Run. In fact, this development in concert with the Lennar homes to the West provides additional problems for all of us - the hard working tax payers of Clovis who made the decision years ago to spend more money for some land in the country. Prime issues: O-1

1. Traffic will be a much bigger problem than it is now. There will be too many people, from too many homes using shepherd or the country streets in our neighborhood to access Fowler. When I take my kids to clovis north, I turn left off of Ticonderoga onto Fowler. The cars are backed up to shepherd every morning now - add 100s more from Wilson and 100s from Lennar. Problems for everyone - real problems for our neighborhood. More traffic provides no benefit to u, only continues headaches. O-2

2. Noise - with more traffic and more homes, and more cement/asphalt - you get more noise. Our quiet neighborhood will change dramatically. Dirks explanation at the meeting is not based in reality. I'm in my backyard right now and see the Lennar homes that " we're framed this week" getting closer and closer . Traffic and people will effect noise - there is no way to argue this. More noise provides no benefit to us O-3 3. Lights. Our county neighborhood has no lights. That was our choice when we purchased our homes. There will be street lights at the edge of our property lines. In addition to the above comments - this will change the rural setting of Quail arum immediately. More light provides no benefit to us O-4 4. Water. I already wrote to you about this. As far as I know - I have three neighbors who drilled new wells within the past year and I tried to revive an old well with a drilling company without success Our water situation has and is deteriorating. I have spent between 2500.00 - 3,000.00 this summer to bring potable water in. This was my most expensive summer yet. The farmers around us no longer flood irrigate, so our water tables are dropping. If we have no other recourse than to affirm this project, please use discernment and reason to forge an equitable plan with the builder to bring water to our lot boundaries. O-5

5. The project plan that was available at the meeting shows street access into our actual neighborhood at the north/west corner of the Wilson homes. I am aggressively opposed to this as it will pour unwanted traffic onto winding country streets. Please do not allow access directly onto our streets. O-6

Again - the Wilson project provides the home owners of quail run NO BENEFIT - only negative change. Please consider our side. We want the Clovis way of life to continue.
Thank you. Curtis and Pamela cookingham. 9397 north Purdue Ave Sent from my iPhone This e-mail may contain confidential and privileged material for the sole use of the intended recipient. Any review, use, distribution or disclosure by others is strictly prohibited. If you are not the intended recipient (or authorized to receive for the recipient), please contact the sender by reply e-mail and delete all copies of this message. O-7

Response to Letter O: Curtis and Pamela Cookingham, Residents of Clovis

Response O-1: The commentor provides a brief introductory paragraph describing opposition to the Project, and that there is no benefit to the Quail Run neighborhood. The statements serve as an introductory statement to their letter, and their specific concerns are more fully discussed in the following comments.

- These introductory statements are noted. There is no response warranted.

Response O-2: The commentor states the following: "*1. Traffic will be a much bigger problem than it is now. There will be too many people, from too many homes using shepherd or the country streets in our neighborhood to access Fowler. When I take my kids to clovis north, I turn left off of Ticonderoga onto Fowler. The cars are backed up to shepherd every morning now - add 100s more from Wilson and 100s from Lennar. Problems for everyone - real problems for our neighborhood. More traffic provides no benefit to u, only continues headaches*."

- The traffic related comment is addressed under Master Response 6 through 13. Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road, and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway on Perrin will be an exit only driveway and will provide emergency access. As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage.

  The project is estimated to add only nominal trips to the local roads including Stanford, Perrin, and Ticonderoga. Similarly, it is estimated to add nominal trips to Fowler Avenue north of Shepherd Avenue. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue. Based on the TIA, only 15 percent of project traffic is anticipated to utilize Fowler Avenue south of Shepherd Avenue. As such, the project is not estimated to create any traffic related issues along Fowler Avenue. A signal at the intersection of Fowler Avenue/Teague Avenue is in the City's Development Impact Fee program and will be constructed when warranted but not as a requirement of the project.

Response O-3: The commentor states the following: "*2. Noise - with more traffic and more homes, and more cement/asphalt - you get more noise. Our quiet neighborhood will change dramatically. Dirks explanation at the meeting is not based in reality. I'm in my backyard right now and see the Lennar homes that "we're framed this week" getting closer and closer. Traffic and people will effect noise - there is no way to argue this. More noise provides no benefit to us*"

- The noise related comment is addressed under Master Response 17.

Response O-4: The commentor states the following: "*3. Lights. Our county neighborhood has no lights. That was our choice when we purchased our homes. There will be street lights at the edge of our property lines. In addition to the above comments - this will change the rural setting of Quail arum immediately. More light provides no benefit to us.*"

- The light related comments, and the comments regarding the change of the setting is addressed under Master Response 18.

Response O-5: The commentor states the following: "*4. Water. I already wrote to you about this. As far as I know - I have three neighbors who drilled new wells within the past year and I tried to revive an old well with a drilling company without success Our water situation has and is deteriorating. I have spent between 2500.00 - 3,000.00 this summer to bring potable water in. This was my most expensive summer yet. The farmers around us no longer flood irrigate, so our water tables are dropping. If we have no other recourse than to affirm this project, please use discernment and reason to forge an equitable plan with the builder to bring water to our lot boundaries.*"

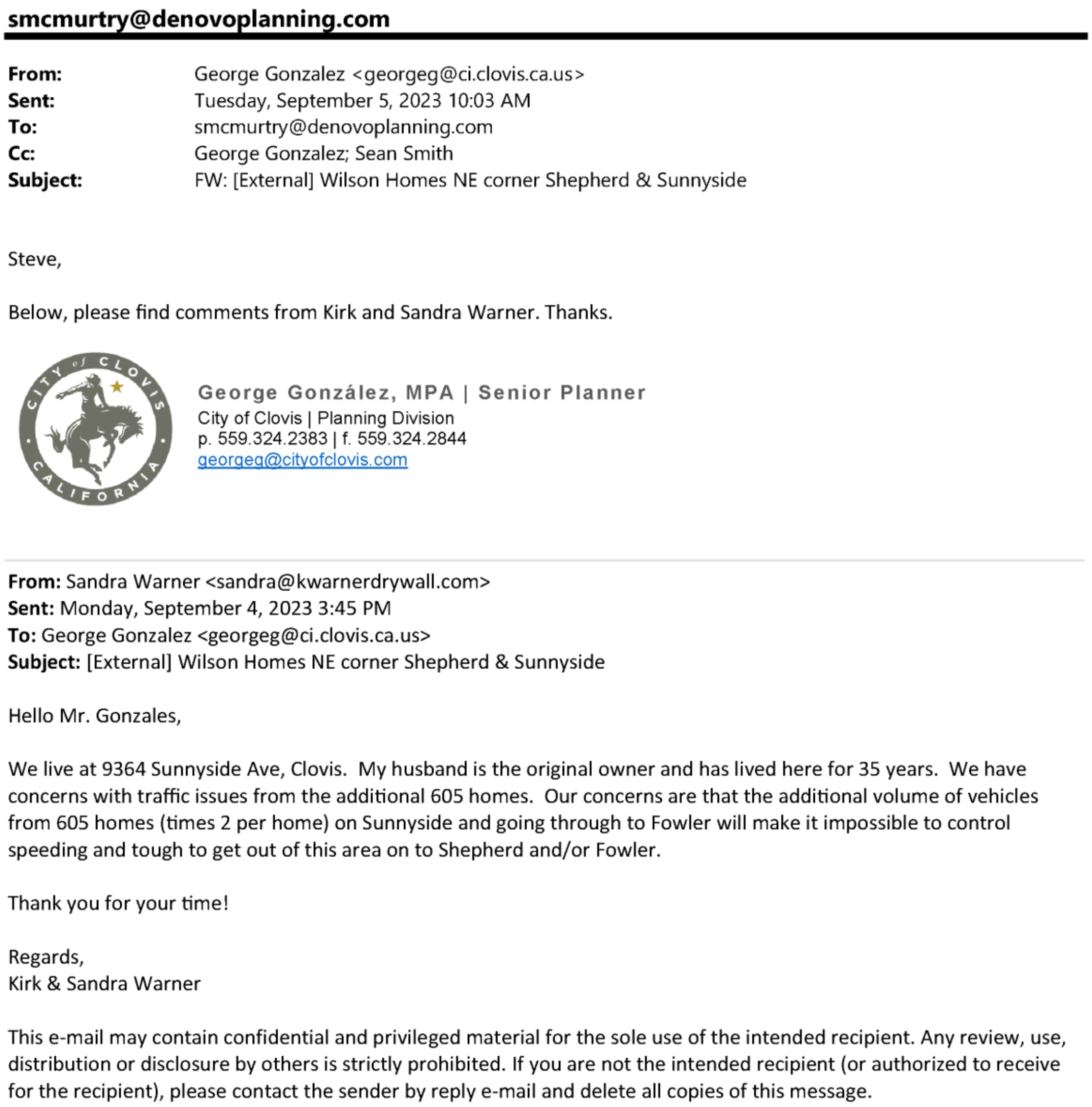
- The water related comment is addressed under Master Response 3, 4, and 5.

Response O-6: The commentor states the following: "*5. The project plan that was available at the meeting shows street access into our actual neighborhood at the north/west corner of the Wilson homes. I am aggressively opposed to this as it will pour unwanted traffic onto winding country streets. Please do not allow access directly onto our streets.*"

- The neighborhood meeting related comment is addressed under Master Response 16. The commenter's opposition to the Project is noted and will be provided to the City for their consideration. The traffic related comments are addressed under Master Response 6 through 13. Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road, and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway on Perrin will be an exit only driveway and will provide emergency access. As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage.

Response O-7: The commentor states the following: "*Again - the Wilson project provides the home owners of quail run NO BENEFIT - only negative change. Please consider our side. We want the Clovis way of life to continue.*"

- The commenter's opposition to the Project is noted and will be provided to the City for their consideration.



smcmurtry@denovoplanning.com

From: George Gonzalez <georgeg@ci.clovis.ca.us>
Sent: Tuesday, September 5, 2023 10:03 AM
To: smcmurtry@denovoplanning.com
Cc: George Gonzalez; Sean Smith
Subject: FW: [External] Wilson Homes NE corner Shepherd & Sunnyside

Steve,

Below, please find comments from Kirk and Sandra Warner. Thanks.

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

From: Sandra Warner <sandra@kwarnerdrywall.com>
Sent: Monday, September 4, 2023 3:45 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Wilson Homes NE corner Shepherd & Sunnyside

Hello Mr. Gonzales,

We live at 9364 Sunnyside Ave, Clovis. My husband is the original owner and has lived here for 35 years. We have concerns with traffic issues from the additional 605 homes. Our concerns are that the additional volume of vehicles from 605 homes (times 2 per home) on Sunnyside and going through to Fowler will make it impossible to control speeding and tough to get out of this area on to Shepherd and/or Fowler. P-1

Thank you for your time!

Regards,
Kirk & Sandra Warner

Response to Letter P: Kirk and Sandra Warner, Residents of Clovis

Response P-1: The commentor states the following: "*We live at 9364 Sunnyside Ave, Clovis. My husband is the original owner and has lived here for 35 years. We have concerns with traffic issues from the additional 605 homes. Our concerns are that the additional volume of vehicles from 605 homes (times 2 per home) on Sunnyside and going through to Fowler will make it impossible to control speeding and tough to get out of this area on to Shepherd and/or Fowler*."

- The comment regarding traffic is addressed in Master Response 6 through 13. The project proposes to construct 605 single-family residences. The surrounding areas in the neighborhood also mostly constitute of similar single-family residential developments. Additionally, several new projects within the area also proposes single-family residential developments. As such, the project does not propose any land use atypical to the area, or any land use that is estimated to change the neighborhood traffic pattern. Therefore, trip generation and distribution pattern from the project is also expected to be similar to the neighborhood trip patterns. In fact, implementation of recommended improvements as included in the TIA would help alleviate traffic congestion and safety related issues within the project vicinity, as well as existing and future residential communities in the area.

  The TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

  The project is estimated to add only nominal trips to local streets like Stanford, Perrin Road, Ticonderoga, as well as on to Fowler Avenue north of Shepherd Avenue. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue. Based on the TIA, only 15 percent of project traffic is anticipated to utilize Fowler Avenue. As such, the project is not estimated to create any traffic related issues along Fowler Avenue. A signal at the intersection of Fowler Avenue/Teague Avenue is in the City's Development Impact Fee program and will be constructed when warranted but not as a requirement of the project.

  Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road, and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway on Perrin will be an exit only driveway and will provide emergency access. As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage.

The project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

September 4, 2023

VIA EMAIL

George González, MPA | Senior Planner
City of Clovis | Planning Division
1033 Fifth Street, Clovis, CA 93612
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com
georgeg@ci.clovis.ca.us

Re: ***Comments on Draft Environmental Impact Report for the Shepherd North Project***

Dear Mr. Gonzalez:

I am writing as an owner and resident of the Quail Run neighborhood (9318 N. Sunnyside, Ave. Clovis, CA 93619) which is the community of 18 homes immediately north of the proposed development (the "**Project**"). While I don't represent the Qual Run community as a whole, I can assure you that most of its residents (if not all) share the major concerns I have with respect to the Project. In particular, I am writing regarding the Draft Environmental Impact Report ("**DEIR**") that attempts to argue that the Project has no real impact on the community. Make no mistake about it, the Project's impact not only on the Quail Run neighborhood but on the community at large will be substantial. Q-1

The Project will forever change the way of life for those in its immediate vicinity and the DEIR pays lip service to the numerous and major concerns of the community.

The DEIR was not properly noticed, fails to analyze numerous potentially significant environmental impacts, fails to evaluate feasible alternatives and mitigation measures, and fails to support its conclusions with substantial evidence. Accordingly, the DEIR is inadequate under the California Environmental Quality Act ("**CEQA**") and as a result, I oppose approval of the Project and certification of the DEIR. I urge the City to address the DEIR's shortcomings in a revised EIR that is recirculated for public review and comment, prior to considering any approvals for the Project. Q-2

I. LEGAL STANDARDS

a. The EIR Must Afford the Fullest Possible Protection to the Environment and Have Sufficient Detail to Enable Those Who Did Not Participate in Its Preparation to Understand and to Consider Meaningfully the Issues Raised by the Proposed Project.

Q-3

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an EIR (except in certain limited circumstances). (See, e.g., Pub. Resources Code, § 21100.) The EIR is the very heart of CEQA. *(Dunn-Edwards v. BMQMD* (1992) 9 Cal.App.4th 644, 652.) "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *(Communities for a Better Environment v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98, 109 (*"CBE v. CRA* ").)

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. (14 Cal. Code Regs. ("CEQA Guidelines")§ 15002(a)(l).) "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'" *(Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564.) The EIR has been described as "an environmental 'alarm bell' whose purpose it is to ale11 the public and its responsible officials to environmental changes before they have reached ecological points of no return." *(Berkeley Keep Jets Over the Bay v. Ed. of Port Comm 'rs.* (2001) 91 Cal.App.4th 1344, 1354 *("Berkeley Jets"); County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.)

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures. (CEQA Guidelines, § I 5002(a)(2) and (3); *See also Berkeley Jets,* 91 Cal.App.4th at 1354; *Citizens of Goleta Valley,* 52 Cal.3d at 564.) The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced." (CEQA Guidelines, §15002(a)(2).) If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." (Pub. Resources Code, § 21081 ; CEQA Guidelines, § 15092(b)(2)(A) & (B).)

Q-3 Cont.

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" *(Berkeley Jets,* 91 Cal.App.4th at 1355 (emphasis added), quoting, *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 391 409, n. 12.)

As the court stated in *Berkeley Jets,* 91 Cal.App.4th at 1355:

> A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decision making and informed public participation, thereby thwarting the statutory goals of the EIR process." *(San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946.)

More recently, the California Supreme Court has emphasized that:

> When reviewing whether a discussion is sufficient to satisfy CEQA, a court must be satisfied that the EIR (1) includes sufficient detail to enable those who did not participate in its preparation to understand and to consider meaningfully the issues the proposed project raises [citation omitted] ....

(Sierra Club v. Cty of Fresno (2018) 6 Cal.5th 502, 510 (2018), citing *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 405.) The Court in *Sierra Club v. Cty. of Fresno* also emphasized at another primary consideration of sufficiency is whether the EIR "makes a reasonable effort to substantively connect a project's air quality impacts to likely health consequences." (6 Cal.5th at 510.) "Whether or not the alleged inadequacy is the complete omission of a required discussion or a patently inadequate one paragraph discussion devoid of analysis, the reviewing court must decide whether the EIR serves its purpose as an informational document." *(Id.* at 516.) Although an agency has discretion to decide the manner of discussing potentially significant effects in an EIR, "a reviewing court must determine whether the discussion of a potentially significant effect is sufficient or insufficient, i.e., whether the EIR comports with its intended function of including 'detail sufficient to enable those who did not pa1ticipate in its preparation to understand and to consider meaningfully the issues raised by the proposed project. "' (6 Cal.5th at 516, citing *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.) "The determination whether a discussion is sufficient is not solely a matter of discerning whether there is substantial evidence to support the agency 's factual conclusions." (6 Cal.5th at 516.) Q-3 Cont.

As the Court emphasized:

> [W]hether a description of an environmental impact is insufficient because it lacks analysis or omits the magnitude of the impact is not a substantial evidence question. A conclusory discussion of an environmental impact that an EIR deems significant can be determined by a court to be inadequate as an informational document without reference to substantial evidence. *(Sierra Club v. Cty. of Fresno,* 6 Cal.5th at 514.)

In general, mitigation measures must be designed to minimize, reduce or avoid an identified environmental impact or to rectify or compensate for that impact. (CEQA Guidelines § 15370.) Where several mitigation measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. *(Id.* at§ 15126.4(a)(l)(B).) A lead agency may not make the required CEQA findings unless the administrative record clearly shows that all uncertainties regarding the mitigation of significant environmental impacts have been resolved.

II. THE DEIR WAS IMPROPERLY NOTICED & FAILED TO INCLUDE ALL STATUTORILY REQUIRED INFORMATION.

a. A Full 45-day Notice of the DEIR Was Not Provided.

On or around July 21, 2023, the City circulated a "Notice of Availability—Draft EIR (Shepherd North Project)" (the "**Notice**"). The Notice provided as follows:

> The 45-day public review period extends from **July 21, 2023 to September 4, 2023**. All written comments must be submitted by **5:00 p.m. on September 4, 2023** to George González, MPA, Senior Planner via email at georgeg@cityofclovis.com or mailed to 1033 Fifth Street, Clovis, CA 93612.

Q-4

After the draft EIR has been completed, the lead agency must provide public notice that the draft EIR is available for review and comment. Pub Res C §21092; 14 Cal Code Regs §15087(a). This notice of availability must be given at the same time that the notice of completion is sent to the state Office of

Planning and Research. The notice must also be given in sufficient time so that the public is able to use the full review period. *Gilroy Citizens for Responsible Planning v City of Gilroy* (2006) 140 CA4th 911, 922

A 45-day period for review of a draft EIR is required when the EIR must be reviewed by state agencies through the State Clearinghouse. (14 Cal Code Regs §15105(a).)

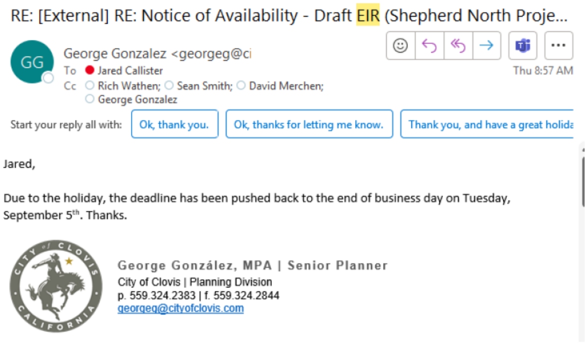
Under CEQA, the notice must specify the **exact dates** of the public review period, and the **full** review period required by the Guidelines must be provided. If the ending date for the required review period would otherwise fall on a weekend or other legal holiday, the ending date must be extended. *Rominger v County of Colusa* (2014) 229 CA4th 690, 708, overruled in part on other grounds by *Union of Med. Marijuana Patients, Inc. v City of San Diego* (2019) 7 C5th 1171

Here, the *Rominger* case is exactly on point. In that case, the county attempted to provide its required notice (in that case 30-days) but the last three days of such notice fell on Labor Day weekend. Because county officers were closed on those three days, the Court concluded that the county effectively "truncated the public review period by three days." Thus, the county in that case effectively only provided a 27-day public review period—which did not comply with CEQA.

Notably, the Court in Rominger held that "[b]y failing to provide a full 30-day public review period, the county did not proceed in the manner required by law and thereby abused its discretion." (*Id.*).

Q-4 Cont.

In a belated attempt to cure this obvious deficiency, on August 31, 2023, in response to queries about the comment period George Gonzalez emailed myself and one other Quail Run resident to inform us that the deadline had been apparently pushed back to the end of business day on Tuesday September 5th. (*screen shot below*)



RE: [External] RE: Notice of Availability - Draft EIR (Shepherd North Proje...

George Gonzalez <georgeg@ci

To ● Jared Callister

Cc ○ Rich Wathen; ○ Sean Smith; ○ David Merchen; ○ George Gonzalez

Thu 8:57 AM

Jared,

Due to the holiday, the deadline has been pushed back to the end of business day on Tuesday, September 5th. Thanks.

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

It is unclear who else in the community was notified that the City was now attempting to extend the September 5 deadline or whether additional updated notices were mailed. What is clear, however, is that the City's belated efforts to cure the botched and truncated notice are legally inadequate. Indeed, this exact circumstance was already addressed by the *Rominger* court where it noticed that belated extension was improper:

4

> Here, the county identified a period from August 7 to September 5 -- a period we have concluded was three days too short because the last three days [Labor Day weekend] did not count. The county cannot now claim that it actually provided a legally sufficient 30-day public review period because its notices were published prior to August 7 and because it would have continued to accept comments from the public up through the hearing on September 12. The period that must comply with CEQA is the period **specified *in the notice* given to the public**. Here, as we have said, that period did *not* comply with CEQA. (*Id. Emphasis added.*)

Q-4 Cont.

Similar to the County in *Rominger*, the City gave improper notice which had the last three comment days falling on Labor Day weekend—thereby truncating the required notice period by three days. And similar to the County in *Rominger*, it is irrelevant that the City belatedly attempted to extend the comment deadline as the Notice provided by the City did not comply with CEQA and could not have been cured.

b. The Notice of DEIR Failed to Include all Required Information

Q-5

Under Pub Res C §21092(b)(1) and 14 Cal Code Regs §15087(c), a notice that a draft EIR is available for public review must contain certain key items, meant to assist the public in its review. The purpose of the description of the project is to alert the public of its nature, location, and purpose so that interested persons can determine whether to review the draft EIR and provide comments.

In particular, one key item that must be included in such notice is an explanation of the "anticipated significant environmental effect of the project." However, noticeably absent from the Notice regarding this Project is any description of such "anticipated significant environmental effects".

And yet, by the DEIR's own admission, the DEIR confirms that the Project's impacts on traffic (3.13-1) will be significant and unavoidable even with their proposed mitigation measures. Likewise, the DEIR confirms that the Project's impact on birds and other mammals will be "potentially significant" and further confirms that construction noise and operation noise with be "potentially significant". Furthermore, the DEIR acknowledges that without mitigation, the Project's involvement with the transportation and use of hazardous materials will be "potentially significant".

Notwithstanding the above-mentioned significant impacts, the Notice failed to mention, list or identify these specific impacts as required under CEQA. This failure to comply with CEQA is an abuse of discretion which requires the DEIR to be re-circulated and correctly noticed for comment with a complete list of all significant impacts.

III. THE DEIR IS LEGALLY INSUFFICIENT IN NUMEROUS RESPECTS

a. The Scope of the DEIR is Insufficient as it Fails to Consider the Unique Characteristics of the Immediate Community and Uses an Improper Baseline Throughout the Bulk of its Analysis.

Q-6

The DEIR purports to address issues and comments raised in the scoping process. However, the DEIR wholly fails to address one key request during the scoping process—namely, the Project's impacts on the unique characteristics and concerns of the Quail Run Community, referred to as the "Expansion SubArea North" in the DEIR.

The Quail Run Community is a community of 18 homes in Fresno County surrounded by and directly adjacent to the Project. In particular, the community is a beautiful and tranquil rural residential community very similar to the well-known Dry Creek Preserve. For years, the Quail Run Community has been part of a designated County Service Area 51---which is an area of well-known and well-documented water issues. Homeowners in County Service Area 51 have had major concerns with the area's groundwater supplies—as many have had to dig several deeper wells over the years. Q-6 Cont.

Indeed, during one scoping phone call I had with City staff, I attempted to clarify the unique concerns of Quail Run and requested that the DEIR include a detailed micro-study of this area and community to ensure that its issues were addressed. In particular, it must be determined, with certainty, how the Project will impact the unique water concerns of the Qual Run neighborhood.

Unfortunately, the DEIR makes no specific study or analysis of the Quail Run community or the Project's impacts on this community. All the DEIR can muster is to simply define the Expansion SubArea North in several sentences—but with no further analysis or direct connection.

Most egregious, is that the DEIR uses an improperly broad and ill-defined "Baseline" when conducting the bulk of its analysis. Time and time again, the DEIR uses the City of Clovis and/or the County of Fresno (as whole) as its Baseline. The is wholly meaningless and counter-productive to how a resident of Quail Run is to gauge the actual impact on his/her neighborhood.

By comparing the Project's numerous impacts to the entire City and County, the DEIR seeks to diminish the significance of these impacts caused by the Project. CEQA prohibits this type of "drop in the bucket" analysis. No single project would ever have a significant impact if its effects were compared to an entire region. In *Friends of Oroville v. City of Oroville* (2013) 219 Cal. App. 4th 832, 841-842, the Court of Appeal held that the agency failed to adequately analyze a project's cumulative contribution to significant GHG impacts by concluding, without adequate analysis, that the project's "miniscule" emissions were insignificant in light of the state 's cumulative, state-wide GHG emissions, thus "applying a meaningless, relative number to determine insignificant impact." The DEIR makes the same error here by comparing the Project's impacts on traffic, noise, light and other matters to the entire City and County of Fresno. Q-7

An analysis that compares and contrasts an improper baseline is wholly inadequate and offers a false picture of how the Project will truly impact the unique Quail Run community. The DEIR must be revised to provide a proper analysis the Project's impacts on the Quail Run community specifically; and based on this analysis, to revise other environmental analyses including but not limited to population and housing, transportation, noise pollution, light pollution, among other topics.

b. The DEIR Only Presents "Straw Man" Alternatives and Fails to Include Several Reasonable Feasible Alternatives that Would Meet all Project Objectives and Result in Less Environmental Impacts than the Project. Q-8

An EIR must describe **a reasonable range of alternatives** to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. "An EIR's discussion of alternatives must contain analysis sufficient to allow informed decision making." *Laurel Heights I,* 47 Cal.3d at 404. An EIR must also include "detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." *Id.* at 405.

CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures. CEQA Guidelines § 15002(a)(2) and (3); *see also, Berkeley Jets,* 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines § 15002(a)(2). If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." Pub. Res. Code§ 21081; CEQA Guidelines § 15092(b)(2)(A) & (B). A "feasible" alternative is one that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. Pub. Res. Code§ 21061.1; CEQA Guidelines § 15364.

Q-8 Cont.

However, the three alternatives currently presented in the draft EIR seem to be set up as "straw man" alternatives, intentionally skewed to make the proposed project appear as the most preferable or only viable option. Here are the primary issues:

1. **Increased Density Mixed Use Alternative:** This alternative, by introducing both homes and apartment complexes, appears to exacerbate the environmental concerns rather than offering a genuine mitigative solution. An alternative in an EIR should ideally present options that reduce environmental impacts, not increase them.
2. **Reduced Density Alternative:** While this alternative reduces the number of homes, it does not sufficiently explore the potential middle ground between high-density and low-density development. Indeed, this option only presents 105 single family homes with no mixed densities. Presenting only a drastically reduced density alternative, without examining intermediate options, can artificially create a contrast that makes the proposed Project appear as a balanced solution. By only considering a large-lot alternative without varying densities the DEIR presents this merely as an illusory alternative that was never meant to be fully considered.
3. **Reduced Sphere of Influence:** This “alternative” simply presents the exact same development, but simply shrinks the Sphere of Influence and its environmental impacts are identical to the proposed project. Offering an alternative that's so similar to the proposed project doesn't give decision-makers or the public a meaningful choice. To call this a viable or thoughtful “alternative” that is meant to reduce environmental impacts is laughable.

To ensure compliance with the spirit and letter of CEQA and to provide a genuine set of alternatives for consideration, I strongly urge the City to:

- **Broaden the Range:** Include a more diverse range of alternatives that genuinely seek to reduce the significant environmental impacts of the project.
- **Examine Intermediate Solutions:** Instead of the extremes of very high or very low density, consider introducing intermediate-density alternatives that can strike a balance between development needs and environmental conservation.
- **Avoid Redundant Alternatives:** Each alternative should be distinct enough from the proposed project to provide a genuine choice. If two alternatives are nearly identical in impact, it can be seen as a redundancy that doesn't aid in meaningful decision-making.

Specifically, the City should consider the following specific reasonable alternatives:

1. **Medium Density Housing of Approximately 350 Homes**: Rather than a 605-unit project, or a 105 unit project, the DEIR needs to examine and consider a balanced, 350 unit project development which consists of a mixture of housing types, sizes and densities. A project such as this would undoubtedly have a reduced environmental impact when compared to the Project while at the same time meeting all of the state project goals.
2. **Southern Parcel Development Only**: Another viable alternative that the City should consider and evaluate is a project which only allows for the development of the southern two parcels of the Project site (APNs: 557-021-19; 20) while retaining the northern parcel (APN: 557-021-21) as prime farmland. The development could consider medium to high density housing of mixed housing types, sizes and densities so as to not only meet the project goals, but to have a reduced environmental impact when compared to the Project.

Q-8 Cont.

In conclusion, for a more robust, transparent, and credible environmental review process, it's crucial that the alternatives section of the EIR be revised to present a sincere and varied set of options. This not only meets legal requirements but also fosters public trust in the development and decision-making processes.

c. The DEIR Fails to Consider Other Alternative Locations in its Sphere of Influence and Justify Its Conclusions.

The DEIR states that the City considered alternative locations for the Project that were in the SOI and were suitable for development. The DEIR notes that "it was found that there are numerous approved projects and proposed projects that are currently under review in Clovis." The DEIR than summarily rejects these alternative locations as they "are not available for acquisition by the Project applicant and are not considered a feasible alternative for the Project applicant." Incredibly, the DEIR then asserts that:

Q-9

> "The City has found that there are no feasible alternative locations that exist within the City's Sphere of Influence with the appropriate size and characteristics that would meet the basic Project objectives and avoid or substantially lessen a significant effect. For these reasons, the City of Clovis determined that there are no feasible alternative locations." (5.0-2)

This statement is not credible given the fact that City's massive Heritage Grove project has been approved and are part of the Sphere of Influence. Is the City really saying that out of the entire Heritage Grove planning area, there is NO alternative site location that feasibly meets the stated project goals?

Most egregiously, is that the DEIR doesn't provide any evidence, data, statistic or studies to actually prove or demonstrate that the alternative locations (including Heritage Grove) where inadequate.

Under CEQA, while the City may consider whether the developer owns the land that may be an alternative site, City must consider whether the project proponent can reasonably acquire, control, or otherwise obtain access to the site if the project proponent does not own the alternative site. 14 Cal Code Regs §15126.6(f)(1). Here, the DEIR simply makes conclusory statements that the alternative sites are "not available for acquisition." Evidence should be presented to prove that such alternative sites cannot reasonably be acquired by the project proponent in this case.

Q-9 Cont.

Indeed, if the City is alleging such alternative sites are economically infeasible, then it needs to actually present an economic analysis that proves and demonstrates such alternatives are not economically viable. (*See Citizens of Goleta Valley v Board of Supervisors* (1990) 52 C3d 553, 575 n7, (where agency's conclusions of economic infeasibility where supported by economic analysis and data that showed alternative site was no viable).)

d. The DEIR Improperly Dismisses the "Reduced Density" Alternative.

The City is required to select the environmentally preferable alternative unless it is infeasible. As explained by the Supreme Court, an environmentally superior alternative may not be rejected simply because it is more expensive or less profitable:

> The fact that an alternative may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible. What is required is evidence that the additional costs or lost profitability are sufficiently severe as to render it impractical to proceed with the project.

Citizens of Goleta Valley v. Ed. of Supervisors (1988) 197 Cal.App.3d 1167, 1180-81; *see also, Burger v. County of Mendocino* (1975) 45 Cal.App.3d 322; *County of El Dorado v. Dept. of Transp.* (2005) 133 Cal.App.4th 1376 (agency must consider small alternative to casino project); *Preservation Action Counsel v. San Jose* (2006) 141 Cal. App. 4th 1336.
In addition, an environmentally superior alternative may not be rejected because it does not meet all of a project's objectives.

Q-10

Inconsistency with only some of the project objectives is not necessarily an appropriate basis to eliminate impact-reducing project alternatives from analysis in an EIR. CEQA Guidelines § 15126.6(c), (f); *see also Watsonville Pilots Assn. v. City of Watsonville* (2010) 183 Cal.App.4th 1059, 1089. Indeed, an alternative that would not meet every Project objective is not a sufficient justification for not considering it in detail. *Mira Mar Mobile Community v City of Oceanside* (2004) 119 CA4th 477,489; 14 C.C.R. § 15126.6.

Here, the DEIR admits and concedes that the "Reduced Density" alternative is the superior alternative when it comes to the environmental impacts (5.0). However, notwithstanding the Reduced Density alternative's superiority over the Project, the DEIR summarily dismissed this alternative on the grounds that the "Reduced Density Alternative does not fully meet all of the Project Objectives." Curiously, the DEIR doesn't even elaborate or identify the Project objectives that are not met. In reality, the Reduced Density appears to not meet only one stated Project objective---the objective seeking mixed-density housing. However, the failure to meet all projective objectives is not sufficient to dismiss the alternative out of hand when it is environmentally superior.

Here, the DEIR appears to be drawing up project objectives so narrowly so as to improperly exclude all other viable alternatives. Under CEQA, a lead agency cannot adopt artificially narrow project objectives that would preclude consideration of reasonable alternatives for achieving the project's underlying purpose. (*We Advocate Through Envt'l Review v County of Siskiyou* (2022) 78 CA5th 683, 692 (project objectives were so narrowly defined lead agency "dismissively rejected" any alternatives other than the proposed project); *North Coast Rivers Alliance v Kawamura* (2015) 243 CA4th 647, 669 (EIR on program to protect plants from invasive insect pest failed to consider control as alternative to eradication); *County of Inyo v City of Los Angeles* (1977) 71 CA3d 185, 203 (EIR for expansion of groundwater extraction program failed to consider water conservation as alternative to increased groundwater extraction).

Q-10

Finally, it is abundantly clear that the DEIR understates how much superior the Reduced Density Alternative is when compared to the Project. For example, the Reduced Density Alternative would consist of approximately 1/6th the number of homes in the proposed Project (namely 105 homes compared to 605 homes). Obviously, a subdivision with 1/6th the number of homes as the proposed Project will have substantially and significantly less impacts on the community than the Project. And yet, throughout the DEIR, when analyzing and contrasting the Reduced Density Alternative, the DEIR understates this distinction. For example, the DEIR often states that the impacts arising from this alternative would be "slightly less when compared to the proposed Project." It is inconceivable that a development with 1/6th the number of homes would only have a "slightly less" impact than the Project when it comes to traffic, noise, light, public services and the other environmental considerations. Thus, the DEIR paints the false impression that the Reduced Density Alternative is only slightly better environmentally than the Project.

e. The DEIR is Almost Entirely Premised on Unreasonable Assumptions About Population Growth Related to the Project.

A key assumption that forms the bedrock of the DEIR is that the Project will result in population increases of 1,700 residents. The DEIR justification for this projection is simplistic—it takes the Department of Finance (2022) estimates of 2.81 persons per household.

This assumption of 1,700 resident growth is key to the DEIR and additional detail and support is needed than merely relying on Department of Finance figures. In particular, this methodology assumes that the 2.81 per person per household city-wide average holds true for Northern Clovis, as well as the types and styles of housing the Project proposes to build.

Q-11

It is well known that the community/area of Northern Clovis is growing quickly and that families are moving into this area—causing almost all of the elementary schools in this area to be impacted. It is abundantly clear that the 2.81 per person household will is drastically low in light of local conditions.

Q-11 cont'd

Thus, because the 1,700 population grown estimate is such an important feature of this analysis, a more local study should be conducted to confirm and verify such assumptions. In particular, the DEIR should utilize additional resources to hone in on the per person/per household figure on a local level—including but not limited to the Census Tract Block Maps.

f. The DEIR Does Not Sufficiently Consider Feasible Mitigation Measures Related to the Substantial Traffic Impacts on the Community.

One of the largest defects of the DEIR is its inability to accurately address the major traffic concerns and considerations of the community. The DEIR admits that even with the proposed mitigation steps, the "Project will have a significant and unavoidable" impact on the environment. (3.13).

The City cannot approve the Project with significant and unavoidable impacts unless it finds that there are no additional mitigation measures or alternatives that are feasible that would reduce the significant and unavoidable impact. Pub. Res. Code§ 21081, 14 CCR§ 15091. The DEIR claims that the impacts are traffic are unavoidable. Yet there are additional feasible mitigation measures that would reduce the Project's impacts but are not discussed in the EIR.

Q-12

For example, the following mitigation measures were not addressed:

- The viability of public transit throughout the Project, including but not limited to shuttle services and/or subsidized transit passes;
- Increase the number of biking and walking avenue throughout the Project;
- Consideration of some mixed-use development within the Project;
- Implementation of traffic calming measures;

g. The Project's Proposed Ingress/Egress From Stanford/Perrin Avenues is not Properly Analyzed In Light of the Actual Conditions of such Roads.

It is unfathomable that the Project is proposing an ingress/egress from the Stanford/Perrin Avenues corner. This is not just ill-conceived, it is outright dangerous. Indeed, the DEIR makes no serious evaluations related to the unique aspects of such streets.

To be clear, Stanford Avenue at this location is a narrow, winding road, clearly not meant for the level of traffic this Development will bring. Without a doubt, Project residents will more often drive North and exit onto Stanford than drive South, choosing to exit off of Sunnyside or Shepherd. For those many resident who will be zoned for Clovis North High School (and its feeder schools), this means a steady stream, morning and afternoon, of cars driving through Stanford, up through Ticonderoga and onto Fowler.

Q-13

As a personal matter, I can attest that Stanford Avenue at this location is filled with couples walking and/or biking and young children biking, playing and skateboarding on the road. Stanford has no sidewalks and no curbs at this location. Funneling thousands of cars through Standford will inevitably lead to pedestrian deaths—many of them children. (*Below are relevant photos of Standford Avenue at this location.*)

Q-13 Cont.

h. **The DEIR's Hydrology Analysis is Inadequate In That It Incorrectly Relies on Data Related to Hardpan** Q-14

The DEIR correctly states that the "proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge." (3.9-2). However, the DEIR reaches the incorrect conclusion that impacts on groundwater recharge will be less than significant.

The fatal flaw in the DEIR's conclusion, however, is that it improperly and inaccurately extrapolates data from the Geotechnical Report (Krazan & Associates, 2019). In particular, the DEIR states as follows:

> The infiltration rate of the soils on the Project site ranges from low to high. As indicated in the Geotechnical Report (Krazan & Associates, 2019), cemented silty sand and silty sand with trace clay, locally referred to as "hardpan," were encountered in <u>several of the borings</u> at the Project site. This cementation inhibits infiltration of surface water into the soil stratum below the hardpan. <u>Therefore, it can be presumed</u> that the Project site generally does not allow for a high level of groundwater recharge in its existing condition. (3.9-25) (emphasis added.)

Q-14 Cont.

The above has two major flaws. First, the DEIR presumes that because only "several" of the borings found hardpan, that hardpan soil is present throughout most of the Project site. To the contrary, the Krazan report shows that 19 boring test were performed on the property—and of those test, <u>only a handful</u> showed the existence of substantial hardpan. And so the DEIR extrapolates this small data set to the rest of the Project site. To extrapolate the results of a small percentage of boring tests to the entire site is improper. Finding hardpan in several boring sites out of 19 does not justify such an extrapolation.

Second, the DEIR makes the faulty assumption that the presence of some hardpan on the site "does not allow for a high level of groundwater recharge in its existing condition). This is quite a broad statement to make with major ramifications. While it is true that hardpan *can* reduce infiltration rates, one cannot reasonably presume that the presence of <u>some</u> hardpan on a small percentage of the boring sites will prevent recharge throughout the entire site. Thus, this presumption is unfounded and unreasonable.

i. The DEIR Hydrology Analysis is Inadequate in That if Fails to Take into Account Removal of the Pecan Trees at the Project Site that Dramatically Alter the Water Recharge Capabilities.

Q-15

As noted above, the Krazan hydrology report relied upon in the DEIR does <u>not</u> conclude that there is hardpan throughout the entire site. It simply states that where present, hardpan can prevent percolation—an obvious conclusion.

However, one thing the DEIR wholly fails to address is how the current condition of the removed Pecan trees on the Project site will impact water recharge. In particular, the DEIR states that hardpan was found in "several" of the 19 borings between the 2' and 8' depth. But since the Krazan report was finished, the Developer has removed approximately one-half of the Pecan orchard and performed substantial earth moving.

It is without a doubt that by removing the Pecan trees and major tree roots, that the previous hardpan has been substantially disrupted and disturbed. In other words, even assuming the presence of hardpan across the entire site, the removal of the Pecan trees would have broken up and disturbed such hard pan to such a degree that the Project site will have substantially higher recharge now, than before.

Q-15 Cont.

Thus, the site should be re-tested to confirm the current state of the alleged hardpan so as to adequately gauge the true rechargeability of the Project site soil.

j. The DEIR Does Not Adequately Explain how the Project being Developed in a 100-year Flood Plain will not cause or trigger greater diversion of flood waters into neighboring communities, in particular the Quail Run community.

The DEIR recognizes that part of the Project lies within the 100-year flood zone (3.9-29). However, when it comes to addressing such fact, the DEIR proposes that the homes built within such zone will be "elevated to or above the base flood elevation".

Woefully omitted, however, from its analysis is how the Project will impact the immediately surrounding community given the fact that substantial grading will be done to raise the development to the required elevation.

Q-16

While the homes built in the Project will be above the floodzone, the earthworks involved to enable that simply means that water will be displaced and flow elsewhere—likely into the Quail Run community. Notably the Quail Run community does not have storm drains and the existing drainage basins on each 2-acre parcel were not designed to accommodate the flood run off from the Project.

The DEIR does not sufficiently detail and describe the impacts of flooding on the immediate neighborhoods.

k. The DEIR Take an Impractical and Illogical Position on the Impact the Project Will Have on Neighborhood Schools.

The DEIR recognizes that "CUSD does not have existing capacity to accommodate projected students from new development." (3.12-23). In particular, the DEIR notes that additional facilities will be needed by CUSD within the next 5 years. Notably, the CUSD does not own any school project sites within a reasonable distance from the Project. All these new children will have to flood into the existing schools which are already impacted.

Q-17

Rather than discussing mitigation measures, the DEIR simply states that the development fees are sufficient. This is not careful or thoughtful planning. Having the funds to build schools is not the same as actually acquiring and building school properties.

l. The DEIR Does Not Address the Major Concerns of Creating a County Island of the Quail Run Community and the Impact of the Project's Odd, Illogical Shape.

Noticeably absent from the DEIR is the fact that the Project will annex an irregular L-shaped plot of land, thereby creating a County island of the Quail Run community. The DEIR recognizes that

Q-18

when it comes to SOI changes, that such changes must create logical and orderly boundaries. However, it is wholly silent on the fact that the Project annexation creates an illogical and disorderly boundary.

Creating County islands is something the City and County have resisted for years for a host of justifiable reasons. And yet, the DEIR is conspicuously silent on any discussion of how the creation of a County island will actually impact that community.

For example, on its discussion of public resources and policing, the DEIR is careful to point out that development fees will be sufficient to enable Clovis PD to hire any additional police as may be needed to police the Project. However, this analysis completely misses and fails to address how the Project will impact public resources on the County island. It is without a doubt that with 605 new homes and residents, that the Quail Run community will face a major uptick in property crimes. And yet, when a resident of Quail Run calls for law enforcement—it is not Clovis PD which responds, but only the County Sherrif's Office. The County Sherrif's Office is already stretched thin and the creation of the County island will lead to increased response times.

Indeed, throughout the entire 626-page report, the DEIR only refers to the County Sheriff's office a single isolated instance. The DEIR is wholly inadequate as it ignores how crime and policing arising from the Project will impact the proposed County island.

Q-18 Cont.

m. The DEIR Fails to Consider the Prime Farmland Designation and Relies on Developers' Self-Serving Statements that Farming is No Longer Viable.

The DEIR admits and recognizes that "[a]ccording to the June 2020 Important Farmland Map, approximately 63.73 acres of Prime Farmland are in the Project Site with approximately 63.60 acres of the Prime Farmland in the Development Area.' (3.2-5) In other words, the Project site is on important agricultural farmland.

However, the DEIR then attempts to attack the 2020 report on the grounds that the report "does not fully consider site specific characteristics such as the existence of hardpan". The DEIR even goes on to allege that the Prime Farmland designation "is not justified for the site-specific conditions."

As already discussed above, the presence of hardpan has been wholly exaggerated and overstated and so relying on the hardpan argument to attempt to remove the Prime Farmland designation is unfounded.

But even beyond hardpan, the DEIR unquestionably relies on statements from the developer to conclude that the Project Site should no longer be considered Prime Farmland. For example, the Site Assessment worksheet states as a matter of fact that the Project site wells "went dry in 2022 causing tree mortality." (Pg. 113 of DEIR Volume II). But nowhere in the DEIR materials are well test from independent third parties confirming that all 6 ag wells on the Project site ran dry.

Likewise, the DEIR relies entirely on self-serving statements from the developer's ranch manager who states in a letter to the City that the land is no longer viable farming property. (May 11, 2023 Letter to City) (Pg. 129 of DEIR Vol. II). In this letter, the manager concludes that notwithstanding the prior owner successfully farming the orchard, that once the developer acquired the property, it was

Q-19

no longer profitable. Quite the convenient conclusion. Rather than requiring third party verification of financials and economic feasibility, the DEIR blindly relies on the self-serving statements and conclusions from the developer.

Q-19 Cont.

n. The Project Fails to Consider or Evaluate Impacts on Kit Fox Which Are Known to Exist Near the Project Area.

Another fatal flaw of the DEIR is that it fails to account for and provide proper mitigation measures for the known endangered wildlife in the area. In particular, San Joaquin kit fox are known to frequent the area and have been observed. Notwithstanding the presence of kit fox, the DEIR fails to include any mitigation measures related to said animals. The DEIR should be revised to consider and implement appropriate mitigation measures for the kit fox.

Q-20

IV. CONCLUSION

For the foregoing reasons, I urge the City to prepare and recirculate a revised DEIR addressing the above shortcomings. Thank you for your attention to these comments.

Sincerely

Jared R. Callister,
Resident of Quail Run

Q-21

Response to Letter Q: Jared Callister, Resident of Clovis

Response Q-1: The commentor states the following:

*"I am writing as an owner and resident of the Quail Run neighborhood (9318 N. Sunnyside, Ave. Clovis, CA 93619) which is the community of 18 homes immediately north of the proposed development (the "Project"). While I don't represent the Qual Run community as a whole, I can assure you that most of its residents (if not all) share the major concerns I have with respect to the Project. In particular, I am writing regarding the Draft Environmental Impact Report ("**DEIR**") that attempts to argue that the Project has no real impact on the community. Make no mistake about it, the Project's impact not only on the Quail Run neighborhood but on the community at large will be <u>substantial</u>.*

The Project will forever change the way of life for those in its immediate vicinity and the DEIR pays lip service to the numerous and major concerns of the community."

- The City disagrees that the DEIR "*attempts to argue that the Project has no potential impact on the community.*" Rather, the DEIR identifies "Potentially Significant Impacts" under the topics: Biological Resources, Geology and Soils, Hazards and Hazardous Materials, Noise, and Traffic. These are presented as potential impacts as disclosed in the DEIR. The DEIR then presents mitigation that is intended to avoid, reduce, or minimize the Potentially Significant Impacts that are identified. The impacts are able to be reduced to a less than significant level with the mitigation presented, with the exception of the impacts from Traffic. For Traffic, the DEIR concludes that the Project would have a Significant and Unavoidable impact, including under cumulative conditions. It is also noted that the DEIR references existing regulations, rules, standards, and specifications that are already in place that would reduce impacts for topics including: Aesthetics, Air Quality, Greenhouse Gases, Climate Change, and Energy, Hydrology and Water Quality, and Utilities. All development within the proposed Project can be classified as a permanent physical change to the environment.

Response Q-2: The commentor states the following:

*"The DEIR was not properly noticed, fails to analyze numerous potentially significant environmental impacts, fails to evaluate feasible alternatives and mitigation measures, and fails to support its conclusions with substantial evidence. Accordingly, the DEIR is inadequate under the California Environmental Quality Act ("**CEQA**") and as a result, I oppose approval of the Project and certification of the DEIR. I urge the City to address the DEIR's shortcomings in a revised EIR that is recirculated for public review and comment, prior to considering any approvals for the Project."*

- This comment is noted. The comment does not provide the specificity necessary to prepare a detailed response, instead the comment serves as a prelude to the more detailed comments provided later in the letter, each of which have a specific response. Nevertheless, the comments will be provided to the City for consideration.

Response Q-3: The commentor provides several pages of discussion under a heading entitled: "*I. LEGAL STANDARDS, a. The EIR Must Afford the Fullest Possible Protection to the Environment and Have Sufficient Detail to Enable Those Who Did Not Participate in Its Preparation to Understand and to Consider Meaningfully the Issues Raised by the Proposed Project*."

- This comment is noted. The legal standards provided are references to statute or case laws relevant to CEQA. The comments do not identify something specific in the DEIR, rather it is the authors presentation of legal standards that apply to CEQA documents.

Response Q-4: The commentor provides several pages of discussion under a heading entitled: "*II. THE DEIR WAS IMPROPERLY NOTICED & FAILED TO INCLUDE ALL STATUTORILY REQUIRED INFORMATION."* The commenter then provides a discussion under a heading entitled "*a. A Full 45-day Notice of the DEIR Was Not Provided*." Here the commenter cites several cases and contends that the City did not provide a full 45-day public review period because the original Notice of Availability identified the 45-day public review period closing on September 4th, which was a holiday.

- To clarify, the City did establish the 45-day review period for the EIR in accordance with the statutory mandate. During the review period, however, it was discovered that the public review end date would fall on a holiday. Once this was recognized, the City extended the public review period an extra day (46 days total review) to ensure that there was additional time beyond the holiday to receive comments. It is noted that the City received an additional letter on September 6, 2023, which required the City to extend the review period for a second day. As shown in the Table 2.0-1, there were five comment letters received dated September 5th, and one comment letter dated September 6th. This reflects the fact that the City extended the review period beyond the statutory 45-day requirements because of the holiday. It is also noted that the State Clearinghouse database (CEQAnet) reflects a public review end date of September 5, 2023, which is consistent with the extension of the public review period beyond the 45-day requirements because of the holiday.

Response Q-5: The commentor provides a discussion under a heading entitled "*b. The Notice of DEIR Failed to Include all Required Information*." The commenter then states the following:

> *"Under Pub Res C §21092(b)(1) and 14 Cal Code Regs §15087(c), a notice that a draft EIR is available for public review must contain certain key items, meant to assist the public in its review. The purpose of the description of the project is to alert the public*

of its nature, location, and purpose so that interested persons can determine whether to review the draft EIR and provide comments.

In particular, one key item that must be included in such notice is an explanation of the "anticipated significant environmental effect of the project." However, noticeably absent from the Notice regarding this Project is any description of such "anticipated significant environmental effects".

And yet, by the DEIR's own admission, the DEIR confirms that the Project's impacts on traffic (3.13-1) will be significant and unavoidable even with their proposed mitigation measures. Likewise, the DEIR confirms that the Project's impact on birds and other mammals will be "potentially significant" and further confirms that construction noise and operation noise with be "potentially significant". Furthermore, the DEIR acknowledges that without mitigation, the Project's involvement with the transportation and use of hazardous materials will be "potentially significant".

Notwithstanding the above-mentioned significant impacts, the Notice failed to mention, list or identify these specific impacts as required under CEQA. This failure to comply with CEQA is an abuse of discretion which requires the DEIR to be re-circulated and correctly noticed for comment with a complete list of all significant impacts."

- The commenter is referred to the fourth paragraph of the Notice of Availability (NOA) which states:

  "Significant Environmental Effects:

  The Draft EIR has identified the following environmental issue areas as having significant and unavoidable environmental impacts from implementation of the project: Transportation and Circulation, and Cumulative Impacts. All other environmental issues were determined to have no impact, less than significant impacts, or less than significant impacts with mitigation measures incorporated into the Project."

  Here, the NOA very clearly, and contrary to the commenter's assertion, identifies that Transportation and Circulation as a topic listed where the DEIR concluded that the Project would have significant and unavoidable impacts. The commenter is also referred to the DEIR Executive Summary, Table ES-2 Project Impacts and Proposed Mitigation Measures, for a full overview of the Project Impacts. In that table, the commenter can find that mitigation measures have been incorporated into the Project to avoid, reduce, or minimize any potential impacts, and the resulting impact is less than significant for all topics with the exception of the Traffic impacts as identified in the NOA. The NOA listed the Traffic Impacts as the impact that is an anticipated significant environmental impact in accordance with the CEQA Guidelines.

Response Q-6: The commentor provides several pages of discussion under a heading entitled: "III. THE DEIR IS LEGALLY INSUFFICIENT IN NUMEROUS RESPECTS." The commenter then provides a discussion under a heading entitled: "*a. The Scope of the DEIR is Insufficient as it Fails to Consider the Unique Characteristics of the Immediate Community and Uses an Improper Baseline Throughout the Bulk of its Analysis*." The commenter then states the following:

> *The DEIR purports to address issues and comments raised in the scoping process. However, the DEIR wholly fails to address one key request during the scoping process—namely, the Project's impacts on the unique characteristics and concerns of the Quail Run Community, referred to as the "Expansion SubArea North" in the DEIR.*
>
> *The Quail Run Community is a community of 18 homes in Fresno County surrounded by and directly adjacent to the Project. In particular, the community is a beautiful and tranquil rural residential community very similar to the well-known Dry Creek Preserve. For years, the Quail Run Community has been part of a designated County Service Area 51---which is an area of well-known and well- documented water issues. Homeowners in County Service Area 51 have had major concerns with the area's groundwater supplies—as many have had to dig several deeper wells over the years.*
>
> *Indeed, during one scoping phone call I had with City staff, I attempted to clarify the unique concerns of Quail Run and requested that the DEIR include a detailed micro-study of this area and community to ensure that its issues were addressed. In particular, it must be determined, with certainty, how the Project will impact the unique water concerns of the Qual Run neighborhood.*
>
> *Unfortunately, the DEIR makes no specific study or analysis of the Quail Run community or the Project's impacts on this community. All the DEIR can muster is to simply define the Expansion SubArea North in several sentences—but with no further analysis or direct connection.*

- Contrary to the commenter's assertions, the DEIR does address the Quail Run community. Specifically, the Quail Run community is part of the "Non-Development Area", which is defined in Section 2.0 Project Description, on page 2.0-1. Here, the DEIR identifies the Non-Development Area as parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East. The Quail Run community is part of the Expansion SubAreas. The Quail Run community is further shown illustratively on numerous Figures within Section 2.0 Project Description.

  The term "Non-Development Area" as used for the Quail Run community, is intended to mean, there will be no physical changes to these lots nor public infrastructure improvements constructed to serve this area. There will be ancillary infrastructure constructed adjacent to this area within the public streets as shown in the various studies included in the Environmental Analysis. The Non-Development Area is within the Project Boundary solely to be included in a Sphere of Influence (SOI) boundary change. The SOI boundary change would be reflected on a map only (a line drawn on a map) and does not physically change the properties. Notably, the Quail Run community would remain within the unincorporated County, and would maintain all General Plan land use and zoning designations provided by the County. In addition, the Quail Run Community would also remain in County Service Area 51. The SOI Expansion is more fully detailed in Master Response 14.

Master Response 1, 2, 3, 4, and 5 provides extensive detail regarding Water, including discussions regarding: groundwater recharge, soils, percolation, wells, agricultural irrigation, trucking in water, water service from City, WSA, Floodplain, and drainage.

Response Q-7: The commenter states the following:

"Most egregious, is that the DEIR uses an improperly broad and ill-defined "Baseline" when conducting the bulk of its analysis. Time and time again, the DEIR uses the City of Clovis and/or the County of Fresno (as whole) as its Baseline. The is wholly meaningless and counter-productive to how a resident of Quail Run is to gauge the actual impact on his/her neighborhood.

By comparing the Project's numerous impacts to the entire City and County, the DEIR seeks to diminish the significance of these impacts caused by the Project. CEQA prohibits this type of "drop in the bucket" analysis. No single project would ever have a significant impact if its effects were compared to an entire region. In Friends of Oroville v. City of Oroville (2013) 219 Cal. App. 4th 832, 841-842, the Court of Appeal held that the agency failed to adequately analyze a project's cumulative contribution to significant GHG impacts by concluding, without adequate analysis, that the project's "miniscule" emissions were insignificant in light of the state 's cumulative, state-wide GHG emissions, thus "applying a meaningless, relative number to determine insignificant impact." The DEIR makes the same error here by comparing the Project's impacts on traffic, noise, light and other matters to the entire City and County of Fresno.

An analysis that compares and contrasts an improper baseline is wholly inadequate and offers a false picture of how the Project will truly impact the unique Quail Run community. The DEIR must be revised to provide a proper analysis the Project's impacts on the Quail Run community specifically; and based on this analysis, to revise other environmental analyses including but not limited to population and housing, transportation, noise pollution, light pollution, among other topics."

- Under CEQA, the impacts of a proposed project must be evaluated by comparing expected environmental conditions after project implementation to conditions at a point in time referred to as the baseline. The changes in environmental conditions between those two scenarios represent the environmental impacts of the proposed project. The description of the environmental conditions in the project study area under baseline conditions is referred to as the environmental setting. The CEQA Guidelines Section 15125 provides the following guidance for establishing the baseline: *An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant*. The commenter is referred to the "Environmental Setting" heading located within Sections 3.1 through 3.14. Here an Environmental Setting (i.e. Baseline Condition) is presented for each environmental topic. Additionally, Section 2.0 Project Description, includes a "Project Setting," in which the Existing Site Conditions, Site Topography, Existing Site Uses, Existing Surrounding Uses, and Existing General Plan Land Use Designations and Zoning are described.

  The impacts that are described in each Section of the DEIR represent the change in environmental conditions that would be anticipated to result from the baseline condition compared to a future "developed" scenario if the Project were approved and constructed. These impacts are not limited to impacts only to the Quail Run community. Some impacts are much broader and would affect an entire air basin, or the world as a whole (i.e. air quality impacts are basin-level impacts, and GHG impacts are world-level climate impacts). Impacts such as noise and traffic can be characterized as more local-level impacts, meaning that they would affect the general vicinity of the Project site, or possibly city-wide. Some impacts are more localized (i.e. construction on the Project site would physically change the Project site, but not result in construction elsewhere). The impact discussions provided in the DEIR are at the appropriate scale, and are performed to the appropriate scientific standards for each topic.

Response Q-8: The commentor provides several pages of discussion under a heading entitled: "*b. The DEIR Only Presents "Straw Man" Alternatives and Fails to Include Several Reasonable Feasible Alternatives that Would Meet all Project Objectives and Result in Less Environmental Impacts than the Project*." The commenter then states the following:

> *An EIR must describe a reasonable range of alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the*

project, and evaluate the comparative merits of the alternatives. "An EIR's discussion of alternatives must contain analysis sufficient to allow informed decision making." Laurel Heights I, 47 Cal.3d at 404. An EIR must also include "detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." Id. at 405.

CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures. CEQA Guidelines § 15002(a)(2) and (3); see also, Berkeley Jets, 91 Cal. App. 4th 1344, 1354; Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553, 564. The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines § 15002(a)(2). If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." Pub. Res. Code§ 21081; CEQA Guidelines § 15092(b)(2)(A) & (B). A "feasible" alternative is one that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. Pub. Res. Code§ 21061.1; CEQA Guidelines § 15364.

However, the three alternatives currently presented in the draft EIR seem to be set up as "straw man" alternatives, intentionally skewed to make the proposed project appear as the most preferable or only viable option. Here are the primary issues:

1. *Increased Density Mixed Use Alternative: This alternative, by introducing both homes and apartment complexes, appears to exacerbate the environmental concerns rather than offering a genuine mitigative solution. An alternative in an EIR should ideally present options that reduce environmental impacts, not increase them.*
2. *Reduced Density Alternative: While this alternative reduces the number of homes, it does not sufficiently explore the potential middle ground between high-density and low-density development. Indeed, this option only presents 105 single family homes with no mixed densities. Presenting only a drastically reduced density alternative, without examining intermediate options, can artificially create a contrast that makes the proposed Project appear as a balanced solution. By only considering a large-lot alternative without varying densities the DEIR presents this merely as an illusory alternative that was never meant to be fully considered.*
3. *Reduced Sphere of Influence: This "alternative" simply presents the exact same development, but simply shrinks the Sphere of Influence and its environmental*

> *impacts are identical to the proposed project. Offering an alternative that's so similar to the proposed project doesn't give decision-makers or the public a meaningful choice. To call this a viable or thoughtful "alternative" that is meant to reduce environmental impacts is laughable.*

To ensure compliance with the spirit and letter of CEQA and to provide a genuine set of alternatives for consideration, I strongly urge the City to:

- *Broaden the Range: Include a more diverse range of alternatives that genuinely seek to reduce the significant environmental impacts of the project.*
- *Examine Intermediate Solutions: Instead of the extremes of very high or very low density, consider introducing intermediate-density alternatives that can strike a balance between development needs and environmental conservation.*
- *Avoid Redundant Alternatives: Each alternative should be distinct enough from the proposed project to provide a genuine choice. If two alternatives are nearly identical in impact, it can be seen as a redundancy that doesn't aid in meaningful decision-making.*

Specifically, the City should consider the following specific reasonable alternatives:

  - *Medium Density Housing of Approximately 350 Homes: Rather than a 605- unit project, or a 105 unit project, the DEIR needs to examine and consider a balanced, 350 unit project development which consists of a mixture of housing types, sizes and densities. A project such as this would undoubtedly have a reduced environmental impact when compared to the Project while at the same time meeting all of the state project goals.*
  - *Southern Parcel Development Only: Another viable alternative that the City should consider and evaluate is a project which only allows for the development of the southern two parcels of the Project site (APNs: 557-021-19; 20) while retaining the northern parcel (APN: 557-021-21) as prime farmland. The development could consider medium to high density housing of mixed housing types, sizes and densities so as to not only meet the project goals, but to have a reduced environmental impact when compared to the Project.*

In conclusion, for a more robust, transparent, and credible environmental review process, it's crucial that the alternatives section of the EIR be revised to present a sincere and varied set of options. This not only meets legal requirements but also fosters public trust in the development and decision-making processes."

- Alternatives are addressed in Section 5.0 Alternatives. The range of alternatives addressed in the EIR is sufficient to foster informed decision-making and informed public participation. CEQA requires that a DEIR analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in a DEIR is governed by a “rule of reason” that requires a DEIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). At the time of project approval, the City Council will have broad discretion to approve the proposed Project if it finds it to be the best choice from a policy perspective, particularly in light of recent findings by the Legislature that the State is suffering a housing crisis of historic proportions. CEQA constrains the City Council’s police power somewhat, but does not substantially reduce the robustness of that power. Here, the Clovis City Council, like any other, has a robust police power, though it is circumscribed in some situations by state legislation intended to serve statewide purposes such as, for example, the need to provide housing during a time of crisis-level housing shortfalls. (See, e.g., Gov. Code, §§ 65589.5, subd. (j), 66300, subd. (b).) But generally, when a city or county is engaged in land use planning, the local agency’s CEQA obligation to adopt feasible alternatives as means of lessening or avoiding significant environmental effects still leaves the agency with broad legislative discretion to achieve outcomes consistent with what the agency’s decisionmakers regard as desirable public policy. (See, e.g., City of Del Mar v. City of San Diego (1982) 133 Cal.App.3d 410, 417 [“‘feasibility’ under CEQA encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors”]; California Native Plant Society v. City of Santa Cruz (2009) 177 Cal.App.4th 957, 1001 [same]; San Diego Citizenry Group v. County of San Diego (2013) 219 Cal.App.4th 1, 17 [same]; Sierra Club v. County of Napa (2004) 121 Cal.App.4th 1490, 1506-1509 [upholding CEQA findings rejecting alternatives in reliance on applicant’s project objectives]; Citizens for Open Government v. City of Lodi (2012) 205 Cal.App.4th 296, 314-315 [court upholds an agency action rejecting an alternative because it would not “entirely fulfill” a particular project objective and “would be ‘substantially less effective’ in meeting” the lead agency’s “goals”]; and In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings (2008) 43 Cal.4th 1143, 1165, 1166 [“feasibility is strongly linked to achievement of each of the primary program objectives”; “a lead agency may structure its DEIR alternative analysis around a reasonable definition of underlying purpose and need not study alternatives that cannot achieve that basic goal”].)

Page 5.0-2 presents the alternatives that were analyzed in the EIR. Here, the DEIR indicates that four alternatives to the proposed Project were developed based on input from City staff. It is noted that a Notice of Preparation (NOP) was also circulated to the public to solicit recommendations for a reasonable range of alternatives to the proposed Project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the proposed Project. No specific alternatives were recommended by commenting agencies or the general public during the NOP public review process. The alternatives that were developed include the following four alternatives in addition to the proposed Project.

- No Project (No Build) Alternative: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- Increased Density Mixed Use Alternative: Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium-high density residential use, 10 acres would be developed with 195 apartments under the high-density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.
- Reduced Density Alternative: Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.
- Reduced Sphere of Influence Alternative: Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

Page 5.0-2 of the DEIR also indicates that the City’s consideration of alternative locations for the Project included a review of previous land use planning and environmental documents in Clovis, including the General Plan. The search included a review of land in Clovis that is located within the Sphere of Influence, suitable for development, available for acquisition, and not already approved or pending development. It was found that there are numerous approved projects and proposed projects that are currently under review in Clovis. These approved and proposed projects are not available for acquisition by the Project applicant and are not considered a feasible alternative for the Project applicant. The City has found that there are no feasible alternative locations that exist within the City’s Sphere of Influence with the appropriate size and characteristics that would meet the basic Project objectives and avoid or substantially lessen a significant effect. For these reasons, the City of Clovis determined that there are no feasible alternative locations.

These alternatives constitute a reasonable range of alternatives for the analysis in the EIR. The City solicited input from the community during the early planning stage to try to develop ideas that could be incorporated into a DEIR alternative. This included engaging the public during the scoping meeting and NOP public review. It is not the City's policy to evaluate every fathomable alternative, rather, they follow the requirements of CEQA by developing a reasonable range of alternatives, which has been performed.

Response Q-9: The commentor provides a heading entitled: "*c. The DEIR Fails to Consider Other Alternative Locations in its Sphere of Influence and Justify Its Conclusions*." The commenter then states the following:

> *The DEIR states that the City considered alternative locations for the Project that were in the SOI and were suitable for development. The DEIR notes that "it was found that there are numerous approved projects and proposed projects that are currently under review in Clovis." The DEIR than summarily rejects these alternative locations as they "are not available for acquisition by the Project applicant and are not considered a feasible alternative for the Project applicant." Incredibly, the DEIR then asserts that:*
>
> > *"The City has found that there are no feasible alternative locations that exist within the City's Sphere of Influence with the appropriate size and characteristics that would meet the basic Project objectives and avoid or substantially lessen a significant effect. For these reasons, the City of Clovis determined that there are no feasible alternative locations." (5.0-2)*
>
> *This statement is not credible given the fact that City's massive Heritage Grove project has been approved and are part of the Sphere of Influence. Is the City really saying that out of the entire Heritage Grove planning area, there is NO alternative site location that feasibly meets the stated project goals?*
>
> *Most egregiously, is that the DEIR doesn't provide any evidence, data, statistic or studies to actually prove or demonstrate that the alternative locations (including Heritage Grove) where inadequate.*
>
> *Under CEQA, while the City may consider whether the developer owns the land that may be an alternative site, City must consider whether the project proponent can reasonably acquire, control, or otherwise obtain access to the site if the project proponent does not own the alternative site. 14 Cal Code Regs §15126.6(f)(1). Here, the DEIR simply makes conclusory statements that the alternative sites are "not*

available for acquisition." Evidence should be presented to prove that such alternative sites cannot reasonably be acquired by the project proponent in this case.

Indeed, if the City is alleging such alternative sites are economically infeasible, then it needs to actually present an economic analysis that proves and demonstrates such alternatives are not economically viable. (See Citizens of Goleta Valley v Board of Supervisors (1990) 52 C3d 553, 575 n7, (where agency's conclusions of economic infeasibility where supported by economic analysis and data that showed alternative site was no viable).)

- This comment is addressed, in part, under Response Q-8 above. The commenter's suggestion of using the Heritage Grove project (which they have identified as an approved project) as an alternative location indicates their misunderstanding of what would be considered a suitable alternative location. For clarification, the Heritage Grove Design Guidelines were approved in 2016. The primary purpose of the design guidelines were to establish an overall theme, illustrate intended architectural elements and carry out the goals and objectives of the Clovis General Plan. The City is currently processing or reviewing various proposed projects in the Heritage Grove growth area. An example of a current proposed project is The Villages Specific Plan, which encompasses approximately 880 acres of land generally located on the north side of Shepherd Avenue, between Willow and Sunnyside Avenues. A second proposed project in Heritage Grove is the proposed Tentative Tract Map 6343 on the south side of Behymer Avenue, west of Sunnyside Avenue. Both of these proposed projects are located within the City's Sphere of Influence, but this is an already intended for development. Section 5.0 Alternatives to the Proposed Project (page 5.0-2) states:

> *"The City's consideration of alternative locations for the Project included a review of previous land use planning and environmental documents in Clovis, including the General Plan. The search included a review of land in Clovis that is located within the Sphere of Influence, suitable for development, available for acquisition, and <u>not already approved or pending development. It was found that there are numerous approved projects and proposed projects that are currently under review in Clovis. These approved and proposed projects are not available for acquisition by the Project applicant and are not considered a feasible alternative for the Project applicant</u>. The City has found that there are no feasible alternative locations that exist within the City's Sphere of Influence with the appropriate size and characteristics that would meet the basic Project objectives and avoid or substantially lessen a significant effect. For these reasons, the City of Clovis determined that there are no feasible alternative locations.*

A key consideration in determining alternative locations, as is described in the DEIR page 5.0-2, is that the alternative location in question cannot be an already approved or pending project. The commenter's suggestion of Heritage Grove being an alternative location does not meet the criteria for suitable alternative locations. For clarification, the Heritage Grove Design Guidelines were approved in 2016. The primary purpose of the design guidelines were to establish an overall theme, illustrate intended architectural elements and carry out the goals and objectives of the Clovis General Plan. The City is currently processing or reviewing various proposed projects in the Heritage Grove growth area. An example of a current proposed project is The Villages Specific Plan, which encompasses approximately 880 acres of land generally located on the north side of Shepherd Avenue, between Willow and Sunnyside Avenues. A second proposed project in Heritage Grove is the proposed Tentative Tract Map 6343 on the south side of Behymer Avenue, west of Sunnyside Avenue. Both of these proposed projects are located within the City's Sphere of Influence, but this is an already intended for development.

Response Q-10: The commentor provides a heading entitled: "*d. The DEIR Improperly Dismisses the "Reduced Density" Alternative.*" The commenter then states the following:

> *The City is required to select the environmentally preferable alternative unless it is infeasible. As explained by the Supreme Court, an environmentally superior alternative may not be rejected simply because it is more expensive or less profitable:*
>
> > *The fact that an alternative may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible. What is required is evidence that the additional costs or lost profitability are sufficiently severe as to render it impractical to proceed with the project.*
>
> *Citizens of Goleta Valley v. Ed. of Supervisors (1988) 197 Cal.App.3d 1167, 1180-81; see also, Burger v. County of Mendocino (1975) 45 Cal.App.3d 322; County of El Dorado v. Dept. of Transp. (2005) 133 Cal.App.4th 1376 (agency must consider small alternative to casino project); Preservation Action Counsel v. San Jose (2006) 141 Cal. App. 4th 1336. In addition, an environmentally superior alternative may not be rejected because it does not meet all of a project's objectives.*
>
> *Inconsistency with only some of the project objectives is not necessarily an appropriate basis to eliminate impact-reducing project alternatives from analysis in an EIR. CEQA Guidelines § 15126.6(c), (f); see also Watsonville Pilots Assn. v. City of Watsonville (2010) 183 Cal.App.4th 1059, 1089. Indeed, an alternative that would not meet every Project objective is not a sufficient justification for not considering it in detail. Mira Mar Mobile Community v City of Oceanside (2004) 119 CA4th 477,489;14 C.C.R. § 15126.6.*

Here, the DEIR admits and concedes that the "Reduced Density" alternative is the superior alternative when it comes to the environmental impacts (5.0). However, notwithstanding the Reduced Density alternative's superiority over the Project, the DEIR summarily dismissed this alternative on the grounds that the "Reduced Density Alternative does not fully meet all of the Project Objectives." Curiously, the DEIR doesn't even elaborate or identify the Project objectives that are not met. In reality, the Reduced Density appears to not meet only one stated Project objective---the objective seeking mixed-density housing. However, the failure to meet all projective objectives is not sufficient to dismiss the alternative out of hand when it is environmentally superior.

Here, the DEIR appears to be drawing up project objectives so narrowly so as to improperly exclude all other viable alternatives. Under CEQA, a lead agency cannot adopt artificially narrow project objectives that would preclude consideration of reasonable alternatives for achieving the project's underlying purpose. (We Advocate Through Envt'l Review v County of Siskiyou (2022) 78 CA5th 683, 692 (project objectives were so narrowly defined lead agency "dismissively rejected" any alternatives other than the proposed project); North Coast Rivers Alliance v Kawamura (2015) 243 CA4th 647, 669 (EIR on program to protect plants from invasive insect pest failed to consider control as alternative to eradication); County of Inyo v City of Los Angeles (1977) 71 CA3d 185, 203 (EIR for expansion of groundwater extraction program failed to consider water conservation as alternative to increased groundwater extraction).

Finally, it is abundantly clear that the DEIR understates how much superior the Reduced Density Alternative is when compared to the Project. For example, the Reduced Density Alternative would consist of approximately 1/6th the number of homes in the proposed Project (namely 105 homes compared to 605 homes). Obviously, a subdivision with 1/6th the number of homes as the proposed Project will have substantially and significantly less impacts on the community than the Project. And yet, throughout the DEIR, when analyzing and contrasting the Reduced Density Alternative, the DEIR understates this distinction. For example, the DEIR often states that the impacts arising from this alternative would be "slightly less when compared to the proposed Project." It is inconceivable that a development with 1/6th the number of homes would only have a "slightly less" impact than the Project when it comes to traffic, noise, light, public services and the other environmental considerations. Thus, the DEIR paints the false impression that the Reduced Density Alternative is only slightly better environmentally than the Project."

- Alternatives are addressed in Section 5.0 Alternatives. Based on the comments above, additional text was added to page 5.0-72 through 5.0-74 to clarify the objectives that were not met. The updated text is presented in Section 3.0 Errata.

For specific clarification, the following two project objectives are not fully met under the Reduced Density Alternative:

> Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in A Landscape of Choice to modestly increase urban density.
>
> Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City Requirements as stated in the latest Regional Housing Needs Analysis (RHNA).

The Reduced Density Alternative would provide housing (150 units), but it would be 455 units less then what is proposed. The first objective listed above references "A Landscape of Choice" which is a regional document that provides direction for the region to utilize urban land as efficiently as possible while providing an adequate supply of a broad range of housing types and densities to meet market demand. One of the guiding principles recommends measures to facilitate and encourage compact growth to all urban land uses including commercial, industrial and institutional uses. The Reduced Density Alternative is not consistent with this guidance for the region.

The second objective listed above references establishing a mix of housing to provide for local and regional housing demand, and consistent with the City requirements in the latest Regional Housing Needs Analysis (RHNA). In light of the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, the State has provided the City with good reason to exercise its legislative discretion to facilitate the construction of new housing. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects." The Reduced Density Alternative would result in 455 fewer units then the proposed Project, which is not consistent with Legislature's guidance for solving California statewide housing crisis.

It should be noted that the City Council has broad discretion to approve the proposed Project if it finds it to be the best choice from a policy perspective, particularly in light of recent findings by the Legislature that the State is suffering a housing crisis of historic proportions. CEQA constrains the City Council's police power somewhat, but does not substantially reduce the robustness of that power.

Public Resources Code section 21004 provides that "[i]n mitigating or avoiding a significant effect of a project on the environment, a public agency may exercise only those express or implied powers provided by law other than [CEQA]. However, a public agency may use discretionary powers provided by such other law for the purpose of mitigating or avoiding a significant effect on the environment subject to the express or implied constraints or limitations that may be provided by law." In other words, CEQA does not give agencies any power that they do not already possess, but does require agencies to exercise the powers they do have in order (i) to ascertain whether the environmental effects of their proposed actions would be significant, and if so, (ii) to formulate feasible mitigation measures or alternative courses of action that could be implemented pursuant to those powers. (See also CEQA Guidelines, § 15040; Kenneth Mebane Ranches v. Superior Court (1992) 10 Cal.App.4th 276, 291 ["CEQA does not grant a local public entity additional powers, independent of those granted by other laws"]; County of San Diego v. Grossmont-Cuyamaca Community College Dist. (2006) 141 Cal.App.4th 86, 102 ["'an agency's authority to impose mitigation measures must be based on legal authority other than CEQA'"].)

Here, the City Council, like any other, has a robust police power, though it is circumscribed in some situations by state legislation intended to serve statewide purposes such as, for example, the need to provide housing during a time of crisis-level housing shortfalls. (See, e.g., Gov. Code, §§ 65589.5, subd. (j), 66300, subd. (b).) But generally, when a city or county is engaged in land use planning, the local agency's CEQA obligation to adopt feasible mitigation measures or alternatives as means of lessening or avoiding significant environmental effects still leaves the agency with broad legislative discretion to achieve outcomes consistent with what the agency's decisionmakers regard as desirable public policy. (See, e.g., City of Del Mar v. City of San Diego (1982) 133 Cal.App.3d 410, 417 ["'feasibility' under CEQA encompasses 'desirability' to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors"]; California Native Plant Society v. City of Santa Cruz (2009) 177 Cal.App.4th 957, 1001 [same]; San Diego Citizenry Group v. County of San Diego (2013) 219 Cal.App.4th 1, 17 [same]; Sierra Club v. County of Napa (2004) 121 Cal.App.4th 1490, 1506-1509 [upholding CEQA findings rejecting alternatives in reliance on applicant's project objectives]; Citizens for Open Government v. City of Lodi (2012) 205 Cal.App.4th 296, 314-315 [court upholds an agency action rejecting an alternative because it would not "entirely fulfill" a particular project objective and "would be 'substantially less effective' in meeting" the lead agency's "goals"]; and In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings (2008) 43 Cal.4th 1143, 1165, 1166 ["feasibility is strongly linked to achievement of each of the primary program objectives"; "a lead agency may structure its DEIR alternative analysis around a reasonable definition of underlying purpose and need not study alternatives that cannot achieve that basic goal"].)

In light of (i) the City's broad police power, (ii) legislation limiting that power in light of the State's unprecedented housing crisis, and (iii) the fact that CEQA case law interprets the concept of "feasibility" in a way that imposes minimal limits on an agency's regulatory authority, the notion that the Reduced Density Alternative is the only legally permissible choice before the City Council is not accurate.

Response Q-11: The commentor provides a heading entitled: "*e. The DEIR is Almost Entirely Premised on Unreasonable Assumptions About Population Growth Related to the Project.*" The commenter then states the following:

"A key assumption that forms the bedrock of the DEIR is that the Project will result in population increases of 1,700 residents. The DEIR justification for this projection is simplistic—it takes the Department of Finance (2022) estimates of 2.81 persons per household.

This assumption of 1,700 resident growth is key to the DEIR and additional detail and support is needed than merely relying on Department of Finance figures. In particular, this methodology assumes that the 2.81 per person per household city-wide average holds true for Northern Clovis, as well as the types and styles of housing the Project proposes to build.

It is well known that the community/area of Northern Clovis is growing quickly and that families are moving into this area—causing almost all of the elementary schools in this area to be impacted. It is abundantly clear that the 2.81 per person household will is drastically low in light of local conditions.

Thus, because the 1,700-population grown estimate is such an important feature of this analysis, a more local study should be conducted to confirm and verify such assumptions. In particular, the DEIR should utilize additional resources to hone in on the per person/per household figure on a local level—including but not limited to the Census Tract Block Maps."

- Population growth estimates are provided in the DEIR in Section 3.10. The population growth estimates utilize the most recent Department of Finance (2022) estimate for average number of persons residing in a dwelling unit in the

City of Clovis is 2.81. This is a reasonable metric for use in estimating population generated for the project.

Response Q-12: The commentor provides a heading entitled: "*The DEIR Does Not Sufficiently Consider Feasible Mitigation Measures Related to the Substantial Traffic Impacts on the Community.*" The commenter then states the following:

> *One of the largest defects of the DEIR is its inability to accurately address the major traffic concerns and considerations of the community. The DEIR admits that even with the proposed mitigation steps, the "Project will have a significant and unavoidable" impact on the environment. (3.13).*
>
> *The City cannot approve the Project with significant and unavoidable impacts unless it finds that there are no additional mitigation measures or alternatives that are feasible that would reduce the significant and unavoidable impact. Pub. Res. Code§ 21081, 14 CCR§ 15091. The DEIR claims that the impacts are traffic are unavoidable. Yet there are additional feasible mitigation measures that would reduce the Project's impacts but are not discussed in the EIR.*
>
> *For example, the following mitigation measures were not addressed:*
>
> - *The viability of public transit throughout the Project, including but not limited to shuttle services and/or subsidized transit passes;*
> - *Increase the number of biking and walking avenue throughout the Project;*
> - *Consideration of some mixed-use development within the Project;*
> - *Implementation of traffic calming measures;*

- The traffic concerns noted in this comment are addressed, in part, in Master Response 6 through 13. The recommendation for "traffic calming measures" is already part of the project and was considered in the analysis. The Project proposes to connect to an existing roundabout at the northerly project location along Sunnyside Avenue. Sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Signal construction is proposed at the intersection of Sunnyside Avenue/Shepherd Avenue, along with the completion of Shepherd Avenue between Sunnyside and Fowler Avenues. These improvements would help address speeding and safety issues along these corridors. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

  The project will also be implementing several project design features that will help eliminate gaps in the pedestrian circulation network around the project site. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue, Shepherd Avenue, Heirloom Avenue and Fordham Avenue, and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings, will enhance pedestrian safety in the neighborhood. The signal that has been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location.

The project will also be implementing several project design features around the project site that will improve safety for children. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue, Shepherd Avenue, Heirloom Avenue, and Fordham Avenue, and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing a signal at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), which will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location.

The recommendation to consider some mixed-used development within the Project was also already considered. Section 5.0 Alternatives presents the “Increased Density Mixed Use Alternative.” Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium-high density residential use, 10 acres would be developed with 195 apartments under the high-density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use. Transit is discussed within the DEIR in Section 3.13. Page 3.13.8 provides a discussion of the transit services available to the Study area.

Response Q-13: The commentor provides a heading entitled: “*g. The Project’s Proposed Ingress/Egress From Stanford/Perrin Avenues is not Properly Analyzed In Light of the Actual Conditions of such Roads.*” The commenter then provides several paragraphs supporting the statement.

- The traffic concerns noted in this comment are addressed in Master Response 6 through 13. Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road (Stanford/Perrin), and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway at Stanford/Perrin will be an exit only driveway and will provide emergency access. The project is estimated to add only nominal trips to the local roads including Perrin Road, Stanford Avenue, or in general, Fowler Avenue north of Shepherd Avenue. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue. As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage.

Additionally, the TIA and the DEIR identifies regional circulation improvements that would help alleviate traffic congestion and safety related issues. As included in Table 9-H of the TIA, and the DEIR, the project would be directly implementing circulation improvements around the project site and will be paying appropriate fees to the City for the future implementation of additional roadway widening and intersection improvements within the project study area when warranted. As demonstrated in the TIA, implementation of these improvements would help alleviate local congestion issues and provide safe access to local schools that are under the Clovis Unified School District (CUSD).

Response Q-14: The commentor provides a heading entitled: "*h. The DEIR's Hydrology Analysis is Inadequate In That It Incorrectly Relies on Data Related to Hardpan.*" The commenter then provides several paragraphs supporting the statement.

- The hardpan concerns noted in this comment are addressed in Master Response 4, and 5.

Response Q-15: The commentor provides a heading entitled: "*i. The DEIR Hydrology Analysis is Inadequate in That if Fails to Take into Account Removal of the Pecan Trees at the Project Site that Dramatically Alter the Water Recharge Capabilities*" The commenter then provides several paragraphs supporting the statement.

- The water concerns noted in this comment are addressed in Master Response 4 and 5.

Response Q-16: The commentor provides a heading entitled: "*j. The DEIR Does Not Adequately Explain how the Project being Developed in a 100-year Flood Plain will not cause or trigger greater diversion of flood waters into neighboring communities, in particular the Quail Run community*." The commenter then states the following:

The DEIR recognizes that part of the Project lies within the 100-year flood zone (3.9-29). However, when it comes to addressing such fact, the DEIR proposes that the homes built within such zone will be "elevated to or above the base flood elevation".

Woefully omitted, however, from its analysis is how the Project will impact the immediately surrounding community given the fact that substantial grading will be done to raise the development to the required elevation.

While the homes built in the Project will be above the floodzone, the earthworks involved to enable that simply means that water will be displaced and flow elsewhere—likely into the Quail Run community. Notably the Quail Run community does not have storm drains and the existing drainage basins on each 2-acre parcel were not designed to accommodate the flood run off from the Project.

The DEIR does not sufficiently detail and describe the impacts of flooding on the immediate neighborhoods.

- Storm Drainage/Flooding is addressed in DEIR Section 3.9 Hydrology and Water Quality and in Section 3.14 Utilities. Specifically, Impact 3.9-5 presented on page 3.9-30 indicates that the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The DEIR indicates that flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater. Page 3.9-31 indicates that the portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be less than significant. The runoff generated from the development of the project site will flow to new storm drainage collection pipelines as required by the Fresno Metropolitan Flood Control District and runoff will be piped to Basin BY located on the west side of Sunnyside Avenue north of Perrin Avenue.

Response Q-17: The commentor provides a heading entitled: "*k. The DEIR Take an Impractical and Illogical Position on the Impact the Project Will Have on Neighborhood Schools*." The commenter then states the following:

> *The DEIR recognizes that "CUSD does not have existing capacity to accommodate projected students from new development." (3.12-23). In particular, the DEIR notes that additional facilities will be needed by CUSD within the next 5 years. Notably, the CUSD does not own any school project sites within a reasonable distance from the Project. All these new children will have to flood into the existing schools which are already impacted.*
>
> *Rather than discussing mitigation measures, the DEIR simply states that the development fees are sufficient. This is not careful or thoughtful planning. Having the funds to build schools is not the same as actually acquiring and building school properties.*

- The Draft EIR addresses schools in Section 3.12 Public Services and Recreation. Page 3.12-9 discusses the Clovis Unified School District (CUSD), which serves the Project Area. Page 3.12-22 provides an analysis of the Project's impacts on schools. Here the DEIR indicates that the proposed Project is located within the service boundaries of the CUSD. The DEIR indicates that the Project site is nearest to Woods Elementary, approximately one mile southwest of the Project site, and Buchanan High School, approximately 1.7 miles southwest of the Project site.

  The DEIR indicates that the proposed Project would directly cause population growth, including school-aged children that would attend the schools that serve the Project site and surrounding area. The DEIR then provides an estimate of the new students that would be generated by the Project (342 new students). The DEIR indicates that students within the Project site would most likely attend Woods Elementary and Buchanan High School, as they are the closest educational locations to the Project site, but notes that student placement is subject to CUSD's determination.

  The DEIR indicates that CUSD does not have existing capacity to accommodate projected students from new development and that CUSD will need additional school facilities during the next five years for approximately 2,339 students in grades TK-6, 496 students in grades 7-8, and 1,034 students in grades 9-12. The DEIR indicates that CUSD currently owns four elementary school sites (Fowler-McKinley, Minnewawa-Perrin, Minnewawa-International, and an elementary site in the Millerton Specific Plan Area) as well as the Bradley Educational Center site, which would accommodate a future high school, intermediate school, and elementary school. The DEIR indicates that CUSD has school site capacity for all projected students in all grade levels, and thus no site acquisition costs are needed. The DEIR details the school fee system that collects money to be used for construction and reconstruction of school facilities, site development, relocatable classrooms on existing or future sites and other facilities necessitated by students generated by new development. The proposed Project is subject to those fees and will be appropriately paid to the CUSD for their use in providing school facilities under their State mandate.

Response Q-18: The commentor provides a heading entitled: "*I. The DEIR Does Not Address the Major Concerns of Creating a County Island of the Quail Run Community and the Impact of the Project's Odd, Illogical Shape*." The commenter then states the following:

> *Noticeably absent from the DEIR is the fact that the Project will annex an irregular L-shaped plot of land, thereby creating a County island of the Quail Run community. The DEIR recognizes that when it comes to SOI changes, that such changes must create logical and orderly boundaries. However, it is wholly silent on the fact that the Project annexation creates an illogical and disorderly boundary.*
>
> *Creating County islands is something the City and County have resisted for years for a host of justifiable reasons. And yet, the DEIR is conspicuously silent on any discussion of how the creation of a County island will actually impact that community.*
>
> *For example, on its discussion of public resources and policing, the DEIR is careful to point out that development fees will be sufficient to enable Clovis PD to hire any additional police as may be needed to police the Project. However, this analysis completely misses and fails to address how the Project will impact public resources on the County island. It is without a doubt that with 605 new homes and residents, that the Quail Run community will face a major uptick in property crimes. And yet, when a resident of Quail Run calls for law enforcement—it is not Clovis PD which responds, but only the County Sherrif's Office. The County Sherrif's Office is already stretched thin and the creation of the County island will lead to increased response times.*
>
> *Indeed, throughout the entire 626-page report, the DEIR only refers to the County Sheriff's office a single isolated instance. The DEIR is wholly inadequate as it ignores how crime and policing arising from the Project will impact the proposed County island.*

- Section 3.10-6 discusses annexations, including the role of Fresno LAFCo. Page 3.10-6 indicates that Fresno LAFCo is responsible for coordinating orderly reorganization to local jurisdictional boundaries, including annexations. Any annexation of the Project site to the City is subject to LAFCo approval, and LAFCo will review proposed annexations for consistency with LAFCo's Annexation Policies and Procedures.

The DEIR indicates that the proposed Project includes an amendment of the City's SOI to include the entirety the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the Fresno LAFCo. The SOI amendment would be reviewed by the City and LAFCo prior to proceeding with the requested annexation. If the SOI Amendment is approved, the Project would then be able to begin the annexation process.

The DEIR indicates that the proposed Project includes the adoption of pre-zoning for the proposed annexation area, which will serve to regulate the uses of land and structures within the Project area. The Project site is currently located outside of the Clovis City limits, and therefore does not have City-designated zoning. The proposed Project includes a request for Development Area pre-zoning (which is consistent with the proposed General Plan Land Use designation). The pre-zoning request is for Single-Family Planned Residential Development Zoning (R-1-PRD) zoning designation over the Development Area lots. The R-1-PRD district is consistent with the proposed Medium-High Density Residential land use designation of the General Plan. The proposed City of Clovis zoning for the Project site is shown on Figure 2.0-9. The Project will be subject to the development standards as described in the Municipal Code. The Municipal Code is proposed to ensure consistency between land use and zoning designations.

The proposed annexation includes lands contiguous with the current City limits and parcels that would be within the expanded SOI. It is noted, though as the commenter indicates, that parcels proposed for annexation would involve the creation of an island of unincorporated territory to the south of the site. It is noted that LAFCo may approve an annexation that creates an island where it finds that the application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation, but that inclusion is not feasible at this time. The island area is designated as Focus Area 7 in the General Plan, and is located within the Herndon – Shepherd Specific Plan Area. The General Plan identifies Focus Area 7 for Residential Use, which would require all proposed projects within Focus Area 7 to be consistent with the Dry Creek Preserve Master Plan if it were to be annexed into the City. This area is currently within the SOI, but the property owners in Focus Area 7 do not currently desire to annex into the City. The City has continued to plan for orderly growth to the north of the City, including the area that includes the Project site.

Response Q-19: The commentor provides a heading entitled: "*m. The DEIR Fails to Consider the Prime Farmland Designation and Relies on Developers' Self-Serving Statements that Farming is*

No Longer Viable.” The commenter then provides several paragraphs supporting the statement.

- The Draft EIR on page 3.2-16 indicates that the California Department of Conservation has designated approximately 63.60 acres of the Project site as Prime Farmland and 11.44 acres of the Project site as Farmland of Statewide Importance. This is reflected on Figure 3.2-1. Land designated as such generally consists of the qualities that make a site good farmland. However, the Draft EIR also indicates on page 3.2-16, that the California Department of Conservation notes that these designations do not necessarily reflect all relevant factors for agricultural production, and that they developed the Land Evaluation and Site Assessment (LESA) to evaluate the significance of the agricultural conversions such as what is proposed. The City utilized the LESA model to evaluate the site-specific characteristics more closely, and after evaluating the site-specific soil characteristics, project size, surrounding uses, agricultural protection zones, water resources availability, and ongoing economic feasibility of agricultural operations utilizing the LESA Model, the model showed that the conversion of the land on the Project site is not a significant impact according to the Department of Conservation thresholds. Therefore, implementation of the proposed Project would have a less than significant impact relative to agricultural conversion. This environmental conclusion considers site specific characteristics, such as the existence of a hardpan within the upper horizon of the soil profile (discussed in Master Response 4 and 5), the project size, surrounding urban uses, lack of agricultural protection zones in the zone of influence, lack of water resources, and ongoing economic feasibility of agricultural operations due to other factors. While farming has historically occurred on the Project site, and on adjacent properties before they too were developed, it currently is an economic challenge to farm the Project site based on the current circumstances of urbanization and an insecure water source for irrigation. The insecurity of groundwater under the Project site is well documented by citizens in the vicinity, and that insecurity of water is not limited to just the neighboring citizens, it applies to the agricultural operation also.

Response Q-20: The commentor provides a heading entitled: “*n. The Project Fails to Consider or Evaluate Impacts on Kit Fox Which Are Known to Exist Near the Project Area*.” The commenter then provides a paragraph supporting the statement.

- San Joaquin kit fox (SJKF) is addressed in the Draft EIR on page 3.4-11, and 3.4-28. The SJKF is a federally endangered and state threatened species. They generally inhabit saltbush scrub, grassland, oak, savanna, and freshwater scrub in the San Joaquin Valley, and adjacent open foothills to the west.

The Project site is characterized as frequently disturbed from active agricultural activities, and as a result, the Project site does not contain high quality habitat for the SJKF. The CDFW has not documented any SJKF within nine miles of the Project site. The field surveys did not reveal any dens on the Project site so there is no active, or recent past, occupation by SJKF. The historical agricultural activities and denser orchard canopy make this site not ideal. It is noted that there are other species of canids, including grey fox and coyote, that are more likely to occur in the vicinity, and it is possible that one was mistaken for a SJKF on the commenter's walk. There are no documented occurrences of a SJKF den in the vicinity, and it is not clear where such a transient SJKF in the vicinity would be traveling to and from. Overall, given the current condition of the Project site, and the absence of SJKF dens, development of the Project is anticipated to have a less than significant impact on SJKF. It is noted that the California Department of Fish and Wildlife has reviewed the Biological Chapter of the EIR and does not have issue with the analysis of SJKF.

Response Q-21: The commentor *provides a conclusion to the letter and states: "for the foregoing reasons, I urge the City to prepare and recirculate a revised DEIR addressing the above shortcomings."*

- There is nothing in the record that warrants a recirculation of a Draft EIR. The Draft EIR is an adequate informational document intended to describe the Project, analyze impacts, analyze alternatives, and present feasible mitigation to avoid, minimize, or mitigate an environmental impact. The Final EIR is intended to provide clarifications, and amplify the information that is already provided in the Draft EIR. The comment is noted and will be provided to the City for their consideration.

NORMAN D. MORRISON IV
8195 North Sunnyside Avenue
Clovis, CA 93619

September 4, 2023

City of Clovis
Planning Division
Attn: George González
1033 Fifth Street
Clovis CA 93612

Re: Comments in Opposition to/regarding Shepherd North Draft EIR E202310000202

Dear Mr. González:

This letter is submitted in response and opposition to the Draft Environmental Impact Report submitted by De Novo Planning Group on behalf of Leo Wilson and Wilson Homes for the "Shepherd North" proposal located at the intersection of Shepherd Avenue and Sunnyside Avenue. This letter is submitted on behalf of myself and numerous other concerned neighbors, most of whom live along Sunnyside Avenue and the streets connecting to Sunnyside, and whom will be directly affected by approval of the proposed project and the related impacts. R-1

Initially, it is noted that the Notice of Availability states that any response must be received by the City by September 4, 2023. As you are aware, September 4, 2023, was a State and Federal Holiday, and the City's offices were not open. We assume this was a calendaring oversight by the City. Further, it is noted that the Notice of Availability does not provide any address for submitting an electronic response. Accordingly, the deadline for submittals is extended to Tuesday, September 5, 2023, as it otherwise impermissibly shortens public response period. (*See Rominger v. County of Colusa* (2014) 226 Cal.App.4th 690, 707-708 (disapproved of on other grounds by *Union of Medical Marijuana Patients, Inc. v. City of San Diego* (2019) 7 Cal.5th 1171, 1188-1194.) R-2

A review of the proposed Draft Environmental Impact Report (DEIR) demonstrates that it is incomplete, flawed, reliant upon inapplicable and outdated information, internally contradictory, and where it does admit to significant impacts, it fails to discuss any methods of remedying these impacts. Additionally, portions of the DEIR are in conflict with the Dry Creek Preserve Master Plan and the ordinances of both the City of Clovis and the County of Fresno. R-3

Accordingly, we request that the City reject the DEIR, and require Leo Wilson and Wilson Homes to submit an updated, corrected DEIR that adequately addresses the impacts associated with the proposed development on neighboring landowners and streets, as well as what mitigation measures Leo Wilson and Wilson Homes are willing to implement to address and mitigate the impacts they concede are unavoidable, significant, and arise from the proposed development.

I. The DEIR Fails to Adequately Analyze Traffic Impacts on Surrounding Streets, Which Are Already Deteriorating and Becoming Increasingly Unsafe and Dangerous Due to Previous Project Approvals Without Any Mitigation Measures; The DEIR Additionally Fails to Identify Any Mitigation Measures for Traffic on Adjacent Streets, and Relies On Outdated and Inaccurate Figures.

As the City is well aware, traffic is a major issue on Sunnyside Avenue that has inexplicably repeatedly been neglected and ignored by the City of Clovis and the County of Fresno over recent years. Developments along both Sunnyside/Teague Avenue (Woodside Homes) and Shepherd Avenue (Heritage Grove and related developments) have resulted in a significant increase in not only the number of vehicles utilizing Sunnyside Avenue, but also the speed of these vehicles and the number of actual and near-accidents on this road, which will only be exacerbated by this project. Although the DEIR does not appear to specifically admit as such, the Shepherd North Project will inevitably rely upon Sunnyside Avenue as a primary, if not the primary, access road for Project homeowners and their guests and invitees to use to access the development. Yet this fact does not appear to have been considered or addressed in the DEIR.

In recent years, the number of near-misses that would have resulted in significant, potentially fatal, collisions along Sunnyside have increased. Although Sunnyside is a 45-MPH street and is striped “double-yellow,” this has not stopped non-residents of the area from attempting to pass over the double-yellow at high rates of speed, speeding well in excess of the posted speed limit, and engaging in road rage encounters with residents. Many of the residents along Sunnyside, my family included, have narrowly avoided potentially significant accidents by people who attempt to pass to the left over the double-yellow line while we are turning left into our driveways. Within the span of less than six months, my family experienced this situation on no less than four (4) separate occasions. Neighbors have had similar experiences, including on one occasion when someone attempted to pass a large trailer carrying expensive agricultural equipment while the other vehicle was turning left into a driveway. In addition, we regularly have near misses between vehicles and heavy equipment including garbage trucks that have to partially block the roadway in order to access and empty dumpsters. We have also had individuals pass vehicles by driving at high speeds into front yards and the dirt street frontage. R-4

There have also been increasing amount of traffic collisions and near-collisions at the intersection of Sunnyside and Nees, which has been affected by the recent projects in the surrounding areas and which will be affected by this project. On numerous occasions, my family and our neighbors have nearly been broadsided at high speeds by individuals traveling east or west along Nees who fail to stop, “jackrabbit” the stop sign, or fail to yield to the drivers with the right of way. We are aware of numerous neighbors who have been involved in one or more accidents at this intersection. Yet again, the City has taken no action to resolve this dangerous intersection, and appears to have no concrete plans to do so beyond stating that a light may be installed at some unknown future point in time.

This type of traffic, and these types of accidents, were extremely rare or non existent prior to the City's approval of development in the surrounding area. Many of these drivers have been confirmed to be residents of the new developments (including Heritage Grove), or are using Sunnyside in an attempt to avoid the traffic restrictions along Clovis Avenue caused by the stops and traffic lights. During prior City Planning Commission and City Council meetings, individuals from outside of Clovis (including those living near and adjacent to the proposed Shepherd North project) have testified and admitted that they take Sunnyside because it is faster than the surrounding streets – due to the lack of traffic controls.

As a result of the increase in traffic, collisions, and near-collisions without any mitigation or enforcement being performed by the City and County, the residents along Sunnyside do not feel safe in allowing their family members, including their children, to walk to school, parks, or neighbors.

The DEIR additionally fails to identify or address the impact that the additional traffic associated with the project will have on those who are using Sunnyside Avenue for walking or bicycling, a significant concern in light of the City's significant investment in the Dry Creek Trailhead at Sunnyside and Nees. Although the DEIR discusses issues relating to future development of bicycle trails and sidewalks at the intersection of Sunnyside and Shepherd, along Sunnyside north of Shepherd, and along Shepherd Avenue, it does not identify how the impact that the additional traffic will have on pedestrians and bicyclists who are using Sunnyside Avenue between Nees and Shepherd. As there are no bicycle or pedestrian paths along this roadway (nor is there existing right of way for any future development of such pathways) along Sunnyside, bicyclists and pedestrians are forced to walk in the roadway, competing with high-speed vehicles passing by. It is expected that pedestrian and vehicular usage will increase in the future, due to the build-out of Woodside Homes' developments in the Dry Creek Preserve which will funnel these homeowners and their guests onto Sunnyside. R-4 Cont.

These facts are why it is deeply concerning that the DEIR concedes that the proposed project will add to existing forecasted deficiencies amongst the roadways in the area, including Sunnyside Avenue, but offers no realistic or identifiable methods of addressing or mitigating the increased traffic that will be associated with its project. It is anticipated that most, if not all, of the future residents of this project will utilize Sunnyside Avenue to travel to and from their homes. This will result in a significant, unavoidable impact on Sunnyside Avenue, which is (and is projected to remain) a narrow, two-lane roadway throughout the foreseeable future. This will also result in significant safety impacts upon students and their parents who are attempting to cross Sunnyside Avenue south of Nees, to get to and from Century Elementary, as there will be potentially thousands of additional vehicle trips associated with this development, between residents, delivery vehicles, service vehicles, visitors, and others each day.

The DEIR additionally fails to address the likelihood of what will occur in the event of future development along Sunnyside Avenue. Should a small number of additional residences or Accessory Dwelling Units be constructed along stretches of Sunnyside Avenue, by operation of law that portion of Sunnyside Avenue will be deemed a Residential District pursuant to Vehicle

Code, section 515, which will also simultaneously reduce the maximum speed limit to 25 MPH. In the event this occurs, it will likely cause significant traffic impacts and backups, which are not addressed, contemplated, or planned for. It is noted that for some stretches of Sunnyside Avenue, the construction of as little as two ADU's, businesses, or residential structures will trigger this requirement. Once again, as Sunnyside Avenue is already identified as significantly impacted and will be further significantly impacted by this development, attention and consideration needs to be paid to this factor.

Finally, as also noted below, it does not appear that the traffic figures relied upon for the DEIR include or recognize the future growth and traffic load upon Sunnyside and the surrounding roadways associated with the numerous developments that have already been approved, much less those that have already been built. When the increased cumulative loads associated with these developments are factored in, there will be a critically significant, unmitigated and unaddressed increase in traffic on Sunnyside. Nor does it appear to address the existing exponential growth in traffic associated with morning and afternoon school commutes, which already backs traffic up from the stoplight at Minnewawa and Shepherd to nearly Sunnyside Avenue on a daily basis. R-4 Cont.

Accordingly, the DEIR is insufficient and flawed as it does not identify any mitigation measures that will be taken to address the proposed development. Among other things, the DEIR should identify what steps Leo Wilson and Wilson Homes will take to steer traffic to the roadways designed and intended to carry the bulk of the load – including Clovis Avenue and Fowler Avenue. It also fails to identify what steps Leo Wilson and Wilson Homes will take to address and mitigate the increased noise, traffic, danger, and other impacts associated with the volumetric increase of traffic on those who reside on Sunnyside Avenue and adjacent roads.

II. **The DEIR Fails to Adequately Analyze the Availability of Water Supplies for the Development, And Completely Fails to Identify , Address or Analyze the Unavoidable Loss of Recharge That Will Result From the Project and Its Effects on Neighboring Landowners.**

The construction of the proposed development will require the development and assignment of hundreds of acre-feet of potable water. The DEIR does not identify where this water will be sourced from, and the City's prior CEQA documents produced in connection with the Heritage Ranch project have conceded that those developments will result in the City having to resume overdrafting groundwater supplies.

On numerous occasions over the years, the issue of inadequate water supplies has been raised during meetings with the Clovis City Council in connection with other projects. Each time, the City has responded by providing vague statements about "water rights" to the Kings River supplies. Yet, the City has never identified the priority of the alleged Kings River water rights it relies upon. While the City may indeed have rights to significant amounts of Kings River water rights, such water rights are of little to no use if they are junior to numerous other rights and the water will only be available in the rare, infrequent high water years. Similarly, R-5 contracts with FID have little use if FID does not possess adequate water to supply its existing shareholders and/or imposes restrictions or shortened water supplies – as has been the case in numerous prior years.

The DEIR appears to rely upon the City's Urban Water Management Plan and other documents, none of which clearly identify the City's actual legal rights to discrete, identifiable water supplies. This fact, combined with the fact that the City has relied upon this same bundle of water rights to approve numerous large developments over recent years, calls into question whether there is adequate water to supply this development. This fact must be identified with precision at this point, as once the development is approved and construction begins the City will be required to supply water – even if this results in significant overdrafts affecting nearby users.

The DEIR also fails to address the loss of water recharge associated with the development of the project. Historically, the water used to irrigate the orchard has percolated down and assisted in replenishing the underground aquifers relied upon by those who live nearby. When the acreage is developed into housing, this recharge supply is irrevocably lost, affecting nearby lands. This is due to the hardscaping of the land for residential purposes, the loss of irrigation, and rainwater and other runoff, as well as water supplies used on the property, now being channeled and transported away from the property and discharged somewhere else.

R-5 Cont.

This loss of water supply is especially critical and significant to neighboring landowners in this area. The Shepherd North project area is well known for rapidly depleting groundwater due to excess pumping (including that pumped by the City to supply its residents and businesses), climate change, and diversion of traditional recharge supplies. This has resulted in many wells supplying nearby residences either going dry, having to be re-drilled or deepened, or losing capacity. As a result of these factors, many homeowners have had to spend tens of thousands of dollars in drilling or improving their wells in an attempt to eke out a few gallons-per-minute in flow, or hiring water deliveries to their home. The proposed development will significantly and unavoidably increase and accelerate these losses, yet no mitigation is identified or discussed. Moreover, the City has traditionally demonstrated that it is not willing to assist the homeowners directly affected by these losses by extending water supplies to them, with one (former) City Councilmember essentially stating that the City didn't have to do anything.

Accordingly, the DEIR needs to identify the loss of groundwater recharge, the source and priority of the water that will be used to supply the project, and what steps will be taken to mitigate the loss of recharge and increased groundwater pumping relating to this project.

III. DEIR Fails to Adequately Analyze or Address the Loss of Prime Farmland and Species Habitat Associated with the Project, or Any Mitigation Measures

Interestingly, the DEIR briefly acknowledges that this project will result in the loss of prime farmland. Yet after acknowledging this fact, the DEIR fails to identify any mitigation measures, and instead seeks to "switch the subject" by discussing other factors.

There is no mistake or dispute that the Shepherd North project location consists of prime farmland. Prior to Leo Wilson and Wilson Homes' recent clearcutting of the property location, the location had been used to grow crops for decades. It was known for producing a variety of tree crops, and these tree crops also supported a variety of wildlife and other species.

The DEIR should identify what steps Leo Wilson and Wilson Homes will take to mitigate the permanent loss of this prime farmland, whether that be by funding a conservation easement over other prime farmland (and not sub-prime lands) to preserve such lands, or other steps. Additionally, the DEIR should identify in detail how the endangered species that are known, and documented, to live in the project area will be protected both now in the future. Alternatively, approval of the project by the City and construction of the development by Leo Wilson and Wilson Homes would likely constitute a violation of both Federal and State laws relating to the preservation of endangered and threatened species.

In addition to discussing the mitigation measures for endangered and threatened species, the DEIR should identify what steps Leo Wilson and Wilson Homes will take to address the loss of habitat for a variety of other wildlife, ranging from avian species (including hawks, owls, and other birds), mammals, reptiles, and other species. Due to the development, those of us who have property in the area are increasingly finding that our property is becoming the subject of attacks by predators, as well as occupied by other animals, that have been displaced due to development and human habitation. This development will further this pattern of shifting the burden and costs of dealing with these species onto other landowners. Accordingly, the DEIR should identify these issues and identify mitigation measures that will be taken to address them. R-6

IV. The DEIR Fails to Adequately Identify, Analyse and Identify Mitigation for Cumulative Impacts

Finally, the DEIR fails to adequately address the cumulative impacts that this project will have in connection and combination with the other various projects that have previously been approved in the area, including those which have already been constructed. California law required that the DEIR identify the cumulative impact that a project will have in connection with other nearby projects, as well as potential future projects (which would include the additional property which it is widely known Leo Wilson and Wilson Homes intends to develop at a future point in time.) R-7

Among other things, the DEIR must discuss the cumulative impact that this project will have, in combination with other previously approved projects, on traffic, water, species, loss of prime farmland, noise, pollution, and the need for additional services. Accordingly, this project cannot be considered in isolation. The DEIR must include an analysis of how this project will add, for example, to the increased traffic loads resulting from the approval of Heritage Grove, Woodside Homes, and the other projects approved near this intersection. Yet, it does not.

Accordingly, the DEIR is insufficient and flawed.

R-7 Cont.

For all of these reasons we request that the City of Clovis reject the proposed DEIR, and require Leo Wilson and Wilson Homes to update, revise, and re-submit a DEIR that adequate addresses these issues, as well as identifying what mitigation measures are available and will be implemented to address the unavoidable impacts.

I further request to be copied on all future communications, filings, and developments regarding this DEIR.

Thank you for your attention to this matter.

Norman D. Morrison IV

Response to Letter R: Norman D. Morrison IV, Attorney

Response R-1: The comment serves as an introduction to the comment letter. The commenter states: "*This letter is submitted in response and opposition to the Draft Environmental Impact Report submitted by De Novo Planning Group on behalf of Leo Wilson and Wilson Homes for the "Shepherd North" proposal located at the intersection of Shepherd Avenue and Sunnyside Avenue. This letter is submitted on behalf of myself and numerous other concerned neighbors, most of whom live along Sunnyside Avenue and the streets connecting to Sunnyside, and whom will be directly affected by approval of the proposed project and the related impacts*."

- This comment is noted. The comment does not raise any CEQA concerns and no further response to this comment is warranted in the EIR.

Response R-2: The commentor states: "*Initially, it is noted that the Notice of Availability states that any response must be received by the City by September 4, 2023. As you are aware, September 4, 2023, was a State and Federal Holiday, and the City's offices were not open. We assume this was a calendaring oversight by the City. Further, it is noted that the Notice of Availability does not provide any address for submitting an electronic response. Accordingly, the deadline for submittals is extended to Tuesday, September 5, 2023, as it otherwise impermissibly shortens public response period. (See Rominger v. County of Colusa (2014) 226 Cal.App.4th 690, 707-708 (disapproved of on other grounds by Union of Medical Marijuana Patients, Inc. v. City of San Diego (2019) 7 Cal.5th 1171, 1188-1194.)*"

- To clarify, the City did establish the 45-day review period for the EIR in accordance with the statutory mandate. During the review period, however, it was discovered that the public review end date would fall on a holiday. Once this was recognized, the City extended the public review period an extra day (46 days total review) to ensure that there was additional time beyond the holiday to receive comments. It is noted that the City received an additional letter on September 6, 2023. Despite the fact that the letter was submitted after the close of the comment period, it was accepted by the City and included in the Final EIR. As shown in the Table 2.0-1, there were five comment letters received dated September 5th, and one comment letter dated September 6th. This reflects the City's extension of the review period. It is also noted that the commenter's letter is dated September 4, 2023, but was submitted electronically to the City on September 5, 2023. In accordance with the City's extension, the commenter's letter is included in the Final EIR. It is also noted that the State Clearinghouse database (CEQAnet) reflects a public review end date of September 5, 2023.

Response R-3: The commentor states: "*A review of the proposed Draft Environmental Impact Report (DEIR) demonstrates that it is incomplete, flawed, reliant upon inapplicable and outdated* *information, internally contradictory, and where it does admit to significant impacts, it fails to discuss any methods of remedying these impacts. Additionally, portions of the DEIR are in conflict with the Dry Creek Preserve Master Plan and the ordinances of both the City of Clovis and the County of Fresno.*

Accordingly, we request that the City reject the DEIR, and require Leo Wilson and Wilson Homes to submit an updated, corrected DEIR that adequately addresses the impacts associated with the proposed development on neighboring landowners and streets, as well as what mitigation measures Leo Wilson and Wilson Homes are willing to implement to address and mitigate the impacts they concede are unavoidable, significant, and arise from the proposed development."

- This comment is noted. The assertions and opinions provided in these paragraphs will be provided to the City for their consideration, however, they do not require a direct response under this response.

Response R-4: The commentor states: "*The DEIR Fails to Adequately Analyze Traffic Impacts on Surrounding Streets, Which Are Already Deteriorating and Becoming Increasingly Unsafe and Dangerous Due to Previous Project Approvals Without Any Mitigation Measures; The DEIR Additionally Fails to Identify Any Mitigation Measures for Traffic on Adjacent Streets, and Relies On Outdated and Inaccurate Figures*." This statement is then followed numerous paragraphs providing support for their statement.

- A few of the concerns in this comment are addressed in Master Response 8, 9, and 11. The TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

  Currently, there is no signalized control along Sunnyside Avenue between Behymer Avenue and Alluvial Avenue. Among the major intersections along this corridor, the intersection of Sunnyside Avenue/Shepherd Avenue is an all-way stop-controlled intersection, Sunnyside Avenue/Teague Avenue is a two-way stop-controlled intersection, and Sunnyside Avenue/Nees Avenue is an all-way stop-controlled intersection.

  As included in the TIA, signals have been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue, and Sunnyside Avenue/Nees Avenue, along with other improvements at these locations. As such, with implementation of these signals along this corridor, the corridor is anticipated to experience improved traffic flow, and alleviate current safety concerns. This is after account ting for the traffic from the project and other adjacent projects in the vicinity. Both signals are in the City's Development Impact Fee program and the City will be implementing these improvements.

The project will also be implementing several project design features that will help eliminate gaps in the pedestrian circulation network around the project site. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue and Shepherd Avenue, Fordham Avenue, and Heirloom Avenue and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings have been recommended to enhance, pedestrian safety in the neighborhood. This includes a signal that has been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), which will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location.

In addition, Shepherd Avenue will be constructed curb to curb between Sunnyside and Fowler Avenue including a trail/sidewalk along the north side of Shepherd Avenue and bike lanes along this segment of Shepherd Avenue. This will enhance both vehicular safety and pedestrian safety along this corridor.

The project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

The project will be implementing several project design features around the project site that will improve safety for children. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue, Shepherd Avenue, Heirloom Avenue, and Fordham Avenue, and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location. As such, implementation of the signal and said sidewalks would help address speeding and safety issues along these corridors.

Response R-5: The commentor states: "*The DEIR Fails to Adequately Analyze the Availability of Water Supplies for the Development, And Completely Fails to Identify, Address or Analyze the*

Unavoidable Loss of Recharge That Will Result From the Project and Its Effects on Neighboring Landowners." This statement is then followed numerous paragraphs providing support for their statement.

- This comment regarding water is addressed under Master Response 3, 4, and 5.

Response R-6: The commentor states: "*DEIR Fails to Adequately Analyze or Address the Loss of Prime Farmland and Species Habitat Associated with the Project, or Any Mitigation Measures*." This statement is then followed numerous paragraphs providing support for their statement.

- The Draft EIR on page 3.2-16 indicates that the California Department of Conservation has designated approximately 63.60 acres of the Project site as Prime Farmland and 11.44 acres of the Project site as Farmland of Statewide Importance. This is reflected on Figure 3.2-1. Land designated as such generally consists of the qualities that make a site good farmland. However, the Draft EIR also indicates on page 3.2-16, that the California Department of Conservation notes that these designations do not necessarily reflect all relevant factors for agricultural production, and that they developed the Land Evaluation and Site Assessment (LESA) to evaluate the significance of the agricultural conversions such as what is proposed. The City utilized the LESA model to evaluate the site-specific characteristics more closely, and after evaluating the site-specific soil characteristics, project size, surrounding uses, agricultural protection zones, water resources availability, and ongoing economic feasibility of agricultural operations utilizing the LESA Model, the model showed that the conversion of the land on the Project site is not a significant impact according to the Department of Conservation thresholds. Therefore, implementation of the proposed Project would have a less than significant impact relative to agricultural conversion. This environmental conclusion considers site specific characteristics, such as the existence of a hardpan within the upper horizon of the soil profile, the project size, surrounding urban uses, lack of agricultural protection zones in the zone of influence, lack of water resources, and ongoing economic feasibility of agricultural operations due to other factors. While farming has historically occurred on the Project site, and on adjacent properties before they too were developed, it currently is an economic challenge to farm the Project site based on the current circumstances of urbanization and an insecure water source for irrigation. The insecurity of groundwater under the Project site is well documented by citizens in the vicinity, and that insecurity of water is not limited to just the neighboring citizens, it applies to the agricultural operation also.
- Species habitat is addressed in Section 3.4 Biological Resources. Page 3.4-4 through 3.4-12 provide a discussion of the types of habitats found on the Project site and the vicinity, as well as an extensive list of special status species that are

documented within a nine-quad search radius of the California Natural Diversity Database. Impact 3.4-1 through 3.4-5 include an analysis of the potential for impacts on special status species and their habitats. Where potential impacts were identified, mitigation was presented (i.e., Mitigation Measure 3.4-1 and 3.4-2). Impacts 3.4-6 through 3.4-8 include an analysis of the potential for impacts on certain habitats such as wetlands, riparian, sensitive natural communities, wildlife corridors, and wildlife nursery sites.

Response R-7: The commentor states: "*The DEIR Fails to Adequately Identify, Analyse and Identify Mitigation for Cumulative Impacts.*" This statement is then followed numerous paragraphs providing support for their statement.

- A cumulative analysis is presented in Section 4.0 Other CEQA-Required Topics. The analysis begins on Page 4.0-1 under the heading "*4.1 Cumulative Setting and Impact Analysis*". The discussion starts with an Introduction on page 4.0-1, and a Cumulative Setting on page 4.0-2. The Method of Analysis is described on page 4.0-2 through 4.0-3. Here, the DEIR states "*There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. This EIR uses the projection approach for the cumulative analysis and considers the development anticipated to occur upon buildout of the various General Plans in the area."* Page 4.0-3 through 4.0-26 presents a Cumulative Analysis with 26 different impact statements covering all CEQA environmental topics, including traffic, water, species, loss of prime farmland, noise, pollution, and the need for additional services. It is noted that the traffic analysis does consider a cumulative scenario, which is reflected in the modeling and output data. It is noted that Impact 4.20: Under Cumulative conditions, Project development would result in VMT increases that are greater than 87 percent of Baseline conditions. This was identified as a significant and unavoidable impact in the cumulative impact analysis.

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

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September 5, 2023

FRE-168-R7.805
DEIR -Draft EIR
DEIR for the Shepherd North project
SCH# 2022050180
https://ld-igr-gts.dot.ca.gov/district/6/report/26417

SENT VIA EMAIL

George Gonzalez, Senior Planner
Planning and Development Services Department
City of Clovis
1033 Fifth Street
Clovis, CA 93612

Dear Mx. Gonzalez:

Thank you for the opportunity to review the Draft Environmental Impact Report (DEIR) for the Shepherd North Project, which proposes to develop approximately 155 acres of land for the construction of 605 single-family residential units and parkland that is currently outside the City of Clovis' city limits. The project is approximately 2 miles north of the State Route (SR) 168 and Fowler Avenue interchange and 2.3 miles northeast of the SR 168 and Herndon Avenue interchange.

The project was previously reviewed as part of the Notice of Preparation (NOP) of a DEIR, a Scope of Work (SOW) for a Transportation Impact Analysis (TIA), and as Tentative Tract Map 6205 (including associated entitlements) with our office providing comment letters dated June 10, 2022, June 22, 2022, and August 15, 2023 respectively. All previous comment letters still apply to this project.

Caltrans provides the following comments consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities: S-1

1. It is projected that the project will significantly impact the SR 168 and Herndon Avenue interchange eastbound (EB) ramps. The eastbound off-ramps will be impacted by the proposed project due to the substantial amount of queue storage it currently projects during the near-term PM peak hour traffic. The utilization of the left-turn lanes on Herndon Avenue heading north onto Clovis Avenue will lead to congestion on the SR 168 and Herndon Avenue off-ramps. **It is recommended that the median island on Herndon Avenue be modified to allow for increasing the storage capacity on Herndon Avenue's left turn lane onto Clovis Avenue which will help alleviate queuing on the SR 168 EB off-ramp.** S-2

"Provide a safe and reliable transportation network that serves all people and respects the environment"

George Gonzalez, DEIR for the Shepherd North project
September 5, 2022
Page 2

2. It is expected that operational issues may arise with the SR 168 and Fowler Avenue westbound (WB) ramps. Based on the queuing analysis conducted for the morning peak hours in 2028, there seems to be no specific lane allotted for making right turns. However, the TIA projects that vehicles will turn right onto SR 168 and head west. This could potentially cause a backlog in the southbound (SB) through-lane on Fowler Avenue for right-turn users. **It is recommended that the City consider proposing a designated right-turn lane in the future to alleviate the anticipated issue**. S-3

3. **The project proponent should be responsible for optimizing signal timing, along with construction of all improvements that are identified within the State right-of-way (ROW), including but no limited to roadway pavement improvements, curb, gutter, sidewalks, driveways, and drainage facilities**. S-4

4. The DEIR notes that the project would have Significant and Unavoidable Impact regarding the vehicle miles traveled (VMT). The project intends to implement design features to help reduce project VMT which include pedestrian infrastructure, improve street connectivity, bicycle infrastructure/improvements, and provide electric vehicle (EV) parking and EV charging infrastructure. We highly encourage the project proponents incorporate the VMT mitigation strategies that were identified and to work closely with local Transit Agencies and the City in finding opportunities to improve multimodal transportation and help mitigate the VMT impacts. S-5

5. As mentioned in the previous comment letter on prior phases of the project and given the VMT impact identified in the DEIR, we recommend the City consider creating a VMT Mitigation Impact Fee to help reduce potential impacts of projects on the local roads and the State Highway System. **It is also recommended that the City consider incorporating the identified road improvements into the City's existing impact fee programs**. S-6

6. An encroachment permit must be obtained for all proposed activities for placement of encroachments within, under or over the State highway rights-of-way. Activity and work planned in the State right-of-way shall be performed to State standards and specifications, at no cost to the State. Engineering plans, calculations, specifications, and reports (documents) shall be stamped and signed by a licensed Engineer or Architect. Engineering documents for encroachment permit activity and work in the State right-of-way may be submitted using English Units. The Permit Department and the Environmental Planning Branch will review and approve the activity and work in the State right-of-way before an encroachment permit is issued. The Streets and Highways Code Section 670 provides Caltrans discretionary approval authority for projects that encroach on the State Highway System. Encroachment permits will be issued in accordance with Streets and Highway Codes, Section 671.5, "Time Limitations." Encroachment permits do not run with the land. A change of ownership requires a new permit application. Only the legal property owner or his/her authorized agent can pursue obtaining an encroachment permit. S-7

George Gonzalez, DEIR for the Shepherd North project
September 5, 2022
Page 3

7. Prior to an encroachment permit application submittal, the project proponent is required to schedule a "Pre-Submittal" meeting with District 6 Encroachment Permit Office. To schedule this meeting, please call the Caltrans Encroachment Permit Office - District 6: 1352 W. Olive, Fresno, CA 93778, at **(559) 488-4058**

   Please review the permit application - required document checklist at: https://forms.dot.ca.gov/v2Forms/servlet/FormRenderer?frmid=TR0402&distpath=MAOTO&brapath=PERM

   Please also review the permit application - processing checklist at: https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/encroachment-permits/tr-0416-a11y.pdf

S-8

If you have any other questions, please call or email Christopher Xiong at (559) 908-7064 or Christopher.Xiong@dot.ca.gov.

Sincerely,

DAVID PADILLA, Branch Chief
Transportation Planning – North

"Provide a safe and reliable transportation network that serves all people and respects the environment"

Response to Letter S: David Padilla, California Department of Transportation

Response S-1: The commentor provides a brief introduction to the letter.

- This comment is noted. The DEIR and the TIA has addressed all previous California Department of Transportation (Caltrans) comments.

Response S-2: The commentor states the following:

"1. It is projected that the project will significantly impact the SR 168 and Herndon Avenue interchange eastbound (EB) ramps. The eastbound off-ramps will be impacted by the proposed project due to the substantial amount of queue storage it currently projects during the near-term PM peak hour traffic. The utilization of the left-turn lanes on Herndon Avenue heading north onto Clovis Avenue will lead to congestion on the SR 168 and Herndon Avenue off-ramps. It is recommended that the median island on Herndon Avenue be modified to allow for increasing the storage capacity on Herndon Avenue's left turn lane onto Clovis Avenue which will help alleviate queuing on the SR 168 EB off-ramp."

- There is currently 240-feet storage for the dual eastbound left-turn lanes at the intersection of Clovis Avenue/Herndon Avenue. Although an extension of the storage may improve level of service, congestion is not a traffic impact following the enactment of SB 743. The City's Circulation Element also does not contemplate a particular length of storage for the left-turn lanes, and the Project is otherwise consistent with the City's Circulation Element. As a result, the storage as currently contemplated would not result in a potentially significant environmental effect. Further, due to geometric constraints, it is not feasible to extend the storage lanes further nor would further storage result in a material difference in congestion.

Response S-3: The commentor states the following:

"2. It is expected that operational issues may arise with the SR 168 and Fowler Avenue westbound (WB) ramps. Based on the queuing analysis conducted for the morning peak hours in 2028, there seems to be no specific lane allotted for making right turns. However, the TIA projects that vehicles will turn right onto SR 168 and head west. This could potentially cause a backlog in the southbound (SB) through-lane on Fowler Avenue for right-turn users. It is recommended that the City consider proposing a designated right-turn lane in the future to alleviate the anticipated issue."

- Comment noted. Based on the summary of levels of service (LOS) analysis included in chapters 8 and 9 of the TIA, this intersection is forecast to operate at a satisfactory LOS under existing, Near-term, and Cumulative conditions under both without and plus project conditions. The City will coordinate with Caltrans for further assessment in determination of requirements of a designated southbound right-turn lane at this location.

Response S-4: The commentor states the following:

"3. The project proponent should be responsible for optimizing signal timing, along with construction of all improvements that are identified within the State right-of-way (ROW), including but no limited to roadway pavement improvements, curb, gutter, sidewalks, driveways, and drainage facilities."

- The TIA evaluated the following four intersections under the jurisdiction of Caltrans:
    - SR-168 Westbound Ramps/Herndon Avenue
    - SR-168 Eastbound Ramps/Herndon Avenue
    - Fowler Avenue/SR-168 Westbound Ramps, and
    - Fowler Avenue/SR-168 Eastbound Ramps.
- Among these four intersections, except for the intersection of Fowler Avenue/SR-168 Eastbound Ramps, all other intersections are forecast to operate satisfactorily under all scenarios. The intersection of Fowler Avenue/SR-168 Eastbound Ramps is currently operating at a deficient LOS and is forecast to deteriorate further in future as shown in Tables 8-A, 8-C, and 8-E of the TIA. As such, the project does not create any new operational deficiency at this location, rather adds to the existing or forecasted deficiency at this location. Therefore, as included in Table 9-H of the TIA, the project will be paying its fair share for the recommended improvements at this intersection through the RTMF fee described below. The City will be coordinating with Caltrans to schedule projects with the Regional Transportation program.

  The Fresno County Regional Transportation Mitigation Fee (RTMF) was created to fulfill one of the terms of the Measure "C" extension ballot measure, which was approved by Fresno County voters in 2006. The RTMF became effective on January 1 2010. The RTMF is "intended to ensure that future development contributes to its fair share towards the cost of infrastructure to mitigate the cumulative, indirect regional transportation impacts of new growth in a manner consistent with the provisions of the State of California Mitigation Fee Act." The fees help fund improvements needed to maintain the target level of service in the face of higher traffic volumes brought on by new developments. As such, any new development within Fresno County, including developments within the City are required to pay the RTMF fee based on the adopted fee structure. The proposed project would be required to pay the RTMF fee to fund improvements and maintenance of the regional roadway network.

Response S-5: The commentor states the following:

4. The DEIR notes that the project would have Significant and Unavoidable Impact regarding the vehicle miles traveled (VMT). The project intends to implement design features to help reduce project VMT which include pedestrian infrastructure, improve street connectivity, bicycle infrastructure/improvements, and provide electric vehicle (EV) parking and EV charging infrastructure. We highly encourage the project proponents incorporate the VMT mitigation strategies that were identified and to work closely with local Transit Agencies and the City in finding opportunities to improve multimodal transportation and help mitigate the VMT impacts."

- Comment noted. The project will implement feasible VMT reduction strategies as included in section 2 of the TIA. Additionally, the project applicant will coordinate with the City with regards to implementation of these VMT reduction strategies.

Response S-6: The commentor states the following:

5. As mentioned in the previous comment letter on prior phases of the project and given the VMT impact identified in the DEIR, we recommend the City consider creating a VMT Mitigation Impact Fee to help reduce potential impacts of projects on the local roads and the State Highway System. It is also recommended that the City consider incorporating the identified road improvements into the City's existing impact fee programs."

- Comment noted.

Response S-7: The commentor states the following:

6. An encroachment permit must be obtained for all proposed activities for placement of encroachments within, under or over the State highway rights-of-way. Activity and work planned in the State right-of-way shall be performed to State standards and specifications, at no cost to the State. Engineering plans, calculations, specifications, and reports (documents) shall be stamped and signed by a licensed Engineer or Architect. Engineering documents for encroachment permit activity and work in the State right-of-way may be submitted using English Units. The Permit Department and the Environmental Planning Branch will review and approve the activity and work in the State right-of-way before an encroachment permit is issued. The Streets and Highways Code Section 670 provides Caltrans discretionary approval authority for projects that encroach on the State Highway System. Encroachment permits will be issued in accordance with Streets and Highway Codes, Section 671.5, "Time Limitations." Encroachment permits do not run with the land. A change of ownership requires a new permit application. Only the legal property owner or his/her authorized agent can pursue obtaining an encroachment permit."

- Comment noted. The project applicant will coordinate with Caltrans staff to obtain necessary encroachment permits in case the project is implementing any improvement within Caltrans right-of-way.

Response S-8: The commentor states the following:

7. Prior to an encroachment permit application submittal, the project proponent is required to schedule a "Pre-Submittal" meeting with District 6 Encroachment Permit Office. To schedule this meeting, please call the Caltrans Encroachment Permit Office - District 6: 1352 W. Olive, Fresno, CA 93778, at (559) 488-4058"

- Comment noted. The project applicant will coordinate with Caltrans staff for scheduling a pre-submittal meeting.

smcmurtry@denovoplanning.com

Subject: FW: [External] Objections to Proposed Wilson Development at Shepherd and Sunnyside Avenues

From: Jacqueline Ruiz <jacquelineruiz@me.com>
Sent: Tuesday, September 5, 2023 4:27 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Cc: Matt <mattruiz85@gmail.com>
Subject: [External] Objections to Proposed Wilson Development at Shepherd and Sunnyside Avenues

Mr. Gonzalez,

My name is Jacqueline Ruiz and I have lived in the Quail Run development with my family since 2017. My husband and I purchased our home on East Lexington Avenue because we wanted to raise a family in a country setting. The Quail Run neighborhood was the perfect place for us to start our family.

When we bought our property, we were surrounded by orchards, which provided a beautiful rural setting. We are now adjacent to major development from Lennar. Additionally, the pecan trees behind our home are being taken out. T-1

We have attended many meetings over the years to voice our concerns about the development and water, as these new development projects have continued around our neighborhood.

Our main concern with the latest proposed project by Wilson Homes is water. We have drilled new wells and had very minimal success in finding any water. Construction around our neighborhood will have a negative impact on our home as the new development will decrease available undeveloped land for groundwater recharge. Our Quail Run neighborhood on county land has relied on natural processes of replenishing our underground water supply for 30+ years. If this next phase of development is allowed to proceed to the south and east of us, we will be an isolated island. Access to water will be more of a challenge and more cost. My family and my neighbors moved to this development to to get away from the city, but the city is now in our backyards. We will soon be staring at cinder block fences and 2 story houses that are 10 feet apart. Not to mention the noise and light pollution that will most definitely impact our home, as it borders the proposed Wilson Development. Particularly the green space park that is situated directly south of our property. T-2

However, because water is our main concern, we would ask for a resolution or agreement between the developers and the officials who are elected to represent us to give us an easy and cost-effective option for access to city water.

Clearly, our number one wish would be for no more development, but we understand that development is a necessary part of the growth of Clovis. We feel that a compromise should be made to provide access to water at a reasonable cost, and with assistance from Wilson Homes, as we will be subject to many extremely negative factors including increases in noise, light, traffic, and high density housing directly adjacent to our property. T-3

Thank you,

Jacqueline and Matthew Ruiz
5141 East Lexington Avenue
Clovis, CA 93619

Response to Letter T: Jacqueline and Matthew Ruiz 2, Residents of Clovis

Response T-1: The commentor states the following: *"My name is Jacqueline Ruiz and I have lived in the Quail Run development with my family since 2017. My husband and I purchased our home on East Lexington Avenue because we wanted to raise a family in a country setting. The Quail Run neighborhood was the perfect place for us to start our family.*

When we bought our property, we were surrounded by orchards, which provided a beautiful rural setting. We are now adjacent to major development from Lennar. Additionally, the pecan trees behind our home are being taken out.

We have attended many meetings over the years to voice our concerns about the development and water, as these new development projects have continued around our neighborhood."

- This comment serves as an introductory statement and is noted. The commenters concerns are more fully detailed in the following comments.

Response T-2: The commentor states the following: "*Our main concern with the latest proposed project by Wilson Homes is water. We have drilled new wells and had very minimal success in finding any water. Construction around our neighborhood will have a negative impact on our home as the new development will decrease available undeveloped land for groundwater recharge. Our Quail Run neighborhood on county land has relied on natural processes of replenishing our underground water supply for 30+ years. If this next phase of development is allowed to proceed to the south and east of us, we will be an isolated island. Access to water will be more of a challenge and more cost. My family and my neighbors moved to this development to city get away from the city, but the city is now in our backyards. We will soon be staring at cinder block fences and 2 story houses that are 10 feet apart. Not to mention the noise and light pollution that will most definitely impact our home, as it borders the proposed Wilson Development. Particularly the green space park that is situated directly south of our property."*

- The comment regarding water is addressed under Master Response 4 and 5. The comment regarding noise is addressed under Master Response 17. The comment regarding light is addressed under Master Response 18. The comment regarding green space park is addressed under Master Response 16. The comment regarding their concern with two story houses backing up to their house is noted. The project, however, is not proposed as a pre-plotted subdivision that identifies specific housing architecture or floor plans on each lot. For example, we do not have any knowledge of whether a one- or two-story residence would be built adjacent to the commenter's residence. The zoning code dictates the development standards for zones throughout the City and it will dictate the standards that apply to the proposed subdivision. One- and two-story residences are allowed up to the height limits defined in the zone. The concept of limiting the height of homes adjacent to the commenter's residence can be presented as a concept for the Applicant to consider, but City's zoning code does not restrict the height to a one story. This concern does not present an environmental impact pursuant to CEQA.

Master Response 14 provides detailed discussion of annexation. The proposed annexation includes lands contiguous with the current City limits and parcels that would be within the expanded SOI. It is noted that parcels proposed for annexation would involve the creation of an island of unincorporated territory to the south of the site. It is noted that LAFCo may approve an annexation that creates an island where it finds that the application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation, but that inclusion is not feasible at this time. The island area is designated as Focus Area 7 in the General Plan, and is located within the Herndon – Shepherd Specific Plan Area. The General Plan identifies Focus Area 7 for Residential Use, which would require all proposed projects within Focus Area 7 to be consistent with the Dry Creek Preserve Master Plan if it were to be annexed into the City. This area is currently within the SOI, but the property owners in Focus Area 7 do not currently desire to annex into the City. The City has continued to plan for orderly growth to the north of the City, including the area that includes the Project site.

Response T-3: The commentor states the following: "*However, because water is our main concern, we would ask for a resolution or agreement between the developers and the officials who are elected to represent us to give us an easy and cost-effective option for access to city water.*

Clearly, our number one wish would be for no more development, but we understand that development is a necessary part of the growth of Clovis. We feel that a compromise should be made to provide access to water at a reasonable cost, and with assistance from Wilson Homes, as we will be subject to many extremely negative factors including increases in noise, light, traffic, and high density housing directly adjacent to our property."

- The comment regarding water is addressed under Master Response 3, 4 and 5. The comment regarding the provision of City water services is addressed under Master Response 14. The comment regarding noise is addressed under Master Response 17. The comment regarding light is addressed under Master Response 18. The comment regarding green space park is addressed under Master Response 16. The comment regarding housing directly adjacent to their property is addressed under Response T-2. Concerns regarding the provision of City utility services are addressed in Master Response 14. The overall concerns are noted and will be provided to the City for their consideration.

Fresno Metropolitan Flood Control District
Capturing Stormwater since 1956

File 170.908
310. "BY1"
550.30 "BY1"

September 5, 2023

Mr. George Gonzalez, MPA, Senior Planner
City of Clovis, Planning Division
1033 Fifth Street
Clovis, CA 93612

Dear Mr. Gonzalez,

Fresno Metropolitan Flood Control District Comments for
Notice of Availability of a Draft Environmental Impact Report for
Shepherd North Project
Drainage Area "BY1"

The Fresno Metropolitan Flood Control District (District) previously provided comments for the Notice of Preparation of an Environmental Impact Report for the Shepherd North Project on June 10, 2022. The comments are still applicable, and a copy of the letter is enclosed for your reference.

U-1

Specific Comments to the DEIR for Shepherd North Project
These comments area specific to the Notice of Availability - Shepherd North Project (the individual pages are included, and the sentence has been referenced):

1. Page 3.2-9 and 3.2-10 (AGRICULTURAL RESOURCES): Correct wording from SIGMA to SGMA.

2. Page 3.14-31 (UTILITIES): Revise "capacity" to "frequency", and "50-year storm frequency to "100-year capacity".

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5469 E. Olive Avenue • Fresno, CA 93727 • (559) 456-3292 • FAX (559) 456-3194
www.fresnofloodcontrol.org

Notice of Availability of a Draft Environmental Impact Report for Shepherd North Project
Drainage Area "BY1"
September 5, 2023
Page 2

3. Page 3.14-32 (UTILITIES): Second paragraph, update from "16,250" to "30,200". Fourth paragraph, update from "200" to "230". Third paragraph, revise "Mill Ditch" to "Big Dry Creek".

4. Page 3.14-33 (UTILITIES): Consider revising first paragraph to incorporate additional language pertaining to Big Dry Creek Detention Basin.

5. Page 3.14-41 (UTILITIES): The Optional Non-Master Plan Facilities shown on Exhibit No. 1 of the FMFCD letter sent June 10, 2022 is conceptual and does not reflect the tentative storm drain alignment as proposed by the developer of Tract 6205 within the development area.

U-1 Cont.

Thank you for the opportunity to comment. If you have any questions or concerns regarding our comments, please feel free to contact the District at (559) 456-3292.

Respectfully,

Denise Wade
Master Plan Special Projects Manager

DW/lrl

Attachment(s)

k:\letters\environmental impact report letters\noa deir shepherd north project.docx

Ramona loam. The Ramona series is a member of the fine-loamy, mixed, thermic family of Typic Haploxeralfs. Typically, Ramona soils have brown, slightly and medium acid, sandy loam and fine sandy loam A horizons, reddish brown and yellowish red, slightly acid, sandy clay loam B2t horizons, and strong brown, neutral, fine sandy loam C horizons. Well-drained; slow to rapid runoff; moderately slow permeability. Used mostly for production of grain, grain-hay, pasture, irrigated citrus, olives, truck crops, and deciduous fruits. Uncultivated areas have a cover of annual grasses, forbs, chamise or chaparral.

Riverwash. Riverwash consists of the unvegetated sand bars in the main channel of rivers that are frequently flooded.

San Joaquin loam. The San Joaquin series consists of moderately deep to a duripan, well and moderately well drained soils that formed in alluvium derived from mixed, but dominantly granitic rock sources. They are on undulating low terraces with slopes of 0 to 9 percent. Well and moderately well drained; medium to very high runoff; very slow permeability. Some areas are subject to rare or occasional flooding. Used for cropland and livestock grazing; crops are small grains, irrigated pasture and rice; vineyards, fruit and nut crops.

Tujunga loamy sand. The Tujunga series consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains, including urban areas. Slopes range from 0 to 12 percent. This soil is used for grazing, citrus, grapes, other fruits, and urban residential or commercial development. Uncultivated areas have a cover of shrubs, annual grasses and forbs. In urban areas, ornamentals and turf-grass are common.

Visalia sandy loam. This series consists of well drained soils. They formed in alluvium derived from granite. Slopes range from 5 to 9 percent. Common uses for this series include irrigated cropland and this soil is considered Prime farmland, if irrigated.

Availability of Water Resources and Feasibility

For several years, the current property owner has been responsible for managing the former Cal-Pecan orchard located on the Project site. In recent years, primarily due to drought conditions and expansion of new development surrounding the former Cal-Pecan orchard, the economically viable of irrigated agricultural production has diminished. The Project site is located entirely north and east of the Enterprise Canal and therefore outside of the nearby Fresno Irrigation District boundary. It is therefore not eligible to receive deliveries of surface water from any irrigation district. This is an entirely different situation from other properties located in the region, such as the nearby Heritage Grove grov ritage Grove is located on the west side of the Enterprise Canal and contin s of surface water to support agricultural production. Recent SIGMA regulatory changes that now severely limit groundwater pumping has constrained the ability of any agricultural properties located outside of an irrigation district to support intensive agricultural uses that require regular and timely irrigation; further, groundwater pumping on this property has proven to be unpredictable and unreliable in recent years as available water from the aquifer under the Project site had been highly variable and provided an unreliable supply. The property owner has indicated that they made every effort to continue irrigating the trees throughout the drought

Correct spelling to SGMA

conditions last summer, but the wells on the Project site went entirely dry and caused the pumps to burn out. The pecan trees suffered tremendous damage without available irrigation water and it resulted in large-scale tree mortality.

Correct spelling to SGMA

Additionally, as a result of the recent SIGMA regulatory changes, virtually all agricultural lending banks and institutions have recently changed their lending requirements to now demand availability of two sources of water (groundwater and surface water) as a condition for continued lending. The Project site cannot meet the new lending requirement because it is located outside of an irrigation district and is no longer eligible to obtain agricultural loans to support commercial agricultural operations.

The property owner also has noted that the soil substructure varies greatly on the Project site and is not accurately reflected in the more generic soil types documented in the Soil Survey for the region. The property owner has indicated that the soils are not conducive to produce high agricultural yields because there is a cemented silty sand, clayey sand, and silty sand with clay, locally referred to as "hardpan" that is encountered below 2 feet across much of the Project site. This cementation retards the free percolation of surface water into the soil stratum below the hardpan, frequently resulting in a temporary perched water table condition at or near the ground surface during winter periods of precipitation. The perched water table can result in anerobic conditions in the root zone, which can result in root mortality and damage or death to the crop. This hardpan layer limits the types of crops that can be successful and is generally a variable that makes the property less economically viable for agricultural production.

The property owner has also indicated that the proximity of the Project site to existing urban development diminishes the economic viability of agricultural production. The property owner has indicated that there is increased vandalism, theft and harassment costs in recent years. The property owner cited last summer as particularly troublesome when neighbors would routinely shut-off irrigation pumps during the night and the valves in the orchard rows that are necessary to regulate pressure to operate the system were stolen. The property owner noted that equipment vandalism and theft occurred regularly and continued agricultural operations are now virtually impossible.

3.2.2 REGULATORY SETTING

FEDERAL

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It ensures that, to the extent practicable, federal programs are compatible with State and local units of government as well as private programs and policies to protect farmland. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of the FPPA, farmland includes Prime Farmland, Unique Farmland, and Land of Statewide or Local Importance. Farmland subject to FPPA requirements does not have to be

3.14.3 STORMWATER

ENVIRONMENTAL SETTING

Stormwater throughout the City of Clovis is collected in Fresno Metropolitan Flood Control District's (FMFCD) basins. Unless the storm season is particularly wet, the collected stormwater is allowed to percolate into the soil as groundwater recharge. Additionally, the FMFCD allows the City to utilize 17 stormwater basins throughout the City's Service Area for recharge purposes. (Provost & Pritchard, 2021B).

FMFCD covers the entire Fresno/Clovis Metropolitan Area and is authorized to control storm waters within an urban and rural foothill watershed of approximately 400 square miles, known as the Fresno County Stream Group. The FMFCD provides storm drainage through a system of inlets, drainage pipes, drainage ponds, and a system of dams and channels upstream. This system provides the primary means of urban storm drainage control for the City of Clovis and its sphere of influence. New storm drainage improvements are made by either development fees or by formation of assessment or improvement districts. The City of Clovis has a representative on the FMFCD Board. (City of Clovis, 2014).

On September 16, 1994, the Central Valley Regional Water Quality Control Board (Regional Water Board) issued the first municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit No. CA0083500 to the Fresno Metropolitan Flood Control District (District) and four other Co-Permittees, including the City of Clovis. The Regional Water Board renewed the permit on May 31, 2013 (Order No. R5-2013-0080). (FMFCD, 2020).

The FMFCD operates and maintains all master plan improvements, includin The City is responsible for operation and maintenance of all temporary facili improvements are not complete. The City is also responsible for all surface flooding in streets and other areas where storm water cannot reach inlets and pipes quickly enough. Storm drainage collection facilities are designed for two-year storm ~~capacity~~. Storm drain retention basins are designed for ~~50-year storm frequency~~. Development impact fees finance acquisition and construction of ponding basins. Storm drainage improvement districts fund development of storm drainage systems for existing urban areas.

Revise capacity to frequency

100-year capacity

Clovis is traversed by three natural stream systems. Each of these systems consists of sub streams or creeks that collect together to discharge to a centralized natural drainage channel. These systems are the Red Bank, Fancher, and Dog Creek System; the Dry and Dog Creek System; and the Pup Creek/Alluvial Drain System. The latter is a tributary of the original Dry Creek channel. These stream systems collect storm runoff from the foothills east of Clovis and convey such runoff through the Clovis/Fresno metropolitan areas to the Fresno Slough, which is located west of the City of Fresno. (County of Fresno, 2018).

The City's Public Utilities Department has three Stormwater Patrol teams, made up of 22 public utilities employees, to implement emergency flood control measures. The plan contains information and procedures to rapidly address flooding throughout the City. Contact information and team assignment data is updated regularly as are geographic locations subject to flooding. Appendices include suppliers/contractors, storm basin list, problem drain lists, and partnerships and agencies with shared responsibility for storm preparedness, mitigation, and response. (County of Fresno, 2018).

Existing City Stormwater and Flood Control Facilities

Flood protection in Clovis is afforded by [illegible] Dry Creek. Big Dry Creek Dam is located approximately 3.5 miles upstream of the City of Clovis. Its main purpose is flood control, and it has a storage capacity of 16,250 acre-feet. Big Dry Creek Reservoir has prevented an estimated $15 million in damage in the Fresno-Clovis area since its completion in 1948. (County of Fresno, 2018).

Update to 30,200

FYI: Probably much higher after last winter but I don't have an estimate. 5,000 cfs would've flooded much of downtown and many areas of Fresno and Clovis.

The Big Dry Creek Dam impounds stormwater runoff from Big Dry Creek in the Big Dry Creek Reservoir. The Big Dry Creek Reservoir is owned and operated by the FMFCD and is intended primarily for flood control of winter runoff from the Dry Creek and Dog Creek w [illegible] 1990s, modifications were made to increase the capacity of the reservoir, and [illegible] protection against the 200-year flood. (County of Fresno, 2018).

230

Under wet conditions, the Big Dry Creek Reservoir captures runoff and contr [illegible] artificial ditches and canals, which drain into either Little Dry Creek, located north [illegible] or in a southerly direction into Mill Ditch. Flows from Little Dry Creek and Mill Ditch eventually drain to the San Joaquin River. Flows from the reservoir can also be diverted into Dog Creek, which also eventually drains into the San Joaquin River. During dry weather conditions, the reservoir does not discharge water and is normally empty, with the exception of a 156-acre-foot residual pool. The top of the pool remains below the elevation of an existing discharge gate. (County of Fresno, 2018).

"Big Dry Creek" seems more appropriate than Mill Ditch, but it does eventually turn into Mill Ditch but then back to Dry Creek Canal.

Further, on average, FMFCD's regional stormwater basin system captures 92 percent of annual rainfall, of which, 70-85 percent of the captured stormwater runoff is recharged into the local groundwater aquifer. The stormwater basins also remove 50-80 percent of the typical stormwater pollutants. (FMFCD, 2020).

Mitigation activities continue to be done in accordance with applicable state and federal requirements for floodplain management and in coordination with the FMFCD. Additional mitigation measures for critical infrastructure protection and rehabilitation are done through the City's Capital Improvement Project (CIP) budget. To date, those mitigation projects have included fire station security, water/sewer infrastructure improvements and City Hall building rehabilitation. (County of Fresno, 2018).

Future Stormwater Drainage Demand and System Improvements

The 2016 Storm Fresno Metropolitan Flood Control District (FMFCD) Services Plan provides a comprehensive planning document to guide improvement and expansion of the City's storm drainage system to meet current and future needs in a safe and reliable manner while maintaining compliance with all applicable regulations.

FMFCD also operates Big Dry Creek Detention Basin (BDB @ 168/Ashlan) and Basin "NN" (Valentine/Church) which provide flood relief for Dry Creek/Gould Extension. BDB is a 24ac site and NN is a 37ac site.

The FMFCD ~~has finalized the design of~~ operates the Dry Creek Extension Basin located near Brawley and Annadale Avenues. This ~~will be~~ is a rural flood control basin located southwest of the City of Fresno. It ~~will~~ provides storage for floodwaters flowing through Dry Creek and other canals, which will provide groundwater recharge benefits. The initial design of the basin was for a 20-acre basin site which is fully excavated. The FMFCD added an adjacent 23-acre site to provide additional storage. This basin is being constructed by the District and is not part of the Federal Redbank and Fancher Creeks Project. (FMFCD, 2017).

The FMFCD has identified four primary groups of construction projects: (1) the Redbank-Fancher Creeks Flood Control Project; (2) District LCA enhancement projects; (3) new development projects; and (4) other routine District maintenance and construction projects. (FMFCD, 2017).

The Corps' Redbank-Fancher Creeks Project, completed in the summer of 1993, provides the points of control for the flows that will pass through the rural streams storm and flood conveyance system. Under the LCA with the Corps, the FMFCD is obligated to ensure proper functioning of the Redbank Fancher Creeks Project components. Through implementation of the rural streams program, the FMFCD will improve conveyance capacities of existing channels where necessary, restore obstructed and eradicated channels, and once adequate capacity is achieved, maintain appropriate project conveyance capabilities. These efforts will involve close coordination with private property owners and developers to obtain necessary channel easement dedications. These dedications preserve flooding rights-of-way and allow District access to the stream channels for operation and maintenance. (FMFCD, 2017).

As future development needs warrant, local drainage facilities will be added to augment the flood control facilities. The FMFCD will review new development plans to ensure appropriate design of channels according to the Rural Streams Design Manual, which is currently being developed by the District. Other routine District activities include construction, repair, and maintenance of flood control structures throughout the rural streams/flood control system. (FMFCD, 2017).

REGULATORY SETTING

Clean Water Act

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e); Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites": subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);

FMFCD noted that the construction of the Optional Master Plan Facilities and Optional Non-Master Plan Facilities (as shown on Exhibit No. 1 of their letter), will provide permanent drainage service to the portion of the "Development Area" located north of Heirloom Avenue. The construction of the Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, will provide permanent drainge service to the portion of the "Development Area" located south of Heirloom Avenue upon construction of facilities by in Tracts 6292 and 6344. If these optional facilities are not constructed, FMFCD recommends temporary facilities until permanent service is available.

FMFCD noted that the "Development Area" shall not block the historical drainage patterns of existing homes located within the parcels to the east and west side of the "Development Area." The "Development Area" shall verify to the satisfaction of FMFCD that runoff from these areas has the ability to surface drain to adjacent streets or be collected into PER-3, as shown on Exhibit No. 1. Either a stub street, channel, or a combination of both shall be provided for those areas, as shown on Exhibit No. 1.

FMFCD noted that the "Development Area" must identify what streets will pass the major storm and provide calculations that show structures will have adequate flood protection. Based on historical drainage patterns, some of the streets located within the "Development Area" may need to be resized or reconfigured (including, but not limited to, streets that include traffic calming curbs) to pass larger event storms. FMFCD approval is not extended to street configuration. A drainage report indicating the path of the major storm flow and calculations confirming there is adequate protection of finished floors will be necessary.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a **less than significant** impact relative to this topic.

flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be **less than significant** and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

FMFCD will require lot coverage to be provided prior to submittal of improvement plans. The lot coverage is calculated by the District to include the front yard walkway, sidewalk walkway and the rear yard patio equaling an additional 6% of impervious area in addition to the City's typical lot coverage calculation. This calculation cannot be calculated at this time given that building plans and lot specific landscaping and site improvements have not been prepared. This very detailed level of design would be performed at either the improvement plan or building plan phase of the project. Ultimately, FMFCD charges a drainage fee that is calculated commensurate with the lot coverage calculation.

FMFCD reviews all grading and improvement plans for consistency with the FMFCD Master Plan. This review ensures that grading does not have an adverse impact to major storm conveyance and to the passage of storm water to the adjacent roadways and existing storm drainage pipelines and inlets. They require all projects to provide the appropriate surface flowage easements or covenants for any portion of the development area that cannot convey storm water to the public right-of-way without crossing private property.

The initial review by FMFCD has indicated that the "Development Area" is currently located within FMFCD's adopted Rural Master Plan Drainage Area "BY1." The adopted Rural Master Plan drainage system is designed to serve the existing land uses of open space, range/pasture and rural residential housing densities ranging from 0 to 0.7 dwelling unit/acre (du/ac). FMFCD has indicated that the existing planned drainage facilities do not have capacity to serve the proposed higher urban density residential land use. FMFCD has indicated that the "Development Area" is required to mitigate the impacts of the increased runoff from the proposed higher density residential land use to the adopted rural planned rate. FMFCD indicated that the "Development Area" may either make improvements to the existing pipeline system to provide additional capacity or may use some type of onsite permanent peak reducing facility in order to match the adopted Rural Master Plan flow rates and eliminate any adverse impacts on the downstream drainage system. FMFCD requested that the grading Engineer contact the District as early as possible to review the proposed site grading for verification and acceptance of design prior to preparing a grading plan.

Fresno Metropolitan Flood Control District
Capturing Stormwater since 1956

File 170.908
310. “BY1”
550.30 “BY1”

June 10, 2022

Mr. George Gonzalez, MPA, Senior Planner
City of Clovis, Planning Division
1033 Fifth Street
Clovis, CA 93612

Dear Mr. Gonzalez,

Fresno Metropolitan Flood Control District Comments for
Notice of Preparation of an Environmental Impact Report for
Shepherd North Project
Drainage Area “BY1”

General Comments

This letter is in response to the City’s request for comments regarding the Notice of Preparation of an Environmental Impact Report for the Shepherd North Project planning area boundaries “Project Area” and “Development Area”. The Fresno Metropolitan Flood Control District (FMFCD) bears responsibility for storm water management within the Fresno-Clovis metropolitan area, including the area of the “Project Area”. Within the metropolitan area, storm runoff produced by land development is to be controlled through a system of pipelines and storm drainage retention basins. The community has developed and adopted a Storm Drainage and Flood Control Master Plan. Each property contributes its pro-rata share to the cost of the public drainage system. All properties are required to participate in the community system for everyone. It is this form of participation in the cost and/or construction of the drainage system that will mitigate the impact of development.

U-2

The subject “Project Area” shall pay drainage fees pursuant to the Drainage Fee Ordinance prior to approval of any final maps and/or issuance of building permits at the rates in effect at the time of such approval. Please contact FMFCD for a final fee obligation prior to issuance of any construction permits. Should land use densities of existing areas be increased, the property would be subject to a reassessment of drainage fees based on the proposed increased land uses and may include the requirement of additional drainage fees to be paid to offset the increased land use. Each proposed development will be reviewed and assessed upon submittal to FMFCD. Any drainage fees previously paid on a property would be given a credit against any new fee responsibility.

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Mr. George Gonzalez, MPA, Senior Planner
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Drainage Area "BY1"
June 10, 2022
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Lot coverage must be provided to the District prior to submittal of improvement plans. The final drainage fee will be calculated commensurate with the lot coverage provided by the developer. If the lot coverage indicates a density higher than Master Planned, mitigation may be required. The lot coverage calculated by the District includes the front yard walkway, sidewalk walkway and the rear yard patio equaling an additional 6% of impervious area in addition to the City's typical lot coverage calculation.

The grading of any proposed development within the "Project Area", including public street areas, shall be consistent with the FMFCD Master Plan. Additionally, grading shall not have an adverse impact to major storm conveyance, and to the passage of storm water to the adjacent roadways and existing storm drainage pipelines and inlets. The "Project Area" shall provide the appropriate surface flowage easements or covenants for any portion of the development area that cannot convey storm water to the public right-of-way without crossing private property.

If there are to be storm water discharges from private facilities to the FMFCD's storm drainage system, they shall consist only of storm water runoff and shall be free of solids and debris. Landscape and/or area drains are not allowed to connect directly to FMFCD's facilities.

U-2 Cont.

FMFCD will need to review and approve the final improvement plans for all development (i.e. grading, street improvement and storm drain facilities) within the boundaries of the "Project Area" to insure consistency with the approved Storm Drainage Master Plan.

The Master Plan system has been designed such that during a two-year event flow will not exceed the height of the 6-inch curb. Should wedge curb (4.5 inches height) be used the same criteria shall apply whereby flow remains below the top of curb. Any extensions or pipe size increases due to meeting the requirement listed above shall be at the developer's expense.

A minimum fifteen-foot (15') wide storm drain easement will be required whenever storm drain facilities are located on private property. No encroachments into the easement will be permitted including, but not limited to, foundations, roof overhangs, swimming pools, and trees.

Specific Comments to the Shepherd North Project

The "Development Area" is currently located within FMFCD's adopted Rural Master Plan Drainage Area "BY1", as shown on Exhibit No. 1. The adopted Rural Master Plan drainage system is designed to serve the existing land uses of open space, range/pasture and rural residential housing densities ranging from 0 to 0.7 dwelling unit/acre (du/ac). The existing planned drainage facilities do not have capacity to serve the proposed higher urban density residential land use. The

Mr. George Gonzalez, MPA, Senior Planner
Notice of Preparation of a Environmental Impact Report for
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June 10, 2022
Page 3

"Development Area" shall be required to mitigate the impacts of the increased runoff from the proposed higher density residential land use to the adopted rural planned rate. The "Development Area" may either make improvements to the existing pipeline system to provide additional capacity (see Optional Non-Master Plan facilities, not Eligible for Credit, as shown on Exhibit No. 1) or may use some type of onsite permanent peak reducing facility in order to match the adopted Rural Master Plan flow rates and eliminate any adverse impacts on the downstream drainage system. Implementation of the mitigation measures may be deferred until the time of development. However, FMFCD requests that the grading Engineer contact the District as early as possible to review the proposed site grading for verification and acceptance of mitigation design prior to preparing a grading plan.

The construction of the Optional Master Plan Facilities and Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, will provide permanent drainage service to the portion of the "Development Area" located north of Heirloom Avenue. The construction of the Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, will provide permanent drainage service to the portion of the "Development Area" located south of Heirloom Avenue upon construction of facilities by Developer of Tracts 6292 and 6344. If these optional facilities are not constructed, the District recommends temporary facilities until permanent service is available.

The "Development Area" shall not block the historical drainage patterns of existing homes located within the parcels to the east and west side of the "Development Area". The "Development Area" shall verify to the satisfaction of the District that runoff from these areas has the ability to surface drain to adjacent streets or be collected into PER-3, as shown on Exhibit No. 1. Either a stub street, channel, or a combination of both shall be provided for those areas, as shown on Exhibit No. 1.

U-2 Cont.

The "Development Area" must identify what streets will pass the major storm and provide calculations that show structures will have adequate flood protection. Based on historical drainage patterns some of the streets located within the "Development Area" may need to be resized or reconfigured (including but not limited to streets that include traffic calming curbs) to pass larger event storms. District approval is not extended to street configuration. A drainage report indicating the path of the major storm flow and calculations confirming there is adequate protection of finished floors will be necessary.

Perrin Tributaries PER-1 and PER-3 are natural stream courses traversing the "Project Area". These stream courses are shown on the Storm Drainage and Flood Control Master Plan (see Exhibit No. 1). Should the "Development Area" choose to modify or relocate these channels, the developer must contact all agencies having an interest in these channels and comply with their regulations regarding the channels. These agencies may include State of California Fish and

Wildlife, State of California Regional Water Quality Control Board (Section 401 of Clean Water Act), and the U.S. Army Corps of Engineers (USACE) (Section 404 of Clean Water Act). Furthermore, if a USACE Clean Water Act Section 404 permit application package is prepared, FMFCD requests an opportunity to review the application prior to submittal.

These channels must be protected and improved in their current location, or an accepted relocation plan must be provided. The protection and improvement of these channels is necessary to convey upland surface runoff through the "Development Area" without adversely affecting other property owners and to provide safe conveyance through the "Development Area". The plans to retain or relocate these channels must be addressed in a drainage report prepared by the developer's engineer and submitted and acceptable to FMFCD for the project and include a study of any affect to the hydraulic performance of the channel. Adequate easement width for Perrin Tributaries PER-1 and PER-3 shall be dedicated to FMFCD prior to approval of the Final Map. The easements shall be of sufficient width to accommodate the Master Plan flow rate and provide adequate maintenance access. Development within the easement is prohibited. FMFCD does not contemplate public access within the easement.

While FMFCD accepts the channel easements to assure their protection, the maintenance of these channels will remain with the property owner. The easement dedication documents will require reimbursement of costs should FMFCD need to intervene in order to perform maintenance and/or otherwise preserve the channels. FMFCD would prefer that the "Development Area" establish a homeowner's association to maintain the channels, but if that is not feasible, each parcel owner along the channels will be burdened with the maintenance of the channel within their property and fences will not be permitted across the channel. Some thought needs to be put into both private and public channel crossings. Preferably, channel crossings will be kept to a minimum and each crossing will require an encroachment agreement identifying the applicant as responsible for the long-term maintenance and potential removal of the encroachment. U-2 Cont.

As channel design and construction of Perrin Tributaries PER-1 and PER-3 will affect the lot pattern and configuration, FMFCD will review the work of the developer's engineer to determine easement limits at the time of dedication. The channel design must be completed prior to tentative map approval to ensure the easement areas are known and adequate space is allotted for each channel. It is in the developer's interest to identify the channel design as early as possible so that appropriate lot configurations are selected. The hydraulic study must reflect culverts where roads and driveways cross the channel. Easement areas must be adequate to convey the design flows.

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The standard geometry parameters for Perrin Tributaries PER-1 and PER-3 are a minimum 4-foot wide bottom and maximum 2:1 side slope. The channels must be designed and constructed to accommodate the flow rate of 16 cubic feet per second for PER-1 and 10 cubic feet per second for PER-3 as identified in the Master Plan. The channel design must include hydraulic modeling using the HEC-RAS computer program. Channel design and hydraulic study must also consider the attenuation currently provided by the developer's property and not reduce the attenuation or otherwise increase conveyance to downstream properties.

FMFCD will accept the easement dedications for Perrin Tributaries PER-1 and PER-3 following completion of construction, including any mitigation obligations, and acceptance under required permits. Any proposed landscaping within the channel easement shall require (i) review and approval by FMFCD, and (ii) maintenance by the property owner.

A portion of the proposed development is in a Federal Emergency Management Agency (FEMA) Zone "AH" flood zone area requiring additional processing and consideration. The developer shall contact FEMA to obtain their requirements.

U-2 Cont.

The City of Clovis, FMFCD, the County of Fresno, the City of Fresno, and the California State University, Fresno are currently covered as Co-Permittees for Municipal Separate Storm Sewer System (MS4) discharges through National Pollutant Discharge Elimination System (NPDES) General Order No. R5-2016-0040 and NPDES Permit No. CAS0085324 (Storm Water Permit) effective May 17, 2018. The previous Storm Water Permit adopted on May 31, 2013 required the adoption of the Stormwater Quality Management Program (SWQMP) that describes the Storm Water Permit implementation actions and Co-Permittee responsibilities. That SWQMP was approved by the Central Valley Regional Water Quality Control Board on April 17, 2015 and is effective until the adoption of a new SWQMP, which is anticipated within the next two years.

The Storm Water Permit requires that Co-Permittees update their CEQA process to incorporate procedures for considering potential stormwater quality impacts when preparing and reviewing CEQA documents. This requirement is found in Provision D.14 of the 2013 Storm Water Permit and in Section 7: Planning and Land Development Program – PLD 3 – Update CEQA Process. The District has created a guidance document that will meet this Storm Water Permit requirement entitled *Guidance for Addressing Stormwater Quality for CEQA Review*, which has been attached. It is recommended that the CEQA review for this project follow the guidance document.

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Specific Comments to the Notice of Preparation - Shepherd North Project

These comments area specific to the Notice of Preparation - Shepherd North Project initiated May 9, 2022 (the individual pages are included, and the sentence has been referenced):

1. Page 7 (Utilities and Planned Infrastructure Improvement): Paragraph for Storm Drainage should also include confirming to FMFCD’s standards and requirements.

2. Page 9 (Other Governmental Agency Approvals): FMFCD should be revised to include review and approval of stormwater facilities, grading, and street improvements.

3. FMFCD should considered a responsible agency for the “Project Area”. Review and approval shall include storm drain facilities, grading, and street improvement plans.

Thank you for the opportunity to comment. Please keep our office informed on the development of these plans. If you should have any questions or comments, please contact FMFCD at (559) 456-3292.

U-2

Sincerely,

Denise Wade
Master Plan Special Projects Manager

DW/lrl

Attachments

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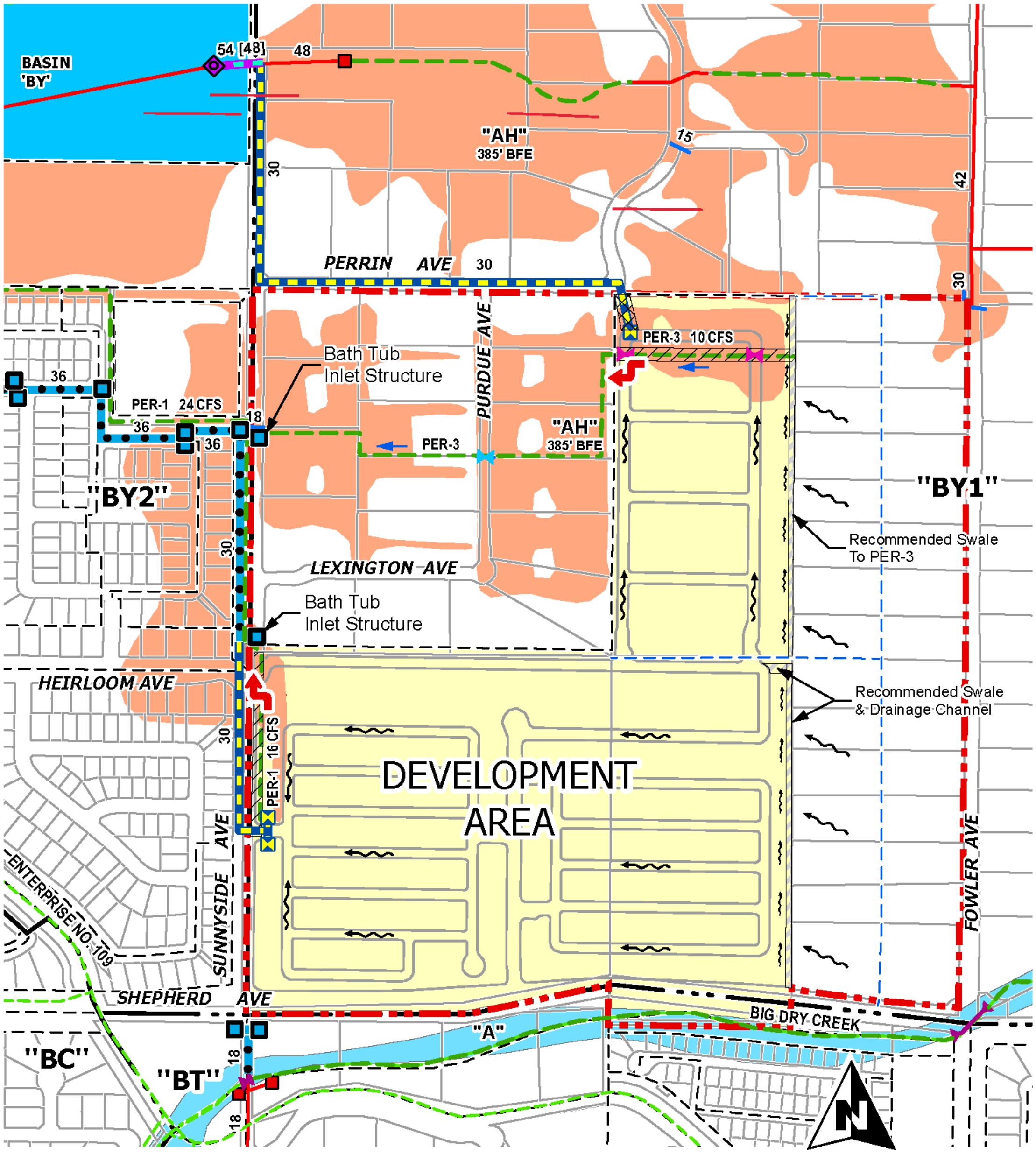
NOTE: THIS MAP IS SCHEMATIC.
DISTANCES, AMOUNT OF CREDITABLE
FACILITIES, AND LOCATION OF INLET
BOUNDARIES ARE APPROXIMATE.



1 " = 500 '

EXHIBIT NO. 1
Page 1 of 2

SHEPHERD NORTH PROJECT

DRAINAGE AREA "BY1"

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

Prepared by: danielg
Date: 5/27/2022
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**NOTE: THIS MAP IS SCHEMATIC.
DISTANCES, AMOUNT OF CREDITABLE
FACILITIES, AND LOCATION OF INLET
BOUNDARIES ARE APPROXIMATE.**

LEGEND

◆– – – –	Optional Master Plan Facilities (Creditable Facilities To Be Constructed By Development Area) - Pipeline (Size Shown) & Outfall
54 [48]	Optional Pipe Size To Be Constructed [Creditable Pipe Size]
☒– – – –	Optional Non-Master Plan Facilities To Be Constructed By Development Area (Not Eligible For Fee Credit)
■• • •	Facilities To Be Constructed By Developer Of Tracts 6292 & 6344
□— —	Existing Master Plan Facilities
■—	Future Master Plan Facilities
— — — —	Existing Stream Course (Master Plan Channel With Maximum Flow Rate)
- - - - - -	Existing FID Facilities
- - - - -	Inlet Boundary
- - - - -	Rural Drainage Boundary
— - - - —	Drainage Area Boundary
▨	Channel Easement To Be Dedicated To District By Developer
▩	Minimum 15' Wide Storm Drain Easement To Be Dedicated To District By Developer (If Optional Facilities Are Constructed)
🟧	FEMA Flood Zone "AH"
🟦	FEMA Flood Zone "A"
▸—◂	Existing Culvert To Be Improved
▸—◂	Proposed Culvert To Be Constructed By Developer
←〰	Direction Of Drainage
↲	Major Storm Breakover
⬚	Project Area Boundary

EXHIBIT NO. 1
Page 2 of 2

SHEPHERD NORTH PROJECT
DRAINAGE AREA "BY1"

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

Prepared by: danielg
Date: 6/9/2022
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and FMFCD's

northwest, and ultimately the northeast urban centers. The plant is designed to accommodate future expansion and will ultimately treat 8.4 mgd.

Storm Drainage

The Project site would include construction of a new storm drainage system, which will confirm to the City's standards and requirements. The storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB), the Fresno Metropolitan Flood Control District (FMFCD), and City of Clovis regulations. This includes, but not limited to the municipal NPDES storm water discharge permit, as well as any City required Best Management Practices to control the volume, rate, and potential pollutant load of storm water runoff. Stormwater throughout the City is collected in FMFCD's basins.

Regulated Public Utilities

Electrical and gas, provided by PG&E; phone, provided by AT&T; cable, provided by Comcast; and related internet services would be extended to all portions of the Project site from existing facilities located along E. Shepherd Avenue and from existing residential development surrounding the Project site. Proposed utilities would be located within public utility easements to be dedicated along street frontages. Utility improvements would be installed in conjunction with planned street improvements.

ALTERNATIVES

Three alternatives to the proposed Project were developed based on input from City staff. The alternatives that are anticipated to be analyzed in the EIR include the following three alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Alternative:** Under this alternative, the proposed Project would be developed with the same number of units as described in the Project Description, but the density of the residential uses would be increased, reducing the overall footprint of the developed areas and preserving the remaining Development Area for agricultural production.
- **Reduced Sphere of Influence Alternative:** Under this alternative, the proposed Project would exclude the 78-acre SOI Expansion north and east of the Development Area.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives.

INCREASED DENSITY ALTERNATIVE

Under this alternative, the proposed Project would be developed with the same components as described in the Project Description, but density of the residential uses would be increased. Under the Increased Density Alternative, the same number of residential units as the proposed project (607 units) would be constructed within the Development Area. The residential areas would be reduced at increased densities

- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits; and
- Fresno Metropolitan Flood Control District – review of stormwater facilities.

grading, and street improvements.

and approval

Fresno Metropolitan Flood Control District

Guidance for Addressing Stormwater Quality for CEQA Review

Stormwater Checklist for CEQA Review

a. Potential impact of project construction on stormwater runoff.

Stormwater runoff from construction activities can have a significant impact on water quality. To build on sites with over one acre of disturbed land, property owners must obtain coverage under the California Construction General Permit for Discharges of Stormwater (CGP). The CGP is issued by the State Water Resources Control Board (SWRCB). The CGP requires sites that do not qualify for an erosivity waiver to create a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is a site-specific plan that is designed to control the discharge of pollutants from the construction site to local storm drains and waterways.

b. Potential impact of project post-construction activity on stormwater runoff.

FMFCD operates the Regional Stormwater Mitigation System, which consists of facilities to handle stormwater runoff and non-stormwater discharges in the FMFCD service area. However, river discharging drainage areas and drainage areas without basin service are subject to FMFCD Policy: Providing for Compliance with Post-Development and Industrial Storm Water Pollution Control Requirements (Policy).

Development and redevelopment projects can result in discharge of pollutants to receiving waters. Pollutants of concern for a project site depend on the following factors:

- Project location;
- Land use and activities that have occurred on the project site in the past;
- Land use and activities that are likely to occur in the future; and
- Receiving water impairments.

As land use activities and site design practices evolve, particularly with increased incorporation of stormwater quality BMPs, characteristic stormwater runoff concentrations and pollutants of concern from various land use types are also likely to change.

Typical Pollutants of Concern and Sources for Post-Development Areas

Pollutant	Potential Sources
Sediment (total suspended solids and turbidity), trash and debris (gross solids and floatables)	Streets, landscaped areas, driveways, roads, construction activities, atmospheric deposition, soil erosion (channels and slopes)

Pesticides and herbicides	Residential lawns and gardens, roadsides, utility right-of-ways, commercial and industrial landscaped areas, soil wash-off
Organic materials/oxygen demanding substances	Residential laws and gardens, commercial landscaping, animal waste
Metals	Automobiles, bridges, atmospheric deposition, industrial areas, soil erosion, metal surfaces, combustion processes
Oil and grease, organics associated with petroleum	Roads, driveways, parking lots, vehicle maintenance areas, gas stations, illicit dumping to storm drains, automobile emissions, and fats, oils, and grease from restaurants
Bacteria and viruses	Lawns, roads, leaking sanitary sewer lines, sanitary sewer cross-connections, animal waste (domestic and wild), septic systems, homeless encampments, sediments/biofilms in storm drain system
Nutrients	Landscape fertilizers, atmospheric deposition, automobile exhaust, soil erosion, animal waste, detergents

Source: Adapted from USEPA, 1999 (Preliminary Data Summary of Urban Storm Water BMPs)

FMFCD's Post-Development Standards Technical Manual provides guidance for implementing stormwater quality Best Management Practices (BMPs) for drainage areas subject to the Policy, with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges. The Post-Development Standards Technical Manual addresses the following objectives and goals:

- Minimize impervious surfaces and directly connect impervious surfaces in areas of new development and redevelopment, and where feasible, to maximize on-site infiltration of stormwater runoff;
- Implement pollution prevention methods supplemented by pollutant source controls and treatment, and where practical, use strategies that control the sources of pollutants or constituents (i.e., where water initially meets the ground) to minimize the transport of runoff and pollutants offsite and into MS4s;
- Preserve, and where possible create or restore, areas that provide important water quality benefits, such as riparian corridors, wetlands, or buffer zones
- Limit disturbances of natural water bodies and natural drainage systems by development, including roads, highways, and bridges;
- Identify and avoid development in areas that are particularly susceptible to erosion and sediment loss or establish guidance that protects areas from erosion and sediment loss;
- Implement source and structural controls as necessary and appropriate to protect downstream receiving water quality from increased pollutant loadings and flows (hydromodification concepts) from new development and significant redevelopment;

- Control the post-development peak stormwater runoff discharge rates and velocities to maintain or reduce pre-development downstream erosion and to protect downstream habitat; and
- Consider integration of Low Impact Development (LID) principles into project design.

The Post-Development Standards Technical Manual describes the stormwater management requirements for Priority Projects, which are identified as meeting one or more of the following and discharge to the San Joaquin River or do not have basin service:

- Home subdivisions of 10 housing units or more;
- Commercial developments greater than 100,000 square feet;
- Automotive repair shops;
- Restaurants;
- Parking lots 5,000 square feet or greater with 25 or more parking spaces and potentially exposed to urban runoff;
- Streets and roads;
- Retail gasoline outlets (RGOs); and
- Significant redevelopment projects, which are developments that result in creation or addition of at least 5,000 square feet of impervious surface on an already developed site. Significant redevelopment includes, but is not limited to, expansion of a building footprint or addition or replacement of a structure, structural developing including an increase in gross floor area and/or exterior construction or remodeling, replacement of impervious surface that is not part of a routine maintenance activity, and land disturbing activities related with structural or impervious surfaces. Where significant redevelopment results in an increase of less than 50 percent of the impervious surfaces of a previously existing development and the existing development was not subject to Post-Construction Standards, only the proposed alteration must meet the requirements of the Post-Development Standards Technical Manual.

All Priority Projects must mitigate the Stormwater Quality Design Volume (SWQDV) or Stormwater Quality Design Flow (SWQDF) through LID- or treatment-based stormwater quality BMPs or a combination thereof.

For new development or significant redevelopment projects for restaurants with less than 5,000 square feet, the project applicant must meet all the requirements of the Post-Development Standards Technical Manual except for mitigating the SWQDV or SWQDF and implementing stormwater quality BMPs.

The Post-Development Standards Technical Manual can be found on FMFCD's website here:

http://www.fresnofloodcontrol.org/wp-content/uploads/2014/11/Post-Development-Standards-Technical-Manual.pdf

c. Potential for discharge of stormwater from areas from material storage, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas.

Development projects may create potential impacts to stormwater from non-stormwater discharge from areas with material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work area.

Some materials, such as those containing heavy metals or toxic compounds, are of more concern than other materials. Toxic and hazardous materials must be prevented from coming in contact with stormwater runoff. Non-toxic or non-hazardous materials, such as debris and sediment, can also have significant impacts on receiving waters. Contact between non-toxic or non-hazardous materials and stormwater runoff should be limited, and such materials prevented from being discharged with stormwater runoff. To help mitigate these potential impacts, BMPs should be included to prevent discharges from leaving the property.

Refer to FMFCD Post-Development Standards Technical Manual for more information or go to http://water.epa.gov/polwaste/nps/urban.cfm.

d. Potential for discharge of stormwater to impact the beneficial uses of the receiving waters or areas that provide water quality benefits.

Identify receiving waters and describe activities that may impact the beneficial uses of the receiving waters or that project water quality benefits. Project that can impact beneficial uses or receiving waters may be mitigated by implementation of the FMFCD Post-Development Standards Technical Manual.

e. Potential for the discharge of stormwater to cause significant harm on the biological integrity of the water ways and water bodies.

Conservation of natural areas, soils, and vegetation helps to retain numerous functions of pre-development hydrology, including rainfall interception, infiltration, and evapotranspiration. Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Sensitive areas, such as streams and their buffers, floodplains, wetlands, steep slopes, and highly-permeable soils, should be protected and/or restored. Slopes can be a major source of sediment and should be properly protected and stabilized. Locating development in less sensitive areas of a project site and conserving naturally vegetated areas can minimize environmental impacts from stormwater runoff.

The evaluation of a project’s effect on sensitive natural communities should encompass aquatic and wetland habitats. Consider “aquatic and wetland habitat” as examples of sensitive habitat.

f. Potential for significant changes in the flow velocity or volume of stormwater runoff that can cause environmental harm.

The evaluation of a project's effect on drainage patterns should refer to the FMFCD's Storm Drainage and Flood Control Master Plan and have their project reviewed by FMFCD to assess the significance of altering existing drainage patterns and to develop any mitigation measures in addition to our stormwater mitigation system. The evaluation should also consider any potential for streambed or bank erosion downstream from the project.

g. Potential for significant increases in erosion of the project site or surrounding areas.

The evaluation of a project's effect on drainage patterns should refer to the FMFCD's Storm Drainage and Flood Control Master Plan and have their project reviewed by FMFCD to assess the significance of altering existing drainage patterns and to develop any mitigation measures in addition to our stormwater mitigation system. The evaluation should also consider any potential for streambed or bank erosion downstream from the project.

Response to Letter U: Denise Wade, Fresno Metropolitan Flood Control District

Response U-1: The commentor notes that they previously provided comments on the Notice of Preparation on June 10, 2022, and that the comments from that letter are still applicable. The noted that they have enclosed that letter for the City's reference. The commenter then provides five specific comments on the EIR, including recommended edits to the Agricultural Resources and Utilities discussions.

This comment is noted. Each of the recommended edits have been incorporated in the FEIR. The edits can be seen in Section 3.0 Errata.

Response U-2: The commentor has included June 10, 2022 comment letter.

This comment is noted. This letter is included in the Draft EIR in Appendix A and was utilized to prepare the Utilities Section of the DEIR. No further response to this comment is warranted in the EIR.

smcmurtry@denovoplanning.com

Subject: FW: [External] Objection to DEIR report for project north shepherd- Wilson Homes.

From: Harmeet Gurm <harmeetgurm@yahoo.com>
Sent: Tuesday, September 5, 2023 5:00 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>; George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Objection to DEIR report for project north shepherd- Wilson Homes.

Hello Mr George González, MPA | Senior Planner City of Clovis | Planning Division
1033 Fifth Street, Clovis, CA 93612
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com georgeg@ci.clovis.ca.us

Regarding DEIR for Shepherd North project.

I reside at 5037 E Perrin Rd Clovis - in the Quail Run Community, north of shepherd and east of Sunnyside. After reviewing the DEIR report, I found multiple areas which are concerning and do not represent all the facts correctly. V-1

For instance - the exit planned at Stanford/Perrin corner for the upcoming Wilson community is very concerning. Stanford is a small winding street with no curbside pavement and will not be able to handle the traffic of the new proposed development. Current speed posted is 10mph. Kids, bicycle riders are common in this road and additional exit of this new proposed community with increased traffic will significantly enhance the chances of a serious accident. V-2

Removal of pecan trees would reduce surface water retention, thereby depleting the water table of the already water challenged area north of shepherd. Without proper planning and provision of recharging the area's water table will cause significant impact to the 18 home community north of this proposed development. V-3

Density of the proposed homes is quite high and will bring in high traffic to the already busy areas of fowler, perrin and sunnyside. The assumptions made in DEIR to calculate the traffic are flawed and needs revision to show the actual ground reality of the community and the roads. V-4

Lastly but not the least, it is against the principle of city of clovis to create island community areas. The 18 homes should be annexed to city, so as to create proper defined shape of the community development. In addition, at the very least, the builder of the proposed development and city should try to help the community of these 18 homes by bringing in the utility lines to address their concerns of water, and sewer. V-5

In the light of above facts, I would like to formally state my objection to current DEIR report.

Sincerely
Dr Harmeet Gurm, MD
Nephrologist
5037 E PErrin Rd Clovis, CA 93619

Response to Letter V: Harmeet Gurm, Resident of Clovis

Response V-1: The commentor states the following: "*I reside at 5037 E Perrin Rd Clovis - in the Quail Run Community, north of shepherd and east of Sunnyside. After reviewing the DEIR report, I found multiple areas which are concerning and do not represent all the facts correctly.*"

This comment serves as an introduction to the letter and notes that they have multiple areas which are concerning and inaccurate, which they discuss in the following comments. This comment is noted. No further response to this comment is warranted in the EIR.

Response V-2: The commentor states the following: "*For instance - the exit planned at Stanford/Perrin corner for the upcoming Wilson community is very concerning. Stanford is a small winding street with no curbside pavement and will not be able to handle the traffic of the new proposed development. Current speed posted is 10mph. Kids, bicycle riders are common in this road and additional exit of this new proposed community with increased traffic will significantly enhance the chances of a serious accident.*"

- This comment regarding traffic and circulation is partially addressed in Master Response 7 through 14. Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road (Stanford/Perrin), and one on Shepherd Avenue. As such, the project will have three other driveways along Sunnyside Avenue and Shepherd Avenue, along with the driveway on Stanford Avenue/Perrin Road. The driveway at Stanford/Perrin will be an exit only driveway and will provide emergency access. The project is also estimated to add only nominal trips to these local roads including Stanford, Ticonderoga, or to Fowler Avenue north of Shepherd Avenue. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south, accessing Sunnyside Avenue and Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue, as shown in the TIA. As such, the project traffic will have nominal effects on the local roads in the neighborhood, including Stanford Avenue, Perrin Road, and Ticonderoga.

  The TIA and DEIR also identifies regional circulation improvements that would help alleviate traffic congestion and safety related issues in the project vicinity. As included in Table 9-H of the TIA, and the DEIR, the project would be directly implementing circulation improvements around the project site and will be paying appropriate fees to the City for implementation of additional roadway widening and intersection improvements within the project study area.

  As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage.

Response V-3: The commentor states the following: "*Removal of pecan trees would reduce surface water retention, thereby depleting the water table of the already water challenged area north of shepherd. Without proper planning and provision of recharging the area's water table will cause significant impact to the 18 home community north of this proposed development.*"

This comment regarding water is addressed in Master Response 3, 4 and 5.

Response V-4: The commentor states the following: "*Density of the proposed homes is quite high and will bring in high traffic to the already busy areas of fowler, perrin and sunnyside. The assumptions made in DEIR to calculate the traffic are flawed and needs revision to show the actual ground reality of the community and the roads.*"

- This comment regarding traffic and circulation is addressed in Master Response 6 through 13. The project proposes to construct 605 single-family residences. The surrounding areas in the neighborhood also mostly constitute of similar single-family residential developments. Additionally, several new projects within the area also proposes single-family residential developments. As such, the project does not propose any land use atypical to the area, or any land use that is estimated to change the neighborhood traffic pattern. Therefore, trip generation and distribution pattern from the project is also expected to be similar to the neighborhood trip patterns. In fact, implementation of recommended improvements as included in the TIA would help alleviate traffic congestion and safety related issues within the project vicinity, as well as existing and future residential communities in the area.

  The project is estimated to add only nominal trips to Fowler Avenue north of Shepherd Avenue. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue. Based on the TIA, only 15 percent of project traffic is anticipated to utilize Fowler Avenue.

  The TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road, and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway on Perrin will be an exit only driveway and will provide emergency access. As included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage.

The project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

Response V-5: The commentor states the following: "*Lastly but not the least, it is against the principle of city of clovis to create island community areas. The 18 homes should be annexed to city, so as to create proper defined shape of the community development. In addition, at the very least, the builder of the proposed development and city should try to help the community of these 18 homes by bringing in the utility lines to address their concerns of water, and sewer…In the light of above facts, I would like to formally state my objection to current DEIR report.*"

- This comment regarding annexation, island creation, and the provision of utilities to adjacent properties is addressed in Master Response 14. Section 3.10-6 discusses annexations, including the role of Fresno LAFCo. Page 3.10-6 indicates that Fresno LAFCo is responsible for coordinating orderly reorganization to local jurisdictional boundaries, including annexations. Any annexation of the Project site to the City is subject to LAFCo approval, and LAFCo will review proposed annexations for consistency with LAFCo's Annexation Policies and Procedures.

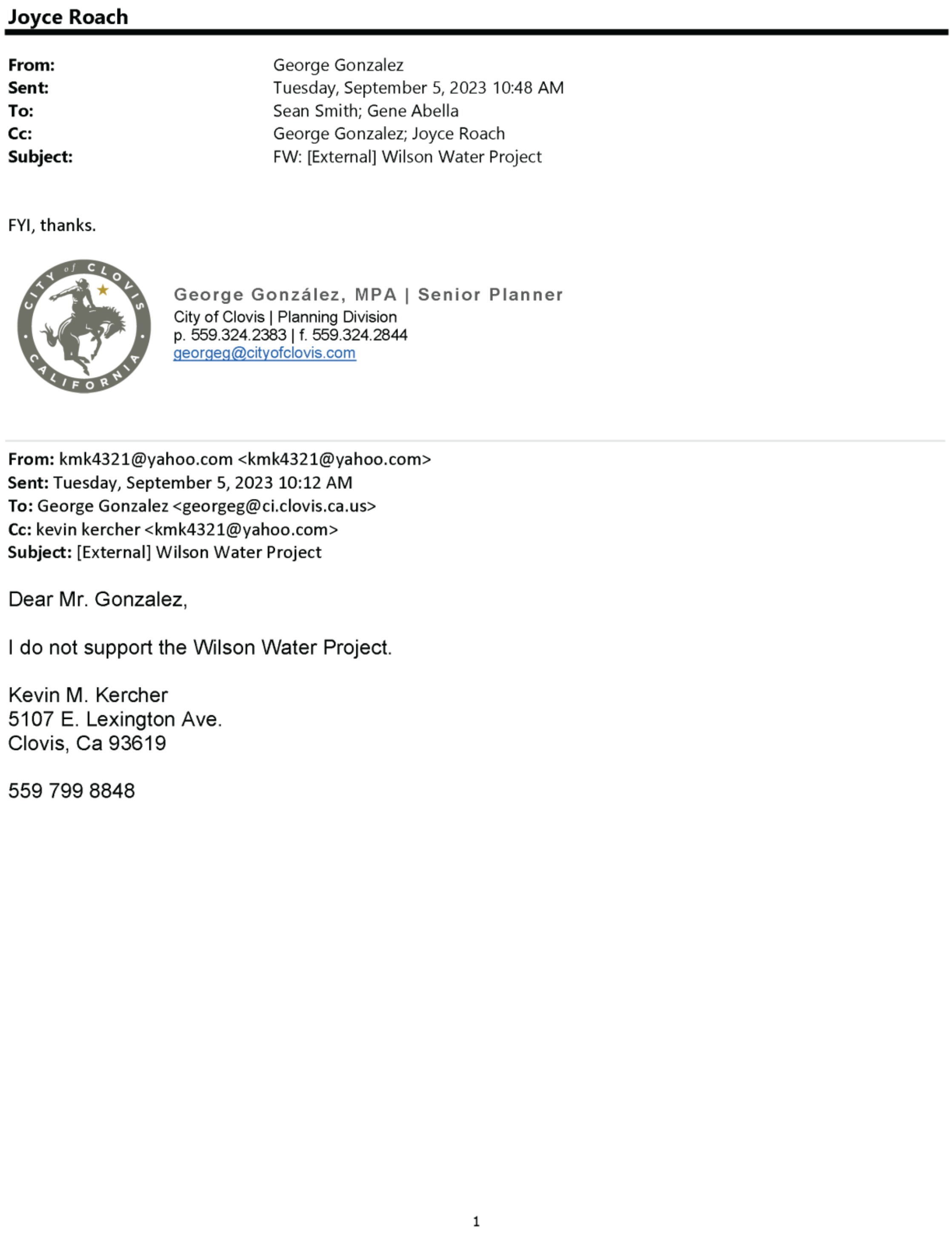
The DEIR indicates that the proposed Project includes an amendment of the City's SOI to include the entirety the approximately 155-acre Project site. The area is currently located in the City's Planning Area, but outside of the City's SOI. The amendment of the City's SOI will require an application and approval by the

Fresno LAFCo. The SOI amendment would be reviewed by the City and LAFCo prior to proceeding with the requested annexation. If the SOI Amendment is approved, the Project would then be able to begin the annexation process.

The proposed annexation includes lands contiguous with the current City limits and parcels that would be within the expanded SOI. It is noted, though as the commenter indicates, that parcels proposed for annexation would involve the creation of an island of unincorporated territory to the south of the site. It is noted that LAFCo may approve an annexation that creates an island where it finds that the application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation, but that inclusion is not feasible at this time. The island area is designated as Focus Area 7 in the General Plan, and is located within the Herndon – Shepherd Specific Plan Area. The General Plan identifies Focus Area 7 for Residential Use, which would require all proposed projects within Focus Area 7 to be consistent with the Dry Creek Preserve Master Plan if it were to be annexed into the City. This area is currently within the SOI, but the property owners in Focus Area 7 do not currently desire to annex into the City. The City has continued to plan for orderly growth to the north of the City, including the area that includes the Project site.

For clarification, the Development Area is proposed for annexation, while the Non-development Area is not proposed for annexation. This means that the Development Area would receive City services once annexed, and the Non-development Area would be eligible for annexation at some future time. A future annexation of the Non-development area would require the property owners of those parcels to organize and agree to be annexed into the City, which has not been done as part of the current proposal. Additionally, it does not appear that the current sentiment from parcel owners in the non-development area would be supportive of annexation into the City at this time. It is noted, however, that the SOI expansion, which does not require the approval of the parcel owners, would allow for future annexation of the non-development area into the City of Clovis if desired by the property owners at some later date. If the SOI expansion were approved, the non-development area would remain in the unincorporated County, but would be within the City's SOI. If annexed at some future time, the parcels could be served by City water and sewer. However, annexing these parcels and providing City water and sewer services is not currently proposed.

The commenters objection to the Draft EIR is noted.



Joyce Roach

From: George Gonzalez
Sent: Tuesday, September 5, 2023 10:48 AM
To: Sean Smith; Gene Abella
Cc: George Gonzalez; Joyce Roach
Subject: FW: [External] Wilson Water Project

FYI, thanks.

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

From: kmk4321@yahoo.com <kmk4321@yahoo.com>
Sent: Tuesday, September 5, 2023 10:12 AM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Cc: kevin kercher <kmk4321@yahoo.com>
Subject: [External] Wilson Water Project

Dear Mr. Gonzalez,

I do not support the Wilson Water Project. W-1

Kevin M. Kercher
5107 E. Lexington Ave.
Clovis, Ca 93619

559 799 8848

Response to Letter W: Kevin Kercher, Resident of Clovis

Response W-1: The commentor provides a brief statement that they *"…do not support the Wilson Water Project*."

For clarification, the proposed Project is an application for residential development entitlements, and not specifically a "*Water Project.*" Nevertheless, this comment is noted. The comment will be provided to the City for consideration. No further response to this comment is warranted in the EIR.

smcmurtry@denovoplanning.com

Subject: FW: [External] Shephard North Wilson development opposition letter

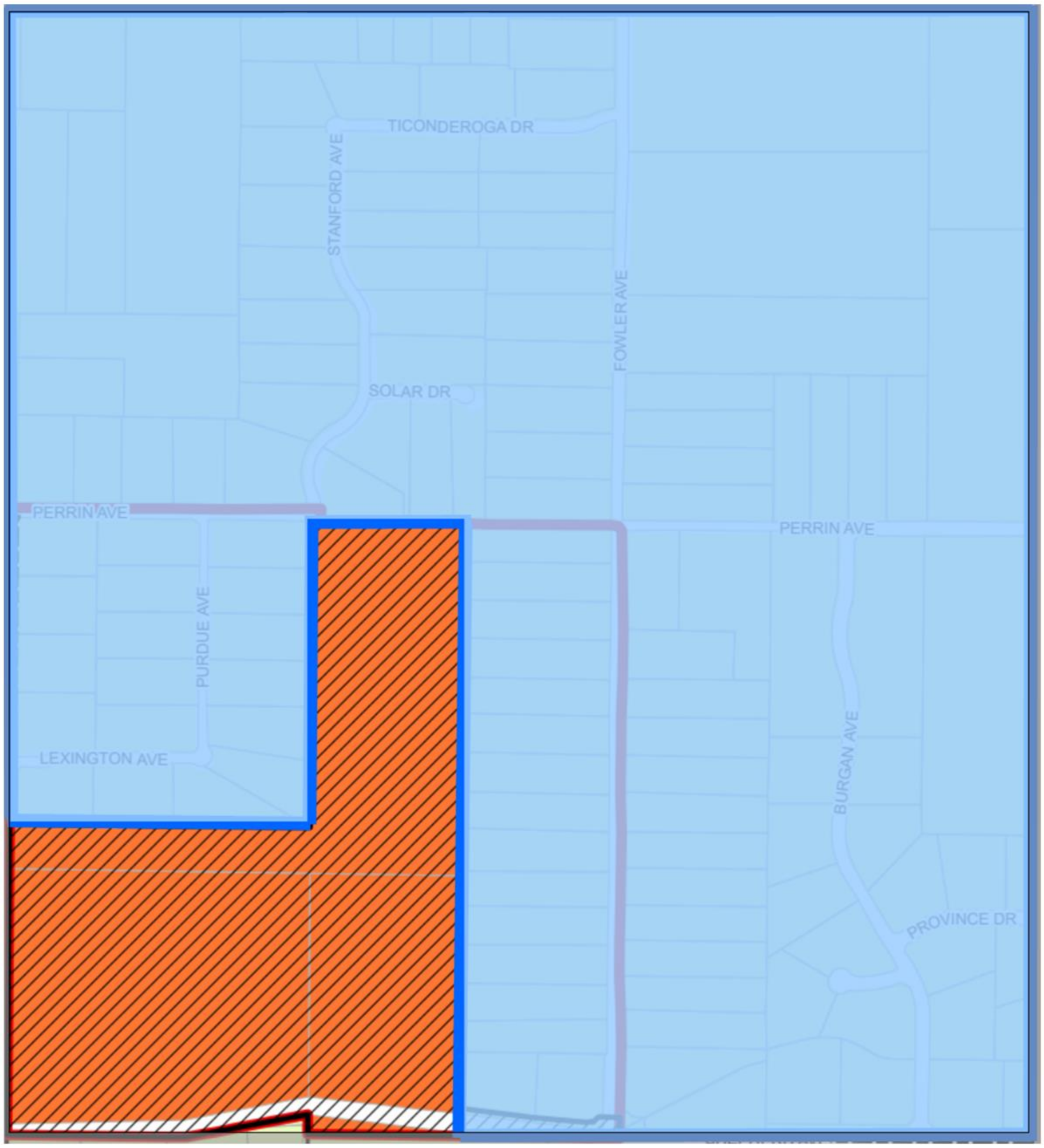
From: ckd@theworks.com <ckd@theworks.com>
Sent: Wednesday, September 6, 2023 1:33 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>; George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Shephard North Wilson development opposition letter

VIA EMAIL
George González, MPA | Senior Planner
City of Clovis | Planning Division
1033 Fifth Street, Clovis, CA 93612
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com
georgeg@ci.clovis.ca.us
Re: Comments on Draft Environmental Impact Report for the Shepherd North Project

Dear Mr. Gonzalez:

I am writing to oppose the approval of the Shepherd North Wilson project based on many factors.

The most obvious is the fact that an irregular L-shaped development with 800 homes (605 houses and 195 apartments) does not fit this area of rural residential. It makes no sense to inject medium-high density housing into an area dominated by two-acre+ lots. Doing so destroys our Clovis way of life, the very motto Clovis promotes. The people who live in these areas enjoy the darkness of starry nights, walks on country roads, the quiet of the outdoors without traffic noise, and a peaceful environment away from the congestion of urban neighborhoods. They have spent their life savings to move out and away from populated areas. The most sensible way to develop this region would be to build additional two-acre properties consistent with the majority of existing properties in the area. Clovis needs to remember and restore its roots, and protect more of its country settings. Another option would be continuing to farm this plot as existing agricultural infrastructure is already in place. Clovis should not continue transitioning away from agriculture and rural properties, two facets that make Clovis a great place to live. X-1

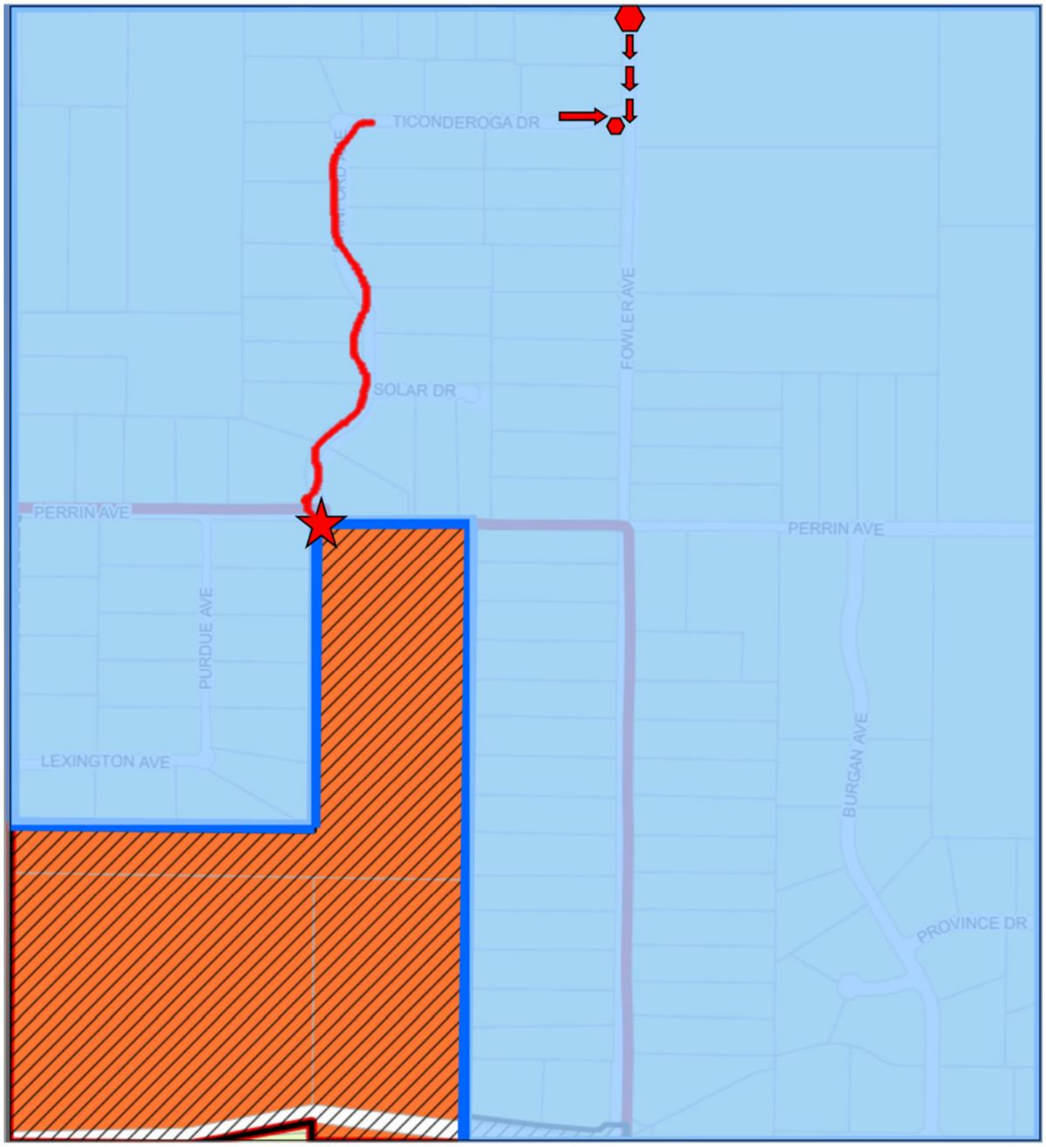


This 800 home development, with two-cars plus per residence, will at minimum generate in excess of 1,600 new vehicles. In addition, out of area traffic visiting these homes, such as friends and family, repairmen, pool techs, gardeners, babysitters, housekeepers, internet and cable companies, etc. will generate traffic beyond these figures. The Wilson development proposes four exits from the development, with approximately 25% for each, or 400+ vehicles using each exit route.The planned northern exit is extremely concerning for many reasons. X-2

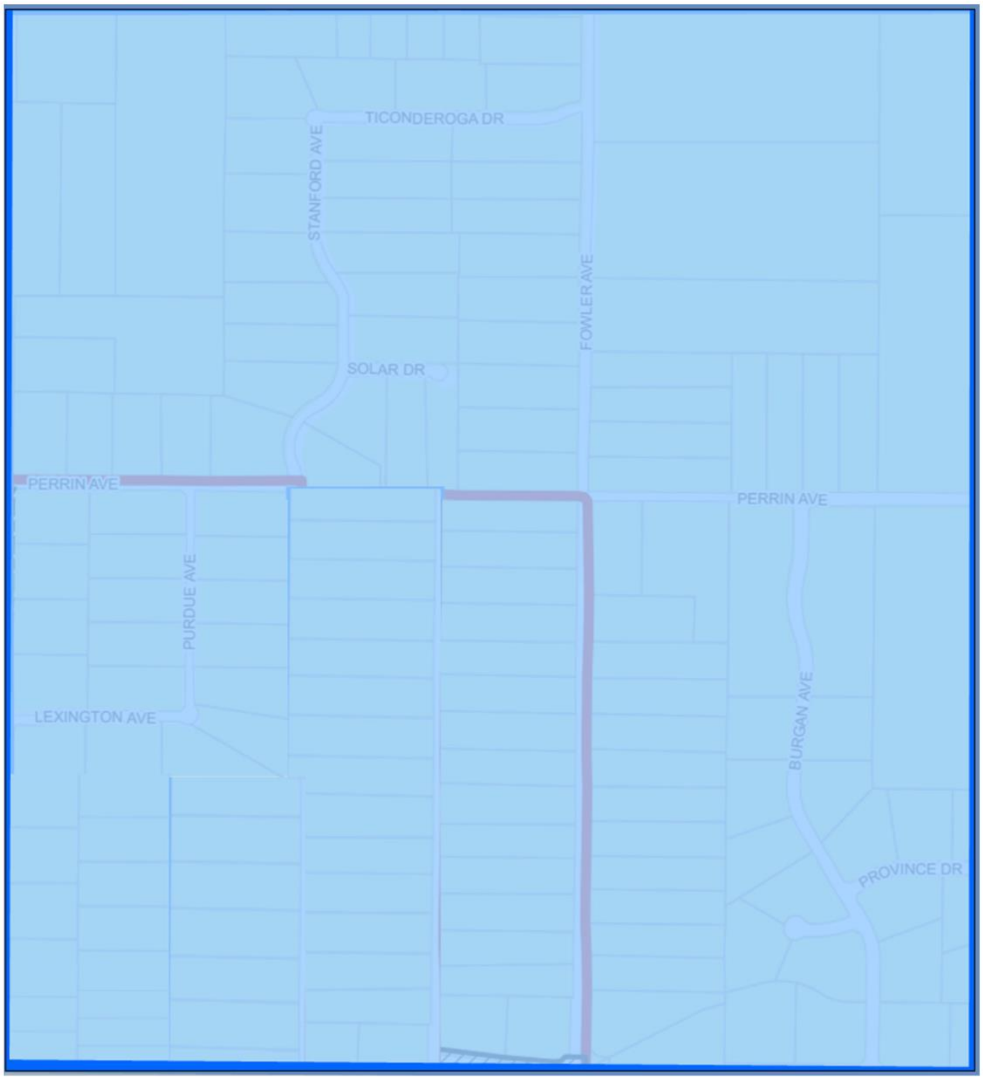
Stanford is a narrow county road and has six curves before it meets Ticonderoga. It has no streetlights, no sidewalks, and no bike lanes. In fact, all of the roads in the Quail Run Neighborhood are similar. Residents frequently ride bicycles, jog, walk dogs, and drive golf carts. Dumping 25% of the proposed development traffic, or a minimum of 400 vehicles, onto Stanford and other streets in this area, is a recipe for disaster. These country roads were not designed for city thoroughfare.

Additionally, since Shepherd has been closed, the only neighborhood exit from Quail Run is by way of Ticonderoga to Fowler. Because of the Stop sign at Behymer and Fowler, obstructing traffic is perfectly timed to make an exit onto Fowler difficult without "gunning it" to cut in. It is unthinkable and unimaginable what this exit would look like with the addition of 400+ vehicles lined up throughout the day and night, especially before and after school. Because cars emit the most CO2 while idling, the line of traffic attempting to exit onto Fowler will most certainly create an unavoidable negative environmental impact.

X-2 Cont.



The proposed land use change and draft EIR, should not be approved. This section should only be developed consistent with existing properties (see below) which maintains the consistency of the region. A developer should not be entitled to inject his profitability vision into the lives of existing property owners who have invested their life savings into a rural and peaceful lifestyle. 800 new households stacked and packed into an odd shaped parcel surrounded by two-acre lots does not fit this region, and the additional traffic onto Stanford for a Fowler exit will have deadly and negative environmental consequences. X-3



Further, last night on our walk we witnessed a family of endangered San Joaquin Valley Kit Fox crossing at Sunnyside and Shepherd. I do not see any mitigations measures in the DEIR to protect this endangered species or provide habitat. Rural residential properties tick this box.

We vehemently urge you to oppose this project without major amendments.

Sincerely,

Kristi and Christian Diener

X-4

9355 N. Purdue

Clovis, CA 93619

Response to Letter X: Kristi and Christian Diener Residents of Clovis

Response X-1: The commentor provides a brief paragraph identifying their opposition to the project. They indicate that "*the most obvious is the fact that an irregular L-shaped development with 800 homes (605 houses and 195 apartments) does not fit this area of rural residential. It makes no sense to inject medium-high density housing into an area dominated by two-acre+ lots. Doing so destroys our Clovis way of life, the very motto Clovis promotes. The people who live in these areas enjoy the darkness of starry nights, walks on country roads, the quiet of the outdoors without traffic noise, and a peaceful environment away from the congestion of urban neighborhoods. They have spent their life savings to move out and away from populated areas. The most sensible way to develop this region would be to build additional two-acre properties consistent with the majority of existing properties in the area. Clovis needs to remember and restore its roots, and protect more of its country settings. Another option would be continuing to farm this plot as existing agricultural infrastructure is already in place. Clovis should not continue transitioning away from agriculture and rural properties, two facets that make Clovis a great place to live*."

- The application that is evaluated in the Draft EIR includes a General Plan Land Use Amendment to adjust the land uses from Rural Residential (RR) to Medium-High Density (MH). This also includes a pre-zoning request for R-1-PRD zoning designations over the Development Area. This proposal would include a Tentative Tract Map entitlement for 605 residential lots. It should be noted that there is not a proposal to develop 195 apartments, rather, the Draft EIR includes an Alternative (Increased Density Mixed Use Alternative) that would include an additional 195 apartment units that Alternative only. The Increased Density Mixed Use Alternative is described in Section 2.0 Project Description on page 2.0-8, and is evaluated in more detail in Section 5.0 Alternatives, but it should be noted that that the Increased Density Mixed Use Alternative is not the application requested by the Applicant. Regardless, the commenter's opposition to an increase in housing density in the Development Area is noted and will be provided to the City for consideration.

Response X-2: The commentor states the following: "*This 800 home development, with two-cars plus per residence, will at minimum generate in excess of 1,600 new vehicles. In addition, out of area traffic visiting these homes, such as friends and family, repairmen, pool techs, gardeners, babysitters, housekeepers, internet and cable companies, etc. will generate traffic beyond these figures. The Wilson development proposes four exits from the development, with approximately 25% for each, or 400+ vehicles using each exit route. The planned northern exit is extremely concerning for many reasons.*

Stanford is a narrow county road and has six curves before it meets Ticonderoga. It has no streetlights, no sidewalks, and no bike lanes. In fact, all of the roads in the Quail Run Neighborhood are similar. Residents frequently ride bicycles, jog, walk dogs, and drive golf *carts. Dumping 25% of the proposed development traffic, or a minimum of 400 vehicles, onto Stanford and other streets in this area, is a recipe for disaster. These country roads were not designed for city thoroughfare.*

Additionally, since Shepherd has been closed, the only neighborhood exit from Quail Run is by way of Ticonderoga to Fowler. Because of the Stop sign at Behymer and Fowler, obstructing traffic is perfectly timed to make an exit onto Fowler difficult without "gunning it" to cut in. It is unthinkable and unimaginable what this exit would look like with the addition of 400+ vehicles lined up throughout the day and night, especially before and after school. Because cars emit the most CO2 while idling, the line of traffic attempting to exit onto Fowler will most certainly create an unavoidable negative environmental impact."

- The traffic related comment is addressed under Master Response 6 through 13. Access to the project from existing streets will be provided by four driveways: two on Sunnyside Avenue, one on Perrin Road (Stanford/Perrin), and one on Shepherd Avenue. Except for the driveways on Shepherd Avenue and Perrin, all other project driveways will operate as full-access driveways. The driveway on Shepherd Avenue will operate as a Right-In Right-Out/Left-In (RIRO/LI) driveway, since Shepherd Avenue has a speed limit of 40 MPH along the project frontage and estimated to have significant amount of through traffic. The driveway at Stanford/Perrin will be an exit only driveway and will provide emergency access. The project is also estimated to add only nominal trips to the local roads including Stanford, Ticonderoga, or to Fowler Avenue north of Shepherd Avenue. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue, as shown in the TIA. As such, the project traffic will have nominal effects on the local roads in the neighborhood, north of Shepherd Avenue

  New traffic will be generated by the future residents of the 605 single-family residences. The DEIR identifies the traffic that would be generated by the proposed Project, including trips and vehicle miles traveled. The proposed Project does not propose any land use atypical to the area, or any land use that is estimated to change the neighborhood traffic pattern. The trip distribution pattern from the proposed Project is expected to be similar to the neighborhood trip patterns. Implementation of recommended improvements as included in the TIA would help alleviate traffic congestion and safety related issues within the project vicinity, as well as existing and future residential communities in the area. The traffic improvements recommended as part of the TIA accounts for cumulative traffic impact from all future projects, as well as the proposed Project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the TIA would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

- The comment regarding CO2 is addressed in Section 3.7 Greenhouse Gases, Climate Change and Energy. Specifically, the emissions associated with mobile sources (traffic) were modeled and quantified. Table 3.7-2 on page 3.7-24 shows that the total emissions from Mobile Sources is 3,435.4 metric tons/year. This is associated with all mobile source emissions, not just limited to idling emissions. The Draft EIR notes that the modeling does not account for the Governor Newsom's Zero-Emission by 2035 Executive Order (N-79-20), which requires that all new cars and passenger trucks sold in California be zero-emission vehicles by 2035. The Draft EIR also notes that the modeling does not account for the incorporation of additional Renewables Portfolio Standard attainment beyond CalEEMod defaults, incorporation of AB 341, and incorporation of Title 24 requirements for the EV charging stations. This is anticipated to substantially reduce the operational emissions associated with passenger vehicles (i.e., mobile emissions) and other sources over time, including prior the 2035 final implementation year. The Draft EIR concluded that operational emissions results are likely an overestimate for mobile emissions.

  The Draft EIR concludes that the Project, including the off-site improvements, would be consistent with the plans, policies, regulations, and GHG emissions reduction actions/strategies outlined in the 2022 Scoping Plan Update, the Fresno COG's 2022 RTP/SCS, and the Clovis General Plan. Furthermore, Draft EIR concludes that because the Project is consistent with and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions would not result in a significant impact on the environment.

Response X-3: The commentor states the following: "*The proposed land use change and draft EIR, should not be approved. This section should only be developed consistent with existing properties (see below) which maintains the consistency of the region. A developer should not be entitled to inject his profitability vision into the lives of existing property owners who have invested their life savings into a rural and peaceful lifestyle. 800 new households stacked and packed into an odd shaped parcel surrounded by two-acre lots does not fit this region, and the additional traffic onto Stanford for a Fowler exit will have deadly and negative environmental consequences.*"

- The traffic related comment is addressed under Master Response 6 through 13. Comments regarding profit are economic in nature and outside the scope of an environmental document. These economic concerns will be provided to the City for their consideration. The commenter's overall opposition to an increase in housing density in the Development Area is noted and will be provided to the City for consideration. The project is estimated to add only nominal trips to Fowler Avenue north of Shepherd Avenue. This is because, due to the local circulation network and location of activity centers in relation to the project, majority of the project traffic is estimated to travel south using Shepherd Avenue on to Clovis Avenue, Sunnyside Avenue, and Fowler Avenue. Based on the TIA, only 15 percent of project traffic is anticipated to utilize Fowler Avenue.

Response X-4: The commentor states the following: "*Further, last night on our walk we witnessed a family of endangered San Joaquin Valley Kit Fox crossing at Sunnyside and Shepherd. I do not see any mitigation measures in the DEIR to protect this endangered species or provide habitat. Rural residential properties tick this box.*"

- San Joaquin kit fox (SJKF) is addressed in the Draft EIR on page 3.4-11, and 3.4-28. The SJKF is a federally endangered and state threatened species. They generally inhabit saltbush scrub, grassland, oak, savanna, and freshwater scrub in the San Joaquin Valley, and adjacent open foothills to the west.

  The Project site is characterized as frequently disturbed from active agricultural activities, and as a result, the Project site does not contain high quality habitat for the SJKF. The CDFW has not documented any SJKF within nine miles of the Project site. The field surveys did not reveal any dens on the Project site so there is no active, or recent past, occupation by SJKF. The historical agricultural activities and denser orchard canopy make this site not ideal. It is noted that there are other species of canids, including grey fox and coyote, that are more likely to occur in the vicinity, and it is possible that one was mistaken for a SJKF on the commenter's walk. There are no documented occurrences of a SJKF den in the vicinity, and it is not clear where such a transient SJKF in the vicinity would be traveling to and from. Overall, given the current condition of the Project site, and the absence of SJKF dens, development of the Project is anticipated to have a less than significant impact on SJKF. It is noted that the California Department of Fish and Wildlife has reviewed the Biological Chapter of the EIR and does not have issues with the analysis of SJKF.

RESPONSES TO COMMENTS RECEIVED AFTER FEIR PUBLIC CIRCULATION

3.1 INTRODUCTION

The City of Clovis received twenty-four (24) comment letters on the Draft EIR (DEIR) during the DEIR 45-day public review period. Acting as lead agency, the City of Clovis has prepared responses to the DEIR comments, which were included in a Final EIR that was made public prior to a hearing by the Planning Commission. After the release of the Final EIR there were sixteen (16) comments provided to the City of Clovis after public review closed for the DEIR. This Chapter is intended to provide a response to those comments. Responses to the comments received after public review do not involve any new significant impacts or "significant new information" that would require recirculation of the DEIR pursuant to CEQA Guidelines Section 15088.5.

3.2 LIST OF COMMENTERS

Table 3.0-1 lists the comments that were submitted to the City of Clovis received after public review closed for the DEIR. The assigned comment number, letter date, letter author, and affiliation, if presented in the comment letter or if representing a public agency, are also listed.

TABLE 3.0-1 LIST OF COMMENTERS ON RECEIVED AFTER DEIR PUBLIC CIRCULATION

RESPONSE LETTER	*INDIVIDUAL OR SIGNATORY*	*AFFILIATION*	*DATE*
L-1	Jared Callister on behalf of 20 members	Quail Run Community and members of the Quail Run 18 Association	11-13-23
L-2	Marcus and Amy DiBuduo	Resident of Clovis	9-16-23 * (11-14-23)
L-3	Rich Wathen	Resident of Clovis	11-14-23
L-4	Leo & Todd Wilson	Project Applicant	11-14-23
L-5	Nathan O. George	Remy Moose Manley, LLP	11-16-23
L-6	Dean & Valerie Uhrig	Resident of Clovis	11-16-23
L-7	Jacqueline Ruiz	Resident of Clovis	11-16-23
L-8	Peter Menagh	Resident of Clovis	11-16-23
L-9	Jared Callister	Resident of Clovis	11-16-23
L-10	Laurence Kimura, P.E.	Fresno Irrigation District	11-16-23
L-11	Lewis Smith	Resident of Clovis	11-16-23
L-12	Patrick Quigley	Resident of Clovis	11-16-23
L-13	Marcus DiBuduo	Resident of Clovis	11-17-23
L-14	Lewis Smith	Resident of Clovis	11-27-23
L-15	Chuck Kallas	Resident of Clovis	11-27-23
L-16	Robert Shuman	Resident of Clovis	11-30-23

** Note that letter L-2 from Marcus and Amy DiBuduo is dated 9/16/23, but this appears to be in error. The letter was emailed to the City on November 14, 2023, and it references City documents that were not made available until November 3, 2023.*

3.3 COMMENTS AND RESPONSES

REQUIREMENTS FOR RESPONDING TO COMMENTS ON A DRAFT EIR

CEQA Guidelines Section 15088, subdivision (a) requires that lead agencies evaluate and respond to all comments on the DEIR that raise significant environmental issues. Section 15008, subdivision (b) provides that "[t]he written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the Lead Agency's position is contrary to recommendations and objections raised in the comments, said comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be a good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice. The level of detail contained in the response, however, may correspond to the level of detail provided in the comment (i.e., responses to general comments may be general). A general response may be appropriate when a comment does not contain or specifically refer to readily available information or does not explain the relevance of evidence submitted with the comment." Section 15204 adds that "[w]hen responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR."

In addressing how commenters on DEIRs should focus their comments, CEQA Guidelines Section 15204 recommends that commenters provide detailed comments that focus on the sufficiency of the DEIR in identifying and analyzing the possible environmental impacts of the project and ways to avoid or mitigate the significant effects of the project, and that commenters provide evidence supporting their comments. Pursuant to CEQA Guidelines Section 15064, subdivision (f)(5), an effect shall not be considered significant in the absence of substantial evidence.

It is noted that the CEQA Guidelines do not specifically address the need to respond to comments that are received after the public review period for the Draft EIR. However, City of Clovis staff intends to incorporate these comments, and the following responses to these comments, into the Revised Final EIR that is presented to the City Council for their certification.

RESPONSES TO COMMENT LETTERS

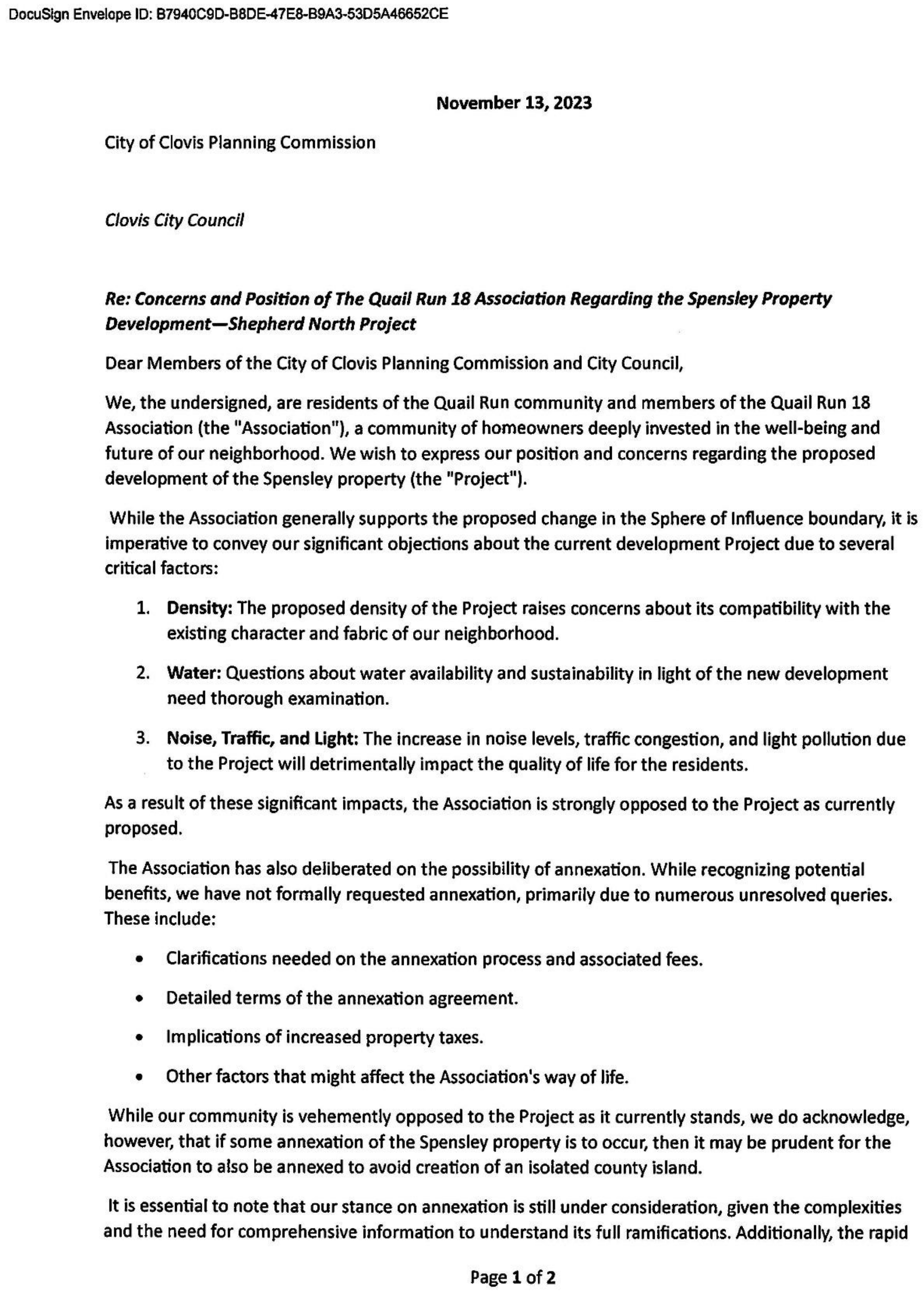
The comments on the DEIR are reproduced on the following pages, along with the City's responses to those comments. To assist in referencing comments and responses, the following coding system is used:

> Each letter is numbered and each comment within each letter is numbered (i.e., comment L-1-1, comment L-1-2, etc.). The "L" denotes that the comment was a comment provided after the 45-day public review period.

MASTER RESPONSE TO COMMENTS

It is noted that master responses were presented in Chapter 2.0 of the Final EIR and were intended to address comments related to topics that are common to several comment letters provided during the public review period, but the master responses are also relevant to address several comment letters provided herein. The intent of a master response is to provide a comprehensive response to a topic in a coordinated, organized manner in one location that clarifies and elaborates on the analysis in the DEIR. The following master responses were included in their entirety in Chapter 2.0 of the Final EIR and are presented here as a list only. Please refer to Chapter 2.0 of this Revised Final EIR for the complete Master Responses:

- Master Response 1: Water Quality
- Master Response 2: Storm Drainage/Flooding
- Master Response 3: Groundwater/Surface Water Supply
- Master Response 4: Infiltration/Natural Recharge
- Master Response 5: Groundwater Extraction
- Master Response 6: Access
- Master Response 7: Traffic generation
- Master Response 8: Traffic volume
- Master Response 9: Pedestrian and Cyclist Traffic
- Master Response 10: Traffic calming/Improvements
- Master Response 11: Safety for children playing
- Master Response 12: Fire gate
- Master Response 13: Traffic on Stanford, Perrin, Ticonderoga, and Fowler
- Master Response 14: Annexation, SOI Expansion, and the Provision of City Services
- Master Response 15: Neighborhood Meeting
- Master Response 16: Parks/Greenspace
- Master Response 17: Noise
- Master Response 18: Aesthetics/Lights
- Master Response 19: Air Quality, GHG, Energy



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November 13, 2023

City of Clovis Planning Commission

Clovis City Council

Re: Concerns and Position of The Quail Run 18 Association Regarding the Spensley Property Development—Shepherd North Project

Dear Members of the City of Clovis Planning Commission and City Council,

We, the undersigned, are residents of the Quail Run community and members of the Quail Run 18 Association (the "Association"), a community of homeowners deeply invested in the well-being and future of our neighborhood. We wish to express our position and concerns regarding the proposed development of the Spensley property (the "Project").

While the Association generally supports the proposed change in the Sphere of Influence boundary, it is imperative to convey our significant objections about the current development Project due to several critical factors: L-1-1

1. **Density:** The proposed density of the Project raises concerns about its compatibility with the existing character and fabric of our neighborhood. L-1-2
2. **Water:** Questions about water availability and sustainability in light of the new development need thorough examination. L-1-3
3. **Noise, Traffic, and Light:** The increase in noise levels, traffic congestion, and light pollution due to the Project will detrimentally impact the quality of life for the residents. L -1-4

As a result of these significant impacts, the Association is strongly opposed to the Project as currently proposed.

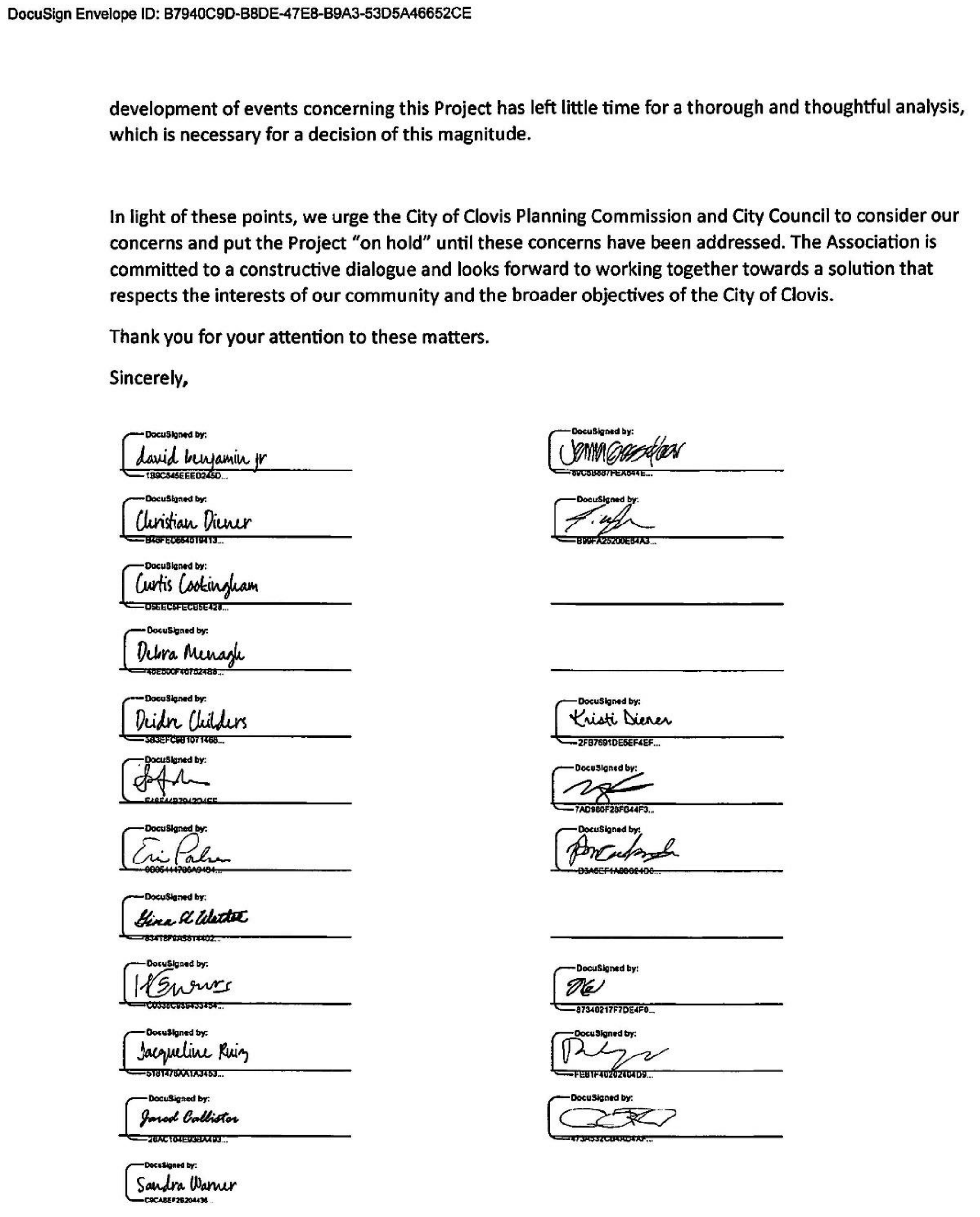
The Association has also deliberated on the possibility of annexation. While recognizing potential benefits, we have not formally requested annexation, primarily due to numerous unresolved queries. These include:

- Clarifications needed on the annexation process and associated fees.
- Detailed terms of the annexation agreement.
- Implications of increased property taxes.
- Other factors that might affect the Association's way of life.

While our community is vehemently opposed to the Project as it currently stands, we do acknowledge, however, that if some annexation of the Spensley property is to occur, then it may be prudent for the Association to also be annexed to avoid creation of an isolated county island. L -1-5

It is essential to note that our stance on annexation is still under consideration, given the complexities and the need for comprehensive information to understand its full ramifications. Additionally, the rapid L -1-6

Page **1** of **2**



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development of events concerning this Project has left little time for a thorough and thoughtful analysis, which is necessary for a decision of this magnitude.

In light of these points, we urge the City of Clovis Planning Commission and City Council to consider our concerns and put the Project "on hold" until these concerns have been addressed. The Association is committed to a constructive dialogue and looks forward to working together towards a solution that respects the interests of our community and the broader objectives of the City of Clovis.

Thank you for your attention to these matters.

Sincerely,

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david benjamin jr
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DocuSigned by:
Christian Diener
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DocuSigned by:
Curtis Cookingham
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DocuSigned by:
Debra Menagh
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Deidre Childers
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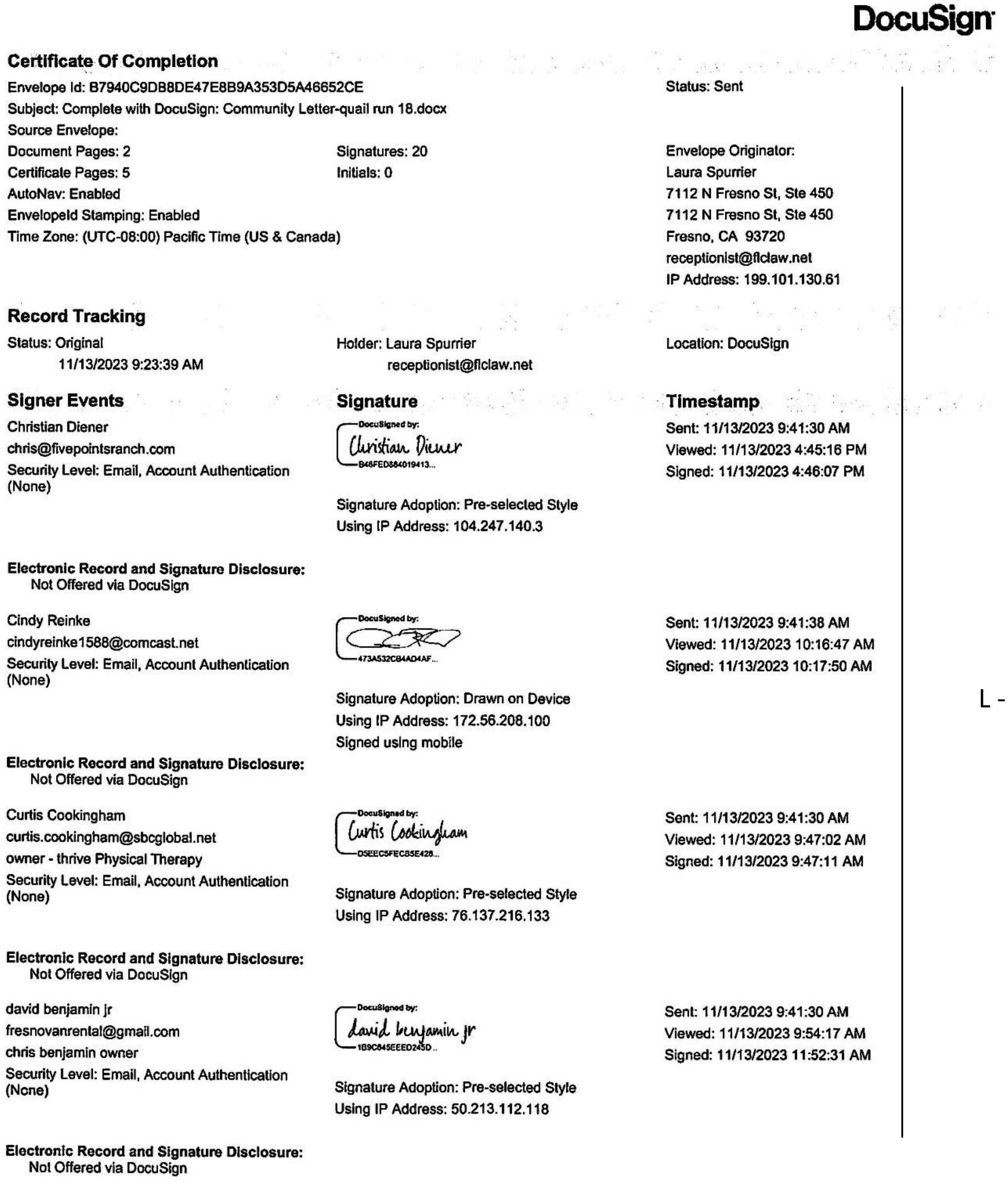

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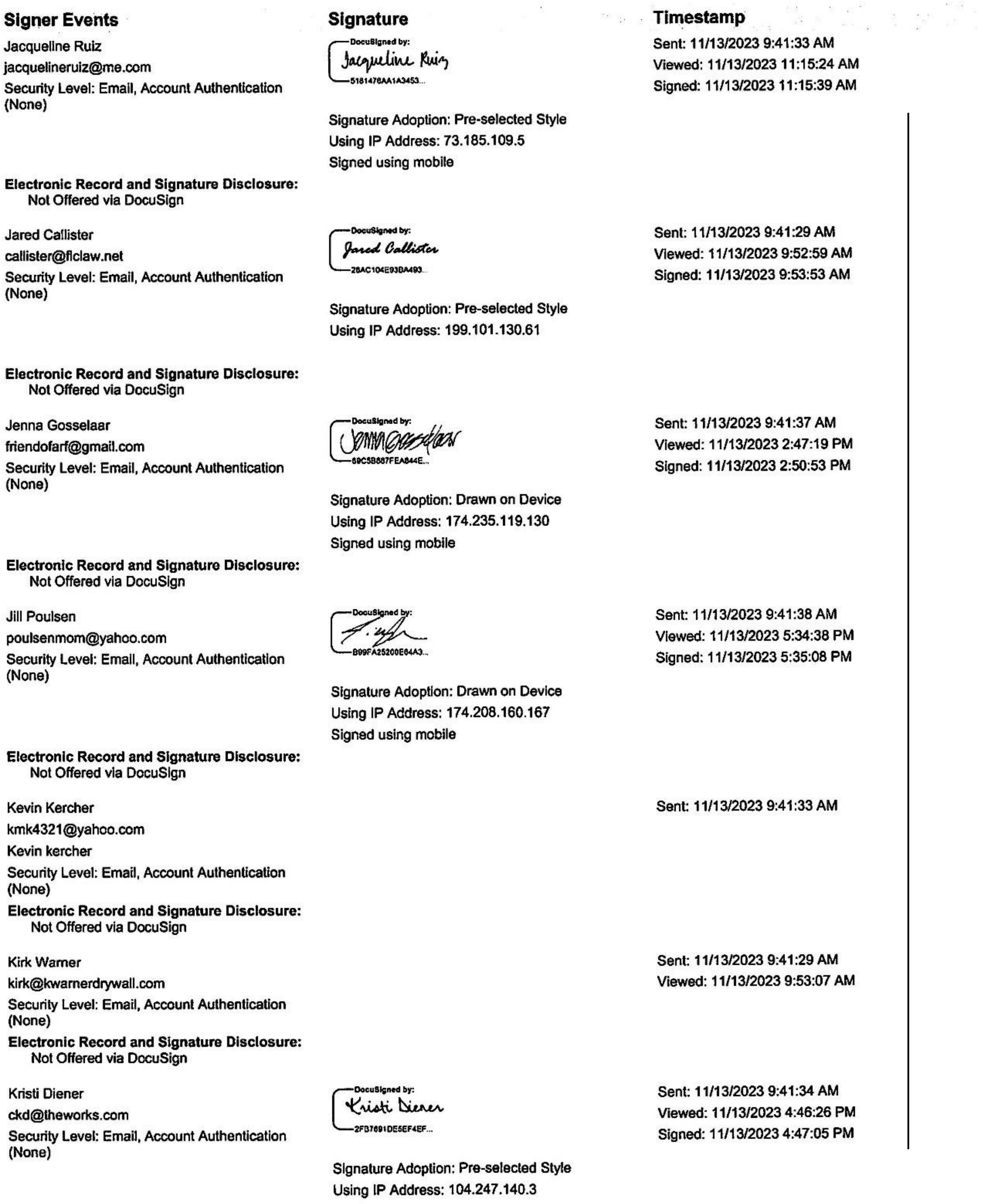

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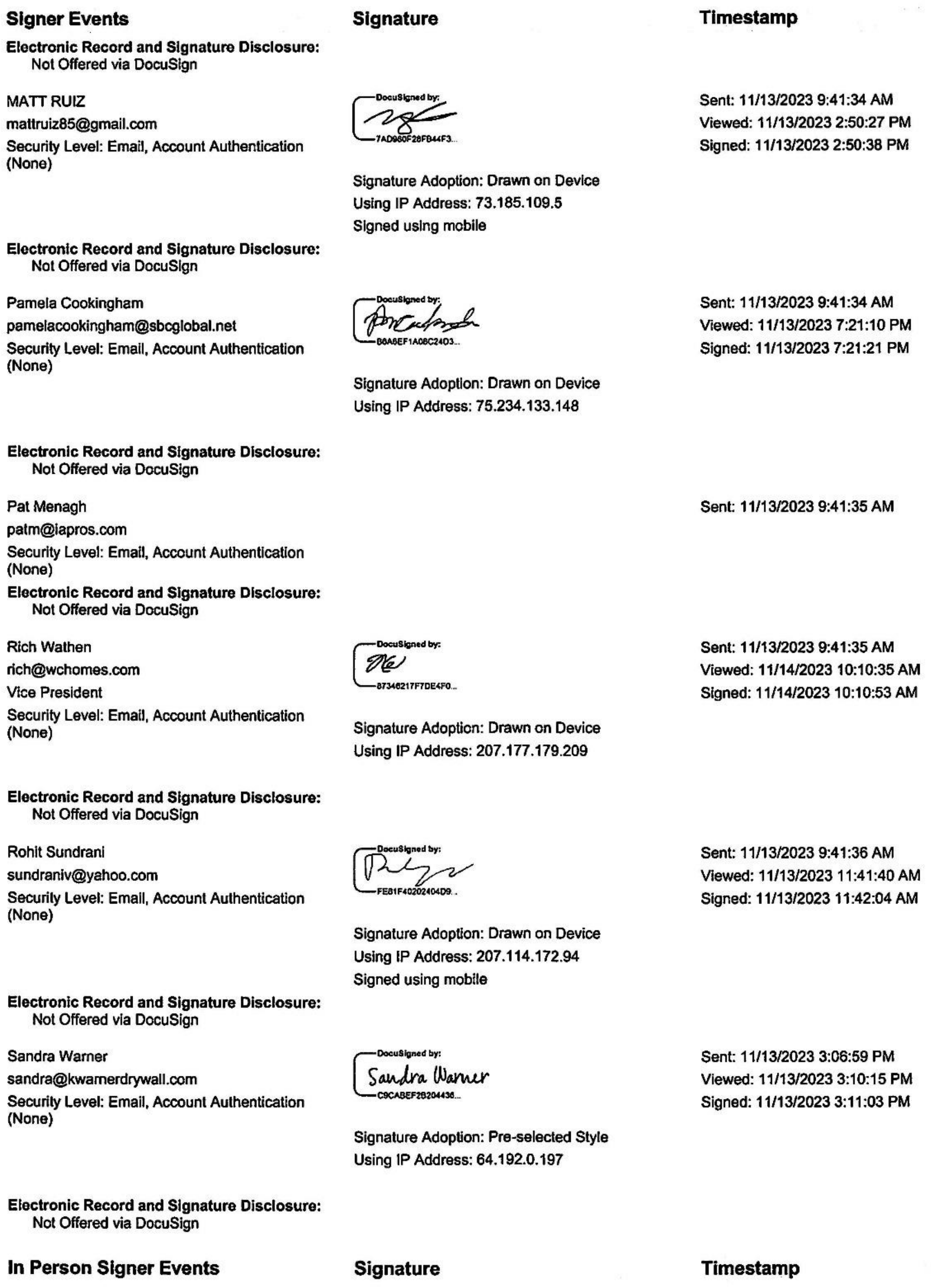

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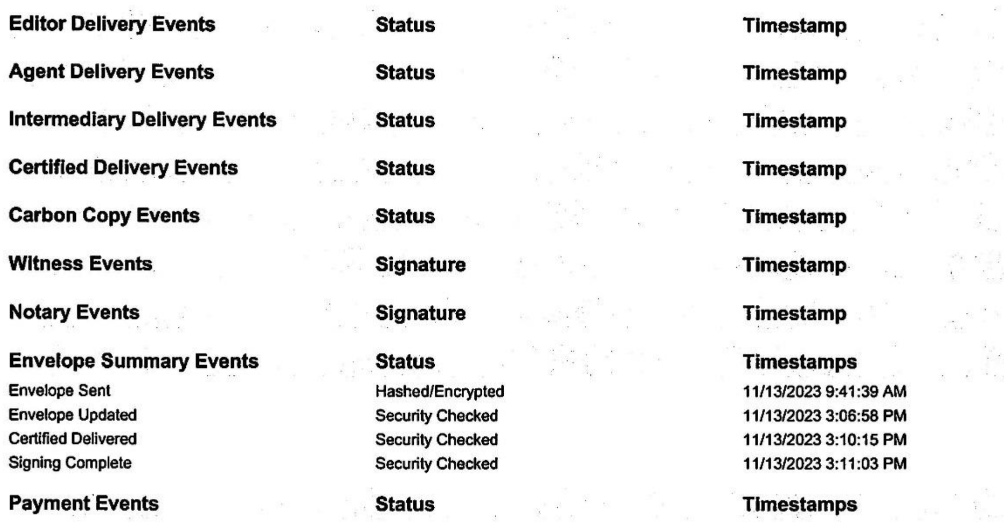

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L -6 Cont

Response to Letter L-1: 20 Members., Quail Run Community and members of the Quail Run 18 Association

Response L-1-1: The commenters provide a brief introduction to the letter, noting who they are, and that they would like to express their position and concern regarding the proposed Project.

- This comment is noted, and their concerns will be presented to the City for consideration. This comment does not require any further response.

Response L-1-2: The commenters state that they have concerns with the proposed density of the Project, and its compatibility with the existing character and fabric of the neighborhood.

- Although CEQA does not require an assessment of the effect of a project on the general “character” or “fabric” of a community, CEQA does require a lead agency to assess whether a project would result in substantial adverse impacts on scenic vistas and resources or substantially degrade the visual character of a project site and its surroundings. The Draft EIR found those impacts would be less than significant.

  The proposed density of the Project is described in Section 2.0 Project Description in the Draft EIR. Master Response 18 provided in the Final EIR addressed concerns regarding the change in visual character of the Project site. The existing visual character of the Project site is discussed on page 3.1-4 of the DEIR. Here the region and vicinity are described as follows: The City of Clovis is in California’s San Joaquin Valley, and like most communities in the region, features a flat landscape organized around an orthogonal system of roadways. Due to its rapid growth in recent years and its adjacency to the City of Fresno, Clovis has a largely suburban character. Most of the City’s land area is devoted to low density residential neighborhoods. However, because the community has grown from a small farming town and is still surrounded by agricultural land uses on three sides, it retains a rural atmosphere. The suburban/rural interface is most prominent on the City’s eastern, southeastern, and southern edges. In these locations, new housing subdivisions are sited between working farms and large residential estate lots of two to five acres. The SOI beyond the City’s Limits to the east, northeast, and north is dominated by agricultural uses and undeveloped open spaces. The Project site is in the north, and the immediately surrounding area is best characterized as a mix of agricultural, suburban residential, and large estate lots with existing residences.

  The Project’s potential impact on the visual character of the areas surrounding the Project were evaluated in the DEIR on pages 3.1-10 through 3.1-13. Here the proposed Project is described as involving an expansion of the City’s Sphere of

Influence (SOI) to add approximately 155 acres into the City of Clovis' SOI, including the annexation/reorganization of the proposed 77-acre Development Area to develop 605 single-family detached units, open space totaling 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements. The DEIR indicates that the non-Development Area includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development and no new development or improvements are proposed as part of the proposed Project for the Non-development Area. As a result, the DEIR concludes that the existing visual character of the Non-development Area would not change as part of the proposed Project.

Although the Project would change the visual character of the Project site, this change would not result in significant aesthetic impacts to surrounding properties. The Project contemplates the 77-acre Development Area would be converted from its existing use as primarily agricultural land to a residential neighborhood.

The Project includes exterior landscaping and open space to ensure an aesthetically pleasing visual buffer between existing land uses and the Project. The Project applicant has submitted a landscape plan for the project detailing the Shepherd Avenue and open space landscaping for the proposed developed prepared by a licensed landscape architect. That conceptual landscape plan includes visual components that will enhance the appearance of the neighborhood once developed like those constructed by adjacent residential projects along Shepherd Avenue. These improvements include landscaping improvements like new street trees and other neighborhood greenery along Shepherd and Sunnyside Street frontages of the Project. The proposed Project would also result in the construction of park and open space areas within the subdivision. While implementation of the proposed Project would change the existing visual character of the area, the development components of the subdivisions are in alignment with the City's requirements for residential subdivisions in the region, and would not result in a potentially significant aesthetic impact.

The neighborhoods within the Development Area would include a network of streets to provide an efficient flow of traffic through the area. Other uses to support and compliment the proposed residential development include underground (non-visible) wet and dry utility infrastructure, roadways with curb/gutters/sidewalks, bicycle/pedestrian facilities, street lighting, and street signage.

The Project site is also required to be consistent with the General Plan and the Clovis Zoning Ordinance, which includes design standards. The City of Clovis zoning ordinance and ministerial permits design, construction and maintenance standards will ensure quality and cohesive design of the Project site. These standards include specifications for building height, massing, and orientation, exterior lighting standards, and landscaping standards. Following the City's design, construction, and maintenance requirements will produce a project that will be internally cohesive, while maintaining and aesthetic feel like that of the surrounding urban uses.

Compliance with the requirements within the General Plan, as well as the Municipal Code (specifically Title 7 Public Works, Title 8 Building Regulations, Title 9 Development Code, and Title 10 Parks and Recreation), for the design, construction, and maintenance of the project will be required. Title 9 Development Code Division 3 includes a series of Development and Operational Standards that are aimed at creating uniform performance standards which are designed to minimize and mitigate the potential impacts of development within the City and promote compatibility with surrounding areas and land uses. These standards cover topics such as exterior light and glare (Section 9.22.050), fences, walls, and hedges (Section 9.24.060), height measure and height limit exceptions (9.24.080), screening and buffering (Section 9.24.090), setback regulations and exceptions (Section 9.24.100), landscaping standards (Chapter 9.28), tree protection standards (Chapter 9.30), and signs (Chapter 9.34). Some of these standards and requirements from pre-existing regulations are implemented after Project entitlement when more detailed site planning, engineering, and architecture is performed. The final approval of these items is ministerial. Some examples of requirements that the Project will follow are:

The Municipal Code implements the policies of the Clovis General Plan by classifying and regulating the uses of land and structures within the City of Clovis. The Municipal Code is adopted to protect and to promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses in the City. These existing requirements provide standards for the orderly growth and development of the City to establish and maintain the community's history and quality characteristics in appropriate locations. It requires high quality planning and design for development that enhances the visual character of the City, avoids conflicts between land uses, encourages the appropriate mix of uses, and preserves the scenic qualities of the City. It also creates a comprehensive and stable pattern of land uses upon which to plan sewerage, transportation, water supply, and other public facilities and utilities. Overall, these mandatory requirements are deemed effective in reducing potential visual impacts. This is particularly true here where the project site is an isolated and remnant agricultural use surrounded by residential and rural residential land uses.

Therefore, although the Project would result in some changes to the visual character of the Project site, the impacts of these changes to both the surrounding neighborhoods and the public would be less than significant.

Response L-1-3: The commenters state that they have concerns with the water availability and sustainability.

- The Final EIR provides a thorough discussion of the topic identified in this comment. Specifically, water availability and sustainability are addressed in Master Response 3, 4, and 5.

Response L-1-4: The commenters state that they have concerns with noise levels, traffic congestion, and light pollution.

- The Final EIR provides a thorough discussion of the topics identified in this comment. Specifically, traffic congestion is addressed in Master Response 7, 8, 10, and 13. Noise is addressed in Master Response 17. Light is addressed in Master Response 18.

Response L-1-5: The commenters state that they are strongly opposed to the Project, and that their organization has deliberated on the possibility of annexation. They recognize some benefits of annexation, but indicate that they have not formally requested annexation due to numerous unresolved queries including: clarifications needed on the annexation process and associated fees, detailed terms of the annexation agreement, implications of increased property taxes, and other factors that might affect their way of life. The commenters reiterate their opposition to the Project, but acknowledge that if it were to be approved for annexation, then it may be prudent for them to also be annexed to avoid creation of an isolated county island.

- These comments are noted. It should be noted that most of this comment refers to economic and social impacts that are not cognizable under CEQA. For clarification, the Quail Run community would not qualify as an isolated island were it not to be annexed. Master Response 14 provides discussion on Annexations. Much of the clarifications and information that the commenter identifies as unresolved queries are obtainable through coordination with LAFCo, which is the agency responsible for annexations. The City staff is also available to provide information and help with queries that the commenter has about annexation. Ultimately, it is the commenter's decision on whether they would like to be annexed. The City's adopted of an SOI expansion would provide the commenter with the option to be annexed if they decide that it is in their best interest.

Response L-1-6: This passage includes the commenters' concluding remarks regarding their stance on the annexation. They indicate that there has been little time for a thorough and thoughtful analysis. The commenters indicate that they are available for constructive dialogue and look forward to working together for a solution that respects the interest of their community and the City's broader objectives.

- These comments are noted. For clarification, the EIR is a result of extensive technical analysis by a team of consultants working closely with City staff since 2021 (over two years). During that time there was a significant amount of analysis, peer review, design changes, and supplemental analysis necessary to fully analyze the impacts, and reduce or avoid impacts associated with project development. The City staff is available five days a week in City Hall to assist with any questions or to receive and process any applications. The commenters have likewise met with representatives of the applicant on several occasions.

September 16, 2023

Planning Commission
City of Clovis
1033 Fifth Street
Clovis, CA 93612

Re: Items associated with approximately 77 acres of land located at the northeast corner of Shepherd and N. Sunnyside Avenues

Dear Commissioners,

We are residents of Cole Ave. which is 1000 feet south of the proposed project and in an area known as the Dry Creek Preserve.

The Dry Creek Preserve is an important and sensitive location which will, in the future, be the connection between upscale North Clovis and historic Downtown Clovis. The City should be respectful to the impact City growth has on this area – an area which will, in all likelihood, be one of the only areas within the reach of the city that maintains a rural, agriculture lifestyle that many (erroneously believe) reflects the "Clovis Way of Life". However, as discussed herein, the City has not sufficiently analyzed water, traffic, and annexation impacts of the project on the Dry Creek Preserve. L-2-1

For the reasons stated herein, we are opposed to each of the following items set to be voted on during the November 16, 2023 meeting, each of which should fail to be adopted:

- Res. 23-__, A resolution of the City of Clovis Planning Commission recommending that the City Council: (1) Certify the Final Project Environmental Impact Report for the Shepherd North Project; (2) Adopt CEQA Findings of Fact and a Statement of Overriding Consideration; and (3) Adopt a Mitigation Monitoring and Reporting Program.
- Res. 23-__, GPA2021-006, A resolution recommending that the City Council approve a request to amend the circulation element of the General Plan to allow for the placement of a Shepherd Avenue access point on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues.
- Res. 23-__, GPA2021-005, A resolution recommending that the City Council approve a request to amend the land use element of the General Plan for the Development Area (approximately 77 acres) from the Rural Residential land use designation to the Medium-High Density Residential land use designation.
- Res. 23-__, R2021-009, A resolution recommending that the City Council approve a request to prezone property within the Development Area (approximately 77 acres) of the Project site from the Fresno County AL20 Zone District to the Clovis R-1-PRD Zone District.
- Res. 23-__, TM6205, A request to approve a vesting tentative tract map for a 605-lot single-family planned residential development subject to the City Council's approval of the annexation and sphere of influence expansion.

L-2-2

- Res. 23-__, PDP2021-004, A resolution recommending that the City Council approve a request to approve a planned development permit for a 605-lot single-family residential development.

Our opposition is based on our review of the following documents attached to Agenda Item 3 for the November 16, 2023 Meeting Packet: 1. Draft Resolution CEQA; 2. Draft Resolution GPA2021-006; 3. Draft Resolution GPA2021-005; 4. Draft Resolution R2021-009; 5. Draft Resolution TM6205; 6. Draft Resolution PDP2021-004; 7. Applicant's Justification for GPA2021-005 & GPA2021-006; 8. Applicant's Development Standards – Citrea; 9. Applicant's Development Standards – Elev8ions; 10. Applicant's Development Standards – Regent Park; 11. Floor & Elevation Plans – Citrea; 12. Floor & Elevation Plans – Elev8ions; 13. Floor & Elevation Plans – Regent Park; 14. Open Space & Park Exhibit; 15. Draft Project EIR – Volume I; 16. Draft Project EIR – Volume II; 17. Final EIR, including Comment Letters, Responses to Comment; Letters and Text Revisions to the Draft EIR; 18. Correspondence from Commenting Agencies; and 19. Findings in Support of Project Applications

L-2-2 Cont

Water

A Kenneth D. Schmidt and Associates' report from September 2023 entitled "Groundwater Conditions in the Vicinity of Proposed Tract 6205" addresses third party comments submitted during the review process, and importantly, disruption of recharge from rainfall.

The Schmidt Report states that there is south westerly flow of groundwater at the project site and that "[o]nly the north half of the project would appear to influence the groundwater in the rural residential area to the northwest." The report however does not address the impact of the proposed development (including not only loss of storm water but loss of recharge from pecan tree irrigation) on the rural residential areas to the east or south of the proposed project.

Harbour and Associates (2023) have estimated the project average storm water runoff to be about 40 acre-feet per year. The storm water from the proposed development is anticipated to be sent to a flood control basin about a mile north of the project site. However, nothing in the Final EIR or the Schmidt Report address whether 40 acre-feet of annual recharge at a basin site a mile north of the proposed project site would contribute positively to groundwater levels in the rural residential areas surrounding the project site (including north, south, and east of the project site) sufficient to offset the loss of recharge from rainfall.

L-2-3

An Indoor Residential Water Use Study, authored by the California Department of Water Resources, reports that the current statewide median indoor residential water use is 48 gallons per capita per day (or about 17,500 gallons per capita per year). 40 acre-feet of water is equivalent to about 13,000,000 gallons of water – enough for about 750 individuals per year. This is a significant amount of water.

It is estimated that there are 500 rural residential properties within a mile of the proposed development. Nearly half of these residences are in the Dry Creek Preserve, the unincorporated area to the south of the proposed project. Half of the Dry Creek Preserve is southwest of the proposed project – the same direction with the Schmidt Report stated the groundwater flows.

Because the impact to groundwater irrigation and the proposed mediation has not adequately addressed the Dry Creek Preserve, the Final EIR is deficient and should not be accepted. For the same reasons, the project should not be approved.

Traffic

As the City is well aware, traffic on Sunnyside Ave. within the Dry Creek Preserve ("Rural Sunnyside Ave.") is and will continue to become a significant issue as the City expands north of Shepherd. Rural Sunnyside Ave. is a two lane, double striped "no-passing" road that spans about one mile and is only about 24 feet wide. Within this one-mile stretch there are approximately 35 fronting residences and approximately 70 points of entry/exit onto Rural Sunnyside Ave. (including paved and unpaved driveways and access roads, transitions to arterial and adjacent streets).

Rural Sunnyside Ave. is a rural road in a rural environment. There are no streetlights. Several areas have mature trees or bushes which interfere with unobstructed line of sight. There is significant wildlife activity in the area which cross the road (Rural Sunnyside Ave. bisects the Dry Creek Preserve between the Dry Creek Canal and open space within the Dry Creek Preserve). Because there are no bike lanes or sidewalks cyclists and pedestrians share the roadway with the vehicles. Agricultural vehicles (including tractors, harvesting equipment, trailers, equine carriers, and the like) frequently utilize this road alongside "typical" roadway vehicles which may be passing through (including commuters, transport vehicles, construction vehicles, school busses, and waste disposal vehicles). All these factors and more require heightened awareness while driving this stretch… especially at night.

Waste collection vehicles, when collecting from the properties adjacent to Rural Sunnyside Ave., cannot pull off the roadway and instead stop in the lane (noting that stand alone and roll-off-type waste containers are placed just outside of the paved roadway to facilitate pickup). During their pickup from each residence along Rural Sunnyside Ave. the waste collection vehicles impede the flow of traffic while the waste containers are positioned, emptied, and re-positioned. Each stop, much less the cumulative impact of sequential stops along Rural Sunnyside Ave., causes a significant backup. This is especially true since the entire stretch of Rural Sunnyside Ave. is "no passing" – meaning all traffic is queued behind the waste collection vehicle while it completes the street pickup. L-2-4

Similarly, school busses must stop in the roadway on Rural Sunnyside Ave. and impede the flow of traffic. Bus drivers may occasionally need to exit the bus to escort children across the roadway. In some cases, children are picked up at the bus stop by their parents who must also stop along the roadway. The alternative for those that are not picked up by their parents, is to undertake a dangerous walk along Rural Sunnyside Ave. It is especially dangerous due to the fact that there are no sidewalks, and in many places no dirt or gravel path, adjacent to Rural Sunnyside Ave.'s roadway.

There are numerous other examples of common conditions on Rural Sunnyside Ave. that make it uniquely more dangerous and deserving of attention. Long equine carries may need to reverse down portions of Rural Sunnyside Ave. as they back into their property. Oversized agricultural equipment may travel at a slow pace and significantly queue traffic that is unable to pass. During harvest time, agricultural vehicles, such as pecan shakers, sweepers, and harvesters, along with the harvesting crew, utilize Rural Sunnyside Ave. to move the slow oversized equipment from one orchard to another. Cyclists - that can only travel in roadway – either cause queued traffic behind them, or create a great risk of frustrated vehicles illegally overtaking them.

As shown above, Rural Sunnyside Ave. has unique traffic related concerns. This is unfortunate since it, along with Fowler Ave., is an important --- if not the most important --- route between the proposed project and any location in Clovis or Fresno that is south of Nees Ave. When Rural Sunnyside Ave. crosses

Nees Ave. it turns into the City's Sunnyside Ave. At this magical intersection Sunnyside Ave. transforms from a 24-foot wide, two lane, unlit road without a sidewalk to a 64-foot wide, four lane, lit road with a sidewalk. Unfortunately, however, neither the Draft EIR, the Final EIR, nor the traffic studies consider Rural Sunnyside Ave. to be anything other than a regular City road, though each admit the proposed project would significantly impact it.

The Final EIR addresses comments that were received regarding the Draft EIR. Master Response 7 (Traffic generation), Master Response 8 (Traffic Volume), Master Response 9 (Pedestrian and Cyclist Traffic), and Master Response 10 (Traffic calming/Improvements) states that the improvements identified in the traffic study --- sidewalks, curb and gutter along Sunnyside Avenue along the project frontage --- would help alleviate traffic congestion and safety issues within the project vicinity.

If these statements (or any other statement) is false, the Final EIR is untrustworthy. If these statements is true, then the Final EIR either (i) treats Sunnyside Ave. between Sheperd Ave. and Nees Ave. as not in the "vicinity" of the proposed project or (ii) fails to analyze the impact of the proposed project other than any particular impact which may be mitigated by the suggested improvements (i.e., it only finds impact to those matters which may be offset by signalization of Sunnyside/Shepherd and Sunnyside/Nees intersections. In any event, the presence of this statement underlies flaws in the Final EIR. L-2-4

The responses further double down on the bizarre assertion that sidewalks north of Shepherd Ave. somehow mitigate impact south of Shepherd Ave. One of the comments to the Draft EIR was a letter from Norman D Morrison, dated September 4, 2023 and entitled "Comments in Opposition to/regarding Shepherd North Draft EIR E202310000202" ("Morrison Letter"). The Morrison Letter indicated deficiencies in adequately analyzing traffic impacts or identify mitigation measures on Sunnyside Avenue between Shepherd and Nees within the Dry Creek Preserve. Mr. Morrison is a resident on Rural Sunnyside Ave.

Rather than analyzing Mr. Morrison's comment along the situs of which it referred (i.e., Rural Sunnyside Ave.), Response R-4 again simply states "[t]he improvements proposed in the study would help address the traffic congestion issues…. within the project vicinity", and again touts the benefits of the improvements along the project frontage without identifying how such improvements would at all mitigate the impact on Rural Sunnyside Ave.

Whether these statements are false or at best misleading, they render the Final EIR unfit for acceptance. For the same reasons, the project should not be approved. The devil and deficiencies here are in the details: much like addressed above with respect to water, the Final EIR appears to not significantly address the impacts on traffic in the Dry Creek Preserve, and importantly, Rural Sunnyside Ave.

Sheperd Ave. Access Point

The project proposes an access point along Sheperd Ave. about 1000' east of the intersection of Sunnyside/Shepherd. Unlike the ill-advised access point to Heritage Grove permitted between the intersections of Sunnyside/Shepherd and Clovis/Shepherd, this stretch of Shepherd Ave. between the proposed access point and the intersection of Fowler/Shepherd is one lane in each direction. Rather than requiring the applicant to dedicate enough property to substantially convert Shepherd Ave. between Sunnyside Ave. and Fowler Ave. into four travel lanes (which would align with Shepherd Ave. east and west L-2-5 of the project), the City apparently is committed to this stretch in a major arterial in North Clovis being a permanent pinch point. Because it will apparently remain a single lane from Fowler Ave. to Sunnyside Ave., any impediment to the flow of traffic appurtenant to the project along Shepherd Av. should be avoided. The City should not amend the circulation element of the General Plan to allow the Access Point as doing so would further congest an already congested stretch of Shepherd Ave.

L-2-5 Cont

Annexation

While the Draft EIR and Final EIR briefly address potential annexation issues to properties north of Shepherd Ave., it doesn't address a bigger concern for the City – annexation of properties in the Dry Creek Preserve south of Shepherd Ave.

Several people provided comments about annexation. Although it doesn't appear that any of these comments were directed to possible annexation of properties within the Dry Creek Preserve, it bears reminding that unconsented annexation of any property within the Dry Creek Preserve will significantly impact the proposed project and the City and its resources. The City should be reminded that most residents of the Dry Creek Preserve do and will object to annexation. Many of those which may choose to not formally object to annexation have executed annexation agreements which relieve them of many obligations and perceived benefits of being in the City.

L-2-6

Should the proposed project trigger annexation proceedings on property in the Dry Creek Preserve, the City and applicant should expect significant delays to final project approval.

The Final EIR should not be accepted since it fails to address the potential of the project to impact the potential for annexation in the "vicinity" anywhere south of the proposed project boundaries. For the same reasons, the project should not be approved. Should the City, however, accept the Final EIR, it should condition approval of the project on no property south of Shepherd Ave. being the subject of annexation proceedings.

Conclusion

The Final EIR is woefully deficient with resect to analyzing the impact of the proposed project and proposing mitigation measures therefor in the "vicinity" of the project: the impact to groundwater south of Shepherd; the impact to all traffic concerns on Sunnyside Ave. between Shepherd Ave. and Nees Ave.; and the potential for annexation of any property in the Dry Creek Preserve. As such, the Final EIR should not be accepted, and the project should not be approved. None of the resolutions should be passed.

L-2-7

Respectfully,

Marcus and Amy DiBuduo

Response to Letter L-2: Marcus and Amy DiBuduo, Residents of Clovis

Response L-2-1: This comment is an introductory statement, indicating first that the commenter is a resident of Cole Ave, then stating that Dry Creek Preserve is an important and sensitive location that will be a future connection between North Clovis and historic downtown Clovis. The comment states that the "*City should be respectful to the impact City growth has on this area – an area which will, in all likelihood, be one of the only areas within the reach of the city that maintains a rural, agriculture lifestyle that many (erroneously believe) reflects the "Clovis Way of Life". However, as discussed herein, the City has not sufficiently analyzed water, traffic, and annexation impacts of the project on the Dry Creek Preserve.*"

- These comments are noted. The Draft EIR has sufficiently analyzed water, traffic, and annexation of the Project site. The Draft EIR provided detailed analysis on each of these topics. The Final EIR provided supplemental discussion on each of these topics. Water is addressed in Master Responses 1, 2, 3, 4, and 5. Traffic is addressed in Master Responses 6, 7, 8, 9, 10, 11, 12, and 13. Annexation is addressed in Master Response 14. Each of these issues were sufficiently analyzed in the Draft EIR and the Final EIR.

Response L-2-2: This comment indicates that the commenter is opposed each of the items set to be voted on during the November 16, 2023 meeting. The commenter then provides a list of six resolutions. Following the list of resolutions, the commenter indicates that their opposition is based on their review of the 19 documents that are part of the Planning Commission Agenda for Item 8 on November 16, 2023.

- The commenters' opposition is noted and will be provided to the City for their consideration. There is no specific comment on the EIR that warrants a specific response.

Response L-2-3: The commenter states the following regarding water:

> *A Kenneth D. Schmidt and Associates' report from September 2023 entitled "Groundwater Conditions in the Vicinity of Proposed Tract 6205" addresses third party comments submitted during the review process, and importantly, disruption of recharge from rainfall.*
>
> *The Schmidt Report states that there is south westerly flow of groundwater at the project site and that "[o]nly the north half of the project would appear to influence the groundwater in the rural residential area to the northwest." The report however does not address the impact of the proposed development (including not only loss of storm water but loss of recharge from pecan tree irrigation) on the rural residential areas to the east or south of the proposed project.*

Harbour and Associates (2023) have estimated the project average storm water runoff to be about 40 acre- feet per year. The storm water from the proposed development is anticipated to be sent to a flood control basin about a mile north of the project site. However, nothing in the Final EIR or the Schmidt Report address whether 40 acre-feet of annual recharge at a basin site a mile north of the proposed project site would contribute positively to groundwater levels in the rural residential areas surrounding the project site (including north, south, and east of the project site) sufficient to offset the loss of recharge from rainfall.

An Indoor Residential Water Use Study, authored by the California Department of Water Resources, reports that the current statewide median indoor residential water use is 48 gallons per capita per day (or about 17,500 gallons per capita per year). 40 acre-feet of water is equivalent to about 13,000,000 gallons of water – enough for about 750 individuals per year. This is a significant amount of water.

It is estimated that there are 500 rural residential properties within a mile of the proposed development. Nearly half of these residences are in the Dry Creek Preserve, the unincorporated area to the south of the proposed project. Half of the Dry Creek Preserve is southwest of the proposed project – the same direction with the Schmidt Report stated the groundwater flows.

Because the impact to groundwater irrigation and the proposed mediation has not adequately addressed the Dry Creek Preserve, the Final EIR is deficient and should not be accepted. For the same reasons, the project should not be approved.

- The Draft EIR, Final EIR, and the Water Supply Assessment adequately address the impact of the proposed development on the rural residential areas to the east and south of the Project site. Groundwater and water supply is addressed in DEIR Section 3.9 Hydrology and Water Quality and in Section 3.14 Utilities. The DEIR references the *City of Clovis Urban Water Management Plan 2020 Update* (Provost & Pritchard, 2021B), *City of Clovis Water Shortage Contingency Plan 2020 Update* (Provost & Pritchard, 2021A); the *City of Clovis Water Master Plan Update Phase III* (Provost & Pritchard, 2017), and the *California's Groundwater: Bulletin 118 - San Joaquin Valley Groundwater Basin/Kings Subbasin* (DWR 2006) as a source of information to support the analysis of water supply.

  The Project contemplates the development of the Project site with impervious surfaces would not substantially reduce rainwater infiltration and groundwater recharge when compared to existing conditions. First, the open space areas of the development totaling approximately 5.54 acres will remain largely pervious and allow direct recharge onsite. Additionally, the collection of rainwater for those areas of the Project site with impervious surfaces will be routed into the proposed Project's storm drainage system, which is collected and would primarily flow to nearby flood control basins managed by the Fresno Metropolitan Flood Control District (FMFCD). The FMFCD facilities are largely earthen bottom, which allows for recharge of stormwater into the local aquifer. FMFCD estimates that its facilities recharge more than 45,000 acre-feet each year.

The commenters also expressed concerns with the study prepared by Kenneth D. Schmidt and Associates. That study provides a supplemental analysis of the groundwater conditions in the vicinity of the Project Site. The conclusion of the report is that the proposed Project would use water from the City of Clovis distribution system as opposed to on-site wells, and that there would be an overall reduction in groundwater pumpage of about 400 acre-feet per year compared to the pecan orchard land use. The report also includes a water balance that considers an estimated 40 acre-feet per year for storm drainage draining offsite. Although this storm drainage would be moved offsite, it would continue to be recharged in the Kings Groundwater Subbasin. In any event, the amount of stormwater moved offsite is only approximately ten percent (10%) of the water saved from the reduction in groundwater pumpage.

Therefore, even with storm drainage to offsite locations, there would be a beneficial impact to the local groundwater supplies from the reduction in pumping for irrigation. As a result, the proposed Project would not result in negative effects to the surrounding properties due to any loss of onsite recharge.

Response L-2-4: The commenter states the following:

> *"As the City is well aware, traffic on Sunnyside Ave. within the Dry Creek Preserve ("Rural Sunnyside Ave.") is and will continue to become a significant issue as the City expands north of Shepherd. Rural Sunnyside Ave. is a two lane, double striped "no-passing" road that spans about one mile and is only about 24 feet wide. Within this one-mile stretch there are approximately 35 fronting residences and approximately 70 points of entry/exit onto Rural Sunnyside Ave. (including paved and unpaved driveways and access roads, transitions to arterial and adjacent streets).*
>
> *Rural Sunnyside Ave. is a rural road in a rural environment. There are no streetlights. Several areas have mature trees or bushes which interfere with unobstructed line of sight. There is significant wildlife activity in the area which cross the road (Rural Sunnyside Ave. bisects the Dry Creek Preserve between the Dry Creek Canal and open space within the Dry Creek Preserve). Because there are no bike lanes or sidewalks cyclists and pedestrians share the roadway with the vehicles. Agricultural vehicles (including tractors, harvesting*

equipment, trailers, equine carriers, and the like) frequently utilize this road alongside "typical" roadway vehicles which may be passing through (including commuters, transport vehicles, construction vehicles, school busses, and waste disposal vehicles). All these factors and more require heightened awareness while driving this stretch… especially at night.

Waste collection vehicles, when collecting from the properties adjacent to Rural Sunnyside Ave., cannot pull off the roadway and instead stop in the lane (noting that stand alone and roll-off-type waste containers are placed just outside of the paved roadway to facilitate pickup). During their pickup from each residence along Rural Sunnyside Ave. the waste collection vehicles impede the flow of traffic while the waste containers are positioned, emptied, and re-positioned. Each stop, much less the cumulative impact of sequential stops along Rural Sunnyside Ave., causes a significant backup. This is especially true since the entire stretch of Rural Sunnyside Ave. is "no passing" – meaning all traffic is queued behind the waste collection vehicle while it completes the street pickup.

Similarly, school busses must stop in the roadway on Rural Sunnyside Ave. and impede the flow of traffic. Bus drivers may occasionally need to exit the bus to escort children across the roadway. In some cases, children are picked up at the bus stop by their parents who must also stop along the roadway. The alternative for those that are not picked up by their parents, is to undertake a dangerous walk along Rural Sunnyside Ave. It is especially dangerous due to the fact that there are no sidewalks, and in many places no dirt or gravel path, adjacent to Rural Sunnyside Ave.'s roadway.

There are numerous other examples of common conditions on Rural Sunnyside Ave. that make it uniquely more dangerous and deserving of attention. Long equine carries may need to reverse down portions of Rural Sunnyside Ave. as they back into their property. Oversized agricultural equipment may travel at a slow pace and significantly queue traffic that is unable to pass. During harvest time, agricultural vehicles, such as pecan shakers, sweepers, and harvesters, along with the harvesting crew, utilize Rural Sunnyside Ave. to move the slow oversized equipment from one orchard to another. Cyclists - that can only travel in roadway – either cause queued traffic behind them, or create a great risk of frustrated vehicles illegally overtaking them.

As shown above, Rural Sunnyside Ave. has unique traffic related concerns. This is unfortunate since it, along with Fowler Ave., is an important --- if not the most important --- route between the proposed project and any location in Clovis or Fresno that is south of Nees Ave. When Rural Sunnyside Ave. crosses Nees Ave. it turns into the City's Sunnyside Ave. At this magical intersection Sunnyside Ave. transforms from a 24-foot wide, two lane, unlit road without a sidewalk to a 64-foot wide, four lane, lit road with a sidewalk. Unfortunately, however, neither the Draft EIR, the Final EIR, nor the traffic studies consider

Rural Sunnyside Ave. to be anything other than a regular City road, though each admit the proposed project would significantly impact it.

The Final EIR addresses comments that were received regarding the Draft EIR. Master Response 7 (Traffic generation), Master Response 8 (Traffic Volume), Master Response 9 (Pedestrian and Cyclist Traffic), and Master Response 10 (Traffic calming/Improvements) states that the improvements identified in the traffic study --- sidewalks, curb and gutter along Sunnyside Avenue along the project frontage --- would help alleviate traffic congestion and safety issues within the project vicinity.

If these statements (or any other statement) is false, the Final EIR is untrustworthy. If these statements is true, then the Final EIR either (i) treats Sunnyside Ave. between Sheperd Ave. and Nees Ave. as not in the "vicinity" of the proposed project or (ii) fails to analyze the impact of the proposed project other than any particular impact which may be mitigated by the suggested improvements (i.e., it only finds impact to those matters which may be offset by signalization of Sunnyside/Shepherd and Sunnyside/Nees intersections. In any event, the presence of this statement underlies flaws in the Final EIR.

The responses further double down on the bizarre assertion that sidewalks north of Shepherd Ave. somehow mitigate impact south of Shepherd Ave. One of the comments to the Draft EIR was a letter from Norman D Morrison, dated September 4, 2023 and entitled "Comments in Opposition to/regarding Shepherd North Draft EIR E202310000202" ("Morrison Letter"). The Morrison Letter indicated deficiencies in adequately analyzing traffic impacts or identify mitigation measures on Sunnyside Avenue between Shepherd and Nees within the Dry Creek Preserve. Mr. Morrison is a resident on Rural Sunnyside Ave.

Rather than analyzing Mr. Morrison's comment along the situs of which it referred (i.e., Rural Sunnyside Ave.), Response R-4 again simply states "[t]he improvements proposed in the study would help address the traffic congestion issues…. within the project vicinity", and again touts the benefits of the improvements along the project frontage without identifying how such improvements would at all mitigate the impact on Rural Sunnyside Ave.

Whether these statements are false or at best misleading, they render the Final EIR unfit for acceptance. For the same reasons, the project should not be approved. The devil and deficiencies here are in the details: much like addressed above with respect to water, the Final EIR appears to not significantly address the impacts on traffic in the Dry Creek Preserve, and importantly, Rural Sunnyside Ave.

- The Project's potential traffic impacts were analyzed in the Draft EIR in accordance with the City's Traffic Impact Analysis Guidelines. The traffic analysis covers access, traffic generation, traffic volume, vehicle miles traveled, pedestrian and bicycles, traffic calming, and safety. Supplemental discussion was also provided in response to comments in the Final EIR. The supplemental discussion is provided in Master Response 6, 7, 8, 9, 10, 11, 12, and 13.

The traffic analysis was performed by a team of highly reputable traffic engineers licensed by the State of California, working in coordination with the City Engineer, Caltrans, Fresno Council of Governments, City of Fresno, and County of Fresno. The traffic engineers first prepared a scoping document that was distributed to all agencies responsible for traffic and circulation systems in the region (i.e. Caltrans, Fresno Council of Governments, City of Fresno, County of Fresno). The scoping and consultation process involved having these agencies review the scoping document and provide their recommendations on the appropriate geographic scope for the analysis and to ensure any facilities that had the potential to be adversely affected by the project were evaluated in the study. The traffic engineers incorporated any comments received by the above agencies regarding the scope of the analysis. After consultation with these transportation agencies, the traffic engineers prepared a traffic analysis, which was distributed to these agencies for their review and comment. The traffic analysis followed the methodology outlined in the City's Traffic Impact Analysis Guidelines.

The Project's potential impacts to Sunnyside Avenue were analyzed in the Transportation Impact Analysis Report (TIA) and the draft EIR. The TIA included an in-depth intersection and roadway segment analysis for Sunnyside Avenue, including the intersections of Sunnyside Avenue/Shepherd Avenue, Sunnyside Avenue/Teague Avenue, Sunnyside Avenue/Nees Avenue, and the roadway segments between these intersections.

The TIA proposed two signals at the intersections of Sunnyside Avenue/Shepherd Avenue and Sunnyside Avenue/Nees Avenue to eliminate the operational deficiency at these locations. Installing these signals at these locations would also help alleviate speeding issues along this corridor. It would also help drivers to be attentive to slow moving vehicles, vehicles backing out from private driveways, and to pedestrians or cyclists ahead while waiting at the signals. Further, as explained in the TIA, both the roadway segments and the intersection of Sunnyside Avenue/Teague Avenue is forecast to operate at or better than LOS D, consistent with City threshold, and County's threshold within the City of Fresno and Clovis Sphere of Influence area.

Sunnyside Avenue is designated as a collector within the City's General Plan. Additionally, Class II Bike lanes are proposed along Sunnyside Avenue. Once implemented, these bike lanes would help alleviate safety concerns about bikers along this corridor. Those lanes would also function as a refuge area/curbside for pedestrians, trash pick-up collection trucks, or for vehicles backing up.

Additionally, as explained in the TIA and the Draft EIR, while some of the project trips are estimated to utilize Sunnyside Avenue, the majority of the project trips are estimated to utilize Clovis Avenue, since Clovis Avenue provides a direct connection to the SR-168/Herndon Avenue interchange and has more vehicular capacity compared to Sunnyside Avenue.

The commenters also raise concerns that the Project would exacerbate existing unsafe conditions on Sunnyside Avenue. As shown in the TIA and the draft EIR, all intersections and roadway segments along Sunnyside Avenue currently operates at an acceptable Level of Service (LOS). This acceptable LOS under existing conditions suggests that there is not an unsafe condition on Sunnyside Avenue. Given the location of Sunnyside Avenue in relation to the proposed Northwest Urban Center growth area (including Heritage Grove Specific Plan area, TM6200, and other projects), traffic along Sunnyside Avenue is projected to increase with time, as shown in the TIA in near-term, and long-term cumulative analysis scenarios. However, as further shown in the TIA, with implementation of the recommended improvements in the TIA, Sunnyside Avenue would operate at an acceptable LOS. This acceptable LOS under near-term, and long-term cumulative conditions suggests that there is not an unsafe condition on Sunnyside Avenue now or in the future. Furthermore, there is no geometric design component of this roadway that is considered unsafe. It is notable that improvements (signals, sidewalks, and bike lanes) are roadway design elements that help improve safety, and specifically some of the safety concerns raised by the commentator (vehicle backing up, speeding, bike and pedestrian concerns) are addressed with the addition of roadway improvements. Adding signals improves safety by controlling traffic, bike, and pedestrian movements through signalized intersections. The control of the vehicle speed and movements reduces the potential for conflicts, and improves overall safety at intersections. Additionally, sidewalks improve safety by separating pedestrians from vehicular traffic. Bike lanes also improve safety by designating a lane for bike travel that is separated from vehicular travel.

The commenters also state that the DEIR and FEIR treat Sunnyside Ave. between Shepherd Ave. and Nees Ave. as not in the "vicinity" of the proposed project.

However, the Project's potential impacts to Sunnyside Avenue were specifically addressed in the TIA and the DEIR, as explained above.

The commenters also express concern that the responses to comments in the FEIR were not responsive to the correspondence submitted by Norman Morrison. The Morrison Letter is addressed in Section 2.0 of this Final EIR. The response notes that the TIA includes contribution of traffic from all future developments that would add traffic to the TIA study area. As such, the traffic improvements recommended as part of this study accounts for cumulative traffic impact from all future projects, as well as the proposed project. Additionally, the traffic analysis takes into consideration the effects of school traffic under existing and future long-range conditions. The improvements proposed in the study would help address the traffic congestion issues from all future developments, as well as school related traffic within the project vicinity. This includes both vehicular and non-motorized traffic issues as described in the TIA.

The response also notes that, currently, there is no signalized control along Sunnyside Avenue between Behymer Avenue and Alluvial Avenue. Among the major intersections along this corridor, the intersection of Sunnyside Avenue/Shepherd Avenue is an all-way stop-controlled intersection, Sunnyside Avenue/Teague Avenue is a two-way stop-controlled intersection, and Sunnyside Avenue/Nees Avenue is an all-way stop-controlled intersection.

As included in the TIA, signals have been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue, and Sunnyside Avenue/Nees Avenue, along with other improvements at these locations. As such, with implementation of these signals along this corridor, the corridor is anticipated to experience improved traffic flow, and alleviate current safety concerns. This is after account ting for the traffic from the project and other adjacent projects in the vicinity. Both signals are in the City's Development Impact Fee program and the City will be implementing these improvements.

The project will also be implementing several project design features that will help eliminate gaps in the pedestrian circulation network around the project site. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue and Shepherd Avenue, Fordham Avenue, and Heirloom Avenue and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings have been recommended to enhance, pedestrian safety in the neighborhood. This includes a signal that has been proposed at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), which will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location.

In addition, Shepherd Avenue will be constructed curb to curb between Sunnyside and Fowler Avenue including a trail/sidewalk along the north side of Shepherd Avenue and bike lanes along this segment of Shepherd Avenue. This will enhance both vehicular safety and pedestrian safety along this corridor.

The project proposes to connect to the existing roundabout at the northerly project location along Sunnyside Avenue. Additionally, sidewalks and bike lanes will be constructed along the project frontage on Shepherd Avenue, Sunnyside Avenue, and Fordham Avenue. Addition of these project design features would help in traffic calming as well as enhance safety around the project site.

The project will be implementing several project design features around the project site that will improve safety for children. As part of project frontage improvement, the project will be constructing sidewalks, curb and gutter along Sunnyside Avenue, Shepherd Avenue, Heirloom Avenue, and Fordham Avenue, and dedicate space for bike lanes along Shepherd Avenue. Additionally, installing signals with pedestrian crossings at the intersection of Sunnyside Avenue/Shepherd Avenue (southwest corner of the project site), will help pedestrians accessing the Dry Creek trailhead safely with designated crosswalks at this location. As such, implementation of the signal and said sidewalks would help address speeding and safety issues along these corridors.

The above-mentioned project design features are beneficial improvements along the project frontage that specifically improve safety. The commenter concludes that the Final EIR appears to not significantly address the impacts on traffic in the Dry Creek Preserve, and specifically, Rural Sunnyside Avenue. The widening of Shepherd Avenue from a 2-lane undivided rural roadway to a 4-lane divided roadway and a longer curve will increase the capacity of the section between Sunnyside Avenue and Fowler Avenue. These improvements tend to change some of the localized traffic patterns over time. There are no geometric safety concerns under current or future conditions along this roadway. In any event, the above responses address traffic-related concerns regarding Sunnyside Avenue.

Response L-2-5: The commenter states the following:

> *"The project proposes an access point along Sheperd Ave. about 1000' east of the intersection of Sunnyside/Shepherd. Unlike the ill-advised access point to Heritage Grove permitted between the intersections of Sunnyside/Shepherd and Clovis/Shepherd, this stretch of Shepherd Ave. between the proposed access point and the intersection of*

Fowler/Shepherd is one lane in each direction. Rather than requiring the applicant to dedicate enough property to substantially convert Shepherd Ave. between Sunnyside Ave. and Fowler Ave. into four travel lanes (which would align with Shepherd Ave. east and west of the project), the City apparently is committed to this stretch in a major arterial in North Clovis being a permanent pinch point. Because it will apparently remain a single lane from Fowler Ave. to Sunnyside Ave., any impediment to the flow of traffic appurtenant to the project along Shepherd Av. should be avoided. The City should not amend the circulation element of the General Plan to allow the Access Point as doing so would further congest an already congested stretch of Shepherd Ave.

- The commenters raise the concern that the Project contemplates that Shepherd Avenue would permanently be configured as having one lane each way in the location of the Project frontage. The Project, however, contemplates the installation of a second westbound lane, along with sidewalks, curb and gutter, along the Shepherd Avenue frontage. Additionally, the project will be dedicating adequate space for construction of the second eastbound lane, bike lanes, and sidewalk per the existing alignment of Sunnyside Avenue between east and west end of the project, to be constructed by the City as part of the City's DIF programs. Therefore, this segment will not remain one lane along the Project frontage, but rather a two-lane facility. Due to the expansion to a two-lane facility, the Project is not anticipated to create any potential for bottleneck conditions for traffic along Shepherd Avenue.

  Additionally, the driveway along Shepherd Avenue will not be a full access driveway, rather, this will be a right-in right-out left-in (RIROLI) driveway only. A raised median and a dedicated left turn storage pocket will be installed at this intersection for safe maneuver of traffic using a two-stage access process. As such, none of the project traffic movements at this location would negatively affect the through traffic along Shepherd Avenue.

- Also, as included in the TIA, a sight distance analysis was conducted for all driveways to determine adequacy of sight for safe maneuver at the driveways using California Highway Design Manual (HDM) recommended methodology. As such, all the proposed project driveways achieve the adequate sight distances and have clear sight triangles for the drivers along the project frontage.

Response L-2-6: The commenter states the following:

"While the Draft EIR and Final EIR briefly address potential annexation issues to properties north of Shepherd Ave., it doesn't address a bigger concern for the City – annexation of properties in the Dry Creek Preserve south of Shepherd Ave.

Several people provided comments about annexation. Although it doesn't appear that any of these comments were directed to possible annexation of properties within the Dry Creek Preserve, it bears reminding that unconsented annexation of any property within the Dry Creek Preserve will significantly impact the proposed project and the City and its resources. The City should be reminded that most residents of the Dry Creek Preserve do and will object to annexation. Many of those which may choose to not formally object to annexation have executed annexation agreements which relieve them of many obligations and perceived benefits of being in the City.

Should the proposed project trigger annexation proceedings on property in the Dry Creek Preserve, the City and applicant should expect significant delays to final project approval.

The Final EIR should not be accepted since it fails to address the potential of the project to impact the potential for annexation in the "vicinity" anywhere south of the proposed project boundaries. For the same reasons, the project should not be approved. Should the City, however, accept the Final EIR, it should condition approval of the project on no property south of Shepherd Ave. being the subject of annexation proceedings."

- The commenter's concerns and objections to the annexation of property in the Dry Creek Preserve are noted and will be provided to the City for consideration. Annexation, SOI Expansion, and the Provision of City Services are addressed under Master Response 14. It is noted that the only annexation provided in the Development Area. The other areas that are described as Non-Development Areas are not proposed for annexation. Instead, these areas would be included in the SOI expansion, which would make them eligible for annexation should the property owners desire to annex into the City.

Response L-2-7: The commenter provides the following conclusion:

"The Final EIR is woefully deficient with respect to analyzing the impact of the proposed project and proposing mitigation measures therefor in the "vicinity" of the project: the impact to groundwater south of Shepherd; the impact to all traffic concerns on Sunnyside Ave. between Shepherd Ave. and Nees Ave.; and the potential for annexation of any property in the Dry Creek Preserve. As such, the Final EIR should not be accepted, and the project should not be approved. None of the resolutions should be passed."

- The City staff and their consultant team have diligently worked to analyze the impacts of the Project, and develop mitigation measures where impacts were identified. The EIR process included extensive public review in accordance with State law. The analysis included an analysis of impacts to groundwater, impacts to traffic on vicinity roadways, and potential for annexation. The commenters' concerns and objections to the Project, the Final EIR, and Resolutions are noted and will be provided to the City for consideration.

-----Original Message-----
From: George Gonzalez <georgeg@ci.clovis.ca.us>
Sent: Wednesday, November 15, 2023 7:59 AM
To: Rich Wathen <rich.wathen@outlook.com>
Cc: George Gonzalez <georgeg@ci.clovis.ca.us>; Sean Smith <SeanS@ci.clovis.ca.us>; David Merchen <davidm@ci.clovis.ca.us>; Renee Mathis <ReneeM@ci.clovis.ca.us>
Subject: RE: [External] Information for the Quail run homeowners

Hi Rich,

The Heritage Grove Design Guidelines were adopted by the City Council in 2016. Hope this helps, let me know if you need additional information.

Sincerely,

George González, MPA | Senior Planner
City of Clovis | Planning Division
p. 559.324.2383 | f. 559.324.2844
georgeg@cityofclovis.com

-----Original Message-----
From: Rich Wathen <rich.wathen@outlook.com>
Sent: Wednesday, November 15, 2023 7:37 AM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: Re: [External] Information for the Quail run homeowners

Thank you very much for the quick response George. I really appreciate it. Could you also tell me approximately when the northwest village plan was approved/adopted. Thank you. L-3-1

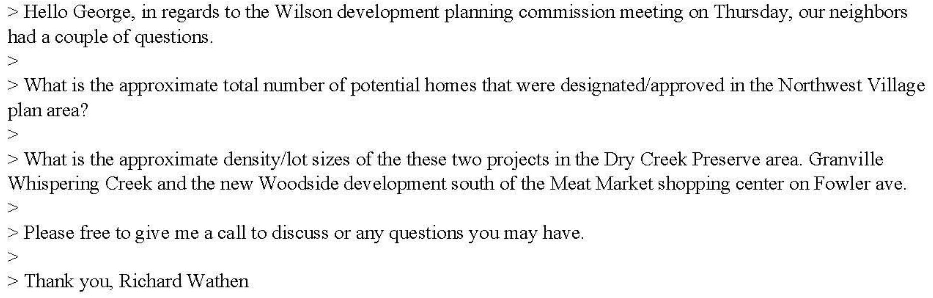
Sent from my iPhone

> On Nov 15, 2023, at 6:00 AM, George Gonzalez <georgeg@ci.clovis.ca.us> wrote:
>
> Hi Rich,

> Woodside's TM6154 located on the east side of Fowler Avenue, north of Teague Avenue has a density of 2.20 units per acre. Woodside's TM6284 located on the south side of Teague Avenue, between Sunnyside and Folwer Avenues has a density of 2.3 units per acre. Granville Home's TM5550 located on the north side of Teague Avenue, between Fowler and Armstrong Avenues has a density of approximately 1 dwelling unit per acre.
>
> Per the Heritage Grove Design Guidelines, the Heritage Grove Growth Area will accommodate a population of approximately 30,000 citizens. This would be equivalent to approximately (estimated) 10,345 homes. I hope this helps, please let me know if you need additional information. Thanks.

George González, MPA | Senior Planner
> City of Clovis | Planning Division
> p. 559.324.2383 | f. 559.324.2844
> georgeg@cityofclovis.com

> -----Original Message-----
> From: Rich Wathen <rich.wathen@outlook.com>
> Sent: Tuesday, November 14, 2023 2:05 PM
> To: George Gonzalez <georgeg@ci.clovis.ca.us>
> Subject: [External] Information for the Quail run homeowners



> Hello George, in regards to the Wilson development planning commission meeting on Thursday, our neighbors had a couple of questions.
>
> What is the approximate total number of potential homes that were designated/approved in the Northwest Village plan area?
>
> What is the approximate density/lot sizes of the these two projects in the Dry Creek Preserve area. Granville Whispering Creek and the new Woodside development south of the Meat Market shopping center on Fowler ave.
>
> Please free to give me a call to discuss or any questions you may have.
>
> Thank you, Richard Wathen

L-3-2

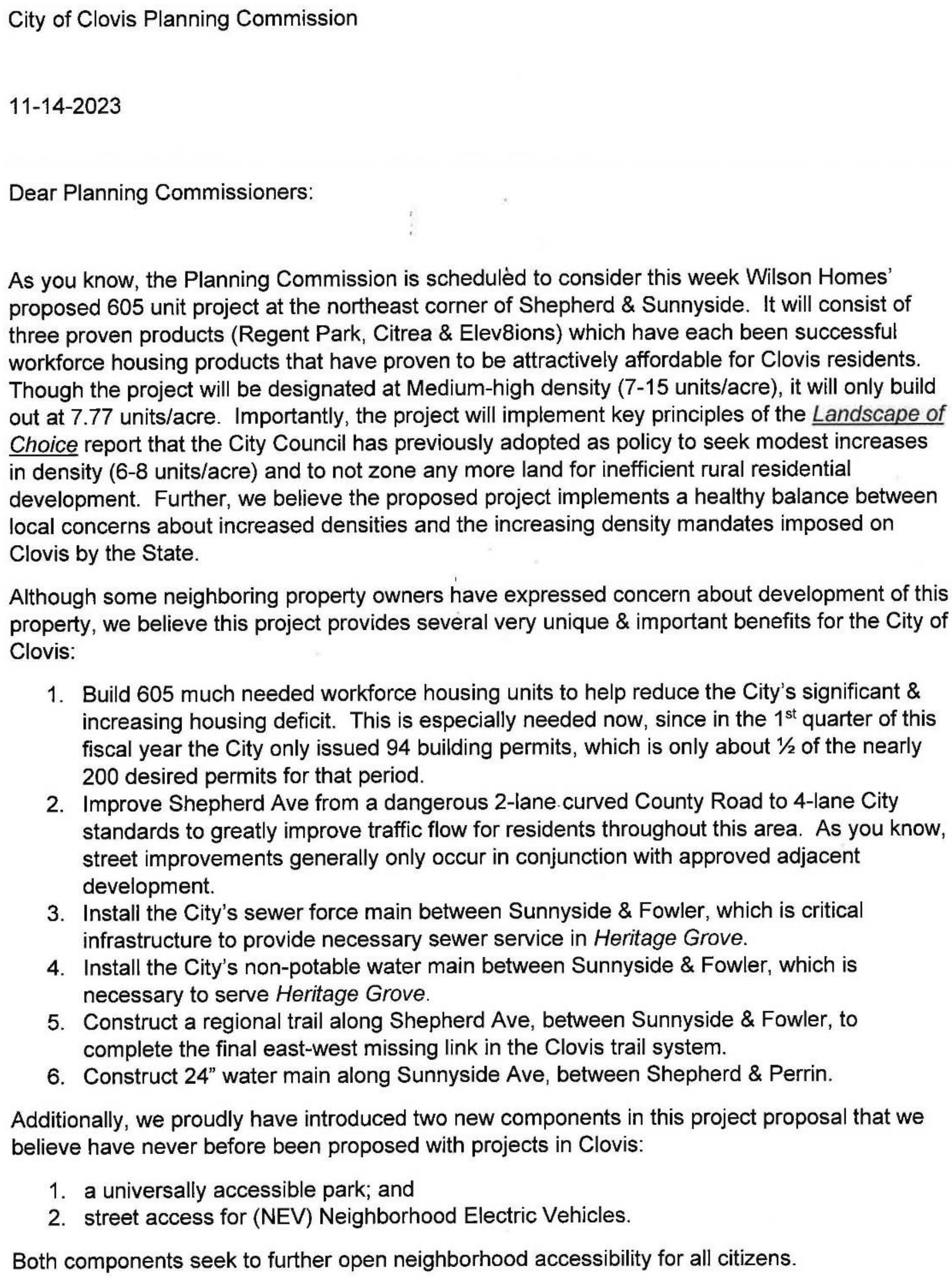
Response to Letter L-3: Rich Wathen, Resident of Clovis

Response L-3-1: This comment is a question sent via email to City of Clovis Senior Planner George Gonzalez. The question is as follows: "*Could you also tell me approximately when the northwest village plan was approved/adopted. Thank you.*"

- City of Clovis Senior Planner George Gonzalez responded via email to the commenter on the same day that question was originally asked. The response is as follows: "*The Heritage Grove Design Guidelines were adopted by the City Council in 2016.*" The commenter's question does not raise any concerns with the EIR, and no further response is warranted.

Response L-3-2: This comment is a question sent via email to City of Clovis Senior Planner George Gonzalez. The question is as follows: "*in regards to the Wilson development planning commission meeting on Thursday, our neighbors had a couple of questions…What is the approximate total number of potential homes that were designated/approved in the Northwest Village plan area?...What is the approximate density/lot sizes of the these two projects in the Dry Creek Preserve area. Granville Whispering Creek and the new Woodside development south of the Meat Market shopping center on Fowler ave.*"

- City of Clovis Senior Planner George Gonzalez responded via email to the commenter on the same day that question was originally asked. The response is as follows: "*Woodside's TM6154 located on the east side of Fowler Avenue, north of Teague Avenue has a density of 2.20 units per acre. Woodside's TM6284 located on the south side of Teague Avenue, between Sunnyside and Fowler Avenues has a density of 2.3 units per acre. Granville Home's TM5550 located on the north side of Teague Avenue, between Fowler and Armstrong Avenues has a density of approximately 1 dwelling unit per acre…Per the Heritage Grove Design Guidelines, the Heritage Grove Growth Area will accommodate a population of approximately 30,000 citizens. This would be equivalent to approximately (estimated) 10,345 homes.*" The commenter's question does not raise any concerns with the EIR, and no further response is warranted.



City of Clovis Planning Commission

11-14-2023

Dear Planning Commissioners:

As you know, the Planning Commission is scheduled to consider this week Wilson Homes' proposed 605 unit project at the northeast corner of Shepherd & Sunnyside. It will consist of three proven products (Regent Park, Citrea & Elev8ions) which have each been successful workforce housing products that have proven to be attractively affordable for Clovis residents. Though the project will be designated at Medium-high density (7-15 units/acre), it will only build out at 7.77 units/acre. Importantly, the project will implement key principles of the *Landscape of Choice* report that the City Council has previously adopted as policy to seek modest increases in density (6-8 units/acre) and to not zone any more land for inefficient rural residential development. Further, we believe the proposed project implements a healthy balance between local concerns about increased densities and the increasing density mandates imposed on Clovis by the State.

Although some neighboring property owners have expressed concern about development of this property, we believe this project provides several very unique & important benefits for the City of Clovis:

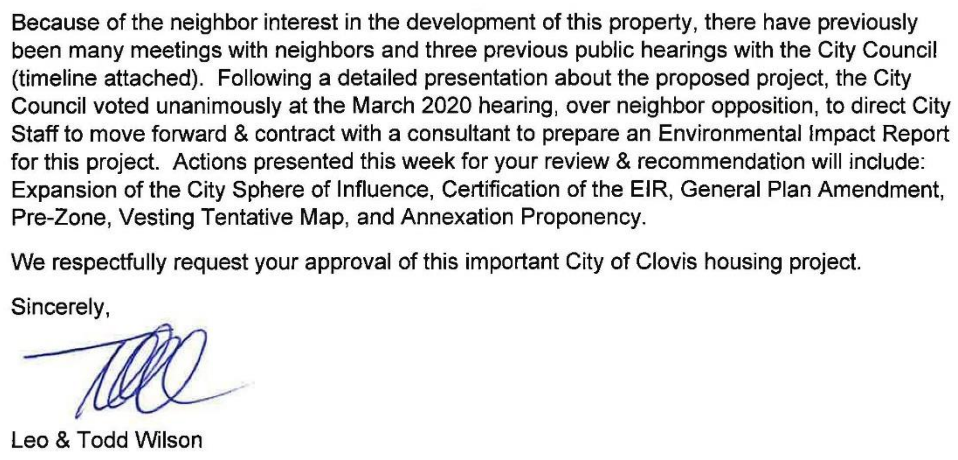
1. Build 605 much needed workforce housing units to help reduce the City's significant & increasing housing deficit. This is especially needed now, since in the 1st quarter of this fiscal year the City only issued 94 building permits, which is only about ½ of the nearly 200 desired permits for that period.
2. Improve Shepherd Ave from a dangerous 2-lane curved County Road to 4-lane City standards to greatly improve traffic flow for residents throughout this area. As you know, street improvements generally only occur in conjunction with approved adjacent development.
3. Install the City's sewer force main between Sunnyside & Fowler, which is critical infrastructure to provide necessary sewer service in *Heritage Grove*.
4. Install the City's non-potable water main between Sunnyside & Fowler, which is necessary to serve *Heritage Grove*.
5. Construct a regional trail along Shepherd Ave, between Sunnyside & Fowler, to complete the final east-west missing link in the Clovis trail system.
6. Construct 24" water main along Sunnyside Ave, between Shepherd & Perrin.

Additionally, we proudly have introduced two new components in this project proposal that we believe have never before been proposed with projects in Clovis:

1. a universally accessible park; and
2. street access for (NEV) Neighborhood Electric Vehicles.

Both components seek to further open neighborhood accessibility for all citizens.

L-4-1



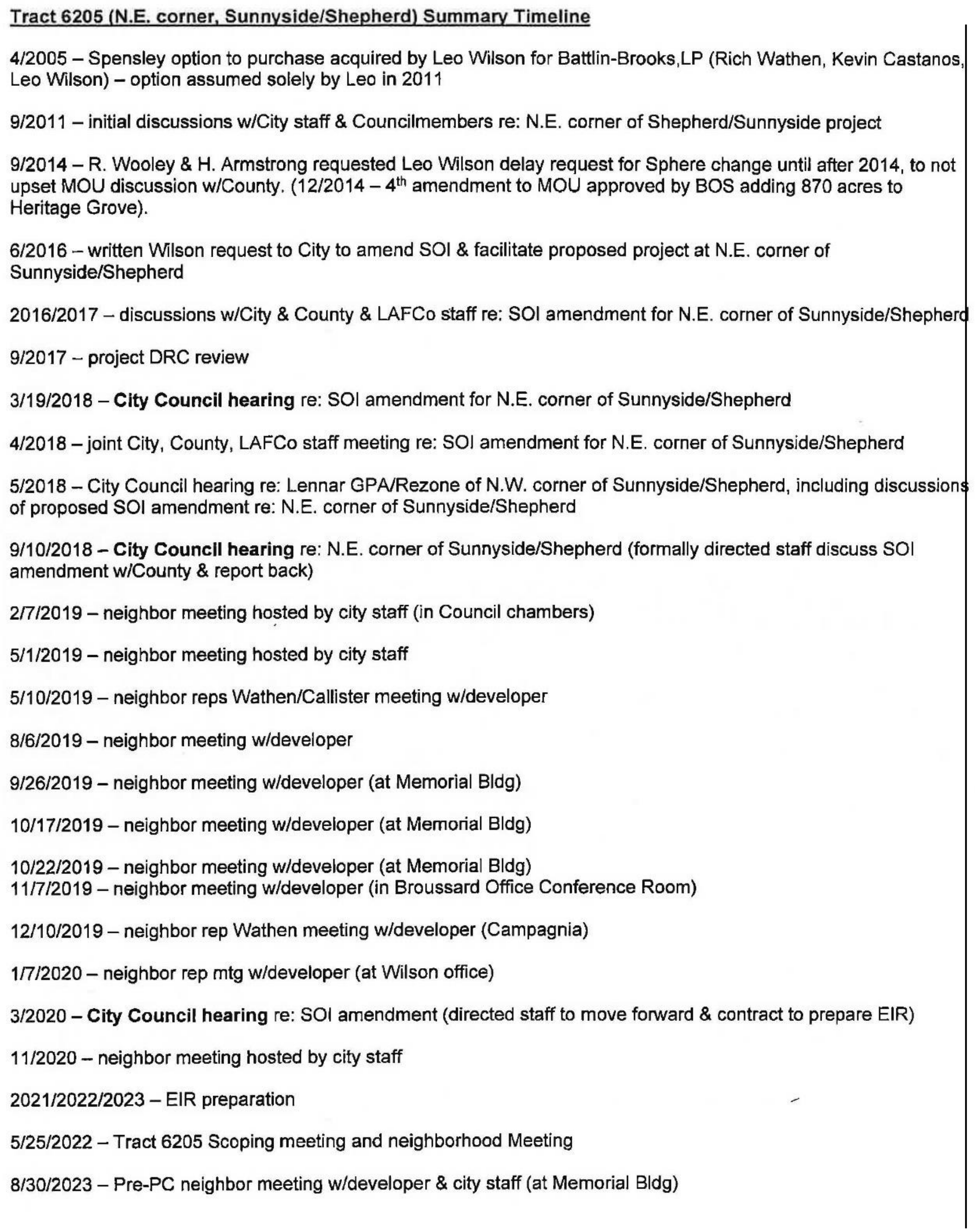
Because of the neighbor interest in the development of this property, there have previously been many meetings with neighbors and three previous public hearings with the City Council (timeline attached). Following a detailed presentation about the proposed project, the City Council voted unanimously at the March 2020 hearing, over neighbor opposition, to direct City Staff to move forward & contract with a consultant to prepare an Environmental Impact Report for this project. Actions presented this week for your review & recommendation will include: Expansion of the City Sphere of Influence, Certification of the EIR, General Plan Amendment, Pre-Zone, Vesting Tentative Map, and Annexation Proponency.

We respectfully request your approval of this important City of Clovis housing project.

Sincerely,

Leo & Todd Wilson

L-4-1 Cont



Tract 6205 (N.E. corner, Sunnyside/Shepherd) Summary Timeline

4/2005 – Spensley option to purchase acquired by Leo Wilson for Battlin-Brooks,LP (Rich Wathen, Kevin Castanos, Leo Wilson) – option assumed solely by Leo in 2011

9/2011 – initial discussions w/City staff & Councilmembers re: N.E. corner of Shepherd/Sunnyside project

9/2014 – R. Wooley & H. Armstrong requested Leo Wilson delay request for Sphere change until after 2014, to not upset MOU discussion w/County. (12/2014 – 4th amendment to MOU approved by BOS adding 870 acres to Heritage Grove).

6/2016 – written Wilson request to City to amend SOI & facilitate proposed project at N.E. corner of Sunnyside/Shepherd

2016/2017 – discussions w/City & County & LAFCo staff re: SOI amendment for N.E. corner of Sunnyside/Shepherd

9/2017 – project DRC review

3/19/2018 – **City Council hearing** re: SOI amendment for N.E. corner of Sunnyside/Shepherd

4/2018 – joint City, County, LAFCo staff meeting re: SOI amendment for N.E. corner of Sunnyside/Shepherd

5/2018 – City Council hearing re: Lennar GPA/Rezone of N.W. corner of Sunnyside/Shepherd, including discussions of proposed SOI amendment re: N.E. corner of Sunnyside/Shepherd

9/10/2018 – **City Council hearing** re: N.E. corner of Sunnyside/Shepherd (formally directed staff discuss SOI amendment w/County & report back)

L-4-1 Cont

2/7/2019 – neighbor meeting hosted by city staff (in Council chambers)

5/1/2019 – neighbor meeting hosted by city staff

5/10/2019 – neighbor reps Wathen/Callister meeting w/developer

8/6/2019 – neighbor meeting w/developer

9/26/2019 – neighbor meeting w/developer (at Memorial Bldg)

10/17/2019 – neighbor meeting w/developer (at Memorial Bldg)

10/22/2019 – neighbor meeting w/developer (at Memorial Bldg)
11/7/2019 – neighbor meeting w/developer (in Broussard Office Conference Room)

12/10/2019 – neighbor rep Wathen meeting w/developer (Campagnia)

1/7/2020 – neighbor rep mtg w/developer (at Wilson office)

3/2020 – **City Council hearing** re: SOI amendment (directed staff to move forward & contract to prepare EIR)

11/2020 – neighbor meeting hosted by city staff

2021/2022/2023 – EIR preparation

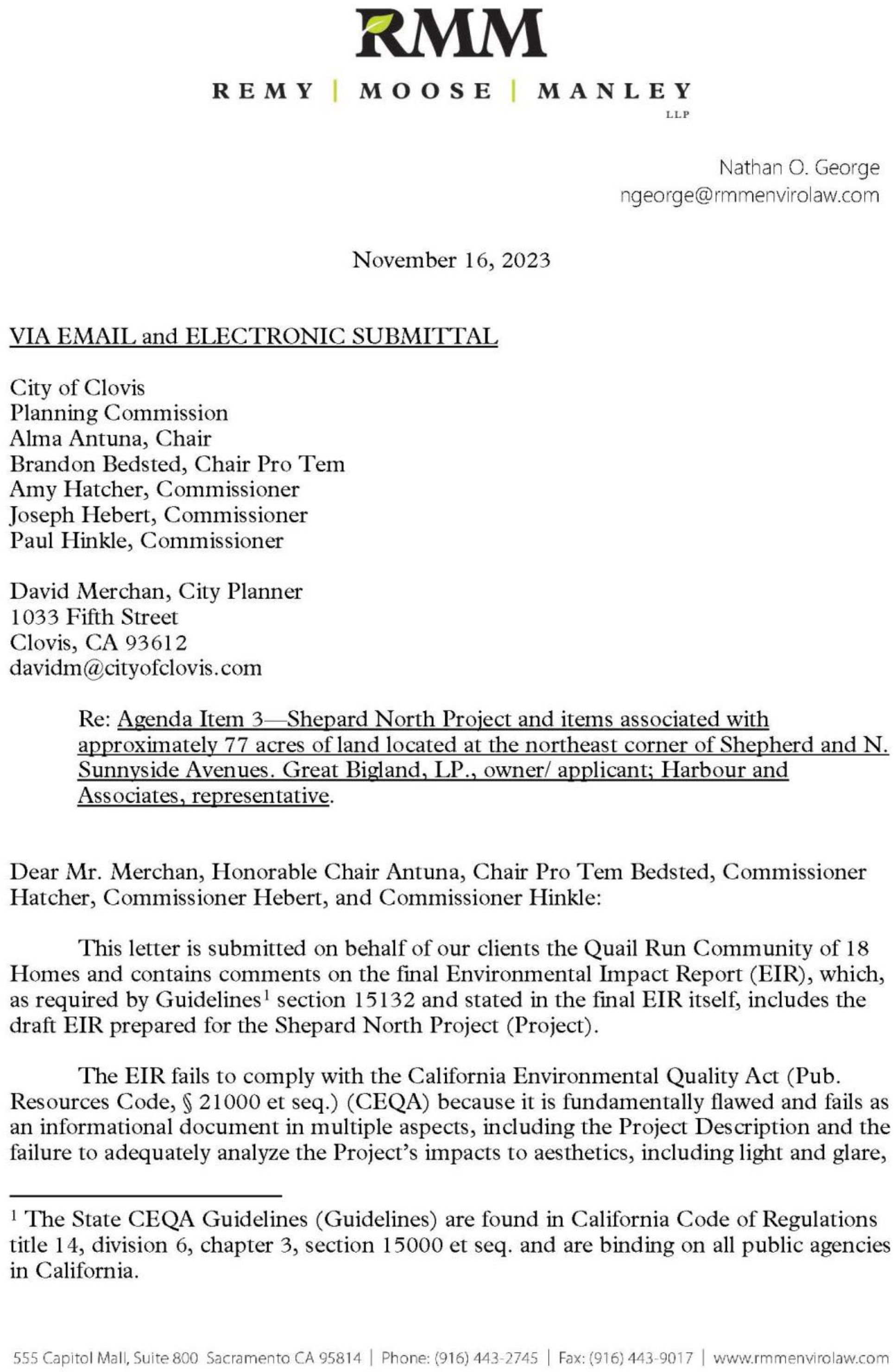
5/25/2022 – Tract 6205 Scoping meeting and neighborhood Meeting

8/30/2023 – Pre-PC neighbor meeting w/developer & city staff (at Memorial Bldg)

Response to Letter L-4: Leo & Todd Wilson, Project Applicant

Response L-4-1: This comment is from the Project Applicant and provides a discussion of what they intend to achieve with project design and improvements that are proposed. The comment also discusses the Project Applicant's timeline for the Project dating back to 2005 when acquisition of the property occurred up to August 2023 where the Applicant held a meeting with neighbors.

- This comment is noted. The comment does not include comments on the EIR. This comment will be provided to the City for consideration. No further response is necessary.



RMM
REMY | MOOSE | MANLEY
LLP

Nathan O. George
ngeorge@rmmenvirolaw.com

November 16, 2023

VIA EMAIL and ELECTRONIC SUBMITTAL

City of Clovis
Planning Commission
Alma Antuna, Chair
Brandon Bedsted, Chair Pro Tem
Amy Hatcher, Commissioner
Joseph Hebert, Commissioner
Paul Hinkle, Commissioner

David Merchan, City Planner
1033 Fifth Street
Clovis, CA 93612
davidm@cityofclovis.com

Re: Agenda Item 3—Shepard North Project and items associated with approximately 77 acres of land located at the northeast corner of Shepherd and N. Sunnyside Avenues. Great Bigland, LP., owner/ applicant; Harbour and Associates, representative.

Dear Mr. Merchan, Honorable Chair Antuna, Chair Pro Tem Bedsted, Commissioner Hatcher, Commissioner Hebert, and Commissioner Hinkle:

This letter is submitted on behalf of our clients the Quail Run Community of 18 Homes and contains comments on the final Environmental Impact Report (EIR), which, as required by Guidelines[1] section 15132 and stated in the final EIR itself, includes the draft EIR prepared for the Shepard North Project (Project). L-5-1

The EIR fails to comply with the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) (CEQA) because it is fundamentally flawed and fails as an informational document in multiple aspects, including the Project Description and the failure to adequately analyze the Project's impacts to aesthetics, including light and glare, L-5-2

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[1] The State CEQA Guidelines (Guidelines) are found in California Code of Regulations title 14, division 6, chapter 3, section 15000 et seq. and are binding on all public agencies in California.

agricultural resources, air quality and associated human health effects, noise, energy, groundwater, transportation, public utilities, including water supply, and cumulative impacts. Additionally, the EIR is internally inconsistent between several environmental impact analysis chapters, as well as the technical appendices. L-5-2 Cont

Fundamentally, the EIR fails to analyze the magnitude of the Project's alteration of the physical environment, including impacts of the massive change in the intensity of use on existing, low-density neighborhoods immediately adjacent to the Project. The EIR also improperly treats the Project, which requires the conversion of 77 acres of agricultural land in the unincorporated county into 605 residential units—which is textbook "greenfield" development—as if it were an infill project in an already urbanized area in the City. Contrary to the conclusory and unsupported statements in the EIR, however, the proposed Project is vastly different from the existing, surrounding land uses (which, as the EIR admits, includes agricultural land and low-density rural residential). The EIR must analyze all potentially significant impacts of the Project on the environment, including the non-development areas, resulting from the drastic changes in intensity of use proposed by the Project. For example and as explained more fully herein, the EIR's Project Description acknowledges the existence and uniqueness of the Quail Run and Fowler neighborhoods (identified as Expansion Subarea North, and Expansion Subarea East, respectively), but the impact analysis chapters largely ignore these neighborhoods in discussing the environmental setting and baseline, resulting in deficient analyses that fail to adequately consider impacts to these components of the existing environment. L-5-3

To remedy the defects in the EIR, the City of Clovis (City) must undertake additional analyses of the Project's environmental effects including, potentially, analysis and recommendation of mitigation measures for significant impacts, which will require adding significant new information to the EIR and trigger the need to recirculate the draft EIR for an additional round of public review and comments. Accordingly, the Planning Commission should direct City staff to revise and recirculate the EIR.

Lastly, the Planning Commission cannot lawfully approve the vesting tentative tract map without first complying with CEQA. As proposed in the City's agenda and agenda packet, staff recommend that the Planning Commission approve vesting tentative tract map TM6205 for the Project without first certifying the EIR. This is a clear violation of CEQA, which states "with private projects, *approval occurs upon the earliest commitment* to issue or the issuance by the public agency of a discretionary contract, grant, subsidy, loan, or other form of financial assistance, lease, permit, license, certificate, or other entitlement for use of the project." (Guidelines, § 15352, subd. (b).) Here, the Planning Commission is proposing to commit the City to the Project, by granting the developer a vested right to develop the Project (see Gov. Code, § 66498.1, subd. (b)) *without* first complying with CEQA. As the California Supreme Court has explained "CEQA itself requires environmental review before a project's approval, not necessarily its *final* approval." (*Save Tara v. City of West Hollywood* (2008) 45 Cal.4th 116, 134, original italics.) The Planning Commission must defer approval of the VTTM L-5-4 until after the EIR is certified. Moreover, as explained below, the EIR must be significantly revised and recirculated before it can be certified. L-5-4 Cont

I. CEQA's General Requirements for EIRs.

"The foremost principle under CEQA is that the Legislature intended the act 'to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.'" (*Laurel Heights Improvement Assn. v. Regents of University of Cal.* (1988) 47 Cal.3d 376, 390 (*Laurel Heights I*).) "With narrow exceptions, CEQA requires an EIR whenever a public agency proposes to approve or to carry out a project that may have a significant effect on the environment. [Citations.]" (*Id.* at pp. 390-391; see Guidelines, § 15002, subd. (f).) The basic purpose of an EIR is to "provide public agencies and the public in general with detailed information about the effect [that] a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project." (Pub. Resources Code, § 21061; see Guidelines, § 15003, subds. (b)-(e).) "Because the EIR must be certified or rejected by public officials, it is a document of accountability. If CEQA is scrupulously followed, the public will know the basis on which its responsible officials either approve or reject environmentally significant action, and the public, being duly informed, can respond accordingly to action with which it disagrees." (*Laurel Heights I*, at p. 392.) The EIR "protects not only the environment but also informed self-government." (*Ibid.*) L-5-5

"CEQA serves 'to ensure that public agencies will consider the environmental consequences of discretionary projects they propose to carry out or approve.'" (*We Advocate Through Environmental Review v. County of Siskiyou* (2022) 78 Cal.App.5th 683, 689 (*WATER 2*).) "An EIR, as courts have often said, is ' "the heart of CEQA." ' [Citation.] It serves to '(1) inform the government and public about a proposed activity's potential environmental impacts; (2) identify ways to reduce, or avoid, those impacts; (3) require project changes through alternatives or mitigation measures when feasible; and (4) disclose the government's rationale for approving a project.' [Citation.] To fulfill these purposes, an 'EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.'" (*Id.* at p. 690.)

"'Under CEQA, an agency must determine what, if any, effect on the environment a proposed project may have.' [Citation.] To that end, the EIR 'must identify and discuss 'all significant effects on the environment' of a proposed project.' [Citations.] The term '[s]ignificant effect on the environment' is defined as 'a substantial, or potentially substantial, adverse change in the environment.' [Citations.] Because a particular environmental effect can only be identified as significant after careful consideration, an EIR is required to discuss and analyze a possible impact of the project if there is a fair argument that it constitutes a significant effect on the environment." (*Yerba Buena Neighborhood Consortium, LLC v. Regents of University of California* (2023) 95 Cal.App.5th 779 [313 Cal.Rptr.3d 701, 719].) "'An agency must find a 'fair argument' if there is any substantial evidence to support that conclusion, even if there is competing substantial evidence in the record that the project will not have a significant environmental effect.' [Citation.] And we review the agency decision 'de novo, with a preference for resolving doubts in favor of environmental review.'" (*Id.*) L-5-5 Cont

II. The FEIR fails as an informational document because the Project Objectives are impermissibly narrow and foreclose consideration of feasible alternatives.

The Project Description in an EIR "must contain a statement of the project objectives. A lead agency must then use this statement to help it, among other things, develop a reasonable range of alternatives to the proposed project to evaluate in the EIR." (*WATER 2*, *supra*, 78 Cal.App.5th at p. 691, citing Guidelines, § 15124.) "The process of selecting the alternatives to be included in the EIR begins with the establishment of project objectives by the lead agency. 'A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings.'" (*In re Bay-Delta etc.* (2008) 43 Cal.4th 1143, 1163.)

Here, the draft and final EIR contain the same Project Description, including the same Project Objectives. As stated in the final EIR:

> The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.
>
> The quantifiable objectives include the development of up to 605 single-family residential units. The quantifiable objectives include the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping to serve the residential uses. (Final EIR, p. ES-2.)

L-5-6

Additionally, the EIR includes a list of "goals of the proposed development."

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice to modestly increase urban density.*

- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

(Final EIR, p. ES-2.)

The Project site is described as 155 acres including two defined areas, the "Development Area" and the "Non-Development Area." The Development Area is 77 acres and "[i]ncludes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review." The Non-Development Area is 78 acres and "[i]ncludes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East." (Draft EIR, p. 2.0-1.)

L-5-6 Cont

Later, the EIR describes the Project as "primarily a residential development anticipated to provide up to 605 residential units. The Development Project would provide open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. Other uses to support and compliment the proposed residential development include public utility infrastructure, public and private roadways, curb/gutters/sidewalks, other pedestrian facilities, private parking, street lighting, and street signage." (Draft EIR, p. 20-5.)

The Project Objectives in the EIR share the same fatal flaw as those adopted by the County of Siskiyou in the *WATER 2* case. Specifically, the Project Objectives are impermissibly narrow and foreclose consideration of feasible alternatives to the Project, including alternative locations. Like the faulty EIR in *WATER 2*, the EIR here "largely defined the project objectives as operating the project as proposed." (78 Cal.App.5th at p. 692.) For example, the EIR states that "[t]he principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development

Area." (Draft EIR, p. 2.0-1.) "But if the principal project objective is simply pursuing the proposed project, then no alternative other than the proposed project would do. All competing reasonable alternatives would simply be defined out of consideration." (*WATER 2*, at p. 692.) Likewise, the "quantifiable objectives" of the Project are identical to the elements of the Project itself. (See draft EIR pp. 2.0-1, 2.0-5.)

"In taking this artificially narrow approach for describing the project objectives, the County ensured that the results of its alternatives analysis would be a foregone conclusion. It also, as a result, transformed the EIR's alternatives section—often described as part of the 'core of the EIR' [Citation]—into an empty formality." (WATER 2, supra, 78 Cal.App.5th at p. 692.) Moreover, this type of error is prejudicial because the EIR essentially "rejected anything other than the proposed project. In doing so, it prejudicially prevented informed decision making and public participation." (*Id.* at p. 693.) Accordingly, the City must "revise the statement of the project objectives" and "revise the alternatives analysis in the light of this new statement." (*Id.* at p. 699.) L-5-6 Cont

III. The EIR fails to adequately analyze potentially significant impacts of the Project.

A. The EIR fails to adequately analyze the Project's aesthetic impacts, including impacts to light and glare.

"'Before the impacts of a project can be assessed and mitigation measures considered, an EIR must describe the existing environment. It is only against this baseline that any significant environmental effects can be determined.' [Citation.] The Guidelines state that an EIR must include a description of 'the physical environmental conditions in the vicinity of the project' which constitute the 'baseline physical conditions' for measuring environmental impacts." (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 657–658 (*San Joaquin Raptor*).) L-5-7a

Here, the environmental setting discussion in the Aesthetics chapter begins with general information about aesthetics, including an acknowledgment that "[s]cenic resources are specific features of a viewing area (or viewshed) such as *trees*, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements." (Draft EIR, p. 3.1-1, italics added.) Similarly, the discussion of light and glare states that "[s]tationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination." (*Id.* at p. 3.1-3.)

The EIR acknowledges that the Project site consists of "mainly rural residential and agricultural land and ha[s] very few sources of light and glare, *allowing for clear day and nighttime views*" because it is "distant from the more urban and densely populated L-5-7b areas of Fresno and Clovis." (Draft EIR, p. 3.1-3, emphasis added.)[2] The EIR, however, contradicts itself by also claiming that "[t]he existing light environment found in the Project site is considered typical of suburban areas." (*Id.*) Similarly, the EIR acknowledges that "sky glow" is "of concern in more rural or natural areas where a darker night sky is either the norm or is important to wildlife[,]" but claims, "[d]ue to ***the urban nature of the City limits***" that "[i]solating impacts of particular sources of light or glare is … not appropriate or feasible for the proposed Project." (*Id.*, emphasis added.) L-5-7b Cont

No facts or evidence support the EIR's contradictory claim that analyzing "particular sources of light and glare" is not feasible. The Project site and surrounding area are not within the "urban" City limits and, as the EIR admits, consist of "mainly rural residential and agricultural land" with "*very few sources of light and glare.*" (Draft EIR, p. 3.1-3; see also *id.* at p. 3.1-6 ["There are minimal existing light sources on and adjacent to the Project site"].) Moreover, the Project will add 605 residences, including new streetlights, and 5,705 new vehicle trips *per day*, (Draft EIR, Appendix I, p. 2-1) which are all potential sources of light and glare (Draft EIR, p. 3.1-3) to an area with "very few sources of light and glare." Indeed, the EIR admits that there are no streetlights in the Non-Development Area. (Draft EIR, p. 3.1-6.) The EIR's internal inconsistencies and failure to analyze the Project's light and glare impacts on the surrounding rural residential and agricultural land constitute prejudicial abuses of discretion an require the City to revise and recirculate the EIR *with* the missing analyses. L-5-7c

The EIR also fails to adequately analyze and mitigate glare impacts on *existing residences* in the Non-Development Area. (See Draft EIR, pp. 3.1-14 through 3.1-15.) The EIR acknowledges that increased traffic generated by the Project could have light and glare impacts from car windshields and headlights, but presumes they will be insignificant because *housing within the Project site* would be developed in compliance with City standards in the General Plan and Municipal Code to minimize impacts from light and glare. (*Id.*, see also Final EIR, p. 2.0-23 ["the construction of park and open space areas … provides some visual relief *within residential subdivisions*." Emphasis added].) As discussed below, however, CEQA law makes clear that the EIR cannot presume the absence of impacts based solely on consistency with existing standards. (*East Sacramento Partnerships for a Livable City v. City of Sacramento* (2016) 5 Cal.App.5th 281, 301 (*Livable City*).) Moreover, the new developments consistency with City standards does *nothing* to address light and glare impacts to the *existing homes* in the Non-Development Area. Similarly, the EIR claims that there would not be any significant impacts because the Project's "single-family residential uses would be an extension of L-5-7d

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[2] The EIR's description of the "Visual Character" of the area surrounding the Project site supports this conclusion: "The SOI beyond the City's Limits to the east, northeast, and north is dominated by agricultural uses and undeveloped open spaces. The Project site is located in the north, and the immediately surrounded area is best characterized as a mix of agricultural, suburban residential, and large estate lots with existing residences." (Draft EIR, p. 3.1-4.)

single-family residential uses adjacent to the Project site." (Draft EIR, p. 3.1-14.) This conclusory statement is completely unsupported by the facts, however, as the EIR admits that the existing residences have no streetlights, and the current environment has "very few sources of light and glare." (See Draft EIR, pp. 3.1-3, 3.1-6.) The EIR completely fails to analyze light and glare impacts from Project structures (including second story windows) and traffic on the existing, immediately adjacent neighborhoods. (See Draft EIR, pp. 3.1-14 through 3.1-15.) Moreover, the final EIR does not remedy this deficiency. In fact, the final EIR admits that compliance with the City's standards would not reduce light and glare impacts to insignificance, "and the overall level of light and glare in the Project site would increase in general as urban development occurs." (Final EIR, p. 2.0-25.) The EIR must be revised and recirculated to analyze and mitigate this potentially significant impact. L-5-7d Cont

An equally fatal flaw in the EIR's analysis is the characterization of the existing environment on the Project site, specifically, the pecan orchard, as an island of agricultural land surrounded by urbanized development. (Draft EIR, p. 3.1-11; see also Final EIR, pp. 2.0-22 through 2.0-23.)[3] On the contrary, the orchard, which has been actively farmed for approximately 50 years, is a visual buffer between the low-density neighborhoods in Expansion Subarea North and Expansion Subarea East and the more urbanized areas of the City south of Shepard Avenue. (See Draft EIR, p. 3.1-4 ["Agricultural lands provide for visual relief form urbanized areas and act as community separators to nearby urban areas"].) Contrary to the unsupported claim in the final EIR, the inclusion of less than one acre of parkland does not remedy the loss of 77-acres of trees, which, as the EIR admits, are visual resources. (Cf. Final EIR, p. 2.0-23.) L-5-7e

The EIR completely fails to analyze the impacts of eliminating the agricultural buffer created by the orchard. (See *Id.* at p. 3.1-5 ["The majority of the Development Area is in active agricultural use"].) Even worse, the EIR fails to analyze the impacts of replacing the existing visual buffer with highly urbanized, medium-high density residential development. Instead of performing this analysis or explaining why it is infeasible, the EIR concludes, *without any support*, that "the existing visual character of the Non-development Area would not change as part of the proposed Project." (Draft EIR, p. 3.1-10; see also Final EIR, p. 2.0-21.) As stated above, this could not be further from the truth as the Project would destroy the existing agricultural buffer an replace it with the very urbanization that the orchard has shielded the Non-Development Area from for more than 50 years. The EIR must analyze the aesthetic impacts of razing the

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[3] Likewise, the Clovis General Plan EIR's conclusion that, based on a programmatic analysis, the urbanization of agricultural lands would be less than significant, does not alleviate the City's duty to analyze *the specific aesthetic impacts of this Project* on the surrounding environment, including the Non-Development Area. (Cf. Draft EIR, p. 3.1-11; see *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th 1307, 1321 [agency was required to analyze whether "site-specific new project might cause significant effects on the environment that were not examined in the prior program EIR"].)

existing 77-acre orchard and constructing 605 homes, including impacts to the existing neighborhoods of the non-development area. L-5-7e Cont

Similarly, the EIR's conclusion that, because the Project would comply with the City's General Plan policies and Development Code, it "would not have a substantial adverse impact on scenic vistas, corridors, or resources *in the City of Clovis*" is completely unsupported. (Draft EIR, p. 3.1-11, emphasis added.) First, Project's destruction of the agricultural buffer would significantly impact visual resources, including trees (see Draft EIR p. 3.1-1) and the EIR's analysis of impacts cannot be artificially limited to the City limits, because the Project's aesthetic impacts will affect the Non-Development Area, which is not "in the City of Clovis." L-5-7f

Second and more importantly, "[c]ompliance with a general plan in and of itself 'does not insulate a project from the EIR requirement, where it may be fairly argued that the project will generate significant environmental effects.' [Citation.] A project's effects can be significant even if 'they are not greater than those deemed acceptable in a general plan.'" (*Livable City*, *supra,* 5 Cal.App.5th at p. 301; see also *Keep Our Mountains Quiet v. County of Santa Clara* (2015) 236 Cal.App.4th 714, 732 [EIR required "if substantial evidence supports a fair argument that the Project may have significant unmitigated noise impacts, even if other evidence shows the Project will not generate noise in excess of the County's noise ordinance and general plan"]; *Berkeley Keep Jets Over the Bay Committee v. Board of Port Com'rs* (2001) 91 Cal.App.4th 1344, 1381 ["the fact that residential uses are considered compatible with a noise level of 65 decibels for purposes of land use planning is not determinative in setting a threshold of significance under CEQA"].) The EIR's repeated claim that the Project's compliance with City of Clovis General Plan policies and standards (cf. Draft EIR, pp. 3.1-11, 3.1-12) says nothing about the physical alteration of the environment that replacing 77 acres of orchard with 605 residences will cause. The EIR must be revised to analyze the Project's aesthetic impacts on the surrounding environment. L-5-7g

B. The EIR fails to adequately analyze the Project's impacts to agricultural resources.

The EIR's analysis of agricultural impacts acknowledges that the 77-acre Project site contains 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation. (Draft EIR, pp. 3.2-5 through 3.2-6.) The EIR, however, ignores these designations based on a Land Evaluation and Site Assessment (LESA) model analysis that uses faulty assumptions about the feasibility of irrigated production at the orchard. (See *Id.*, see also Draft EIR, Appendix B [LESA analysis].) Specifically, the EIR claims, based on the presence of "hardpan" in 5 of 19 bore samples from the geotechnical engineering report (see Draft EIR, Appendix F) that "the majority of the property has a thin layer of productive soil, underlaid by a hardpan and perched water that is not conductive to sustain long term agricultural production." (Draft EIR, p. 3.2-7.) L-5-8a The fifty-plus years of agricultural production at the Project site belies this conclusion. Moreover, as indicated above, the L-5-8b geotechnical report does not support this conclusion. Appendix F includes bore sample logs from 19 borings and identified "weakly cemented" silty sand in Borings B1, B3, at depths of approximately 8 feet, and B15, B16, and B18 at depths ranging from 2 to 4 feet. The bore samples also identified "clayey sand" in Borings B6, B7, B11, and B15 at depths of 8 to 14 feet. (Draft EIR, Appendix F.) Accordingly, the majority of bore samples (i.e., eleven of nineteen) do not contain "hardpan" and there is no evidence that the Project site contains only "a thin layer of productive soil" that has kept the orchard in continuous operation for more than fifty years. (Cf. Drat EIR, p. 3.2-7.) L-5-8b Cont

The LESA analysis included with the EIR (Draft EIR, Appendix B) relied, in part, on the faulty assumption that "hardpan" covered the majority of the Project site (when, in fact, it was found in less than half of bore samples) to conclude that irrigated production is infeasible in drought years, making the Water Resource Availability score 30 out of 100, based on "Option 11." (See also, Draft EIR, pp. 3.2-10, 3.2-16.) The LESA analysis concludes that, due to this infeasibility, the Project's overall score is 50.50, with a Site Assessment score of 18 (largely based on the Water Resource Availability score of 30). (Draft EIR, p. 3.2-16; see Draft EIR, Appendix B.) Correcting the LESA score to remove the faulty assumptions that "hardpan" covers the majority of the site at depths of 2 feet, changes the Water Resource Availability score to 65, using "Option 7." (See the Revised LESA analysis attached to this letter as Exhibit 1.) Based on the corrected Water Resource Availability score, the total LESA score for the Project site is 55.75, with a Site Assessment score of 23.25. L-5-8c

The draft EIR states that the Project would have a significant impact on agricultural resources if the total LESA score is greater than 50 out of 100 and both the Land Evaluation and Site Assessment component scores are greater than 20. (Draft EIR, p. 3.2-16.) Using the corrected LESA score (which does not rely on the faulty "hardpan" assumptions in the Draft EIR) the Project will have a potentially significant impact on agricultural resources, which the EIR must be revised to analyze and mitigate. L-5-8d

C. The EIR fails to adequately analyze the Project's air quality impacts and associated human health effects.

The EIR acknowledges the significant increase in average daily trips generated by the Project and, correctly, concludes the Project will have a significant vehicle miles traveled (VMT) impact. (See Draft EIR, pp. 3.13-18 through 3.13-23.) The air quality analysis, however, downplays the significance of mobile source pollution generated by the Project and completely fails to analyze the potential for project generated traffic to have significant toxic air contaminant (TAC) impacts from ultrafine particles (UFPs) emitted by vehicle emissions, braking, and tire wear. L-5-9a The EIR also fails to analyze cumulative TAC emissions from project traffic combined with traffic levels presumed from buildout under the General Plan. L-5-9b

The EIR acknowledges the Supreme Court's decision in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 (*Friant Ranch*), which requires EIRs to analyze and disclose L-5-9c the human health effects of a project's air quality emissions or explain why doing so is infeasible. (*Id.* at pp. 519-520.) The EIR claims to perform the required analysis, albeit in "qualitative" fashion. (Draft EIR, pp. 3.3-25 through 3.3-26.) Like the EIR in *Friant Ranch*, however, the Project's EIR "generally outlines some of the unhealthy symptoms associated with exposure to various pollutants" but "does not give any sense of the nature and magnitude of the 'health and safety problems caused by the physical changes' resulting from the Project." (*Friant Ranch*, at p. 522; see Draft EIR, pp. 3.3-28 through 3.3-30.) Instead, the EIR analyzes the Project's contribution to air pollution (Ozone and particulate matter (PM), specifically) and while the cumulative levels of those pollutants "would affect people[,]" the Project's emissions would be less than the San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds of significance. (Draft EIR, pp. 3.3-29 through 3.3-30.) The EIR's conclusory statement that pollution "would affect people" does not come close to the analysis required by Friant Ranch. The EIR must be revised to either analyze whether the Project's air quality emissions would have significant human health effects or explain why doing so is infeasible. L-5-9c Cont

Additionally, the EIR only considers the health effects of the Project's contribution to ozone and PM (PM_{10} and $PM_{2.5}$, specifically). (See Draft EIR, pp. 3.3-28 through 3.3-30.) The EIR does not consider potential impacts from the Project generated traffic emissions of UFPs (including emissions from tailpipe emissions, braking, and tire wear), and does not analyze the potential human health effects of Project UFP emissions. UFPs are another air quality impact not discussed in the EIR. UFPs, particles with diameters less than 0.1 micrometers, are comprised mostly of metals that are known constituents of brake pads and drums, as well as additives in motor oil. (Exhibit 2, Cahill, Ch. 8, p. 80.) Generally, all engines can create UFPs, but especially diesel engines, and any vehicle's braking system. (Exhibit 3, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003-2007, p. 1130.) Traffic, particularly start-and-stop, generates UFPs. (See Exhibit 3, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003- 2007, p. 1131.) Recent research suggests that UFPs pose considerable health risks, such as increased risk of cardio-vascular disease and ischemic heart disease death rates, and loss of lung function. (Exhibit 4, Cahill, Artificial ultra-fine aerosol tracers for highway transect studies, pp. 31-32; see also Exhibit 5, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 2: 1974-1991; Exhibit 3, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003-2007.) "The strongest correlations to [ischemic heart disease] mortality were found in very fine ... to ultrafine metals, with most tied to vehicular sources." (Exhibit 3, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003 - 2007, p. 1133.) Prenatal proximity to freeways and exposure to UFPs may be causally linked to increased autism rates in children. (Exhibit 6, Volk, Residential Proximity to Freeways and Autism in the CHARGE Study, p. 875.) Unlike diesel exhaust or other larger TAC emissions, UFPs are more persistent and do not dissipate easily over distances. (Exhibit 7, Cahill, Transition metals in coarse, fine, very fine and ultra-fine particles from an interstate highway transect near Detroit, pp. 340-341.) Moreover, the California Air Resources Board (CARB) has acknowledged that L-5-9d the transition to zero emissions vehicles (ZEVs) will not eliminate all traffic emissions. (Exhibit 8, CARB Technical Advisory, p. 17 ["Non-tailpipe particulate matter emissions—like road dust, tire wear, and brake wear" are roughly equivalent in ZEVs and internal combustion engine vehicles, due to the higher weight of ZEVs].)

The EIR does not ever mention UFPs as a potentially significant air quality impact and therefore fails as an informational document. In addition to acknowledging these TAC emissions that will be exacerbated by the Project, the recirculated EIR will need to measure those emissions and correlate those emission levels to identified health risks, if feasible. If not feasible, the recirculated EIR will need to explain why so. As discussed above, the EIR correctly acknowledges the relevance of *Friant Ranch*, which explains the "EIR must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must adequately explain what the agency does know and why, given existing scientific constraints, it cannot translate potential health impacts further." Here, the EIR has not even attempted to inform the public of the "bare numbers" with respect to mobile UFP emissions, let alone translate those numbers into quantifiable adverse impacts. The failure to do so is inexcusable given that recent scientific studies demonstrate that it is feasible to correlate TACs and UFP emissions levels to resulting human health risks. The EIR must make a good-faith effort to consider and analyze whether mobile source emissions (including UFPs) created by the Project would pose a potential health risk to future Project occupants. L-5-9d Cont

Lastly, the EIR's analysis of the Project's consistency with the Air Quality element of the City's General Plan is based on the false promise of compliance with mitigation measures that do not exist. The Land Use, Population, and Housing chapter of the EIR analyzes the Project's consistency with various goals and policies of the City's General Plan. (See, generally, Draft EIR, ch. 3.10.) With respect to Air Quality, the EIR claims that the Project is "consistent" with Air-Policy 1.1 in the Air Quality element of the City's General Plan, which directs the City to "[r]educe greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems." (Draft EIR, p. 3.10-19.) As stated above, the EIR finds the Project "consistent" with this policy because the Project would, allegedly, reduce VMT through pedestrian and bicycle systems and L-5-10

> *as required by Mitigation Measure 3.13-1 in Section 3.13* of the Draft EIR, *the applicant would be required to implement measures*, which are identified in the California Air Pollution Control Officers Association's (CAPCOA) Draft Handbook for Analyzing GHG Emission Reductions, assessing Climate Vulnerabilities, and Advancing Health and Equity (GHG Handbook). Many of the strategies listed in this mitigation measure pertain to transit, pedestrian, and bicycle systems.
> (Draft EIR, p. 3.10-19.)

Contrary to the discussion of consistency with Air-Policy 1.1, however, *there is no Mitigation Measure 3.13-1*. (Cf. Draft EIR, ch. 3.13 [Transportation and Circulation].) Accordingly, because there are no measures that "the applicant would be required to implement" regarding "transit, pedestrian, and bicycle systems" the EIR's conclusion that the Project is consistent with Air-Policy 1.1 is unsupported. The EIR must be revised to analyze the Project's consistency with the Air Quality element of the General Plan without relying on phantom mitigation measures. L-5-10 Cont

D. The EIR fails to adequately analyze the Project's energy impacts as required by Guidelines Appendix F.

The EIR includes a cursory analysis of potential energy impacts and assumes that the Project's consistency with state and local laws, including building codes, supports determining that the Project's energy impacts would be less than significant. (Draft EIR, pp. 3.7-27 through 3.7-30.) For example, the EIR claim the Project "would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capital energy consumption to achieve this goal, including through statewide and local measures." (*Id.* at p. 3.7-29.) The final EIR merely repeats this unsupported conclusion. (Final EIR, p. 2.0-27.) The EIR, however, contains <u>no description</u> of any specific measures the project would implement, and <u>no commitment</u> by the Project to do anything specific to conserve energy. (See *id.*) Instead, the EIR relies on regulated entities complying with laws and regulations to conclude that *the Project* would not have a significant energy impact. (*Id.*) Whether or not Pacific Gas & Electric (PG&E) complies with the law in general, however, says nothing about this Project's potential energy impacts. In other words, there is no substantial evidence connecting PG&E's compliance with the Statewide Renewable Portfolio Standard (RPS) with the efficiency and energy conservation efforts of <u>the Project</u>. (See *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 225.) The EIR must be revised to actually analyze the Project's consumption and conservation of energy to determine whether there will be a potentially significant impact or not. L-5-11a

Moreover, the EIR's cursory energy analysis fails to consider renewable energy use in determining whether the Project could have a significant energy impact. CEQA requires the "EIR's analysis of a project's impacts on energy resources must include a discussion of whether the project could increase its reliance on renewable energy sources to meet its energy demand as part of determining whether the project's energy impacts are significant." (*League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) 75 Cal.App.5th 63, 164 (*League to Save Lake Tahoe etc.*).) As discussed above, the EIR concludes that the Project's energy impacts would be less than significant based solely on regulated entities (i.e., PG&E) complying with the law and does not discuss renewable energy options for the Project itself. "Because the EIR did not address whether any renewable energy features could be incorporated into the project as part of determining whether the project's impacts on energy resources were significant, it did not comply with CEQA's procedural requirements, a prejudicial error." (*League to Save Lake Tahoe etc.*, at p. 168.) The EIR must be revised to analyze renewable energy use as a component of L-5-11b the Project's potential energy impacts and recirculated to allow the public to comment on this important issue. L-5-11b Cont

E. The EIR fails to adequately analyze and mitigate the Project's noise impacts.

The regulatory setting in the EIR's noise analysis describes noise standards in the City's General Plan and ordinances. (Draft EIR, p. 3.11-7.) The EIR, however, does not discuss the County's General Plan policies and ordinances governing noise. (*Id.* but see Draft EIR p. 3.8-1 [analyzing hazards and hazardous materials impacts based, in part, on information from the Fresno County General Plan and Fresno County Zoning Ordinance].) Because the existing sensitive receptors surrounding the Project site are and would remain part of unincorporated Fresno County, the EIR should analyze noise impacts based on the County's noise policies and ordinances as well. (See *United Neighborhoods for Los Angeles v. City of Los Angeles* (2023) 93 Cal.App.5th 1074, 1096 (*UNLA*) ["No such deference is warranted, however, with respect to the City's determination of which policies apply to the Project. The principle that the City is uniquely positioned to weigh the priority of competing policies does not extend to the question of which policies are to be placed on the scales"].)[4] L-5-12a

The EIR acknowledges that Project generated traffic on Sunnyside Avenue between Shepard Avenue and "Project Intersection 1" will have a significant impact on the environment. (Draft EIR, p. 3.11-16.) The EIR, however, fails to measure, model, or analyze the potential noise impacts of Project generated traffic on Sunnyside Avenue north of "Project Intersection 1." (Cf. *id.*) L-5-12b Moreover, nowhere in the EIR is there any Project entryway identified as "Project Intersection 1." (See, e.g., Draft EIR, ch. 11 [Noise], ch 3.13 [Transportation].) The Transportation analysis identifies Study Intersection 23 as "Sunnyside Avenue/Project Driveway 1." (Draft EIR, Appendix I, Figure 4-2.) Assuming "Project Intersection 1" and "Project Driveway 1" are the same thing, then the EIR also fails to analyze the noise impacts of project generated traffic to off-site receptors along Lexington Avenue that will abut the public street identified as "Project Driveway 1" in the Transportation analysis. L-5-12c Moreover, the Noise Mitigation Measures in the EIR only address noise impacts to residences within the Project site and do nothing for existing off-site receptors. (See Draft EIR, p. 3.11-19 [Mitigation Measures 3.11-1 and 3.11-2].) Moreover, the final EIR does not remedy this deficiency. (Final EIR, p. 2.0-20.) The EIR must be revised and recirculated to analyze and mitigate L-5-12d

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[4] This same critique (the EIR's failure to analyze applicable Fresno County General Plan policies regarding impacts to existing homes that would remain in the unincorporated County) applies equally to other analyses in the EIR. For example, the EIR's analyses of aesthetic impacts, including light and glare, agricultural resource impacts, transportation impacts, air quality impacts, and groundwater impacts, all fail to consider Fresno County policies and ordinances in analyzing impacts to Fresno County residents. (See *UNLA*, *supra*, 93 Cal.App.5th at p. 1096.)

noise impacts to existing off-site receptors from project generated traffic along "Project Driveway 1" and/or "Project Intersection 1." L-5-12d Cont

The EIR admits that Project construction will generate noise levels *exceeding* the standards in the City's General Plan for residential land use (see Draft EIR, 3.11-9 [Table 3.11-6: Maximum Exterior Noise Standards, "allowable exterior noise level (15-Minute Leq)" 55 dba from 7 a.m. to 10 p.m.]), and that the existing homes in the non-development areas will be subject to construction noise levels that are more than *double* the baseline measured in the technical noise analysis. (Draft EIR, p. 3.11-19 ["This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave"]; see Draft EIR, p. 3.11-4 ["A 10-db change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response"].) Rather than proposing and analyzing feasible means of reducing these significant noise impacts, the EIR points to a handful of largely meaningless "strategies" including a prohibition on equipment idling and the use of already installed vehicle mufflers, and concludes, without any analysis, that these measures will reduce noise to less than significant levels. (Draft EIR, p. 3.11-20 [Mitigation Measure 3.11-4.)[5] The EIR, however, contains no explanation, analysis, or substantial evidence to support this conclusion. (Cf. *id.*) The EIR must be revised to analyze whether this mitigation would actually reduce noise levels below the City's threshold or include additional feasible measures to do so. For example, temporary noise barriers, combined with regular monitoring and reporting of construction noise levels are a few of the many feasible noise mitigation measures available for the City's consideration. (See Exhibit 9.) L-5-12e

F. The EIR's analysis of groundwater recharge is fundamentally flawed.

The EIR admits that "impervious surfaces such as pavement, ***significantly reduce infiltration capacity*** and increase surface water runoff." (Draft EIR, p. 3.9-24, emphasis added.) As discussed above, however, the draft EIR presumes, without providing any analysis, that the presence of "hardpan" soils in fewer than half of the bore samples taken as part of the geotechnical analysis established that converting a 77-acre orchard to impervious surfaces would not significantly impact groundwater recharge. (Draft EIR, p. 3.9-25.) Several commenters pointed out the serious flaws in this conclusory claim, which is contradicted by the fifty-plus years of successful agriculture at the Project site. The final EIR retains the unsupported conclusion that hardpan makes the Project's impacts on groundwater recharge less than significant, but also purports to adopt the conclusions in a supplemental hydrological analysis prepared for the applicant. (Final EIR, p. 2.0-8.) The supplemental hydrological analysis, however, acknowledges that deep percolation does occur at the orchard, despite the few areas of cemented and/or "clayey" soils found in the geological study. (Final EIR, Appendix L, pp. 9-10.) Moreover, the L-5-13a

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[5] Mitigation Measure 3.11-3 merely requires Project construction to occur during the City's required hours of operation. (Draft EIR p. 3.11-20.) Because the Project's construction noise impacts would be significant ***during the required construction hours***, this mitigation measure is meaningless.

supplemental analysis admits that irrigation and deep percolation in the northern area of the orchard does affect groundwater levels in the Quail Run neighborhood. (*Id.*, p. 10.) L-5-13aCont

The EIR must be revised and recirculated to actually analyze the effects that replacing the orchard with 70+ acres of impervious surfaces will have on groundwater recharge rates. Even with the supplemental hydrological analysis, the EIR provides no comparison of groundwater recharge rates with or without the Project. (Final EIR, p. 2.0-8 ["*it can be presumed* that the Project site generally does not allow for a high level of groundwater recharge in its existing condition[,]" emphasis added].)[6] The Supreme Court has "made clear, and recently reiterated, that " '[i]nformation "scattered here and there in EIR appendices" or a report "buried in an appendix," is not a substitute for "a good faith reasoned analysis." ' " (*Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 516.) The EIR fails as an informational document because it leaves the public and those affected by the Project to "guess" at what the potential groundwater recharge impacts would be. L-5-13b

The supplemental hydrological analysis concludes that the net effect of ceasing all groundwater pumping at the Project site, originally used for irrigation, would result in a benefit to local groundwater levels because more water would remain in the ground. (Final EIR, Appendix L, p. 13.) While this conclusion has superficial appeal, it is ultimately mistaken and unsupported by the evidence. L-5-13c First, the assumptions in the supplemental hydrological analysis conflict with the Water Supply Analysis (WSA). For example, the WSA states that current water use at the project site is 186.4 acre-feet per year (AFY) for irrigation and that the proposed 605 homes would require 255.8 AFY. (Draft EIR, Exhibit J, pp. 2-1, 3-1.) The supplemental hydrological analysis, however, claims that approximately 400 AFY will remain in the ground because irrigation of the orchard has ceased. (Final EIR, Appendix L, p. 9.) The supplemental hydrological analysis provides no explanation for its claim that *more than twice* the amount of water is used for irrigation than what is disclosed in the WSA. (Cf. *id.*) More importantly, there is no requirement or commitment in the EIR or WSA that the wells at the project site will be retired, nor any guarantee that the claimed 400 AFY will actually remain in the ground to benefit local groundwater levels. "Argument, speculation, [and] unsubstantiated opinion or narrative" do not constitute substantial evidence. (Guidelines, § 15384, subd. (a).) Accordingly, the EIR's conclusion that groundwater recharge will not be negatively impacted by converting 77 acres of orchard to impervious surfaces is not supported by substantial evidence. L-5-13d

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[6] Similarly, the final EIR's contention that "on-farm recharge does not result in the return of all pumped irrigation water" is completely beside the point. (Final EIR, p. 2.0-8.) As the supplemental hydrological analysis claims, approximately half of irrigation water at the orchard does return to the aquifer. (Final EIR, Appendix L, p. 9.) The issue the EIR fails to analyze is what impact the construction of 70+ acres of impervious surfaces would have on that recharge rate compared to the existing environment. The EIR must be revised and recirculated to include that analysis.

Lastly, the supplemental hydrological analysis explains that "Rural residential areas should have a net zero water balance, meaning that recharge of storm runoff should equal or exceed the consumptive use." (Final EIR, Appendix L, p. 11.) The EIR, however, admits that storm runoff from the 77-acre project site would be collected and transported off-site into the City's stormwater infrastructure, making the "net zero water balance" impossible to achieve for this rural residential area. (See Draft EIR, pp. 3.9-22 through 3.9-23.) The EIR fails to analyze the impacts of upsetting the existing groundwater balance caused by the Project. The EIR must be revised and recirculated to address the Project's potentially significant groundwater recharge impacts. L-5-13e

G. The EIR fails to adequately analyze and mitigate the Project's significant transportation impacts.

As stated above, the EIR admits that the Project would have a significant VMT impact. (Draft EIR, p. 3.13-23.) The EIR, however, incorrectly presumes that there are no feasible mitigation measures that could reduce this significant impact. CEQA case law is clear that an EIR cannot conclude an impact is significant and unavoidable without first exhausting all feasible mitigation measures. (*Friant Ranch*, *supra*, 6 Cal.5th at pp. 524-525 ["Even when a project's benefits outweigh its unmitigated effects, agencies are still required to implement all mitigation measures ***unless those measures are truly infeasible.***" Emphasis added].) Here, the EIR includes a perfunctory analysis of a handful of "Project design features" and fails to truly grapple with the issue. (Draft EIR, pp. 3.13-19 through 3.13-22.) As at least one commenter pointed out, however, the EIR fails to analyze the feasibility of public transit options to mitigate significant VMT impacts. (See Final EIR, p. 2.0-135.) The final EIR impermissibly dismisses this comment by pointing to the general discussion of transit in the environmental setting and concludes, without explanation, that transit was addressed in the EIR. (*Id.* at p. 2.0-136; L-5-14a see Draft EIR, p. 3.13-8.) The final EIR completely misses the point of the comment, which asks the City to analyze the potential of increased transit as mitigation for the Project's admittedly significant VMT impacts, and must be revised to analyze whether feasible transit options exist that could reduce the Project's significant VMT impacts. (Guidelines, § 15088, subd. (c) [comments raising "recommendations and objections … must be addressed in detail giving reasons why specific comments and suggestions were not accepted"].) The final EIR fails to adequately respond to this comment.[7] L-5-14b Additionally, as pointed out by Caltrans, the EIR should consider other potentially L-5-14c

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[7] The Final EIR also fails to adequately respond to many of the individual comments raising specific concerns about the Project's impacts to existing residences in the Non-Development Area, including the Project's traffic, noise, and groundwater impacts. (See, e.g., Final EIR, pp. 2.0-127, 2.0-154 ["the commenter then provides several paragraphs supporting the statement"]; Guidelines, § 15088, subd. (c).) Instead, the final EIR dismisses these individual concerns and point readers to generic discussions of the broad impact categories in the Master Responses. (*Ibid.*) The EIR must revised to actually consider and address the objections and recommendations raised in these comments.

feasible mitigation measures, such as creating a VMT Mitigation Impact Fee, to address the Project's significant VMT impacts. (Final EIR, p. 2.0-161.) Again, the final EIR improperly dismisses Caltrans comment without either adopting the recommendation of that expert agency or explaining why a VMT mitigation impact fee is not feasible mitigation for the Project. (*Id.* ["Comment noted"].) The EIR must be revised to actually consider and address Caltrans' comments and must be revised to analyze the feasibility of the many mitigation measures available to address the Project's significant VMT impact, including increased transit. (See Exhibit 10 [Caltrans SB 743 Program Mitigation Playbook], 11 [Berkely Law – Implementing SB 743].) L-5-14c

The EIR fails to analyze the Project's potential impacts to transit. The EIR acknowledges that public transportation services exist "within the Study Area." (Draft EIR, p. 3.13-8.) The EIR's analysis of impacts to the circulation system, including transit, bicycle, and pedestrian facilities, however, does not analyze the Project's potential impacts on these transit systems. (See *id.* at pp. 3.13-23 through 3.13-25.) The failure to consider this potential impact is a violation of CEQA and the EIR must be revised and recirculated to analyze the Project's potential impacts to the transit system. (*Yerba Buena Neighborhood Consortium, LLC v. Regents of University of California* (2023) 95 Cal.App.5th 779, 799-807 [EIR failed to analyze potential transit impacts].) L-5-14d

Moreover, the EIR's conclusion that the Project "would not result in a conflict with an existing or planned … transit service/facility" is not supported by substantial evidence. (Draft EIR, p. 3.13-25.) The EIR claims that, despite "the absence of a fee program where the Project has an impact on the roadway network," the Project's impacts will be less than significant because "the Project will pay its respective fair share for the proposed improvements." (*Id.*) The EIR, however, includes no mitigation measures or any other enforceable requirement that the Project actually "pay its respective fair share" of anything. That, however, is not good enough to satisfy CEQA. (See *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 855, 857-858 [finding inadequate a mitigation measure that required the project applicant to "increase" the use of "produced water" and "reduce" the use of "municipal and industrial quality" water "to the extent feasible"; the terms "increase" and "reduce," even when modified by the phrase "to the extent feasible," are not specific performance standards]; *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1984) 151 Cal.App.3d 61, 79-80 [finding inadequate a mitigation measure that required a project applicant to expand a city's busing "capacity *by paying an unspecified amount of money at an unspecified time in compliance with an as yet unenforced or unspecified transit funding mechanism.*" Emphasis added].) (See Guidelines, § 15126.4, subd. (a)(2) ["Mitigation measures must be full enforceable through permit conditions, agreements, or other legally-binding instruments"].) In the absence of any requirement that the Project actually pay for its fair share of roadway improvements, the EIR cannot claim the Project's impacts would be less than significant. Further, without a plan or program to actually construct the improvements, this "quasi-mitigation" is unenforceable and violates CEQA. (*Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, 1189.) L-5-14e

The EIR also ignores significant transportation safety impacts of the Project identified by Caltrans. As stated in Caltrans' comments on the draft EIR, Project traffic would significantly impact queueing at the SR 168 and Hendon Avenue interchange ramps and recommends mitigation measures for those impacts. (Final EIR, p. 2.0-159.) The final EIR, however, dismisses Caltrans' comments, claiming they relate to level of service (LOS) impacts that are no longer required in a CEQA analysis. (*Id.*)[8] The EIR is mistaken. Caltrans published an Interim Local Development Intergovernmental Review (LDIGR) Safety Review guidance for state and local agencies to integrate into their CEQA analyses to address safety impacts on public roadways, including those under the jurisdiction of Caltrans, caused by traffic generated by development projects. (See Exhibit 12 [Caltrans LDIGR guidance].) Caltrans LDIGR guidance is completely consistent with the State's transition from LOS to VMT as the appropriate measure of transportation impacts. (See *id.*) Accordingly, the EIR's failure to analyze and mitigate the significant transportation safety impacts of the Project requires revision and recirculation. L-5-14f

H. The EIR fails to adequately analyze the environmental impacts of supplying the Project with water.

The EIR cites the WSA in support of its conclusion that the City has adequate water to supply the Project and that constructing water infrastructure would not significantly impact the environment. (See Draft EIR, pp. 3.14-26 through 3.14-30.) The WSA, however, admits that, based on the buildout assumptions in the City's General Plan, the Project's water supply will need to be replaced in order for there to be enough water to serve all the development contemplated in the General Plan. (Draft EIR, Appendix J, p. 8-1.) The EIR <u>completely ignores</u> this aspect of the WSA and does not include *any* analysis of the need to replace the Project's water supply at full build out of the General Plan, or the environmental impacts of doing so. (Draft EIR, pp. 3.14-26 through 3.14-30.) Notably, the cumulative impacts chapter of the EIR adopts the "projections" method for analyzing cumulative impacts, which requires the EIR to analyze the Project's individual contribution to impacts along with the development projections in local plans, including the City's General Plan. (Draft EIR, pp. 4.0-2 through 4.0-3.) The EIR <u>fails to do so</u> with respect to cumulative water supply impacts. L-5-15

I. The EIR fails to adequately analyze the Project's cumulative impacts.

As stated above, the EIR adopts the "projections" methodology for analyzing cumulative impacts. (Draft EIR, pp. 4.0-2 through 4.0-3.) The purported analysis of cumulative impacts, however, simply repeats the previous analyses of the Project specific L-5-16a

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[8] Moreover, the final EIR's claim that mitigating the impacts identified by Caltrans are not feasible is completely unsupported by analysis or substantial evidence. (Cf. id.) The final EIR fails to explain what "geometric constraints" make Caltrans' proposed mitigation infeasible. (See Guidelines, § 15088, subd. (c).) L-5-14g

impacts and concludes that nothing would be different in the cumulative scenario. (See, e.g., Draft EIR, pp. 4.0-3 through 4.0-6, 4.0-9 through 4.0-10.) This analysis is fundamentally flawed.

The purpose of a cumulative impact analysis is to require agencies to consider whether the impacts of individual projects, even if less-than-significant on their own, may nevertheless be cumulatively considerable when analyzed together with the impacts of past, present, and reasonably foreseeable future projects. "'The significance of a comprehensive cumulative impacts evaluation is stressed in CEQA.' [Citation.] Proper cumulative impact analysis is vital 'because the full environmental impact of a proposed project cannot be gauged in a vacuum. One of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact.' [Citations.] '[C]onsideration of the effects of a project or projects as if no others existed would encourage the piecemeal approval of several projects that, taken together, could overwhelm the natural environment and disastrously overburden the man-made infrastructure and vital community services. This would effectively defeat CEQA's mandate to review the actual effect of the projects upon the environment.'" (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1214–1215.)

L-5-16a Cont

Here, the EIR does not actually consider the cumulative impacts of development projections in the General Plan together with the Project. Instead, the EIR concludes, because the induvial impacts of this Project are small (as discussed above, however, the EIR is flawed in claiming that many of the Project's impacts are less than significant) there is no need to go to the next step and measure the Project's impacts together with those of development projected in the General Plan. (See, e.g., Draft EIR, pp. 4.0-3 through 4.0-6, 4.0-9 through 4.0-10.) The EIR must be revised to complete all the required steps of a CEQA compliant cumulative impacts analysis and then recirculated for an additional round of public review.

L-5-16b Cont

IV. The proposed resolution approving the vesting tentative tract map lacks adequate findings to support approval.

The Agenda Packet for the Planning Commission meeting includes a proposed resolution approving the Vesting Tentative Tract Map (VTTM) for the Project. (Agenda Packet, Attachment 5, pp. 80-82.) The proposed resolution includes a list of "findings" that the Subdivision Map Act (Map Act) requires before approving a tentative map. (*Id.*, at p. 81; see Gov. Code, §§ 66473.5, 66474.) These findings, like all other administrative findings, "must … bridge the analytic gap between the raw evidence and ultimate decision or order." (*Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515 (*Topanga*).) The proposed findings simply repeat the language required by the Government Code and do nothing "to bridge the analytic gap between the raw evidence and ultimate decision or order" here, i.e., the approval of the

L-5-17

VTTM. The findings contain no explanation of how or why each of the required findings can be made here. (See Agenda Packet, Attachment 5, pp. 80-82.) As explained by the Supreme Court, "a findings requirement serves to conduce the administrative body to draw legally relevant subconclusions supportive of its ultimate decision; the intended effect is to facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions." (*Topanga*, at p. 516.) The findings must be revised to actually address the criteria listed in the Government Code and explain why the Project and VTTM complies with those requirements. L-5-17 Cont

V. Conclusion

As discussed above the EIR is fundamentally flawed in multiple respects and fails as an informational document. In order to comply with CEQA, the EIR must be revised to include significant new information and then recirculated to ensure adequate public participation and informed government. As the first decision-making body to consider the EIR, the Planning Commission must ensure that it complies with CEQA before the City certifies it as such. In its current state, certification of the EIR would be a prejudicial abuse of discretion under CEQA. Moreover, the Planning Commission cannot approve the VTTM without first complying with CEQA and, as discussed above, revising the proposed findings to comply with the law. L-5-18

On behalf of the Quail Run Community of 18 Homes, we ask that the Planning Commission consider these comments and direct City staff to revise and recirculate the EIR to bring it into compliance with CEQA and revise the VTTM findings.

Please contact my office if you have any questions.

Very truly yours,

Nathan O. George

Enclosures

Exhibits 1-12 are available at:
https://www.dropbox.com/scl/fi/mcfwb1pe68dcdyr3folv2/Exhibits-for-Quail-Run-Comments-on-Shepard-North-Project-00687213xB0A85.PDF?rlkey=q6ma47o42up7056h4f0pj8ett&dl=0

Response to Letter L-5: Nathan O. George, Remy Moose Manley, LLP

Response L-5-1: This comment serves as an introductory statement, introducing the commenter, and indicating how the commenter represents.

- This comment is noted, and does not warrant further response.

Response L-5-2: This comment states "*The EIR fails to comply with the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) (CEQA) because it is fundamentally flawed and fails as an informational document in multiple aspects, including the Project Description and the failure to adequately analyze the Project's impacts to aesthetics, including light and glare, agricultural resources, air quality and associated human health effects, noise, energy, groundwater, transportation, public utilities, including water supply, and cumulative impacts. Additionally, the EIR is internally inconsistent between several environmental impact analysis chapters, as well as the technical appendices*."

- The City has prepared the EIR in compliance with CEQA, and has made a significant effort to ensure that adequate information is synthesized and presented in the EIR, and made available to the public, responsible agencies, trustee agencies, and interested parties. The City has also made a substantial effort to answer questions, provide clarifications, and to correct or amplify information where necessary in the Final EIR, and in this document. The assertions made in this paragraph are general statements that are more fully discussed by the commenter in later paragraphs. A more detailed response to each topic is presented in association with those later paragraphs.

Response L-5-3: This comment states "*Fundamentally, the EIR fails to analyze the magnitude of the Project's alteration of the physical environment, including impacts of the massive change in the intensity of use on existing, low-density neighborhoods immediately adjacent to the Project. The EIR also improperly treats the Project, which requires the conversion of 77 acres of agricultural land in the unincorporated county into 605 residential units—which is textbook "greenfield" development—as if it were an infill project in an already urbanized area in the City. Contrary to the conclusory and unsupported statements in the EIR, however, the proposed Project is vastly different from the existing, surrounding land uses (which, as the EIR admits, includes agricultural land and low-density rural residential). The EIR must analyze all potentially significant impacts of the Project on the environment, including the non-development areas, resulting from the drastic changes in intensity of use proposed by the Project. For example and as explained more fully herein, the EIR's Project Description acknowledges the existence and uniqueness of the Quail Run and Fowler neighborhoods (identified as Expansion Subarea North, and Expansion Subarea East, respectively), but the impact analysis chapters largely ignore these neighborhoods in discussing the environmental setting and baseline, resulting in deficient analyses that* *fail to adequately consider impacts to these components of the existing environment."* The commenter then suggests a remedy as follows: "*To remedy the defects in the EIR, the City of Clovis (City) must undertake additional analyses of the Project's environmental effects including, potentially, analysis and recommendation of mitigation measures for significant impacts, which will require adding significant new information to the EIR and trigger the need to recirculate the draft EIR for an additional round of public review and comments. Accordingly, the Planning Commission should direct City staff to revise and recirculate the EIR."*

- The commenter suggests the DEIR does not evaluate the impacts of the Project on adjacent residential communities, such as Quail Run Community. This assertion is inaccurate. Page 2.0-1 of the DEIR describes the Non-Development Area as including "*parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East*." As such, the absence of new development in the Non-Development Area will result in no direct physical changes associated with development activities. Development of the Development Area will, however, have potential indirect impacts on the Non-Development Area, which are described throughout the EIR under each relevant environmental topic.

  An example of the DEIR considering surrounding uses is in the Aesthetics Section, where on page 3.1-4 it states "*Light sources from the proposed Project can have an adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, light sources can create light spillover impacts on surrounding land uses in the absence of a lighting plan that includes photometrics of the lighting*." The DEIR goes on to explain that any new lighting associated with implementation of the proposed Project would be pedestrian-scale lighting and the fixtures would be consistent with the style and technical specifications approved by the City, including compliance with the City's light and glare regulations under Section 9.22.050 of the Clovis Development Code, which requires that light be shielded so that light does not spill onto adjacent properties. The City's existing requirements require a lighting plan to be submitted to the City for review and approval for the improvement plans, as well as for the building plans. All proposed outdoor lighting is required to meet applicable City standards regulating outdoor lighting, including 9.22.050 Exterior light and glare of the City's Development code, which is designed to minimize any impacts resulting from outdoor lighting on adjacent properties. Implementation of the existing City standards would reduce potential impacts associated with nighttime lighting and light spillage onto adjacent properties to a less than significant level. Here, the DEIR identifies light spillover as a potential indirect impact of the lighting installed in the Development Area, but it identifies that existing regulations ensure that the lighting systems on the buildings and streets are designed in a way that eliminates the potential for spillover and nuisance lighting.

The DEIR also considers surrounding uses in the Aesthetics Section, where on page 3.1-11 it states "…*the agricultural land provides visual relief from urban and suburban developments, and helps to define the character of a region*." The DEIR then notes "*… the pecan orchard portion of the Project site is an island of agricultural land use surrounded by developed homes to the east, north, and south, and an entitled residential subdivision to the west*." Here, the DEIR discusses the visual characteristics of the Project site relative to the surrounding uses. The DEIR notes that "…*the pecan orchard is a relic agricultural piece of property that has remained intact and operational despite the properties in the immediate surrounding aesthetically changing to suburban residential aesthetic*." Again, the DEIR describes the Project site relative to the surrounding uses.

The DEIR also considers other potential impacts on the non-adjacent area. For example, the DEIR considers surrounding uses in the Transportation and Circulation Section, which on page 3.13-1 *analyzes the potential impacts of the proposed Project on the surrounding transportation system including roadways, bicycle/pedestrian facilities, rail, and transit facilities/services*." On page 3.13-2, the DEIR defines the Study Area and specifically states that it includes "*Pedestrian, bicycle, and transit facilities within 0.5 mile from the project site boundary…All signalized intersections within 0.5 mile of the Project site boundary where the project would add 50 or more peak-hour trips, and signalized intersections beyond 0.5 mile where the project would add 100 or more peak-hour trips…All unsignalized intersections within a 0.5 mile of the project site boundary where the project would add more than 50 peak-hour trips."* This of course includes facilities within the Quail Run neighborhood.

The DEIR also considers impacts on surrounding land uses. For instance, on page 3.11-4 the DEIR discusses the existing ambient noise levels in the project vicinity. Then on page 3.11-15 through 3.11-19, the DEIR discusses the noise levels that would be projected with the Project along 23 roadway segments that traverse through surrounding land uses.

There are many other examples where the DEIR addresses the potential impacts on surrounding areas, including the Non-development Areas (e.g. Quail Run). The discussion of these potential impacts on the Non-Development Area and other surrounding areas are appropriately analyzed in the DEIR with support for the conclusions that are presented.

The commenter also suggests that the DEIR fails to accurately describe the magnitude of the Project. This is inaccurate. The EIR accurately describes the scope and scale of the Project in Section 2.0 Project Description, where it defines the Project as a conversion of 77 acres of agricultural land in the unincorporated County into 605 residential units, with the balance of the Project site being existing residential uses with no new development proposed. The changes that would result from the Project are analyzed throughout the DEIR under each respective environmental topic.

Additionally, the land that defines the Development Area portion of the Project site (the 77 acres to be developed with 605 residential units) is accurately described in the EIR as existing agricultural land (historically used as a pecan orchard), which the commenter states is “textbook greenfield development.” Because the project site is largely surrounded by urban, semi-urban, and suburban development, City staff does not believe it is accurate to characterize the Project as “textbook greenfield development.” In addition, the City’s General Plan contemplates development and the conversion of isolated agricultural lands in many places throughout the city to accommodate the need for new housing. This is because agricultural land is the predominate land base that is available for development within the City’s Sphere of Influence. The City also has no policy against development on agricultural land; rather, the City uses a thorough and thoughtful long-range planning process to evaluate targeted areas for the City to grow, and they reserve areas under agricultural use for areas that are not ripe for development.

The commenter also suggests the DEIR is flawed because it describes the Project “as if it were an infill project in an already urbanized area in the City.” The Project is not expressly defined as an “infill project” in the DEIR. In some respects, however, the Project can be accurately described as an “infill” project because it embodies a common-sense concept of infill, as that term is commonly used by planning practitioners. This is because the Project contemplates the development of residential uses on an agricultural island that is surrounded by developed urban, semi-urban, and suburban land uses. Figures 2.0-3 through 2.0-7 in the DEIR show the areas that surround the Project site. The DEIR, with its multiple graphics showing the locations of the Project site, accurately depicted their locations and the nature of the surrounding properties. Page 2.0-2 of the DEIR describes the surrounding uses:

> "*The Project site is surrounded by a variety of residential land uses. Uses immediately adjacent to the north and east boundary of the Project site include rural residential uses on larger lots, some having small orchards. Uses to the south of the Project site contain a mix of residential uses, as well as rural residential on larger lots and medium-high density residential in a developed smaller lot residential subdivision. West of the Project site is an electrical power substation and a graded area that is being prepared for additional residential development*."

This is an accurate characterization of the surrounding uses, which is largely developed land uses. The DEIR Figure 2.0-8 identifies the Fresno County land use designations and zoning for the Project site and the surrounding area, which identifies the Development Area as designated for Low Density Residential and the Non-Development Area as designated for Rural Residential. These land use designations are urban land use designations. Draft EIR page 2.0-3 states that "*At the time Fresno County created the Rural Residential land use designation and assigned that land use designation to areas within the county, the Fresno County General Plan was segregated into two segments; Non Intensive and Intensive, development polices. The Fresno County General Plan Non Intensive section defines county goals and polices regarding agriculture, open space and riverine area protection, mineral extraction, etc. Whereas the Intensive section of the plan defines County goals and policies regarding residential development, directing urban development to cites, lands in city fringe areas as well as unincorporated communities…The Development Area is bounded on the north and east by Rural Residential developments classified as Intensive development in the County General Plan. To the west and south are Low Density Residential uses. The Development Area is an island surrounded by Intensive development.*" This statement illustrates Fresno County guidance for intensive development of the Project site.

In addition to its common-sense meaning within the planning community, the term "infill" can have narrower definitions depending on the context. For instance, the commenter may be using the term "*infill*" as that term is defined by certain statutes, such as California Health and Safety Code section 53545.12, subdivisions (d) and (e), which includes definitions for both "qualifying infill area" and "qualifying infill project." The DEIR does not suggest the Project is subject to Section 53545.12, and the term "*infill*" is not used in the Project Description. In fact, page 3.10-5 of the DEIR states: "*The proposed Project is not considered an infill development. However, the site has many infill characteristics, including underutilized lands within existing development patterns. The Project site is* *designated for residential uses by the City's General Plan Land Use Map. While the proposed Project is not located near a job center, commercial areas and services are in the Project vicinity*."

The DEIR also does not suggest the Project is an infill project under other statutes. For example, the proposed Project is not an infill project as defined by the defined in California Health and Safety Code, or by CEQA Guidelines section 15332. A statutory definition of "infill site" can also be found in Public Resources Code sections 21061.3. A somewhat less precise statutory definition of the same term can be found in section 21099, subdivision (a)(4). A separate statutory category of "residential infill projects" are subject to rules set forth in Public Resources Code section 21081.2. The CEQA Guidelines include yet another definition of "infill site" in section 15191, subdivision (e). This definition informs the incredibly complex multi-factory statutory exemptions for infill projects found in CEQA Guidelines section 15195, which tracks the statutory exemption found in Public Resources Code section 21159.24. The DEIR does not suggest the Project is subject to any of these narrower definitions of the term "infill."

In short, the DEIR accurately characterizes both the Project and the site and that characterization does not in any way undermine the impact analysis in the document. The EIR's Project Description acknowledges the existence of communities such as the Quail Run and Fowler neighborhoods (identified in the DEIR as Expansion Subarea North, and Expansion Subarea East, respectively), and adequately assesses the potential impacts of the Project on those communities.

Response L-5-4: This comment states "*Lastly, the Planning Commission cannot lawfully approve the vesting tentative tract map without first complying with CEQA. As proposed in the City's agenda and agenda packet, staff recommend that the Planning Commission approve vesting tentative tract map TM6205 for the Project without first certifying the EIR. This is a clear violation of CEQA, which states "with private projects, approval occurs upon the earliest commitment to issue or the issuance by the public agency of a discretionary contract, grant, subsidy, loan, or other form of financial assistance, lease, permit, license, certificate, or other entitlement for use of the project." (Guidelines, § 15352, subd. (b).) Here, the Planning Commission is proposing to commit the City to the Project, by granting the developer a vested right to develop the Project (see Gov. Code, § 66498.1, subd. (b)) without first complying with CEQA. As the California Supreme Court has explained "CEQA itself requires environmental review before a project's approval, not necessarily its final approval." (Save Tara v. City of West Hollywood (2008) 45 Cal.4th 116, 134, original italics.) The Planning Commission must defer approval of the VTTM until after the EIR is certified. Moreover, as explained below, the EIR must be significantly revised and recirculated before it can be certified*."

- The comment is noted. The Planning Commission did not approve the vesting tentative tract map (TM6205) or any other component of the Project. As a result, *Save Tara* and related authorities are not applicable.

Response L-5-5: This comment presents a series of general requirements for an EIR.

- There are no specific comments provided here, rather, this comment serves as a presentation of statutory requirements for an EIR. The requirements presented are already codified in statute, and are noted. This comment warrants no further response.

Response L-5-6: This comment states that "*The FEIR fails as an informational document because the Project Objectives are impermissibly narrow and foreclose consideration of feasible alternatives*." Following this statement is several pages describing the commenters reasons for the statement.

- The Project Objectives are not impermissibly narrow and do not foreclose consideration of feasible alternatives to the Project. Page 5.0-1 of the DEIR presents a heading entitled "Project Objectives," which includes a collection of goals and objectives to define the purpose of the Project. In developing the project objectives, it is notable that the City considered the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and it is clearly within a city's exercise of its legislative discretion to facilitate the construction of new housing after thorough evaluation of the development potential. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects."

  The DEIR identifies the principal Project objective of the project as the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval, and subsequent development of the Development Area. The principal Project objective is an overarching Project objective. In addition, the DEIR presents five goals that more fully inform the project purpose and principal Project objective. These goals also serve as a set of Project Objectives, in that they provide flexibility, yet more specific and detailed direction by which Project alternatives can be considered. The goals and objectives presented in the DEIR are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice to modestly increase urban density*.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

The Project's goals and objectives were developed by the City in response to the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and the City's desire to facilitate the construction of new housing in the face of the housing crisis. The City staff has responded with adequate attention to the economic, environmental, and social costs of reduced housing density by establishing a quantified target density that provided the City with significant flexibility to evaluate different scenarios for residential projects on the Project site. The quantified target was presented in the DEIR using the term "quantifiable objective," which has created some misunderstanding in the DEIR text. The DEIR did not intend to imply that these "quantifiable objectives" were synonymous with "project objectives" under CEQA. This misunderstanding warrants edits to the DEIR text in Section 2.0 Project Description and Section 5.0 Alternatives to clarify.

The objectives discussed in Section 5.0 of the DEIR (as clarified in Chapter 4.0 the Errata) help to inform the consideration, and ultimately, the development of alternatives for analysis. It is notable that the NOP was circulated with the project objectives and the three (3) possible alternatives presented below:

- No Project (No Build) Alternative: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.

- Increased Density Alternative: Under this alternative, the proposed Project would be developed with the same number of units as described in the Project Description, but the density of the residential uses would be increased, reducing the overall footprint of the developed areas, and preserving the remaining Development Area for agricultural production.
- Reduced Sphere of Influence Alternative: Under this alternative, the proposed Project would exclude the 78-acre SOI Expansion north and east of the Development Area.

Following the NOP public review feedback, and further evaluation by the City, the Increased Density Alternative was expanded to also have a "Mixed Use" component and a Reduced Density Alternative was added. Ultimately, four (4) alternatives to the proposed Project were established based on input from City staff after considering public comment and after evaluating them against the five project goals and objectives. This is a relevant example of where the project objectives clearly did not foreclose consideration of feasible alternatives, but instead resulted in the addition of an alternative for consideration, and modifications of an alternative that was already under consideration.

The alternatives evaluated in the DEIR represent a reasonable range of feasible alternatives that meet most or all project objectives presented above (and clarified in the Errata) while reducing or avoiding one or more significant environmental effects of the project. Again, a range of alternatives required in a DEIR is governed by a "rule of reason" that requires a DEIR to set forth only those alternatives necessary to permit a reasoned choice. The following alternatives were analyzed in the DEIR:

- No Project (No Build) Alternative: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- Increased Density Mixed Use Alternative: Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium-high density residential use, 10 acres would be developed with 195 apartments under the high density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.

- Reduced Density Alternative: Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.
- Reduced Sphere of Influence Alternative: Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

The commenter also states the City has "*rejected anything other than the proposed project. In doing so, it prejudicially prevented informed decision making and public participation*." This is not accurate. As explained above, the DEIR originally considered three alternatives to the Project, and after the scoping process, expanded the alternatives to include an additional alternative and modifications to an alternative that was already under consideration. Also, as discussed on page 5.0-2 of the DEIR, the City considered alternative locations, but determined that there are no feasible alternative locations. After establishing the four alternatives as reasonable range of alternatives, the City evaluated the potential environmental effects of the four alternatives and whether those alternatives would meet the Project Objectives. The City has not rejected any of those alternatives, and those alternatives may be considered by the City Council. In addition, the commenter has not offered any proposed alternative that they believe should be analyzed.

Response L-5-7a: This comment states that "*The EIR fails to adequately analyze potentially significant impacts of the Project.*" The comment then states *"The EIR fails to adequately analyze the Project's aesthetic impacts, including impacts to light and glare*." The commenter then states: *"'Before the impacts of a project can be assessed and mitigation measures considered, an EIR must describe the existing environment. It is only against this baseline that any significant environmental effects can be determined.' [Citation.] The Guidelines state that an EIR must include a description of 'the physical environmental conditions in the vicinity of the project' which constitute the 'baseline physical conditions' for measuring environmental impacts." (San Joaquin Raptor Rescue Center v. County of Merced (2007) 149 Cal.App.4th 645, 657–658 (San Joaquin Raptor).)…Here, the environmental setting discussion in the Aesthetics chapter begins with general information about aesthetics, including an acknowledgment that "[s]cenic resources are specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the* *focal point of a viewshed and are usually foreground elements." (Draft EIR, p. 3.1-1, italics added.) Similarly, the discussion of light and glare states that "[s]tationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination." (Id. at p. 3.1-3.).*

- This comment is noted. The commenter has provided discussion about what is necessary for an assessment of impacts and mitigation measures, including establishing a baseline. The commenter next identifies several statements made in the DEIR regarding aesthetics. There are no specific questions presented in this comment. It should be noted that the DEIR includes a description of the baseline aesthetic condition. It is first described in the Project Description (DEIR pages 2.0-1 through 2.0-3. In addition, there are a variety of figures provided in the Project Description that illustrate the baseline condition of the Project site. Additional baseline information is provided on page 3.1-1 through 3.1-6 of the Draft EIR, describing the aesthetic condition of the Project site and the general vicinity.

Response L-5-7b: This comment states that "*The EIR acknowledges that the Project site consists of "mainly rural residential and agricultural land and ha[s] very few sources of light and glare, allowing for clear day and nighttime views" because it is "distant from the more urban and densely populated areas of Fresno and Clovis." (Draft EIR, p. 3.1-3, emphasis added.)*[2] *The EIR, however, contradicts itself by also claiming that "[t]he existing light environment found in the Project site is considered typical of suburban areas." (Id.) Similarly, the EIR acknowledges that "sky glow" is "of concern in more rural or natural areas where a darker night sky is either the norm or is important to wildlife[,]" but claims, "[d]ue to the urban nature of the City limits" that "[i]solating impacts of particular sources of light or glare is … not appropriate or feasible for the proposed Project." (Id., emphasis added.)*"

- Additional text is provided on page 3.1-1 through 3.1-6, and 3.1-15 through 3.1-18 in of the Draft EIR, to amplify the discussion on light and glare, and to clarify references to isolating sources of existing light. The DEIR acknowledges that some of the areas within the vicinity of the Project site have limited sources of light and glare, allowing for clear day and nighttime views. To the north of Shepherd Avenue in the vicinity of the Project site is a mix of suburban and rural residential areas. Immediately to the west is suburban residential in the neighborhoods north of Shepherd Avenue (i.e. Lennar Heritage Grove). Immediately to the north and east of the Project site is rural residential development, which has a lower intensity of lighting then what is common in the suburban neighborhoods in the vicinity. These rural residential areas have typical residential building lighting (i.e., lights on the building structure in the front and backyard, landscaping lighting, and indoor lighting) like the suburban neighborhoods, but there is a lower density of buildings so overall lighting intensity is lower in these areas when compared to the surrounding suburban lighting. Additionally, some of the rural residential areas do not have street lighting, unlike more intensively developed areas in the vicinity. However, these areas are typical of suburban areas within and immediately outside the City of Clovis, where rural residential neighborhoods are often located adjacent to suburban or urban uses. The mix of lighting is typical of many suburban neighborhoods along the periphery of the City and within certain areas, such as the Dry Creek Preserve.

The DEIR acknowledges the Project would introduce additional sources of light and glare into the vicinity of the Project, including in areas adjacent to the rural residential communities described above. However, this does not mean the Project would result in potentially significant aesthetic effects associated with the introduction of light and glare. The DEIR found no significant impacts would occur. This is because the City's mandatory standards require measures designed to prevent the spillover of light, as well as high intensity or excessively bright lights. The Project is also required to comply with the City's mandatory standards for street lights, which includes standard shields to direct lighting to the roadway rights-of-way, without spilling over onto adjacent properties.

The commenter also raises concerns about the Project's impact on existing sky glow. Sky glow is the effect created by light reflecting into the night sky. Sky glow is of particular concern in areas surrounding observatories, where darker night sky conditions are necessary; however, the introduction of significant levels of sky glow in isolated rural or natural areas can also result in potentially significant effects. Because the Project is located within a largely developed area of Fresno County, and surrounded by developed land uses, several existing light sources already affect residential areas and illuminate the night sky. In other words, sky glow is present under existing conditions, and the introduction of a residential development adjacent to those existing developments would not result in a significant increase in sky glow. While sky glow can increase based on certain intensive uses—such as a project that contemplates stadium lights, spot lights, and strobe lights—no such intensive uses are contemplated for the Project. As a result, any increase in sky glow resulting from this Project would be imperceptible compared to baseline conditions and thus impossible to measure. The Project would therefore not result in new or substantially increased sky glow. In other words, sky glow is considered part of the existing conditions (i.e., the baseline conditions under CEQA).

The proposed Project also does not have any areas where there would be spillover of light, or high intensity or excessively bright lights. There would be normal City standard street lights that include standard shields to direct lighting to the roadway rights-of-way, without spilling over onto adjacent properties. This new light would not be a potentially significant impact. The new lighting expected would consist of lights on the building structure in the front and backyard, landscaping lighting, and indoor lighting. Although there would be new lighting associated with the residential buildings, the lighting attached to the building structures would be normal residential lighting subject to the City's standards. The implementation of these lighting standards is part of the Project's design and would avoid nuisance light and spillover issues.

Some buildings within the Project would be two-story, and it is therefore possible that lighting from the second story windows could be visible from adjacent properties; however, such second story indoor lighting would not be directed at, or to, the adjacent properties, and would not have a potentially significant impact on those adjacent properties. Additionally, the proposed Project does not include any lights that are considered excessively bright with the potential to create sky glow, such as stadium lights, strobe lights, spot lights, etc. In addition, there are no sources of significant glare associated with the proposed Project.

The DEIR discusses new sources of glare from the proposed Project primarily occurring from the windshields of vehicles travelling to and from the Development Area and from vehicles parked within the Project site. The DEIR notes that significant glare within the Project site is not expected to impact receptors within the Project site, or at adjacent properties, given the visual screening from landscaping, open space, and the residential components of the site plan. Glare from traveling vehicles is a function of the density of vehicles on the roadway, the time that they are present, and the time of day. Generally, glare from traveling vehicles to a receptor is very short lived (fractions of a second) given that the glare is dependent on the amount of time in which the vehicle is positioned at the perfect angle for the sun to reflect light off the vehicle to a receptor. The potential for glare changes throughout the day as the angle of the sun changes. Further, the City does not consider glare from vehicles traveling along roadways as a significant impact. The proposed Project is not anticipated to have high concentrations of glare, and the impact from glare is less than significant.

Response L-5-7c: This comment states that "*No facts or evidence support the EIR's contradictory claim that analyzing "sources of light and glare" is not feasible*."

- The DEIR does not state that assessment of sources of light and glare is infeasible. Rather, as explained above, sky glow associated with existing uses within the vicinity of the Project currently exists, and the Project does not contemplate any uses that would significantly increase the level of sky glow. Because the Project is in a largely developed area, any incremental contribution to sky glow would be imperceptible and therefore impossible to isolate.

Response L-5-7d: This comment states that "*The Project site and surrounding area are not within the "urban" City limits and, as the EIR admits, consist of "mainly rural residential and agricultural land" with "very few sources of light and glare." (Draft EIR, p. 3.1-3; see also id. at p. 3.1-6 ["There are minimal existing light sources on and adjacent to the Project site"].) Moreover, the Project will add 605 residences, including new streetlights, and 5,705 new vehicle trips per day, (Draft EIR, Appendix I, p. 2-1) which are all potential sources of light and glare (Draft EIR, p. 3.1-3) to an area with "very few sources of light and glare." Indeed, the EIR admits that there are no streetlights in the Non-Development Area. (Draft EIR, p. 3.1-6.) The EIR's internal inconsistencies and failure to analyze the Project's light and glare impacts on the surrounding rural residential and agricultural land constitute prejudicial abuses of discretion an require the City to revise and recirculate the EIR with the missing analyses…The EIR also fails to adequately analyze and mitigate glare impacts on existing residences in the Non-Development Area. (See Draft EIR, pp. 3.1-14 through 3.1-15.) The EIR acknowledges that increased traffic generated by the Project could have light and glare impacts from car windshields and headlights, but presumes they will be insignificant because housing within the Project site would be developed in compliance with City standards in the General Plan and Municipal Code to minimize impacts from light and glare. (Id., see also Final EIR, p. 2.0-23 ["the construction of park and open space areas … provides some visual relief within residential subdivisions." Emphasis added].) As discussed below, however, CEQA law makes clear that the EIR cannot presume the absence of impacts based solely on consistency with existing standards. (East Sacramento Partnerships for a Livable City v. City of Sacramento (2016) 5 Cal.App.5th 281, 301 (Livable City).) Moreover, the new developments consistency with City standards does nothing to address light and glare impacts to the existing homes in the Non-Development Area. Similarly, the EIR claims that there would not be any significant impacts because the Project's "single-family residential uses would be an extension of single-family residential uses adjacent to the Project site." (Draft EIR, p. 3.1-14.) This conclusory statement is completely unsupported by the facts, however, as the EIR admits that the existing residences have no streetlights, and the current environment has "very few sources of light and glare." (See Draft EIR, pp. 3.1-3, 3.1-6.) The EIR* *completely fails to analyze light and glare impacts from Project structures (including second story windows) and traffic on the existing, immediately adjacent neighborhoods. (See Draft EIR, pp. 3.1-14 through 3.1-15.) Moreover, the final EIR does not remedy this deficiency. In fact, the final EIR admits that compliance with the City's standards would not reduce light and glare impacts to insignificance, "and the overall level of light and glare in the Project site would increase in general as urban development occurs." (Final EIR, p. 2.0-25.) The EIR must be revised and recirculated to analyze and mitigate this potentially significant impact."*

- The Project would not result in any significant aesthetic impacts associated with increase light and glare on the surrounding community. Light and glare is addressed on page 3.1-3, and 3.1-14 through 3.1-15 of the DEIR. The DEIR notes that the proposed Project involves the development of up to 605 single-family residential units, open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements. The DEIR indicates that several roadways would be constructed within the Development Area to serve the proposed single-family residential uses and that these roadways would result in the introduction of street lighting into a currently undeveloped site. The DEIR indicates that the proposed single-family residential uses and local roadway would be typical of what is already experienced because of the existing single-family residential uses and local roadways that occur within the surrounding area. The proposed single-family residential uses would be an extension of single-family residential uses adjacent to the Project site.

  The DEIR concludes that the addition of these new single-family residential uses would not result in a significant impact. New sources of glare from the proposed Project would occur primarily from the windshields of vehicles travelling to and from the Development Area and from vehicles parked within the Project site. However, parking for the proposed residential uses in the Development Area would primarily occur within enclosed garages and driveways. Headlights and windshields would be shielded by the proposed residential structures within the site. Additionally, the Project includes plans for extensive landscaping and open space areas throughout the site, which would provide visual screening and block potential windshield glare for sensitive receptors within the Project site. Residential structures placed along the boundaries of the Development Area would provide visual screening and block potential windshield glare to areas surrounding the Project site. Glare from traveling vehicles is a function of the density of vehicles on the roadway, the time that they are present, and the time of day. Generally, glare from traveling vehicles to a receptor is very short lived (fractions of a second) given that the glare is dependent on the amount of time in which the vehicle is positioned at the perfect angle for the sun to reflect light off the vehicle to a receptor. The potential for glare changes throughout the day as the angle of the sun changes. Further, the City does not consider glare from vehicles traveling along roadways as a significant impact. The proposed Project is not anticipated to have high concentrations of glare, and the impact from glare is less than significant.

The DEIR properly assumes the proposed Project would be required to implement existing City regulations aimed at reducing light impacts to ensure that no unusual nighttime lighting is produced. The Project's incorporation of these standards would avoid potentially significant effects associated with lighting and glare to the surrounding neighborhoods. For example, Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. The DEIR indicates that while implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light, the impacts would not be eliminated entirely, and the overall level of light and glare in the Project site would increase in general as urban development occurs. This statement that there would be an impact does not mean that the impact is "significant." Rather, the DEIR concludes that the impact is "less than significant" for many reasons. First, page 3.1-14 of the DEIR states "*it is noted there are no specific features within the proposed Project that would create unusual light and glare*." Light and glare that would be created are normal for suburban areas, and consistent with lighting in the developed neighborhoods in the suburban areas in along Shepherd Avenue to the south, as well as the suburban areas to the immediate west (i.e., Heritage Grove).

The implementation of these lighting standards would ensure the Project would not result in significant light and glare impacts to the surrounding community. The lighting standards require lighting design that ensures that the Project would not have areas with spillover of light, or high intensity or excessively bright lights. Nothing in the project design calls for any unusual lighting that would result in spillover, high intensity, or excessively bright lights. There would be normal City standard street lights that include standard shields to direct lighting to the roadway rights-of-way, without spilling over onto adjacent properties. The new lighting expected would consist of lights on the building structure in the front and backyard, landscaping lighting, and indoor lighting.

Some buildings within the Project would be two-story, and it is therefore possible that lighting from the second story windows could be visible from adjacent properties; however, such second story indoor lighting would not be directed at, or to, the adjacent properties, and would not have a potentially significant impact on those adjacent properties.

Further, the development adjacent to the Quail Run neighborhood will be buffered by a 25-foot Landscape/Trail buffer adjacent to a proposed neighborhood street. Proposed homes south of this Quail Run neighborhood will front on to the adjacent neighborhood street and homes east of the Quail Run neighborhood will side on to a neighborhood street except for one home that will side on to the Landscape/Trail buffer.

Existing rural residential lots along the north and east property line of the project will have proposed lots backing on to the adjacent rural residences. The existing residential structures are a significant distance from the proposed homes, and will not result in a potentially significant impact.

The DEIR also notes that new lighting, including street lighting, would be "*pedestrian-scale lighting*" and the fixtures would include shields so that light does not spill onto adjacent properties. The less then significant conclusion is not dependent on the existing regulation cited, rather, compliance with lighting regulations throughout the City create an environment that minimizes light impacts.

While the commenter suggests the existence of new streetlights and windshield glare from vehicles would result in a significant impact, street lighting or windshield glare is not unusual in either the City or the vicinity of the Project, and the City does not consider the addition of such minor sources of light and glare to be a significant impact, particularly given the prevalence of those sources along the Shepherd Avenue corridor and the City generally. Moreover, windshield glare exists on all roadways occupied by motor vehicles, including the streets surrounding the Quail Run Community. The fact that lighting regulations exist is presented in the DEIR as an acknowledgement that lighting regulation exists to ameliorate light nuisances that can develop within human occupied areas when such measures are not taken.

The commenter asserts without evidentiary support that the existence of light itself would inevitably result in a significant impact that would warrant some form of mitigation. The conclusion that the introduction of any new light source results in a per se significant impact is speculative and unsupported by the evidence. The existence of light itself does not constitute a significant impact; rather, it represents an expected outcome in inhabited areas, including the area in the vicinity of the Project. Where an impact from a new source of light would rise to the level of "potentially significant" and warrant mitigation would be in a situation where a new source of light is directed to, or allowed to spillover onto adjacent properties, or if the new source of light was excessively bright, as is the case with stadium lights, spot lights, and strobe lights, such that the new light would cause sky glow or other nuisance situations. Spillover of light onto adjacent property, or excessively bright lights that create sky glow, such as stadium lights, would present a potentially significant impact and warrant consideration of mitigation to reduce or avoid the impact. The proposed Project does not have any areas where there would be spillover of light. There would be normal City standard streetlights that include standard shields to direct lighting to the roadway rights-of-way, without spilling over onto adjacent properties. This new light would not create a potentially significant impact. Additionally, there would be new lighting associated with the residential buildings. The lighting attached to the building structure would be normal residential lighting consistent with City's standards. These lighting standards are designed to be protective of nuisance light and spillover issues. The new lighting expected would consist of lights on the building structure in the front and backyard, landscaping lighting, and indoor lighting. Some buildings would be two-story, and lighting from the second story windows could be visible from adjacent properties, but second story indoor lighting would not be directed at, or to, the adjacent properties, and would not have a potentially significant impact on those adjacent properties. Additionally, the proposed Project does not include any lights that are considered excessively bright with the potential to create sky glow, such as stadium lights, strobe lights, spot lights, etc. In addition, there are no sources of significant glare associated with the proposed Project. The DEIR states on page 3.1-14 that "*it is noted there are no specific features within the proposed Project that would create unusual light and glare*." It is notable that the commenter, also, has not identified any specific sources of light or locations where the Project would have a significant impact on an adjacent property other than the concept that the existence of light from a two-story residence could be a significant light impact. Again, the existence of light inside a two-story home is intended to illuminate the inside of the home, and is not directed to neighboring properties. The visibility of the neighboring light from inside a two-story home is not by itself a potentially significant impact. Again, there is no portion of the project that would direct light onto adjacent properties, rather, the new development would have typical residential lighting commonly observed in existing Clovis neighborhoods. The existence of such light does not constitute a significant impact.

The commenter states: "*Moreover, the final EIR does not remedy this deficiency. In fact, the final EIR admits that compliance with the City's standards would not reduce light and glare impacts to insignificance, "and the overall level of light and glare in the Project site would increase in general as urban development occurs." (Final EIR, p. 2.0-25.)*." This statement does not accurately characterize the conclusions in the Final EIR. Nowhere in the FEIR discussion on page 2.0-25 is there a "*significance*" or "*insignificance*" conclusion provided; rather, that portion of the Final EIR includes a discussion of impacts. The Final EIR states that "*the impacts would not be eliminated entirely, and the overall level of light and glare in the Project site would increase in general as urban development occurs*." This is not a conclusion that any such impacts would be significant; to the contrary, this language is an acknowledgement that new light will occur and that the change is an impact. Those impacts, however, would ultimately be less than significant. As stated on page 3.1-14 of the DEIR, "*it is noted there are no specific features within the proposed Project that would create unusual light and glare*," and as discussed previously, there are no locations were spillover or excessively bright lights would be erected such that there would be a nuisance or sky glow. Given that there are no specific light features within the proposed Project that would cause unusual light or glare impacts, the DEIR and FEIR appropriately concludes that the impact light and glare is less than significant.

Response L-5-7e: This comment states that "*An equally fatal flaw in the EIR's analysis is the characterization of the existing environment on the Project site, specifically, the pecan orchard, as an island of agricultural land surrounded by urbanized development. (Draft EIR, p. 3.1-11; see also Final EIR, pp. 2.0-22 through 2.0-23.) On the contrary, the orchard, which has been actively farmed for approximately 50 years, is a visual buffer between the low-density neighborhoods in Expansion Subarea North and Expansion Subarea East and the more urbanized areas of the City south of Shepard Avenue. (See Draft EIR, p. 3.1-4 ["Agricultural lands provide for visual relief form urbanized areas and act as community separators to nearby urban areas"].) Contrary to the unsupported claim in the final EIR, the inclusion of less than one acre of parkland does not remedy the loss of 77-acres of trees, which, as the EIR admits, are visual resources. (Cf. Final EIR, p. 2.0-23.)…The EIR completely fails to analyze the impacts of eliminating the agricultural buffer created by the orchard. (See Id. at p. 3.1-5 ["The majority of the Development Area is in active agricultural use"].) Even worse, the EIR fails to analyze the impacts of replacing the existing visual buffer with highly urbanized, medium-high density residential development. Instead of performing this analysis or explaining why it is infeasible, the EIR concludes, without any support, that* *"the existing visual character of the Non-development Area would not change as part of the proposed Project." (Draft EIR, p. 3.1-10; see also Final EIR, p. 2.0-21.) As stated above, this could not be further from the truth as the Project would destroy the existing agricultural buffer an replace it with the very urbanization that the orchard has shielded the Non-Development Area from for more than 50 years. The EIR must analyze the aesthetic impacts of razing the existing 77-acre orchard and constructing 605 homes, including impacts to the existing neighborhoods of the non-development area."*

- The elimination of the pecan orchard would not result in any potentially significant environmental effects. First, the pecan orchard does not function as an "agricultural buffer." The term "agricultural buffer" as used in the planning profession describes areas where planners establish non-intensive uses/open space to separate residences from agricultural land. This is done because the intensive agricultural activities that occur within agricultural operations are often viewed as incompatible with adjacent residential land uses. In this case, the agricultural field (orchard) adjacent to the Development Area is not an agricultural buffer in the true sense of the term. Rather, there is no agricultural buffer that separates the agricultural use and the existing residences.

  The City also does not consider the pecan orchard to be a visual buffer. The City's General Plan does not designate the Development Area as a visual buffer, scenic, or any other visually significant feature. Instead, the City's General Plan designates the Development Area for conversion to an urban use.

  In some instances, agricultural lands form part of a viewshed or otherwise provide visual relief from otherwise urban development, and the conversion of agricultural land to urban uses creates a change in what residents and passerby see on a property. However, such changes do not necessarily result in a "significant" impact. According to the CEQA Guidelines, such changes are considered a significant impact where the change would have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the project site and its surroundings.

  Under these standards, the Project would not result in a significant environmental effect. The pecan orchard portion of the Project site is an island of agricultural land use surrounded by developed homes to the east, north, and south, and an entitled residential subdivision under construction to the west. What this means is that the pecan orchard is a relic agricultural piece of property that has remained intact and operational despite the properties in the immediate surrounding aesthetically changing to a residential aesthetic. The proposed

Project would change the existing aesthetic of the Project site to be consistent with the residential (suburban and rural) theme established for Shepherd Avenue by the City of Fresno and the City of Clovis' land use approvals along Shepherd Avenue. With few exceptions, both cities have required residential projects to construct a uniform 6 ft. tall concrete block wall setback at least 30 feet from the street with landscaping, sidewalks, and bike lanes. Trees of a small to medium size and a variety of shrubs create a generally consistent shared landscape theme by both cities.

In addition, a change in the visual character of a project site does not necessarily mean the visual character of the project site or the surrounding area will be degraded. The Project applicant has submitted a conceptual plan for the project detailing the Shepherd Avenue and open space landscaping. That conceptual landscape plan includes visual components that will enhance the appearance of the neighborhood once developed like those constructed by adjacent residential projects along Shepherd Avenue. These improvements include landscaping improvements like new street trees and other neighborhood greenery along Shepherd and Sunnyside Street frontages of the Project. The proposed Project would also result in the construction of park and open space areas which provides some visual relief within residential subdivisions. While implementation of the proposed Project would change the existing visual character of the area, the development components of the subdivisions are in alignment with the City's requirements for residential subdivisions in the region.

Response L-5-7f: This comment states that "*Similarly, the EIR's conclusion that, because the Project would comply with the City's General Plan policies and Development Code, it "would not have a substantial adverse impact on scenic vistas, corridors, or resources in the City of Clovis" is completely unsupported. (Draft EIR, p. 3.1-11, emphasis added.) First, Project's destruction of the agricultural buffer would significantly impact visual resources, including trees (see Draft EIR p. 3.1-1) and the EIR's analysis of impacts cannot be artificially limited to the City limits, because the Project's aesthetic impacts will affect the Non-Development Area, which is not "in the City of Clovis*."

- As stated in the DEIR, the Project site is not designated as a scenic vista by the City of Clovis General Plan or the Fresno County General Plan, nor does it contain any unique or distinguishing features that would qualify the site for designation as a scenic vista. The DEIR does discuss the fact that development along Shepherd Avenue was contemplated in the Clovis General Plan EIR, which concluded that development/urbanization of the agricultural lands in the area was a less than significant environmental impact. General Plan DEIR pages 5.1-13 through 5.1-14 reflects the City's finding that new development would not substantially alter or damage scenic vistas or resources in the Plan Area or along a state scenic highway. The City has established their desire to convert the agricultural land to an urban use in the General Plan by designating it for development. In designating land for development, the City establishes standards for the orderly growth and development of the City to establish and maintain the community's history and quality characteristics in appropriate locations. It requires high quality planning and design for development that enhances the visual character of the City, avoids conflicts between land uses, encourages the appropriate mix of uses, and preserves the scenic qualities of the City. It also creates a comprehensive and stable pattern of land uses upon which to plan sewerage, transportation, water supply, and other public facilities and utilities. The General Plan EIR provides an analysis and impact conclusion for conversion of agricultural and rural residential land for new development. The General Plan EIR concludes that there are potential impacts associated with these changes, but that following specific required provisions (General Plan policy, design guidelines, and development standards) would ensure that there is not a significant impact associated with changes from new development. Here, the City of Clovis has established two important directives for future projects within the General Plan Planning Area. The City has provided 1) a directive that new development follows the General Plan policies, design guidelines, and development standards, and 2) a conclusion that compliance with such General Plan policies, design guidelines, and development standards shall result in a less than significant impact. While the threshold and analysis under the City's directive is qualitative, the General Plan EIR impact conclusions are applicable to the proposed Project.

The DEIR does acknowledge that the loss of the visual appearance of the agricultural land on the site will change the visual character of the Project site in perpetuity, which some people are expected to view as a loss of an isolated visually attractive amenity, but not that it is a significant impact. The City considers the mandatory requirements for landscaping and site plan as effective in reducing potential significant visual impacts on new development. Overall, the conversion of the isolated and remnant agricultural land surrounded by residential and rural residential land uses is a considered less than significant impact.

Response L-5-7g: This comment states that "*Second and more importantly, "[c]ompliance with a general plan in and of itself 'does not insulate a project from the EIR requirement, where it may be fairly argued that the project will generate significant environmental effects.' [Citation.] A project's effects can be significant even if 'they are not greater than those deemed* *acceptable in a general plan.'" (Livable City , supra, 5 Cal.App.5th at p. 301; see also Keep Our Mountains Quiet v. County of Santa Clara (2015) 236 Cal.App.4th 714, 732 [EIR required "if substantial evidence supports a fair argument that the Project may have significant unmitigated noise impacts, even if other evidence shows the Project will not generate noise in excess of the County's noise ordinance and general plan"]; Berkeley Keep Jets Over the Bay Committee v. Board of Port Com'rs (2001) 91 Cal.App.4th 1344, 1381 ["the fact that residential uses are considered compatible with a noise level of 65 decibels for purposes of land use planning is not determinative in setting a threshold of significance under CEQA"].) The EIR's repeated claim that the Project's compliance with City of Clovis General Plan policies and standards (cf. Draft EIR, pp. 3.1-11, 3.1-12) says nothing about the physical alteration of the environment that replacing 77 acres of orchard with 605 residences will cause. The EIR must be revised to analyze the Project's aesthetic impacts on the surrounding environment*."

- The DEIR appropriately discloses the physical alterations of the Project site that would occur from new development. The visual changes are described, and the impacts from the changes are disclosed within the context of CEQA. The DEIR notes the conclusions that were made in the General Plan EIR, and notes that the General Plan provides direction for new development to be located along Shepherd Avenue. This includes development of the Project site. General Plan DEIR pages 5.1-14 through 5.1-15 reflect the City's finding that new development would alter the visual appearance of the City and its Plan Area, but would not substantially degrade its existing visual character or quality such that there would be a significant impact. The analysis performed by the City specifically looked at "*…new development farther away from the City's existing boundaries into the further SOI and non-SOI Plan Area, which are currently designated primarily as agriculture and rural residential*." Here, the General Plan DEIR describes characteristics like the Development Area and general vicinity. The General Plan DEIR notes that "*New projects would have to comply with the General Plan Update policies, design guidelines, and development standards. Subsequent environmental review would also be required for development of each individual project. These required provisions would ensure that the altered visual appearance of the City would maintain the existing visual quality and character of the City and its surrounding landscape. Consequently, the full buildout of the General Plan Update would not result in significant adverse impacts to the City's visual quality and character."* Here, the City of Clovis has provided 1) a directive that new development follow the General Plan policies, design guidelines, and development standards, and 2) a conclusion that compliance with such General Plan policies, design guidelines, and development standards shall result in a less than significant impact. While the threshold and analysis under the City's directive is qualitative, the impact conclusions from the certified General Plan DEIR emphasize the City's finding that compliance with the required provisions would ensure that there is not a significant impact associated with changes in the visual appearance or character from new development.

Response L-5-8a: This comment states that "*The EIR's analysis of agricultural impacts acknowledges that the 77-acre Project site contains 63.60 acres of Prime Farmland and 11.44 acres of Farmland of Statewide Importance, as designated by the California Department of Conservation. (Draft EIR, pp. 3.2-5 through 3.2-6.) The EIR, however, ignores these designations based on a Land Evaluation and Site Assessment (LESA) model analysis that uses faulty assumptions about the feasibility of irrigated production at the orchard. (See Id., see also Draft EIR, Appendix B [LESA analysis].) Specifically, the EIR claims, based on the presence of "hardpan" in 5 of 19 bore samples from the geotechnical engineering report (see Draft EIR, Appendix F) that "the majority of the property has a thin layer of productive soil, underlaid by a hardpan and perched water that is not conductive to sustain long term agricultural production." (Draft EIR, p. 3.2-7.) The fifty-plus years of agricultural production at the Project site belies this conclusion."*

- The *Land Evaluation and Site Assessment (LESA)* model includes an evaluation of "Land Evaluation" (LE) factors, as well as "Site Assessment" (SA) factors. For the Land Evaluation portion of the model, factors such as Land Capability Classification Ratings and Storie Index provide the characteristics for establishing an LE score.

  The Land Capability Classification System classifies soils from Class I to Class VIII based on their ability to support agriculture with Class I being the highest quality soil. The Storie Index considers other factors such as slope and texture to arrive at a rating. These systems are described on page 3.2-2 through 3.2-3 of the DEIR. It is notable that Table 3.2-5 on page 3.2-7 of the DEIR shows that 45 percent of the Project site has a Storie Index that is described as follows: "*If used for crops, severely limited and require special management*." Only 24 percent of the Project site is characterized with the highest Storie Index. It is also notable the majority of the Development Area, 57.55 acres (74%) of the site is classified as Class II – IV soils. Class II soils have moderate limitations that restrict choice plants or that require moderate conservation practices. Class III soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both. Class IV soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Ultimately, the Capability Classification System and the Storie Index soil values are input into the LESA model, regardless of any additional soil inclusions (i.e. "hardpan") that are discovered in geotechnical borings. These soil values result in a Land Evaluation Score in the LESA Model. In addition, these soil values provide some weight to a Project Size score in the LESA model. Again, the fact that "hardpan" was found in the geotechnical borings, provides no weight in the LE portion of the LESA model.

The existence of "hardpan" is not a specific factor that is considered under either Land Capability Classification or Storie Index, nor it is provided scoring weight within the "Land Evaluation" score. Instead, the Land Capability Classification and Storie Index are soil classifications that are well documented in the United States Geological Service's Soil Survey for the area. The LE score utilizes these factors in establishing a project score, but does not use the existence of "hardpan" as a factor.

The SA portion of the model considers four factors: Project Size, Water Resources Availability, Surrounding Agricultural Land, and Surrounding Protected Resource Land. In this portion of the model, the existence of hardpan has no effect on three of the factors (i.e. Project Size, Surrounding Agricultural Land, and Surrounding Protected Resource Land). Under the Water Resources Availability factor, "hardpan" is a consideration in the overall evaluation, but is not provided significant scoring weight. To understand the considerations regarding the Water Resource Availability factor, an explanation is provided by the California Department of Conservation below.

> "*The Water Resource Availability factor in the LESA Model was developed in cooperation with Nichols-Berman, a consulting firm under contract with the Department of Conservation. A thorough discussion of the development of this rating is presented by Nichols-Berman in a report to the Department entitled, Statewide LESA Methodologies Report - Project Size and Water Resource Availability Factors*[1]*. During the development of this factor, it became apparent that certain conditions unique to California would need to be represented in this system.*
>
> *First, it was decided to classify water reliability based upon the effects on agricultural production (such as being forced to change to lower-value crops, putting in groundwater pumps, or cutting back on the acreage farmed) rather than the actual type of limitation (such as a limitation on the quantity, frequency,*

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[1] *Statewide LESA Methodologies Report - Project Size and Water Resource Availability Factors*. Prepared by Nichols - Berman, for the Department of Conservation. 1995.

or duration of water delivery). LESA systems have traditionally focused on the latter. However, it was found that the many types of limitations are too varied in California to adequately represent in the LESA system. In the Statewide LESA system, these effects are referred to as restrictions.

Second, the factor had to include an interrelation with cost. The historical shortages and unreliability of California water use has led to the establishment of various interconnected and dual systems. Probably more than any other state, reliability is related with cost -- a more reliable water supply can sometimes be obtained, but at a greater cost. Therefore, restrictions were classified into two major categories -- physical and economic. These are separated because, generally, a physical restriction is more severe than an economic restriction and this should be reflected in the LESA system.

Third, the factor had to include the effects of the drought cycle in California. During the drought of 1987 to 1992, many agricultural areas of the state experienced water shortages. The impact of these shortages resulted in several different actions. Some areas were able to avoid the worst effects of the drought simply by implementing water conservation measures. Other areas were able to obtain additional water supplies, such as by securing water transfers or simply pumping more groundwater, but at an increase in the overall price of water. Other options included shifting crops, replanting to higher value crops to offset the increase in water prices, or leaving land fallow. A project site that experiences restrictions during a drought year should not be scored as high as a similar project site that does not.

The easiest way to make determinations of irrigation feasibility and the potential restrictions of water sources is to investigate the cropping history of the project site. For instance, was the water supply to the project site reduced by the local irrigation district during the last drought? If the site has a ground water supply, do area ground water levels sometimes drop to levels that force markedly higher energy costs to pump the water?

If the history of the project site is unavailable (including when the site has recently installed an irrigation system), look at the history of the general area. However, remember that the project site may have different conditions than the rest of the region. For instance, the project site could have an older water right than others in the region. Although certain areas of the state had severe restrictions on water deliveries during the last drought, some parcels within these areas had very secure deliveries due to more senior water rights. If this was the case in the region of the project site, check the date of water right and compare it with parcels that received their total allotment during the last drought. The local irrigation district should have information on water deliveries.

> *The scoring of water resource availability for a project site should not just reflect the adequacies of water supply in the past -- it should be a prediction of how the water system will perform in the future. For instance, a local jurisdiction might find that the allocation of flows to stream and river systems has been recently increased for environmental reasons, which will decrease the future available surface water supply. In this case, the past history of the site is not an adequate representation of future water supply and water system performance.*

Considering this explanation, the Department of Conservation established the following factors to score the Water Resources Availability for a site: Irrigated Production Feasibility, Physical Restrictions, and Economic Restrictions.

"Feasibility" of irrigated production considers the following three factors:

1) There is an existing irrigation system on the project site that can serve the portion of the project;
2) Physical and/or economic restrictions are not severe enough to halt production; and
3) It is possible to achieve a viable economic return on crops though irrigated production.

The LESA model poses a major question that must be considered, "*if there is an irrigated crop that can be grown within the region, can it actually be grown on the project site*?" Here, there are several considerations. To answer this question, the agricultural manager/property owner was questioned. First, the agricultural manager/property owner has indicated that there is not a supply of water from irrigation districts as is common in the region. Instead, the property relies on groundwater pumped from wells. The agricultural manager/property owner has indicated that there have been extended periods without irrigation from dry wells resulting in significant mortality, and significant economic loss. The agricultural manager/property owner has also indicated that there are periods of time where irrigation is halted because repairs and replacements to pumps become necessary following theft and vandalism. These repairs and replacements increase the costs of pumping groundwater, in addition to the economic losses associated with plant mortality. The agricultural manager/property owner has indicated that the ongoing agricultural operation is not sustainable from both an economic standpoint, and from the physical limitations that groundwater pumping presents for the operation.

The LESA model defines a physical restriction as an occasional or regular interruption or reduction in a water supply, or a shortened irrigation season, that forces a change in agricultural practices -- such as planting a crop that uses less water, or leaving land fallow. The LESA model specifically indicates that this could be from ground or surface water becoming depleted or unusable. The assumptions used for the LESA model reflect that irrigation must rely on ground water, and groundwater pumping has proven to be unpredictable and unreliable in recent years as available water from the aquifer under the Project site had been highly variable and provided an unreliable supply. The property owner has indicated the wells on the Project site went entirely dry and the pecan trees suffered large-scale tree mortality as a result. The LESA model input was that Physical Restrictions exist. The presence of “hardpan” is another physical restriction that occurs in places on the Project site, but this fact serves as an additional fact to acknowledges other physical restrictions that are present. The historical unreliability of groundwater is the most critical fact that determines the input for the Physical Restrictions factor in the LESA model.

The LESA model defines an economic restriction as a rise in the cost of water to a level that forces a reduction in consumption. This could be from the extra cost of pumping. The agricultural manager/property owner cited theft and vandalism of pumps by neighbors as an economic restriction given that these actions increase costs associated with groundwater pumping, and cause delays needed to make repairs or replace pumps such that there are periods that lack irrigation. The LESA model input was that Economic Restrictions exist.

Based on these facts, the LESA model input was that irrigation was not feasible in drought years, but was feasible in non-drought years.

The DEIR discusses the existence of hardpan; however, the DEIR does not suggest hardpan is the only soil condition present. Rather, the DEIR clearly presents the variation in soil conditions as presented in the Soil Survey, and supplements that data with soil data from test borings. Soils typically have inclusions with variation in the soil composition, some of which may be conducive to agricultural production. The property owner has significant experience with the soil conditions, and has spent considerable money testing the soil to better understand how to manage the orchard. Ultimately, the property owner has concluded that the agricultural operation is not conducive to continued soil management to produce high agricultural yields because there is too much cemented silty sand, clayey sand, and silty sand with clay, locally referred to as "hardpan" that is encountered in the Development Area. This cementation retards the free percolation of surface water into the soil stratum below the hardpan, frequently resulting in a temporary perched water table condition at or near the ground surface during winter periods of precipitation. The perched water table can result in anerobic conditions in the root zone, which can result in root mortality and damage or death to the crop. This hardpan layer limits the types of crops that can be successful and is generally a variable that makes the property less economically viable for agricultural production. While it is possible to manage, or treat the soil mechanically to break the hardpan, and condition the soils for agricultural production, there is significant cost associated with such treatments and given the lack of water reliability for agricultural production, the property owner is not able to justify the significant cost of the operation.

It is recognized that the Development Area has historically been used as a Pecan Orchard, but that historic use does not necessarily support the conclusion that site-specific conditions are conducive to sustaining long-term agricultural production using modern agricultural practices which emphasize access to multiple sources of water, economies of scale, and operational efficiencies.

For several years, the current property owner has been responsible for managing the former Cal-Pecan orchard located on the Project site. In recent years, primarily due to drought conditions and expansion of new development surrounding the former Cal-Pecan orchard, the economic viability of irrigated agricultural production has diminished. The Project site is located entirely north and east of the Enterprise Canal and therefore outside of the nearby Fresno Irrigation District boundary. It is therefore not eligible to receive deliveries of surface water from any irrigation district. This is an entirely different situation from other properties located in the region, such as the nearby Heritage Grove growth area. A portion of Heritage Grove is located on the west side of the Enterprise Canal and continues to receive deliveries of surface water to support agricultural production. Recent SGMA regulatory changes that now severely limit groundwater pumping has constrained the ability of any agricultural properties located outside of an irrigation district to support intensive agricultural uses that require regular and timely irrigation; further, groundwater pumping on this property has proven to be unpredictable and unreliable in recent years as available water from the aquifer under the Project site had been highly variable and provided an unreliable supply. It is notable that the property owners of Quail Run have provided substantial information regarding their wells being dry and needing to truck water in for their use. This issue of water reliability for the Quail Run residents also applies to the Pecan Orchard as they operate from groundwater in the exact same region. The property owner has indicated that they made every effort to continue irrigating the trees throughout the drought conditions last summer, but the wells on the Project site went entirely dry and caused the pumps to burn out. The pecan trees suffered tremendous damage without available irrigation water and it resulted in large-scale tree mortality. This fact should be no surprise to the commenter, considering the residents that they represent have experienced those same water reliability issues during the drought.

The LESA model assumptions are based on published facts, as well as existing conditions that are verifiable in the field and economic hardships that exist from droughts and impacts from surrounding development. These facts are deemed appropriate and accurate assumptions for use in the LESA model.

Response L-5-8b: This comment states that "*Moreover, as indicated above, the geotechnical report does not support this conclusion. Appendix F includes bore sample logs from 19 borings and identified "weakly cemented" silty sand in Borings B1, B3, at depths of approximately 8 feet, and B15, B16, and B18 at depths ranging from 2 to 4 feet. The bore samples also identified "clayey sand" in Borings B6, B7, B11, and B15 at depths of 8 to 14 feet. (Draft EIR, Appendix F.) Accordingly, the majority of bore samples (i.e., eleven of nineteen) do not contain "hardpan" and there is no evidence that the Project site contains only "a thin layer of productive soil" that has kept the orchard in continuous operation for more than fifty years. (Cf. Draft EIR, p. 3.2-7.).*"

- It is recognized that the Development Area has historically been used as a Pecan Orchard, but that historic use does not necessarily support the conclusion that site-specific conditions are conducive to sustaining long-term agricultural production using modern agricultural practices which emphasize access to multiple sources of water, economies of scale, and operational efficiencies. The DEIR discusses the existence of hardpan; however, the DEIR does not suggest that hardpan is the only soil condition present, nor does is suggest that its presence is the only reason that continued agricultural production is not sustainable. Rather, the DEIR presents the variation in soil conditions as presented in the Soil Survey, and supplements that data with soil data from test borings. The areas that have hardpan are not as conducive to sustained long term agricultural production without treatments to help break hardpan and facilitate pecan root success. It is important to understand how the root system for a pecan tree works.

  A pecan tree has both, tap and feeder roots. A tap root is a deeper penetrating root, while feeder roots are much shallower. A hardpan, whether it is at two feet or eight feet, inhibits plant success by retarding the ability of the tap root to fully develop. The feeder roots are also critically important to the plant, and require a well-drained soil in the upper soil horizon. The property owner has concluded there is too much "hardpan" encountered below 2 feet in depth in the Development Area for the success of the pecan trees. The property owner has indicated that the hardpan retards the free percolation of surface water into the soil stratum below the hardpan, frequently resulting in a temporary perched water table condition at or near the ground surface during winter periods of precipitation. The perched water table can result in anerobic conditions in the upper root zone, which can result in feeder root mortality and damage or death to the crop. While it is recognized that the Development Area has historically been used as a Pecan Orchard, the historic use does not necessarily support the conclusion that site-specific conditions are conducive to sustaining long-term agricultural production. Instead, the property owner has determined that the combination of drought conditions, theft, and vandalism from adjacent properties, in addition to soil characteristics that require more intensive management, make long-term agricultural production unsustainable.

Response L-5-8c: This comment states that "*The LESA analysis included with the EIR (Draft EIR, Appendix B) relied, in part, on the faulty assumption that "hardpan" covered the majority of the Project site (when, in fact, it was found in less than half of bore samples) to conclude that irrigated production is infeasible in drought years, making the Water Resource Availability score 30 out of 100, based on "Option 11." (See also, Draft EIR, pp. 3.2-10, 3.2-16.) The LESA analysis concludes that, due to this infeasibility, the Project's overall score is 50.50, with a Site Assessment score of 18 (largely based on the Water Resource Availability score of 30). (Draft EIR, p. 3.2-16; see Draft EIR, Appendix B.) Correcting the LESA score to remove the faulty assumptions that "hardpan" covers the majority of the site at depths of 2 feet, changes the Water Resource Availability score to 65, using "Option 7." (See the Revised LESA analysis attached to this letter as Exhibit 1.) Based on the corrected Water Resource Availability score, the total LESA score for the Project site is 55.75, with a Site Assessment score of 23.25."*

- The *Land Evaluation and Site Assessment (LESA)* model includes an evaluation of "Land Evaluation" (LE) factors, as well as "Site Assessment" (SA) factors. As discussed under Response L-5-8a, the existence of "hardpan" is not a specific factor that is considered within the LE score. The SA portion of the model considers four factors: Project Size, Water Resources Availability, Surrounding Agricultural Land, and Surrounding Protected Resource Land. In this portion of the model, the existence of hardpan has no effect on three of the factors (i.e. Project Size, Surrounding Agricultural Land, and Surrounding Protected Resource Land). Under the Water Resources Availability factor, "hardpan" is a consideration in the overall evaluation, but is not provided significant scoring weight. To understand the considerations regarding the Water Resource Availability factor, an explanation is provided by the California Department of

Conservation within the LESA Model instruction manual (See Response L-5-8a). Considering this explanation, the Department of Conservation established the following factors to score the Water Resources Availability for a site: Irrigated Production Feasibility, Physical Restrictions, and Economic Restrictions.

"Feasibility" of irrigated production considers the following three factors:

1) There is an existing irrigation system on the project site that can serve the portion of the project;
2) Physical and/or economic restrictions are not severe enough to halt production; and
3) It is possible to achieve a viable economic return on crops though irrigated production.

The LESA model poses a major question that must be considered, "*if there is an irrigated crop that can be grown within the region, can it actually be grown on the project site*?" Here, there are several considerations. To answer this question, the agricultural manager/property owner was questioned. First, the agricultural manager/property owner has indicated that there is not a supply of water from irrigation districts as is common in the region. Instead, the property relies on groundwater pumped from wells. The agricultural manager/property owner has indicated that there have been extended periods without irrigation from dry wells resulting in significant mortality, and significant economic loss. The agricultural manager/property owner has also indicated that there are periods of time where irrigation is halted because repairs and replacements to pumps become necessary following theft and vandalism. These repairs and replacements increase the costs of pumping groundwater, in addition to the economic losses associated with plant mortality. The agricultural manager/property owner has indicated that the ongoing agricultural operation is not sustainable from both an economic standpoint, and from the physical limitations that groundwater pumping presents for the operation.

The LESA model defines a physical restriction as an occasional or regular interruption or reduction in a water supply, or a shortened irrigation season, that forces a change in agricultural practices -- such as planting a crop that uses less water, or leaving land fallow. The LESA model specifically indicates that this could be from ground or surface water becoming depleted or unusable. The assumptions used for the LESA model reflect that irrigation must rely on ground water, and groundwater pumping has proven to be unpredictable and unreliable in recent years as available water from the aquifer under the Project site had been highly variable and provided an unreliable supply. The property owner has indicated the wells on the Project site went entirely dry and the pecan trees suffered large-scale tree mortality as a result. The LESA model input was that Physical Restrictions exist. The presence of "hardpan" is another physical restriction that occurs in places on the Project site, but this fact serves as an additional fact to acknowledges other physical restrictions that are present. The historical unreliability of groundwater is the most critical fact that determines the input for the Physical Restrictions factor in the LESA model.

The LESA model defines an economic restriction as a rise in the cost of water to a level that forces a reduction in consumption. This could be from the extra cost of pumping. The agricultural manager/property owner cited theft and vandalism of pumps by neighbors as an economic restriction given that these actions increase costs associated with groundwater pumping, and cause delays needed to make repairs or replace pumps such that there are periods that lack irrigation. The LESA model input was that Economic Restrictions exist.

Based on these facts, the LESA model input was that irrigation was not feasible in drought years, but was feasible in non-drought years. This results in selection of "Option 11" within the LESA model. The facts support this conclusion.

Response L-5-8d: This comment states that "*The draft EIR states that the Project would have a significant impact on agricultural resources if the total LESA score is greater than 50 out of 100 and both the Land Evaluation and Site Assessment component scores are greater than 20. (Draft EIR, p. 3.2-16.) Using the corrected LESA score (which does not rely on the faulty "hardpan" assumptions in the Draft EIR) the Project will have a potentially significant impact on agricultural resources, which the EIR must be revised to analyze and mitigate.*"

- This comment is addressed, in part, under Reponses L-5-8a, L-5-8b, and L-5-8c. Page 3.2-16 of the DEIR provides a summary of the California Land Evaluation and Site Assessment (LESA) Model that was utilized to determine the proposed Project's potential impact on agricultural resources. As noted, the proposed Project has a final LESA score of 50.50, which is a significant impact only if the Land Evaluation and Site Assessment sub scores are each greater than or equal to 20 points. The proposed Project has a sub score of 32.50 for the Land Evaluation (LE) and a sub score of 18.0 for the Site Assessment (SA), which means the conversion of the land on the Project site is not considered significant according to the California Department of Conservation's established thresholds.

Response L-5-9a: This comment states that "*The EIR acknowledges the significant increase in average daily trips generated by the Project and, correctly, concludes the Project will have a* *significant vehicle miles traveled (VMT) impact. (See Draft EIR, pp. 3.13-18 through 3.13-23.) The air quality analysis, however, downplays the significance of mobile source pollution generated by the Project and completely fails to analyze the potential for project generated traffic to have significant toxic air contaminant (TAC) impacts from ultrafine particles (UFPs) emitted by vehicle emissions, braking, and tire wear."*

- Neither the DEIR nor the Air Quality Analysis downplay the significance of mobile source emissions that would be generated because of the Project. Rather, the DEIR explains that the California Emission Estimator Model (CalEEMod) was used to estimate emissions for the proposed Project. Page 3.3-25 describes that the Project buildout was assumed to be completed in 2028 and that "*This may prove to be a conservative estimate because criteria pollutant emission rates are reduced over time (due to state and federal mandates) and would be expected to be even lower than reported in this analysis, should the Project buildout be completed after 2028*." Pages 3.3-27 through 3.3-28 presents the thresholds of significance by which the Project emissions are compared against to determine the level of significance. The emissions estimates, which were based on conservative assumptions, were found to not exceed any of the SJVACPD operational thresholds of significance.

  The Project would also not result in significant environmental effects associated with the release of ultrafine particles (UFPs) associated with vehicle emissions, braking, and tire wear.

  UFPs (defined as fine particles of less than 0.1 microns in size, or $PM_{0.1}$) are a subset of PM, which is regulated under PM_{10} and $PM_{2.5}$ rules, however, there are no adopted rules or regulations for $PM_{0.1}$ by the U.S. EPA or California air districts. Moreover, attainment status related to UFPs is not monitored by the U.S. EPA or California air districts, and the SJVAPCD does not provide any guidance for assessment, thresholds, or mitigation associated with UFPs.

  Different sources of PM generate differing levels of UFPs. Precisely estimating $PM_{0.1}$ can be difficult, given that UFPs are not incorporated into the modeling software recommended by the CARB and the California air districts (i.e. CalEEMod). UFPs are primarily generated by motor vehicle emissions (especially from diesel engines), braking, and tire wear. Specifically, UFPs are comprised mostly of metals that are known constituents of brake pads and drums, as well as additives in motor oil. Generally, all engines can create UFPs, but especially diesel engines, and any vehicle's braking system; traffic, particularly start-and-stop, generates UFPs.[2]

UFPs are a type of particulate matter, and like other particulate matters, they have the potential to generate chronic risks associated with cardiovascular disease, potential long-term loss of long-function, and cancer. According to a recent study prepared for the European Geosciences Union, UFPs vary widely as a proportion of PM overall, depending on location; specifically, the $PM_{0.1}$ to $PM_{2.5}$ ratio analyzed in approximately 39 cities in the United States varied from approximately 1% to 16%.[3] These factors vary so widely because the sources of $PM_{0.1}$ vary substantially from city to city. For example, cities that are located close to substantial sources of natural gas combustion have higher $PM_{0.1}$ to $PM_{2.5}$ ratios, since almost all the PM emitted by natural gas combustion is in the $PM_{0.1}$ size fraction, whereas this is only true for less than half of the PM emitted by gasoline and diesel fuel combustion. Taken together, these facts support the potential importance of natural gas combustion for ambient $PM_{0.1}$ concentrations. The city analyzed in the study with the greatest similarity to the City of Clovis (i.e. where the Project is located) was the City of Bakersfield, given its similarity in location within the Central Valley region. The ratio of $PM_{0.1}$ to $PM_{2.5}$ for Bakersfield was found to be approximately 11%. Absent precise data specific to the City of Clovis, this data is presumed to be the best available data for use in developing a reasonable estimate of $PM_{0.1}$ levels for the proposed Project. Given the Project's estimated 1.2 tons per year of $PM_{2.5}$ (see Table 3.3-6 on page 3.3-27), the total $PM_{0.1}$ generated by the Project is estimated to be approximately 0.132 tons per year (263 lbs/year). This is equivalent to 0.72 lbs/day of $PM_{0.1}$. While there is not specifically a quantitative threshold of significance established by the SJVAPCD for $PM_{0.1}$, the quantity estimated (0.72 lbs/day) is considered small relative to thresholds that the SJVAPCD has established for other particulate matter (i.e. 82 lbs/day). From an incremental health perspective, this level of UFPs generated by the Project would not result in any significant environmental effect.

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[2] Aerosol Science and Technology. 2011. Thomas A. Cahill, David E. Barnes, Nicholas J. Spada, Jonathan A. Lawton, and Thomas M. Cahill. Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003-2007. July 13, 2011.

[3] Venecek, M. A., Yu, X., and Kleeman, M. J.: Predicted ultrafine particulate matter source contribution across the continental United States during summertime air pollution events, Atmos. Chem. Phys., 19, 9399–9412, https://doi.org/10.5194/acp-19-9399-2019, 2019.

Response L-5-9b: This comment states that "*The EIR also fails to analyze cumulative TAC emissions from project traffic combined with traffic levels presumed from buildout under the General Plan*."

- The proposed Project does not include any industrial or commercial uses that would present a significant source of diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads which are not part of the proposed Project. The DEIR discusses the fact that a 2007 U.S. EPA rule requires controls that has, and will continue, to dramatically decreases Mobile Source Air Toxics (MSAT) emissions through cleaner fuels and cleaner engines. The DEIR notes that an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (VMT) increases by 145 percent, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050. The DEIR also notes that California maintains stricter standards for clean fuels and emissions compared to the national standards. Therefore, the evidence shows MSAT trends in California will decrease consistent with or more than the U.S. EPA's national projections. These facts are on a cumulative basis extending out to an estimated year 2050-time horizon. As a result, the Project would not result in any cumulatively considerable TAC emissions.

Response L-5-9c: This comment states that "*The EIR acknowledges the Supreme Court's decision in Sierra Club v. County of Fresno (2018) 6 Cal.5th 502 (Friant Ranch), which requires EIRs to analyze and disclose the human health effects of a project's air quality emissions or explain why doing so is infeasible. (Id. at pp. 519-520.) The EIR claims to perform the required analysis, albeit in "qualitative" fashion. (Draft EIR, pp. 3.3-25 through 3.3-26.) Like the EIR in Friant Ranch, however, the Project's EIR "generally outlines some of the unhealthy symptoms associated with exposure to various pollutants" but "does not give any sense of the nature and magnitude of the 'health and safety problems caused by the physical changes' resulting from the Project." (Friant Ranch, at p. 522; see Draft EIR, pp. 3.3-28 through 3.3-30.) Instead, the EIR analyzes the Project's contribution to air pollution (Ozone and particulate matter (PM), specifically) and while the cumulative levels of those pollutants "would affect people[,]" the Project's emissions would be less than the San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds of significance. (Draft EIR, pp. 3.3-29 through 3.3-30.) The EIR's conclusory statement that pollution "would affect people" does not come close to the analysis required by Friant Ranch. The EIR must be revised to either analyze whether* *the Project's air quality emissions would have significant human health effects or explain why doing so is infeasible*."

- The lead agency (City of Clovis) evaluated the Project to determine the appropriate approach and methodology to analyzing the health effects from the air quality emissions. Page 3.3-25 notes that the lead agency determined that, given the nature and size of the Project, a qualitative approach to correlating the expected air quality emissions of Projects to the likely health consequences of the increased emissions is appropriate. This statement does not, however, mean the DEIR did not include any quantitative analysis of air emissions, but rather, it is indicative of a two-step process to analyzing health effects from air emissions.

  The first step in the analysis determines the path warranted in the second step. If the air emissions exceed the human protective thresholds established by the SJVAPCD for the purpose of protecting human health, then there is a "potential" for a significant impact and more quantitative modeling is warranted to adequately explain the nature and magnitude of the "significant" health effects. However, if the human protective thresholds are not exceeded, then there is not a potential for a significant impact and more detailed quantitative modeling is not warranted as a second step. Under this scenario, the nature and magnitude of the impact is "less than significant" and a qualitative explanation of the health effects of the less then significant impact is all that is warranted.

  Central to the determination of approach and methodology described above is understanding of the Friant Ranch Decision and the SJVAPCD guidance, including their thresholds of significance. First, the City evaluated the pollution levels associated with the Project through quantitative modeling, and compared the quantitative outputs from the model to the quantitative thresholds of significance that are established by the SJVAPCD (see Table 3.3-6 on page 3.3-27). The SJVAPCD thresholds are established to be protective of human health, and the quantitative modeling for the Project shows that the emission levels are below the human protective thresholds established by the SJVAPCD. This is an important factor when considering the California Supreme Court ruling in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, known as the Friant Ranch Decision. The EIR at issue in that case concluded that criteria air pollutants would "exceed" the SJVAPCD-issued human protective thresholds of significance and impacts would be "significant and unavoidable." The Court found the EIR's conclusion to be insufficient because the air quality analysis did not adequately explain the nature and magnitude of the "significant and unavoidable" health effects from long-term emissions of criteria air pollutants and ozone precursors that exceeded district thresholds.

Here, in contrast, the DEIR concluded that the Project's criteria air pollutant emissions would be below the SJVAPCD thresholds, which are specifically set to be protective of human health. Emissions below the SJVAPCD's health-protective thresholds indicate that there would not be significant health effects from the Project's air emissions. Under this conclusion, there is not a warrant for more quantitative analysis than was already performed in the first step of quantitative modeling because additional analysis will still lead to the conclusion that the Project emissions are below the human health protective measures. As a result, the Project was not required to proceed to the second step of the analysis or perform a full Health Risk Assessment.

Further, the SJVAPCD is the agency responsible for evaluating projects and regulating air emissions in the region. In their regulatory capacity, the SJVAPCD defines guidelines for an analysis and establishes thresholds of significance. The SJVAPCD received the Draft EIR and did not raise any concerns that were asserted by the commenter. In fact, on December 6, 2023 the SJVAPCD issued a letter to the City of Clovis approving the Air Impact Assessment for the proposed Project.

Response L-5-9d: This comment states that "*Additionally, the EIR only considers the health effects of the Project's contribution to ozone and PM (PM_{10} and $PM_{2.5}$, specifically). (See Draft EIR, pp. 3.3-28 through 3.3-30.) The EIR does not consider potential impacts from the Project generated traffic emissions of UFPs (including emissions from tailpipe emissions, braking, and tire wear), and does not analyze the potential human health effects of Project UFP emissions. UFPs are another air quality impact not discussed in the EIR. UFPs, particles with diameters less than 0.1 micrometers, are comprised mostly of metals that are known constituents of brake pads and drums, as well as additives in motor oil. (Exhibit 2, Cahill, Ch. 8, p. 80.) Generally, all engines can create UFPs, but especially diesel engines, and any vehicle's braking system. (Exhibit 3, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003-2007, p. 1130.) Traffic, particularly start-and-stop, generates UFPs. (See Exhibit 3, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003- 2007, p. 1131.) Recent research suggests that UFPs pose considerable health risks, such as increased risk of cardio-vascular disease and ischemic heart disease death rates, and loss of lung function. (Exhibit 4, Cahill, Artificial ultra-fine aerosol tracers for highway transect studies, pp. 31-32; see also Exhibit 5, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the*

California Central Valley 2: 1974-1991; Exhibit 3, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003-2007.) "The strongest correlations to [ischemic heart disease] mortality were found in very fine ... to ultrafine metals, with most tied to vehicular sources." (Exhibit 3, Cahill, Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003 - 2007, p. 1133.) Prenatal proximity to freeways and exposure to UFPs may be causally linked to increased autism rates in children. (Exhibit 6, Volk, Residential Proximity to Freeways and Autism in the CHARGE Study, p. 875.) Unlike diesel exhaust or other larger TAC emissions, UFPs are more persistent and do not dissipate easily over distances. (Exhibit 7, Cahill, Transition metals in coarse, fine, very fine and ultra-fine particles from an interstate highway transect near Detroit, pp. 340-341.) Moreover, the California Air Resources Board (CARB) has acknowledged that the transition to zero emissions vehicles (ZEVs) will not eliminate all traffic emissions. (Exhibit 8, CARB Technical Advisory, p. 17 ["Non-tailpipe particulate matter emissions—like road dust, tire wear, and brake wear" are roughly equivalent in ZEVs and internal combustion engine vehicles, due to the higher weight of ZEVs].)…The EIR does not ever mention UFPs as a potentially significant air quality impact and therefore fails as an informational document. In addition to acknowledging these TAC emissions that will be exacerbated by the Project, the recirculated EIR will need to measure those emissions and correlate those emission levels to identified health risks, if feasible. If not feasible, the recirculated EIR will need to explain why so. As discussed above, the EIR correctly acknowledges the relevance of Friant Ranch, which explains the "EIR must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must adequately explain what the agency does know and why, given existing scientific constraints, it cannot translate potential health impacts further." Here, the EIR has not even attempted to inform the public of the "bare numbers" with respect to mobile UFP emissions, let alone translate those numbers into quantifiable adverse impacts. The failure to do so is inexcusable given that recent scientific studies demonstrate that it is feasible to correlate TACs and UFP emissions levels to resulting human health risks. The EIR must make a good-faith effort to consider and analyze whether mobile source emissions (including UFPs) created by the Project would pose a potential health risk to future Project occupants."

- The commenter is referred to Response L-5-9a.

Response L-5-10: This comment states that "*Lastly, the EIR's analysis of the Project's consistency with the Air Quality element of the City's General Plan is based on the false promise of compliance with mitigation measures that do not exist. The Land Use, Population, and*

*Housing chapter of the EIR analyzes the Project's consistency with various goals and policies of the City's General Plan. (See, generally, Draft EIR, ch. 3.10.) With respect to Air Quality, the EIR claims that the Project is "consistent" with Air-Policy 1.1 in the Air Quality element of the City's General Plan, which directs the City to "[r]educe greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well- designed transit, pedestrian, and bicycle systems." (Draft EIR, p. 3.10-19.) As stated above, the EIR finds the Project "consistent" with this policy because the Project would, allegedly, reduce VMT through pedestrian and bicycle systems and as required by Mitigation Measure 3.13-1 in Section 3.13 of the Draft EIR, the applicant would be required to implement measures, which are identified in the California Air Pollution Control Officers Association's (CAPCOA) Draft Handbook for Analyzing GHG Emission Reductions, assessing Climate Vulnerabilities, and Advancing Health and Equity (GHG Handbook). Many of the strategies listed in this mitigation measure pertain to transit, pedestrian, and bicycle systems. (Draft EIR, p. 3.10-19.)…*Contrary to the discussion of consistency with Air-Policy 1.1, however, there is no Mitigation Measure 3.13-1. (Cf. Draft EIR, ch. 3.13 [Transportation and Circulation].) Accordingly, because there are no measures that "the applicant would be required to implement" regarding "transit, pedestrian, and bicycle systems" the EIR's conclusion that the Project is consistent with Air-Policy 1.1 is unsupported. The EIR must be revised to analyze the Project's consistency with the Air Quality element of the General Plan without relying on phantom mitigation measures.

- The commenter notes a clerical error in Section 3.10's policy consistency analysis; specifically, and that Mitigation Measure 3.13-1 does not exist in the DEIR, and that the presence of Mitigation Measure 3.13-1 is relied upon to show consistency with Air-Policy 1.1. This comment warrants text revisions to correct and clarify the conclusions in the DEIR. The edits are made to Section 3.10 of the DEIR starting on page 3.10-19. This text revision is intended to clarify that the mitigating features of the Project are presented in the text as Project Design Features, and not as "Mitigation Measure 3.13-1." It is acknowledged that Mitigation Measure 3.13-1 does not exist in the Draft EIR. Additional text was also added to amplify the discussion regarding relevant CAPCOA measures incorporated into the Project to mitigate, or reduce, VMT. Also added, is a discussion of the EV measures that also are incorporated into the Project to reduce greenhouse gas emissions and other local pollutant emissions.

Response L-5-11a: This comment states that "*The EIR includes a cursory analysis of potential energy impacts and assumes that the Project's consistency with state and local laws, including building codes, supports determining that the Project's energy impacts* *would be less than significant. (Draft EIR, pp. 3.7-27 through 3.7-30.) For example, the EIR claim the Project "would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capital energy consumption to achieve this goal, including through statewide and local measures." (Id. at p. 3.7-29.) The final EIR merely repeats this unsupported conclusion. (Final EIR, p. 2.0-27.) The EIR, however, contains no description of any specific measures the project would implement, and no commitment by the Project to do anything specific to conserve energy. (See id.) Instead, the EIR relies on regulated entities complying with laws and regulations to conclude that the Project would not have a significant energy impact. (Id.) Whether or not Pacific Gas & Electric (PG&E) complies with the law in general, however, says nothing about this Project's potential energy impacts. In other words, there is no substantial evidence connecting PG&E's compliance with the Statewide Renewable Portfolio Standard (RPS) with the efficiency and energy conservation efforts of the Project. (See Center for Biological Diversity v. Department of Fish and Wildlife (2015) 62 Cal.4th 204, 225.) The EIR must be revised to actually analyze the Project's consumption and conservation of energy to determine whether there will be a potentially significant impact or not.*"

- The commenter contends that there is no description of any specific measures the Project would implement, and no commitment by the Project to do anything specific to conserve energy. What is under consideration in the EIR for the CEQA analysis threshold, is not whether the Project includes specific measures to conserve energy, but rather "*would the project result in the inefficient, wasteful, or unnecessary use of energy resources*." There is no component of the Project that would have inefficient, wasteful, or unnecessary use of energy sources. The Project is a typical residential project, which is not a type of project that is characterized as an inefficient, wasteful, or unnecessary user of energy resources. Furthermore, and as a matter of law, the State legislature has established standards and regulations to ensure that residential uses incorporate specific measures to prevent inefficient, wasteful, or unnecessary use of energy. A residential project that does not comply with these standards would be deemed inefficient, wasteful, or unnecessary use of energy resources.

  The DEIR discusses elements of the Project that incorporate renewable energy resources into the design and construction of the project. While in years past, incorporating solar panels on residential buildings was often considered a mitigation measure that would be introduced into an EIR to ensure renewable energy sources are part of a project, today, such solar panels on residential buildings are mandated by CALGreen (Part 11 of Title 24). As such, the proposed

Project will install solar panels on all new residential buildings. In other words, the installation of solar panels on all residential buildings is evidence that it will incorporate renewable energy sources into the proposed Project. Other energy saving elements would include: the use of water saving shower heads, faucets, and toilets, installation of energy efficient appliances, and other standards outlined in the State Title 24 building energy efficiency standards ("part 6"). These are specific measures that would be implemented by the proposed Project by virtue of the legal requirement to do so (i.e. the State law). The fact that that the Project will install solar panels, and other energy saving elements of a residential home, in compliance with the requirements of the CALGreen mandates is evidence that the Project does not conflict with standards that are in place to prevent inefficient, wasteful, or unnecessary use of energy. The Project would comply with these standards as a condition of project approval.

In addition to the building construction standards mentioned above that will specifically require each home to install solar panels to generate solar energy at each home, the Project also will utilize an energy provider (PG&E) that has shifted their mix of energy portfolio toward a higher mix of renewable energy resources. The California Energy Commission (CEC) has established an RPS target mix of renewable energy within PG&Es portfolio dating back to 2011 and extending through 2030. The CEC performs a periodic verification to ensure that PG&E is achieving the target established. So far, PG&E has met the RPS verification by the CEC in 2011-2013 [4], 2014-2016[5], and 2017-2020[6]. The target established for the most recent verification was a 33 percent mix of renewables, which was surpassed by PG&E with a 35 percent mix. PG&E provided a press release in 2021[7] indicating that they are on track to meet the states RPS targets, which will include a 60 percent mix of renewable energy by the end of 2030. This shift toward renewable energy resources is mandated by the State as part of the Renewable

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[4] California Energy Commission, Renewables Portfolio Standard 2011-2013 Retail Sellers Procurement Verification-Commission Final Report

[5] California Energy Commission, Renewables Portfolio Standard 2014-2016 Retail Sellers Procurement Verification - Commission Final Report

[6] California Energy Commission, Renewables Portfolio Standard 2017-202 Retail Sellers Procurement Verification - Commission Final Report

[7] PG&E Corporation - PG&E Surpasses California's 2020 Renewable Energy Goal; Electricity Delivered to Customers is More than 88% Greenhouse Gas-Free and Among the Cleanest in the Nation (pgecorp.com)

Portfolio Standard (RPS)[8] and PG&E has shown a history of achieving the targets. While each home will generate solar energy from the solar panels on each home, any excess energy would be from a PG&E's high mix of renewable energy which shows that the Project is placing a high reliance on renewable energy. The Project does not conflict with the RPS, or any directive toward the use or generation of renewable energy. Rather, the Project generates its own renewable energy, and will also rely on a utility provider to provide verified renewable energy. The Project does not result in the inefficient, wasteful, or unnecessary use of energy resources.

Other Statewide measures are also applicable, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g., the Pavley Bill and the Low Carbon Fuel Standard). These measures would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time and are designed to reduce energy consumption.

What is at question in the DEIR impact analysis, is not whether the Project will require the use of energy, but rather, will the project's energy use be "*inefficient, wasteful, or unnecessary*." The proposed Project relies on renewable energy to supply the energy demand, both from onsite capture (solar panels) and from purchase of energy with a high mix of renewables (PG&E renewable portfolio). As a result, no component of the Project's energy use would be inefficient, wasteful, or unnecessary.

Response L-5-11b: This comment states that "*Moreover, the EIR's cursory energy analysis fails to consider renewable energy use in determining whether the Project could have a significant energy impact. CEQA requires the "EIR's analysis of a project's impacts on energy resources must include a discussion of whether the project could increase its reliance on renewable energy sources to meet its energy demand as part of determining whether the project's energy impacts are significant." (League to Save Lake Tahoe Mountain etc. v. County of Placer (2022) 75 Cal.App.5th 63, 164 (League to Save Lake Tahoe etc.).) As discussed above, the EIR concludes that the Project's energy impacts would be less than significant based solely on regulated entities (i.e., PG&E) complying with the law and does not discuss renewable energy options for the Project itself. "Because the EIR did not address whether any renewable energy*

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[8] California Energy Commission, Renewables Portfolio Standard Eligibility Guidebook, Ninth Edition, adopted at the April 27, 2017, Business Meeting

features could be incorporated into the project as part of determining whether the project's impacts on energy resources were significant, it did not comply with CEQA's procedural requirements, a prejudicial error." (League to Save Lake Tahoe etc., at p. 168.) The EIR must be revised to analyze renewable energy use as a component of the Project's potential energy impacts and recirculated to allow the public to comment on this important issue."

- The commenter states the DEIR does not discuss renewable energy options for the Project itself. The DEIR, however, does discuss the fact that the Project will fully rely on a combination of solar panels (a form of renewable energy) on the residential roofs of all new buildings in compliance with State law. It also discusses the reliance on an energy provider (PG&E) to bridge any additional energy needs, and that PG&E specifically has established a mix of energy resources, which includes renewables to meet the Statewide Renewable Portfolio Standard (RPS). The DEIR also notes that PG&E is expected to achieve at least a 40% mix of renewable energy resources by 2030. These specific design elements are discussed in the Draft EIR, not as a mitigation, but being incorporated into the Project as a matter of law. Because the Draft EIR clearly identifies that the Project will increase its reliance on renewable energy sources to meet is energy demand through solar panels and the use of PG&E as its energy provider, the document adequately addresses the Project's potential to increase reliance on renewable energy sources.

Response L-5-12a: This comment states that "*The regulatory setting in the EIR's noise analysis describes noise standards in the City's General Plan and ordinances. (Draft EIR, p. 3.11-7.) The EIR, however, does not discuss the County's General Plan policies and ordinances governing noise. (Id. but see Draft EIR p. 3.8-1 [analyzing hazards and hazardous materials impacts based, in part, on information from the Fresno County General Plan and Fresno County Zoning Ordinance].) Because the existing sensitive receptors surrounding the Project site are and would remain part of unincorporated Fresno County, the EIR should analyze noise impacts based on the County's noise policies and ordinances as well. (See United Neighborhoods for Los Angeles v. City of Los Angeles (2023) 93 Cal.App.5th 1074, 1096 (UNLA) ["No such deference is warranted, however, with respect to the City's determination of which policies apply to the Project. The principle that the City is uniquely positioned to weigh the priority of competing policies does not extend to the question of which policies are to be placed on the scales"].)*[4]

- The commenter correctly indicates that the DEIR presents an analysis based on the City of Clovis noise standards as thresholds. These standards are provided on page 3.11-9 of the DEIR. These standards are appropriate for suburban areas that interface with agricultural uses, such as the project site, as there are numerous such properties within the City's jurisdictional boundaries. Moreover, when the County's noise standards are applied, the result is likewise that there would not be a significant impact. This is consistent with the conclusion in the DEIR when the City's standards are applied. For instance, County Policy HS-H.7 indicates where existing noise levels are between 60 and 65 dB Ldn at outdoor activity areas of noise-sensitive uses, a 3 dB Ldn increase in noise levels will be considered significant. Table 3.11-9 shows the existing plus project scenario to result in a noise level change that ranges from 0.0 dB to 1.3 dB at a 50' distance from centerline on roadways that would remain in the County. Following the County's criteria established in Policy HS-H.7, the noise change resulting with the Project would be below the County standard of 3 dB. There is only one location that would exceed that standard (Sunnyside Avenue – Project Driveway 1 to Shepherd Avenue) but that location would be within the City of Clovis. However, the DEIR includes a mitigation measure that reduces noise levels in that location to an acceptable level. As a result of the application of the mitigation measure there would be no areas that would exceed the noise standards resulting in a less than significant impact. Regardless, the City has determined that its existing thresholds of significance for traffic noise are appropriate for City projects, regardless of whether an adjacent jurisdiction has different noise thresholds.

Regarding construction noise, it is also notable that the Fresno County Noise Control Ordinance (Section 8.40.060) establishes activities that are exempted from the provisions of the County's Noise Control Ordinance. This specifically includes noise sources associated with construction, provided such activities do not take place before 6:00 a.m. or after 9:00 p.m. on any day except Saturday or Sunday, or before 7:00 a.m. or after 9:00 p.m. on Saturday or Sunday. Here, the County has established a timing threshold like the City's noise ordinance (Section 5.27.604), however, the City's standard is stricter than the County's. Regardless, the City has determined that its existing thresholds of significance for noise are appropriate for City projects, regardless of whether an adjacent jurisdiction has different noise thresholds.

Response L-5-12b: This comment states that "*The EIR acknowledges that Project generated traffic on Sunnyside Avenue between Shepard Avenue and "Project Intersection 1" will have a significant impact on the environment. (Draft EIR, p. 3.11-16.) The EIR, however, fails to measure, model, or analyze the potential noise impacts of Project generated traffic on Sunnyside Avenue north of "Project Intersection 1." (Cf. id.)*"

- The Draft EIR indicates that the existing noise level on Sunnyside Avenue from Shepherd Avenue to Project Intersection 1 is 54.4dBA at 50’ from the centerline of the roadway, and would increase to 60.5 dBA with project traffic which is below the City’s standards and thresholds established for the analysis. Under the cumulative year, the noise level would reach 69.9 dBA CNEL and would require a 6’ soundwall placed at 47 feet from the centerline to reduce noise levels down to of 63.7 dBA CNEL, which is required under Mitigation Measure 3.11-2. This is below the 65 dBA CNEL noise standards with the 6’ soundwall.

  The Project would not result in any potentially significant impacts for the portions of Sunnyside south of Shepherd Avenue. The project peak traffic volumes along Sunnyside under the existing conditions is 58 trips. These are trips that originate from the north of the Development Area, and specifically north of the Intersection 1 (i.e. Lexington, Perrin, etc.). Almost all trips generated by the Project are anticipated to be southbound on Sunnyside toward Shepherd Avenue from the Intersections on Sunnyside. This means any Project-related noise increases on Sunnyside would be concentrated in the zone between Shepherd Avenue and Intersection 1, as the new traffic is generated from the Development Area and not the area to the north. The traffic noise levels north of the intersection 1 would remain largely the same as the existing condition because the traffic levels are not anticipated to change.

Response L-5-12c: This comment states that “*Moreover, nowhere in the EIR is there any Project entryway identified as “Project Intersection 1.” (See, e.g., Draft EIR, ch. 11 [Noise], ch 3.13 [Transportation].) The Transportation analysis identifies Study Intersection 23 as “Sunnyside Avenue/Project Driveway 1.” (Draft EIR, Appendix I, Figure 4-2.) Assuming “Project Intersection 1” and “Project Driveway 1” are the same thing, then the EIR also fails to analyze the noise impacts of project generated traffic to off-site receptors along Lexington Avenue that will abut the public street identified as “Project Driveway 1” in the Transportation analysis.*”

- The terminology used by the noise engineer in their reporting for the access point into the Development Area was “Intersection,” whereas the traffic engineer used the term “driveway” to describe the same access points. These terms describe the same points of access. Nevertheless, edits are made to DEIR pages 3.11-16 through 3.11-17 in Section 3.11 of the DEIR to change the term “Intersection” to “Driveway” to clarify for the commenter. This text is reflected in the Errata and the change does not affect the analysis. As described under Response L-5-12b, the project peak traffic volumes along Sunnyside under the existing conditions is 58 trips. These are trips that originate from the north of the Development Area, and specifically north of the Intersection 1 (i.e. Lexington, Perrin, etc.). Almost all trips generated by the Project are anticipated to be southbound on Sunnyside toward Shepherd Avenue from the Intersections on Sunnyside. The implication of this fact is that the noise increases on Sunnyside are concentrated in the zone between Shepherd Avenue and Driveway 1 because the new traffic is generated from the Development Area and not the area to the north. The traffic noise levels north of Driveway 1 will remain largely the same as the existing condition because the traffic levels are not anticipated to change. This fact is based on the Non-development Area not having any new development, and the area to the north of the Development Area not having any significant destinations from residents of the Development Area.

Response L-5-12d: This comment states that "*Moreover, the Noise Mitigation Measures in the EIR only address noise impacts to residences within the Project site and do nothing for existing off-site receptors. (See Draft EIR, p. 3.11-19 [Mitigation Measures 3.11-1 and 3.11-2].) Moreover, the final EIR does not remedy this deficiency. (Final EIR, p. 2.0-20.) The EIR must be revised and recirculated to analyze and mitigate noise impacts to existing off-site receptors from project generated traffic along "Project Driveway 1" and/or "Project Intersection 1.*"

- The Project would not result in any potentially significant impacts for the portions of Sunnyside south of Shepherd Avenue. As described under Response L-5-12b, the project peak traffic volumes along Sunnyside under the existing conditions is 58 trips. These are trips that originate from the north of the Development Area, and specifically north of the Driveway (i.e. Intersection) 1 (i.e. Lexington, Perrin, etc.). Almost all trips generated by the Project are anticipated to be southbound on Sunnyside toward Shepherd Avenue from the Intersections on Sunnyside. This means any Project-related noise increases on Sunnyside would be concentrated in the zone between Shepherd Avenue and Driveway (i.e. Intersection) 1, as the new traffic is generated from the Development Area and not the area to the north. The traffic noise levels north of the Driveway (i.e. Intersection) 1 will remain largely the same as the existing condition because the traffic levels are not anticipated to change in that direction. Edits are made to DEIR pages 3.11-19 in Section 3.11 in Section 3.11 of the DEIR. This text is reflected in the Errata and the change does not affect the analysis.

Response L-5-12e: This comment states that "*The EIR admits that Project construction will generate noise levels exceeding the standards in the City's General Plan for residential land use (see Draft EIR, 3.11-9 [Table 3.11-6: Maximum Exterior Noise Standards, "allowable exterior noise level (15-Minute Leq)" 55 dba from 7 a.m. to 10 p.m.]), and that the* *existing homes in the non-development areas will be subject to construction noise levels that are more than double the baseline measured in the technical noise analysis. (Draft EIR, p. 3.11-19 ["This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave"]; see Draft EIR, p. 3.11-4 ["A 10-db change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response"].) Rather than proposing and analyzing feasible means of reducing these significant noise impacts, the EIR points to a handful of largely meaningless "strategies" including a prohibition on equipment idling and the use of already installed vehicle mufflers, and concludes, without any analysis, that these measures will reduce noise to less than significant levels. (Draft EIR, p. 3.11-20 [Mitigation Measure 3.11-4.)*[5] *The EIR, however, contains no explanation, analysis, or substantial evidence to support this conclusion. (Cf. id.) The EIR must be revised to analyze whether this mitigation would actually reduce noise levels below the City's threshold or include additional feasible measures to do so. For example, temporary noise barriers, combined with regular monitoring and reporting of construction noise levels are a few of the many feasible noise mitigation measures available for the City's consideration. (See Exhibit 9.)*"

- An analysis of construction noise associated with the Project is presented on page 3.11-19 through 3.11-20. As mentioned by the commenter, the DEIR indicates that unmitigated noise levels at 550 feet have the potential to reach 60 dBA Leq and 92 dBA Lmax at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower, approximately from 46 to 59 dBA Leq and 86 to 93 dBA Lmax. This would be a 13 dB Leq daytime increase in the ambient noise level at the residents along Perrin Rd., Purdue Ave., and East Lexington Ave. The modeling assumes construction equipment as close as 25 feet from the adjacent residences and an average of 550 feet away from the adjacent residences.

  The DEIR also notes that construction noise is considered a short-term impact and would be considered significant if construction activities are performed outside the allowable times as described in the City of Clovis Municipal Code Section 5.27.604. In effect, this limits construction to the less sensitive daytime hours. The reasoning for establishing the allowable times as a threshold of significance for construction noise is because the sensitivity of noise to a resident is greater during the nighttime hours when people are trying to rest, as opposed to the day time hours when more noise is anticipated because activity levels are greater. The City established permissible hours for construction in their Municipal Code, and these are appropriate for use as a threshold of significance.

The DEIR presents Mitigation Measure 3.11-3, presented on page 3.11-20 of the DEIR. This measure embodies a preexisting legal requirement from City of Clovis Municipal Code Section 5.27.604 that ensures that construction activities are performed within specific hours, and ensures that construction noise does not exceed the timing threshold established. The timing threshold is intended to concentrate construction noise to the least noise sensitive time, which has been established by the City as during normal daytime hours. To the contrary, the timing threshold places a much higher weighted value, which is effectively a prohibition by the City of noise generating activities during nighttime hours. Simply put, the City has established that nighttime noise is significant, and daytime noise is insignificant. The timing threshold described is used in a qualitative analysis that considers the threshold relative to the expected time for construction activities. A project that would require nighttime construction would have a potentially significant impact, whereas a project constructed during daytime hours would have a less than significant impact. DEIR presents Mitigation Measure 3.11-3 to embody the threshold that the City finds effective as ensuring construction noise is not a significant impact.

Mitigation Measure 3.11-4, also presented on page 3.11-20 of the DEIR, provides specific requirements for attenuating noise during construction. These measures are supplemental to the requirement provided under Mitigation Measure 3.11-3, and are intended to further minimize the impact of construction noise during the time periods that are already determined to be the least noise sensitive time periods. The first bullet calls for all construction equipment to be equipped with appropriate noise attenuating devices. Such devices are commonly known as mufflers, which are effective at reducing noise associated with an exhaust system by up to 5 decibels. For clarification, the term “devices” is revised to “mufflers” in the Errata. The second bullet calls for turning off equipment when not in use. Equipment on construction sites is often left idling when not in use; however, idling equipment exert noise. The requirement to turn off idling equipment is effective at reducing noise generated from construction sites. The third bullet calls for maintaining equipment such that loads are secure and do not unnecessarily generate noise from rattling and banging that can be caused from unsecure equipment or materials moving around in a vehicle while in motion. This requirement is effective at reducing noise generated from construction sites. While these three measures are supplemental to the requirement provided under Mitigation Measure 3.11-3, they are effective at minimizing the impact of construction noise although the impact has already been determined to be less than significant.

Mitigation Measure 3.11-3 and 3.11-4 are appropriate mitigation measures for the project, and will ensure that construction noise does not exceed the timing threshold. The commenter has suggested the use of a temporary sound barrier during construction to reduce noise levels. While the measure is not required per the City's Municipal Code, Mitigation Measure 3.11-3 is modified to incorporate a requirement for installation of sound barriers along the boundary of the Development Area to minimize construction related impacts on neighbors. The addition of this as a mitigation will not change the requirement to also limit construction activities to daytime hours in alignment with the Municipal Code.

Response L-5-13a: This comment states that "*The EIR admits that "impervious surfaces such as pavement, significantly reduce infiltration capacity and increase surface water runoff." (Draft EIR, p. 3.9-24, emphasis added.) As discussed above, however, the draft EIR presumes, without providing any analysis, that the presence of "hardpan" soils in fewer than half of the bore samples taken as part of the geotechnical analysis established that converting a 77-acre orchard to impervious surfaces would not significantly impact groundwater recharge. (Draft EIR, p. 3.9-25.) Several commenters pointed out the serious flaws in this conclusory claim, which is contradicted by the fifty-plus years of successful agriculture at the Project site. The final EIR retains the unsupported conclusion that hardpan makes the Project's impacts on groundwater recharge less than significant, but also purports to adopt the conclusions in a supplemental hydrological analysis prepared for the applicant. (Final EIR, p. 2.0-8.) The supplemental hydrological analysis, however, acknowledges that deep percolation does occur at the orchard, despite the few areas of cemented and/or "clayey" soils found in the geological study. (Final EIR, Appendix L, pp. 9-10.) Moreover, the supplemental analysis admits that irrigation and deep percolation in the northern area of the orchard does affect groundwater levels in the Quail Run neighborhood. (Id., p. 10.)*".

- The presence of hardpan soils in some of the geotechnical bore samples at the Project site was provided in the DEIR for appropriate context. However, the presence of hardpan was not the basis for the DEIR's conclusion that the Project would have a less than significant impact on groundwater recharge. The DEIR reached that conclusion based on several factors, most notably the fact that the Project's onsite groundwater usage would be less than existing conditions. At full build-out, total water demand for the Project would be approximately 255.8 AFY. Since at least 2020, less than half of the City's water supplies have derived from groundwater pumping; instead, most of the City's supplies come from the City's surface water rights or stored water. In other words, actual groundwater usage following the completion of the Project will be less than half (*i.e.*, less than 127.9 AFY, and decreasing over time) of the Project's total consumptive water use. As such, the Project's groundwater usage will be less than historic groundwater usage at the site as estimated in either the Schmidt Report or the WSA. Moreover, the proportion of the City's water supply needs that will be served by groundwater extractions will continue to decrease through at least 2030. In addition, unlike the historic agricultural uses on the Property, the City's water supplies do not draw from onsite wells, but rather from wells located in other locations within and around the City of Clovis. Further, a significant amount of the site will remain pervious (i.e. landscaping front and backyards, parks, open space, etc.). To the extent that runoff occurs offsite because of impervious surfaces, groundwater recharge associated with runoff would occur in nearby FMFCD stormwater facilities. Because the project's groundwater usage is less than the status quo (*i.e.*, the pecan orchard), the Project would not impede sustainable groundwater management under the applicable GSA or result in any potentially significant impacts related to groundwater resources.

Response L-5-13b: This comment states that "*The EIR must be revised and recirculated to actually analyze the effects that replacing the orchard with 70+ acres of impervious surfaces will have on groundwater recharge rates. Even with the supplemental hydrological analysis, the EIR provides no comparison of groundwater recharge rates with or without the Project. (Final EIR, p. 2.0-8 ["it can be presumed that the Project site generally does not allow for a high level of groundwater recharge in its existing condition[,]" emphasis added].)[6] The Supreme Court has "made clear, and recently reiterated, that " '[i]nformation "scattered here and there in EIR appendices" or a report "buried in an appendix," is not a substitute for "a good faith reasoned analysis." ' " (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 516.) The EIR fails as an informational document because it leaves the public and those affected by the Project to "guess" at what the potential groundwater recharge impacts would be*."

- The agricultural operation demands are currently extracted from wells onsite. Ceasing the agricultural operation will result in a net improvement in the aquifer on an annual basis when compared to the existing condition. This is a beneficial impact to the aquifer immediately under the Project site.

  The DEIR's conclusion that the Project's onsite groundwater usage would be less than existing conditions, is based on several factors, most notably the fact that the Project's onsite groundwater usage would be less than existing conditions. At full build-out, total water demand for the Project would be approximately 255.8

AFY. Since at least 2020, less than half of the City's water supplies have derived from groundwater pumping; instead, most of the City's supplies come from the City's surface water rights or stored water. In other words, actual groundwater usage following the completion of the Project will be less than half (*i.e.*, less than 127.9 AFY, and decreasing over time) of the Project's total consumptive water use. As such, the Project's groundwater usage will be less than historic groundwater usage at the site as estimated in either the Schmidt Report or the WSA. Moreover, the proportion of the City's water supply needs that will be served by groundwater extractions will continue to decrease through at least 2030. In addition, unlike the historic agricultural uses on the Property, the City's water supplies do not draw from onsite wells, but rather from wells located in other locations within and around the City of Clovis. Further, a significant amount of the site will remain pervious (i.e. landscaping front and backyards, parks, open space, etc.). To the extent that runoff occurs offsite because of impervious surfaces, groundwater recharge associated with runoff would occur in nearby FMFCD stormwater facilities. Because the project's groundwater usage is less than the status quo (*i.e.*, the pecan orchard), the Project would not impede sustainable groundwater management under the applicable GSA or result in any potentially significant impacts related to groundwater resources.

Response L-5-13c: This comment states that "*The supplemental hydrological analysis concludes that the net effect of ceasing all groundwater pumping at the Project site, originally used for irrigation, would result in a benefit to local groundwater levels because more water would remain in the ground. (Final EIR, Appendix L, p. 13.) While this conclusion has superficial appeal, it is ultimately mistaken and unsupported by the evidence*."

- The extraction of water from the groundwater table for the orchard irrigation has historically resulted in a net loss of water to the groundwater table. The reduction of pumping water from the groundwater table at the Project site for use in irrigating orchard trees would cease to exist. This would leave more water within the groundwater table in this location. The DEIR indicates that the proposed project would use water from the City of Clovis distribution system as opposed to on-site wells. In terms of groundwater, there would be an overall reduction in groundwater pumpage. The water supply from the City that will serve the Project site is not from water directly below the Project site, but instead, it will be from offsite City wells. The net change will be less water demand from the water table immediately under the Project site that is shared with the surrounding neighborhoods. The amount of storm drainage percolation from the project site is very limited given that the precipitation levels are very low, and the soil composition is such that the Project site does not serve as a significant recharge area for the groundwater.

The DEIR's conclusion that the Project's onsite groundwater usage would be less than existing conditions, is based on several factors, most notably the fact that the Project's onsite groundwater usage would be less than existing conditions. At full build-out, total water demand for the Project would be approximately 255.8 AFY. Since at least 2020, less than half of the City's water supplies have derived from groundwater pumping; instead, most of the City's supplies come from the City's surface water rights or stored water. In other words, actual groundwater usage following the completion of the Project will be less than half (*i.e.*, less than 127.9 AFY, and decreasing over time) of the Project's total consumptive water use. As such, the Project's groundwater usage will be less than historic groundwater usage at the site as estimated in either the Schmidt Report or the WSA. Moreover, the proportion of the City's water supply needs that will be served by groundwater extractions will continue to decrease through at least 2030. In addition, unlike the historic agricultural uses on the Property, the City's water supplies do not draw from onsite wells, but rather from wells located in other locations within and around the City of Clovis. Further, a significant amount of the site will remain pervious (i.e. landscaping front and backyards, parks, open space, etc.). To the extent that runoff occurs offsite because of impervious surfaces, groundwater recharge associated with runoff would occur in nearby FMFCD stormwater facilities. Because the project's groundwater usage is less than the status quo (*i.e.*, the pecan orchard), the Project would not impede sustainable groundwater management under the applicable GSA or result in any potentially significant impacts related to groundwater resources.

Response L-5-13d: This comment states that "*First, the assumptions in the supplemental hydrological analysis conflict with the Water Supply Analysis (WSA). For example, the WSA states that current water use at the project site is 186.4 acre-feet per year (AFY) for irrigation and that the proposed 605 homes would require 255.8 AFY. (Draft EIR, Exhibit J, pp. 2-1, 3-1.) The supplemental hydrological analysis, however, claims that approximately 400 AFY will remain in the ground because irrigation of the orchard has ceased. (Final EIR, Appendix L, p. 9.) The supplemental hydrological analysis provides no explanation for its claim that more than twice the amount of water is used for irrigation than what is disclosed in the WSA. (Cf. id.) More importantly, there is no requirement or commitment in the EIR or WSA that the wells at the project site will be retired, nor any guarantee that the claimed 400 AFY will actually remain in the ground to benefit local groundwater levels. "Argument, speculation, [and] unsubstantiated opinion or* *narrative" do not constitute substantial evidence. (Guidelines, § 15384, subd. (a).) Accordingly, the EIR's conclusion that groundwater recharge will not be negatively impacted by converting 77 acres of orchard to impervious surfaces is not supported by substantial evidence*."

The DEIR's conclusion that the Project's onsite groundwater usage would be less than existing conditions, is based on several factors, most notably the fact that the Project's onsite groundwater usage would be less than existing conditions. At full build-out, total water demand for the Project would be approximately 255.8 AFY. Since at least 2020, less than half of the City's water supplies have derived from groundwater pumping; instead, most of the City's supplies come from the City's surface water rights or stored water. In other words, actual groundwater usage following the completion of the Project will be less than half (*i.e.*, less than 127.9 AFY, and decreasing over time) of the Project's total consumptive water use. As such, the Project's groundwater usage will be less than historic groundwater usage at the site as estimated in either the Schmidt Report or the WSA. Moreover, the proportion of the City's water supply needs that will be served by groundwater extractions will continue to decrease through at least 2030. In addition, unlike the historic agricultural uses on the Property, the City's water supplies do not draw from onsite wells, but rather from wells located in other locations within and around the City of Clovis. Further, a significant amount of the site will remain pervious (i.e. landscaping front and backyards, parks, open space, etc.). To the extent that runoff occurs offsite because of impervious surfaces, groundwater recharge associated with runoff would occur in nearby FMFCD stormwater facilities. Because the project's groundwater usage is less than the status quo (*i.e.*, the pecan orchard), the Project would not impede sustainable groundwater management under the applicable GSA or result in any potentially significant impacts related to groundwater resources.

The commenter also claims that there is no guarantee that the wells at the project site will be retired, nor any guarantee that the estimated water will remain in the ground to benefit local groundwater levels. The commenter is directed to Mitigation Measure 3.8-1 (provided below), which is a mitigation measure, and functionally a guarantee that the existing wells will be properly abandoned. The fact that the existing wells will be abandoned is evidence that the estimated water will remain in the ground to benefit groundwater levels because there be no wells available for extraction. The DEIR explains that water used for the new homes/residents would come from the City of Clovis infrastructure and water supplies, which come from wells located in a different location than the project site.

> ***Mitigation Measure 3.8-1**: Prior to the acceptance of improvements, the Project proponent shall hire a licensed well contractor to obtain a well abandonment permit from Fresno County Department of Public Health Environmental Health Division, and properly abandon the on-site wells, pursuant to review and approval of the City Engineer and the Fresno County Department of Public Health Environmental Health Division.*

Response L-5-13e: This comment states that "*Lastly, the supplemental hydrological analysis explains that "Rural residential areas should have a net zero water balance, meaning that recharge of storm runoff should equal or exceed the consumptive use." (Final EIR, Appendix L, p. 11.) The EIR, however, admits that storm runoff from the 77-acre project site would be collected and transported off-site into the City's stormwater infrastructure, making the "net zero water balance" impossible to achieve for this rural residential area. (See Draft EIR, pp. 3.9-22 through 3.9-23.) The EIR fails to analyze the impacts of upsetting the existing groundwater balance caused by the Project. The EIR must be revised and recirculated to address the Project's potentially significant groundwater recharge impacts.*"

- The DEIR's conclusion that the Project's onsite groundwater usage would be less than existing conditions, is based on several factors, most notably the fact that the Project's onsite groundwater usage would be less than existing conditions. At full build-out, total water demand for the Project would be approximately 255.8 AFY. Since at least 2020, less than half of the City's water supplies have derived from groundwater pumping; instead, most of the City's supplies come from the City's surface water rights or stored water. In other words, actual groundwater usage following the completion of the Project will be less than half (*i.e.*, less than 127.9 AFY, and decreasing over time) of the Project's total consumptive water use. As such, the Project's groundwater usage will be less than historic groundwater usage at the site as estimated in either the Schmidt Report or the WSA. Moreover, the proportion of the City's water supply needs that will be served by groundwater extractions will continue to decrease through at least 2030. In addition, unlike the historic agricultural uses on the Property, the City's water supplies do not draw from onsite wells, but rather from wells located in other locations within and around the City of Clovis. Further, a significant amount of the site will remain pervious (i.e. landscaping front and backyards, parks, open space, etc.). To the extent that runoff occurs offsite because of impervious surfaces, groundwater recharge associated with runoff would occur in nearby FMFCD stormwater facilities. Because the project's groundwater usage is less than the status quo (*i.e.*, the pecan orchard), the Project would not impede sustainable groundwater management under the applicable GSA or result in any potentially significant impacts related to groundwater resources.

Response L-5-14a: This comment states that "*As stated above, the EIR admits that the Project would have a significant VMT impact. (Draft EIR, p. 3.13-23.) The EIR, however, incorrectly presumes that there are no feasible mitigation measures that could reduce this significant impact. CEQA case law is clear that an EIR cannot conclude an impact is significant and unavoidable without first exhausting all feasible mitigation measures. (Friant Ranch, supra, 6 Cal.5th at pp. 524-525 ["Even when a project's benefits outweigh its unmitigated effects, agencies are still required to implement all mitigation measures unless those measures are truly infeasible." Emphasis added].) Here, the EIR includes a perfunctory analysis of a handful of "Project design features" and fails to truly grapple with the issue. (Draft EIR, pp. 3.13-19 through 3.13-22.) As at least one commenter pointed out, however, the EIR fails to analyze the feasibility of public transit options to mitigate significant VMT impacts. (See Final EIR, p. 2.0-135.) The final EIR impermissibly dismisses this comment by pointing to the general discussion of transit in the environmental setting and concludes, without explanation, that transit was addressed in the EIR. (Id. at p. 2.0-136; see Draft EIR, p. 3.13-8.)*".

- Project VMT can only be reduced by changes in residents' behavioral pattern. Project VMT, or in general average VMT for project residents is a function of regional and project location, neighborhood and surrounding land uses, local access to amenities, availability of different modes of transportation, among others. As such, projects that are near complementary land uses and transportation mode choices tend to exhibit low VMT trends. Given the location of the project, the project has limited options of surrounding land uses and transportation modes. As such, VMT cannot be reduced to any reasonable degree through the adoption of specific mitigation measures.

  Within the state of California, California Air Pollution Control Officers Association's (CAPCOA) "*Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity – Designed for Local Governments, Communities, and Project Developers*" dated December 2021 is recognized as a compliant source of VMT reduction measures. The implementation of these measures was considered as project design features. All measures were evaluated relative to the project to determine applicability and feasibility. Measures that were deemed feasible are identified in the Section 3.13 Transportation in the DEIR as a project design measure. Some measures were deemed inapplicable or infeasible, as discussed below.

  The potential measures include mitigation related to land use, trip reduction programs, parking or road pricing/management, neighborhood design and transit. Measures related to trip reduction programs could only be implemented by employers and is not applicable to residential projects. Measures related to parking or road pricing/management are only applicable to multifamily residential projects. And to the extent the City could impose any measures identified in the CAPCOA manual, these measures would not result in any measurable reduction in VMT's for the Project. The project, as described in the TIA and DEIR, includes all feasible land use related and neighborhood design related mitigation measures as project design features. As such, after an extensive review of all potential VMT reduction options listed in the CAPCOA manual, the City and its air quality experts concluded the Project's potential impacts to VMT could be further mitigated through implementing mitigation measures. The mitigation measures are incorporated into the Project as designed measures and a detailed discussion of these measures is provided in Chapter 3.13 Transportation in the DEIR.

The commenter's second argument is that the Final EIR impermissibly dismisses transit comments in the Final EIR by pointing to a general discussion of transit in the EIR. It is true that transit is discussed within the DEIR in Section 3.13. Page 3.13.8 provides a discussion of the transit services available to the Study area. This is specifically in contrast to what the commenter is suggesting the DEIR does not provide. The DEIR discussion of available transit notes that Clovis Transit Stageline Routes 10 and 80 operate within the Study Area. It further notes that Route 10 operates from Monday through Saturday, while Route 80 operates only on school days, based on the Clovis Unified School District schedule. It also notes that Route 10 provide access to Fresno State University and Route 80 provides access to the Buchanan Education Complex. The DEIR also indicates that Fresno Area Express (FAX) operates within the Study Area along Willow Avenue 7 days a week. The route connects communities in Fresno to the different campuses of Clovis Community College. In addition to fixed route services, Round Up is the Clovis paratransit service for disabled City residents. Round Up transit vehicles are all accessible in accordance with the Americans with Disabilities Act (ADA) standards. These are all preexisting transit services available to the Project that will help to reduce VMT.

Further public transit options would not be feasible because they would not result in usage or ridership sufficient to actually reduce VMT to any degree. The theory that an increase in transit service would result in an increase in ridership is not reflected in the research published by the Transit Cooperative Research Board's

"Analysis of Recent Public Transit Ridership Trends[9]. The research from this analysis shows that the relationship between transit ridership and three (3) other major factors influence ridership: 1) population, 2) transit-dependent population (i.e. zero-vehicle household, and 3) transit service levels (i.e. transit vehicle revenue miles). In very urban areas like San Francisco where it is very densely populated and residents often do not have vehicles, transit becomes an optimal transportation option and ridership is high. Alternatively, in suburban areas such as Clovis with lower population density and when residents often have one or more vehicle in the household, increases in ridership are not be proportional to increases in transit service. This is particularly true here, where public transit in the vicinity of the Project already exists, and further public transportation options would merely augment existing options in a manner that is largely duplicative of those services. As a result, significantly increasing transit services available in suburban or rural areas of Clovis is not anticipated to proportionately increase the ridership of the transit. These relationships of transit ridership in suburban and rural areas such as Clovis are fully supported by the research stated above. This is not to say that there will not be any transit used in these areas, but the research does suggest that the transit ridership in this area has a limit that will not increase beyond the limit by simply increasing transit service. It would be unsupported and speculative to claim that VMT per capita would be significantly reduced more than is already reflected in the DEIR by oversaturating transit services in an area that would not fully absorb the saturated transit available. The VMT analysis appropriately assumes a correct level of transit usage.

Response L-5-14b: This comment states that "*The final EIR completely misses the point of the comment, which asks the City to analyze the potential of increased transit as mitigation for the Project's admittedly significant VMT impacts, and must be revised to analyze whether feasible transit options exist that could reduce the Project's significant VMT impacts. (Guidelines, § 15088, subd. (c) [comments raising "recommendations and objections … must be addressed in detail giving reasons why specific comments and suggestions were not accepted"].) The final EIR fails to adequately respond to this comment.*7."

- Response L-5-15a provides the reasons that increased transit as mitigation for the significant VMT impacts is not a feasible mitigation to reduce the Project's VMT. In short, the existing transit services discussed will be available. These transit services have established an appropriate level of transit for the demand within

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[9] Transit Cooperative Research Board's "Analysis of Recent Public Transit Ridership Trends (National Academies of Sciences, Engineering, and Medicine; Transportation Research Board; Transit Cooperative Research Program; Kari Watkins; Simon Berrebi; Chandler Diffee; Becca Kiriazes; David Ederer, 2020)

the region. The concept of increasing transit would increase the saturation of transit available in the region, but would not be effective in reducing VMT because transit ridership would not significantly increase.

Response L-5-14c: This comment states that "*Additionally, as pointed out by Caltrans, the EIR should consider other potentially feasible mitigation measures, such as creating a VMT Mitigation Impact Fee, to address the Project's significant VMT impacts. (Final EIR, p. 2.0-161.) Again, the final EIR improperly dismisses Caltrans comment without either adopting the recommendation of that expert agency or explaining why a VMT mitigation impact fee is not feasible mitigation for the Project. (Id. ["Comment noted"].) The EIR must be revised to actually consider and address Caltrans' comments and must be revised to analyze the feasibility of the many mitigation measures available to address the Project's significant VMT impact, including increased transit. (See Exhibit 10 [Caltrans SB 743 Program Mitigation Playbook], 11 [Berkely Law – Implementing SB 743].)*

- The commenter suggests a VMT Mitigation Impact Fee program be implemented entirely by the project, to address the Project's significant VMT impacts. It should be noted that Caltrans recommended the City to 'consider' a VMT Impact Mitigation Fee for all future projects. As such, Caltrans is not recommending that the Shepherd North Project itself develop a VMT Impact Mitigation fee program.

  VMT mitigation fee programs are intended to allow program-level mitigation to take place, where mitigation at the project level alone may not be effective. It should be noted that a VMT fee for this project alone, would not reasonably reduce VMT. As such, these fee programs are a regional envelop that combines the cumulative effect of all future developments, determine feasible program level mitigation measure that can eliminate the impacts of these developments, and aims to create a funding mechanism for implementation of these mitigation measures. The City of Clovis is yet to establish a VMT Mitigation Fee, and it is not known whether such a Program would be established in Clovis. The establishment of a mitigation fee program is a matter of legislated action on the local level, utilizing the local police powers provided to the City of Clovis under California law. Such power to establish a mitigation fee cannot be performed by the Project applicant, being that they do not possess the local police powers of the City. It is not feasible to impose such a requirement at a project-level.

Response L-5-14d: This comment states that "*The EIR fails to analyze the Project's potential impacts to transit. The EIR acknowledges that public transportation services exist "within the Study Area." (Draft EIR, p. 3.13-8.) The EIR's analysis of impacts to the circulation* *system, including transit, bicycle, and pedestrian facilities, however, does not analyze the Project's potential impacts on these transit systems. (See id. at pp. 3.13-23 through 3.13-25.) The failure to consider this potential impact is a violation of CEQA and the EIR must be revised and recirculated to analyze the Project's potential impacts to the transit system. (Yerba Buena Neighborhood Consortium, LLC v. Regents of University of California (2023) 95 Cal.App.5th 779, 799-807 [EIR failed to analyze potential transit impacts].).*"

- The contention that the DEIR fails to analyze the Project's impacts on transit is not accurate. The proposal does not remove a transit station, bus stop, or other transit facility, nor does it impede existing transit service. Transit ridership is anticipated to be low, but, nevertheless, there will be transit service available to the area. The proposed Project does not have any significant impacts on transit.

Response L-5-14e: This comment states that "*Moreover, the EIR's conclusion that the Project "would not result in a conflict with an existing or planned … transit service/facility" is not supported by substantial evidence. (Draft EIR, p. 3.13-25.) The EIR claims that, despite "the absence of a fee program where the Project has an impact on the roadway network," the Project's impacts will be less than significant because "the Project will pay its respective fair share for the proposed improvements." (Id.) The EIR, however, includes no mitigation measures or any other enforceable requirement that the Project actually "pay its respective fair share" of anything. That, however, is not good enough to satisfy CEQA. (See King & Gardiner Farms, LLC v. County of Kern (2020) 45 Cal.App.5th 814, 855, 857-858 [finding inadequate a mitigation measure that required the project applicant to "increase" the use of "produced water" and "reduce" the use of "municipal and industrial quality" water "to the extent feasible"; the terms "increase" and "reduce," even when modified by the phrase "to the extent feasible," are not specific performance standards]; San Franciscans for Reasonable Growth v. City and County of San Francisco (1984) 151 Cal.App.3d 61, 79-80 [finding inadequate a mitigation measure that required a project applicant to expand a city's busing "capacity by paying an unspecified amount of money at an unspecified time in compliance with an as yet unenforced or unspecified transit funding mechanism." Emphasis added].) (See Guidelines, § 15126.4, subd. (a)(2) ["Mitigation measures must be full enforceable through permit conditions, agreements, or other legally-binding instruments"].) In the absence of any requirement that the Project actually pay for its fair share of roadway improvements, the EIR cannot claim the Project's impacts would be less than significant. Further, without a plan or program to actually construct the improvements, this "quasi-mitigation" is unenforceable and violates*

CEQA. (Anderson First Coalition v. City of Anderson (2005) 130 Cal.App.4th 1173, 1189.)."

- The contention that DEIR "*includes no mitigation measures or any other enforceable requirement that the Project actually "pay its respective fair share" of anything…is not good enough to satisfy CEQA*" does not accurately characterize the enforcement requirements of the Fresno County Regional Transportation Mitigation Fee or the City's traffic fee mitigation program. These are adopted fee programs that are in effect and made a condition of approval on all projects in the City of Clovis. A condition of approval means it is a requirement and enforceable. All requirements of the Project must be implemented to obtain future permits (i.e. grading permits, building permits, certificate of occupancy, etc.). The Project will pay for its fair share of roadway improvements through these adopted programs by virtue of the conditions of approval, and these adopted programs are effective at constructing improvements as evidenced by the long history of the agencies administering the program completing new transportation improvement projects. The condition on the Project to pay its fair share is fully enforceable through the conditions. Given the fee programs are adopted and placed as conditions, they are binding on the Project.

Response L-5-14f: This comment states that "*The EIR also ignores significant transportation safety impacts of the Project identified by Caltrans. As stated in Caltrans' comments on the draft EIR, Project traffic would significantly impact queueing at the SR 168 and Hendon Avenue interchange ramps and recommends mitigation measures for those impacts. (Final EIR, p. 2.0-159.) The final EIR, however, dismisses Caltrans' comments, claiming they relate to level of service (LOS) impacts that are no longer required in a CEQA analysis. (Id.)8 The EIR is mistaken. Caltrans published an Interim Local Development Intergovernmental Review (LDIGR) Safety Review guidance for state and local agencies to integrate into their CEQA analyses to address safety impacts on public roadways, including those under the jurisdiction of Caltrans, caused by traffic generated by development projects. (See Exhibit 12 [Caltrans LDIGR guidance].) Caltrans LDIGR guidance is completely consistent with the State's transition from LOS to VMT as the appropriate measure of transportation impacts. (See id.) Accordingly, the EIR's failure to analyze and mitigate the significant transportation safety impacts of the Project requires revision and recirculation*."

- As explained in the DEIR, the intersections of SR-168 Westbound Ramps/Herndon Avenue and SR-168 Eastbound Ramps/Herndon Avenue are forecast to operate at a satisfactory LOS under all scenarios, except for the Fowler Avenue/SR-168 Eastbound Ramps, which are currently operating at a deficient LOS. The Project does not create any new operational deficiency or additional safety impacts at this location and further, any congestion and/or safety effects associated with the existing deficiencies would be avoided because of planned projects within the Regional Transportation program.

Moreover, the freeway Off-ramp queuing analysis included in TIA shows that the project does not create any safety concerns on State facilities. As a result, there would not be any potentially significant impact as to traffic or traffic safety.

Response L-5-14g: This comment states that "[8] *Moreover, the final EIR's claim that mitigating the impacts identified by Caltrans are not feasible is completely unsupported by analysis or substantial evidence. (Cf. id.) The final EIR fails to explain what "geometric constraints" make Caltrans' proposed mitigation infeasible. (See Guidelines, § 15088, subd. (c).)* "

- In its comment letter on the DEIR, Caltrans recommended extending the left turn storage lanes on eastbound Herndon Avenue, by removing/reducing the existing median between eastbound and westbound traffic along Herndon Avenue. The current storage length is 240 feet for the dual eastbound left-turn lanes at the intersection of Clovis Avenue/Herndon Avenue. Although extending the length of storage may improve level of service (LOS), maintaining the current storage length of 240 feet would not result in any potentially significant traffic impacts. This is because congestion/LOS is not a potentially significant level of service. Further, maintaining the current storage length at 240 feet would not create conditions that would result in potentially significant traffic safety impacts.

Response L-5-15: This comment states that "*The EIR cites the WSA in support of its conclusion that the City has adequate water to supply the Project and that constructing water infrastructure would not significantly impact the environment. (See Draft EIR, pp. 3.14-26 through 3.14-30.) The WSA, however, admits that, based on the buildout assumptions in the City's General Plan, the Project's water supply will need to be replaced in order for there to be enough water to serve all the development contemplated in the General Plan. (Draft EIR, Appendix J, p. 8-1.) The EIR completely ignores this aspect of the WSA and does not include any analysis of the need to replace the Project's water supply at full build out of the General Plan, or the environmental impacts of doing so. (Draft EIR, pp. 3.14-26 through 3.14-30.) Notably, the cumulative impacts chapter of the EIR adopts the "projections" method for analyzing cumulative impacts, which requires the EIR to analyze the Project's individual contribution to impacts along with the development projections in local plans, including the City's*

General Plan. (Draft EIR, pp. 4.0-2 through 4.0-3.) The EIR fails to do so with respect to cumulative water supply impacts."

- Water supply is addressed in DEIR Section 3.9 Hydrology and Water Quality and in Section 3.14 Utilities, and in the Master Responses provided in the Final EIR, which address ground and surface water supplies, including contracts that secure water. The DEIR references the *City of Clovis Urban Water Management Plan 2020 Update* (Provost & Pritchard, 2021B), *City of Clovis Water Shortage Contingency Plan 2020 Update* (Provost & Pritchard, 2021A); the *City of Clovis Water Master Plan Update Phase III* (Provost & Pritchard, 2017), and the *California's Groundwater: Bulletin 118 - San Joaquin Valley Groundwater Basin/Kings Subbasin* (DWR 2006) as a source of information to support the analysis of water supply.

  The DEIR indicates that the City has access to surface water through several different contracts, all of which are delivered to the City by the Fresno Irrigation District (FID). (DEIR p. 3.9-4). The City's groundwater system contains more than 30 wells with a total capacity of approximately 37,690 gallons per minute with another 4,750 gpm of additional capacity planned in the next few years.

  The DEIR (p. 3.14-28 through 3.14-30) provides a Projected Water Demand for the Proposed Project. The Project would receive water supply from the City's water distribution system, which relies on both groundwater and surface water supplies as described above. According to the Water Supply Assessment, the proposed Project has an associated Land Use-based Water Demand Factor (WDF of 3.3 AFY/acre associated with Medium High Density Residential (MHDR) based on the City's UWMP. The projected water demand is shown in Table 3.14-7 of the DEIR on page 3.14-28. The total projected annual potable water demand is projected to be 255.8 AFY. The DEIR notes that total proposed water demand amounts to approximately 1.6% of the excess supply for year 2030 the City has in a normal year (as shown in Table ES-3 of the 2020 UWMP). This indicates an ability of the City to serve this project, but it notes that additional supplies must be acquired by the City to accommodate full build-out of the GP. The commenter suggests that "*The EIR completely ignores this aspect of the WSA and does not include any analysis of the need to replace the Project's water supply at full build out of the General Plan, or the environmental impacts of doing so,*" however, the DEIR does acknowledge that additional supplies will need to be acquired to accommodate full build-out of the GP (p. 3.14-28). This is not considered a "significant impact" or "cumulatively considerable," but rather, it is common for a City to need to expand its water supply as a City grows. It is not practicable for the City to prematurely invest in a water supply that may not be needed for 20 or more years, and similarly, the City will not prematurely expand other services and infrastructure before they are needed. The City's Urban Water Management Plan (UWMP) is updated every four to five years and a new plan is established to ensure water in the near term, while also considering the long-term buildout of the General Plan. The Water Supply Assessment has been prepared following the latest UWMP. Pursuant to Water Code section 10910, subdivision (c)(4) and based on the technical analyses described in the UWMP, the total projected water supplies determined to be available for the proposed Project during Normal, Single Dry, and Multiple Dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses.

A comparison of the City's projected potable and raw water supplies and demands is shown in Table 3.14-8 of the Draft EIR (p. 3.14-29 through 3.14-30) for Normal, Single Dry, and Multiple Dry Years. The data shows that demand within the City's service area is not expected to exceed the City's supplies in any Normal year between 2020 and 2040. From this analysis, the City's water demands are not expected to exceed water supplies in Single Dry Years or Multiple Dry Years. Because of the longer-term analysis of the Water Supply Assessment (year 2040), the analysis is a long-term cumulative outlook. The results of the analysis are carried through in the Cumulative Chapter of the DEIR (Section 4.0), where it accurately reflects the findings of the cumulative analysis presented in Section 3.14 Utilities.

Response L-5-16a: This comment states that *"As stated above, the EIR adopts the "projections" methodology for analyzing cumulative impacts. (Draft EIR, pp. 4.0-2 through 4.0-3.) The purported analysis of cumulative impacts, however, simply repeats the previous analyses of the Project specific impacts and concludes that nothing would be different in the cumulative scenario. (See, e.g., Draft EIR, pp. 4.0-3 through 4.0-6, 4.0-9 through 4.0-10.) This analysis is fundamentally flawed…The purpose of a cumulative impact analysis is to require agencies to consider whether the impacts of individual projects, even if less-than-significant on their own, may nevertheless be cumulatively considerable when analyzed together with the impacts of past, present, and reasonably foreseeable future projects. "'The significance of a comprehensive cumulative impacts evaluation is stressed in CEQA.' [Citation.] Proper cumulative impact analysis is vital 'because the full environmental impact of a proposed project cannot be gauged in a vacuum. One of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a* *variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact.' [Citations.] '[C]onsideration of the effects of a project or projects as if no others existed would encourage the piecemeal approval of several projects that, taken together, could overwhelm the natural environment and disastrously overburden the man-made infrastructure and vital community services. This would effectively defeat CEQA's mandate to review the actual effect of the projects upon the environment.'" (Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, 1214–1215.)."*

- A cumulative analysis is provided in Section 4.0 of the DEIR. The DEIR notes that "*Cumulative settings are identified under each cumulative impact analysis. Cumulative settings vary because the area that the impact may affect is different. For example, noise impacts generally only impact the local surrounding area because noise travels a relatively short distance, while air quality impacts affect the whole air basin as wind currents control air flow and are not generally affected by natural or manmade barriers which would affect noise..."* The DEIR then indicates projection approach is used for the analysis. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. The projection approach for the cumulative analysis considers full buildout of the General Plan.

  The DEIR then provides a cumulative analysis for each environmental topic. It is noteworthy that State CEQA Guidelines section 15130, subdivision (b) specifies that a cumulative impact analysis may be less detailed than the analysis of the project's individual effects. The cumulative analysis provided in the DEIR includes a discussion of the project characteristics and impacts, then discusses the impacts anticipated under the cumulative condition. For instance, the cumulative analysis of visual character (Aesthetics and Visual Resources topic) in the Draft EIR states the following: "*Under cumulative conditions, buildout of the General Plan for Clovis and the surrounding jurisdictions could result in changes to the visual character and quality of the City of Clovis through development of undeveloped areas and/or changes to the character of existing communities. Development of the proposed Project, in addition to other future projects in the area, would change the existing visual and scenic qualities of the City. However, the City of Clovis has adopted specific landscape and design standards to enhance the visual appearance of the Project site and adjacent areas. As such, this is a less than significant cumulative impact. As such, impacts relative to degradation of visual character would be a less than cumulatively considerable contribution and no* *mitigation is required*. This is just one example of a cumulative analysis presented for each environmental topic on pages 4.0-3 through 4.0-26. The above excerpt shows that the cumulative analysis does consider cumulative impacts from the visual changes that would occur as development occurs throughout the region.

In some cumulative analyses provided in the DEIR, such as under the cumulative analysis of agricultural resources on page 4.0-6, the project-level impact determination is critically important in considering the physical change within the cumulative context. For instance, the Project site is no longer a viable agricultural option given the lack of water reliability, and other reasons discussed in previous responses, combined with the fact that conversion of the land does not exceed a threshold of significance established by the State as shown in the LESA model. These facts support the conclusion that the impact is less than significant. When you consider this Project-level impact conclusion relative to the cumulative context for agricultural land in the County (i.e. total acreage of crop land - 1,355,142 acres), the change is a conversion of 0.0058% (1/5800th) of the total agricultural land available, which has notably been determined to also not be economically viable any longer. The only valid conclusion to be drawn from these facts is that the impact is less than cumulatively considerable impact.

In some cases, the DEIR includes a cumulative impact analysis in the topical section (Section 3). For instance, Section 3.3 Air Quality, page 3.3-27 includes a cumulative analysis under the impact "*Impact 3.3-1: Project operation has the potential to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan. (Less than Significant)*" and under *"Impact 3.3-2: Proposed Project construction activities would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan. (Less than Significant)."* As noted on page 3.3-26 of the DEIR, "*…air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded."* This means that the Air District's guidance, including their thresholds, are developed in consideration of the more regional concerns of air quality and the District's ability to meet NAAQS and CAAQS through their planning. Under both analyses, the project-level analysis, is the same as the cumulative-level analysis because the thresholds are aimed at the cumulative problem of air quality in the region. As such, the conclusions from Section 3.3 are carried through and presented under the Section 4.0 Cumulative analysis for this topic.

Another example of a cumulative impact analysis in the topical section (Section 3) is under Section 3.6 Greenhouse Gases, Climate Change and Energy. Page 3.7-21 discusses the cumulative nature of greenhouse gases as follow: "*Cumulative impacts are the collective impacts of one or more past, present, and future projects that, when combined, result in adverse changes to the environment. In determining the significance of a project's contribution to anticipated adverse future conditions, a lead agency should generally undertake a two-step analysis. The first question is whether the combined effects from both the proposed Project and other projects would be cumulatively significant. If the agency answers this inquiry in the affirmative, the second question is whether "the project's incremental effects are cumulatively considerable" and thus significant in and of themselves. The cumulative global project list for this issue (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe. No project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate, but rather effects are shown to be caused by the cumulative emissions from across the globe. However, legislation and executive orders on the subject of climate change in California have established a Statewide context and process for developing an enforceable Statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant*."

Impact 3.7-1 on page 3.7-22 states "*Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of* *the proposed Project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO2 and other GHG pollutants, such as methane (CH4) and nitrous oxide (N2O), from mobile sources and utility usage*." This means, like under the Air Quality analysis, the project-level analysis, is the same as the cumulative-level analysis because the thresholds are aimed at the cumulative problem of greenhouse gas emissions in the region. As such, the conclusions from Section 3.6 are carried through and presented under the Section 4.0 Cumulative analysis for this topic.

The cumulative analysis for energy (p. 4.0-10) is an example where the State has adopted state-wide standards to ensure that development is not inefficient, wasteful, or unnecessary. The cumulative discussion appropriately discloses that the proposed Project would comply with these standards. Additionally, there is nothing in the project that is considered "inefficient, wasteful, or unnecessary" as it relates to energy. In addition to the absence of any component of the proposed Project being inefficient, wasteful, or unnecessary, and the fact that the state-wide standards apply to all development in California and is intended to cumulatively reduce inefficient, wasteful, or unnecessary use of energy, the conclusion is appropriately reported as less than cumulatively considerable on page 4.0-10.

Response L-5-16b: This comment states that "*Here, the EIR does not actually consider the cumulative impacts of development projections in the General Plan together with the Project. Instead, the EIR concludes, because the induvial impacts of this Project are small (as discussed above, however, the EIR is flawed in claiming that many of the Project's impacts are less than significant) there is no need to go to the next step and measure the Project's impacts together with those of development projected in the General Plan. (See, e.g., Draft EIR, pp. 4.0-3 through 4.0-6, 4.0-9 through 4.0-10.) The EIR must be revised to complete all the required steps of a CEQA compliant cumulative impacts analysis and then recirculated for an additional round of public review*."

- As was discussed under Response L-5-16a, there are scenarios where a less than significant impact on a project level also results in a less than cumulatively considerable impact on a cumulative level. For instance, under the cumulative analysis of agricultural resources on page 4.0-6, the project-level impact analysis shows that the Project site is no longer a viable agricultural option given the lack of water reliability, and other reasons discussed in previous responses, combined with the fact that conversion of the land does not exceed a threshold of significance established by the State as shown in the LESA model. These facts support the conclusion that the impact is less than significant on a project-level. In addition, when you consider this Project-level impact conclusion relative to the cumulative context for agricultural land in the County (i.e. total acreage of crop land - 1,355,142 acres), the change is a conversion of 0.0058% (1/5800th) of the total agricultural land available, which has notably been determined too also not be economically viable any longer. The only valid conclusion to be drawn from these facts is that the impact is less than cumulatively considerable impact in addition to being less than significant on a project-level.

There are other examples of cumulative analysis in the Draft EIR where the project-level impact and cumulative level impact are the same. This is not improper, it can simply be a result of an environmental topic being an environmental topic that by its very nature, is a cumulative consideration (i.e. greenhouse gas emissions and air quality). Thresholds for greenhouse gas emissions and air quality are established to effect emissions on a regional or statewide level, which is beyond the limits of the Project site and immediate surrounding. For such topics, the project-level analysis is the cumulative analysis.

Response L-5-17: This comment states that "*The proposed resolution approving the vesting tentative tract map lacks adequate findings to support approval*. Following this statement is several pages describing the commenters reasons for the statement.

- The Planning Commission did not approve the vesting tentative tract map (TM6205). The Planning Commission denied all approvals and adopted a resolution recommending that the City Council deny all approvals. The comment regarding the Planning Commission's ability to approve the VTTM is moot.

Response L-5-18: This comment serves as concluding remarks, and indicates that the EIR is fundamentally flawed in multiple respects and fails as an information document. The commenter suggests that the EIR be revised. The commenter also provides several opinions relating to the Planning Commission's ability to approve the VTTM.

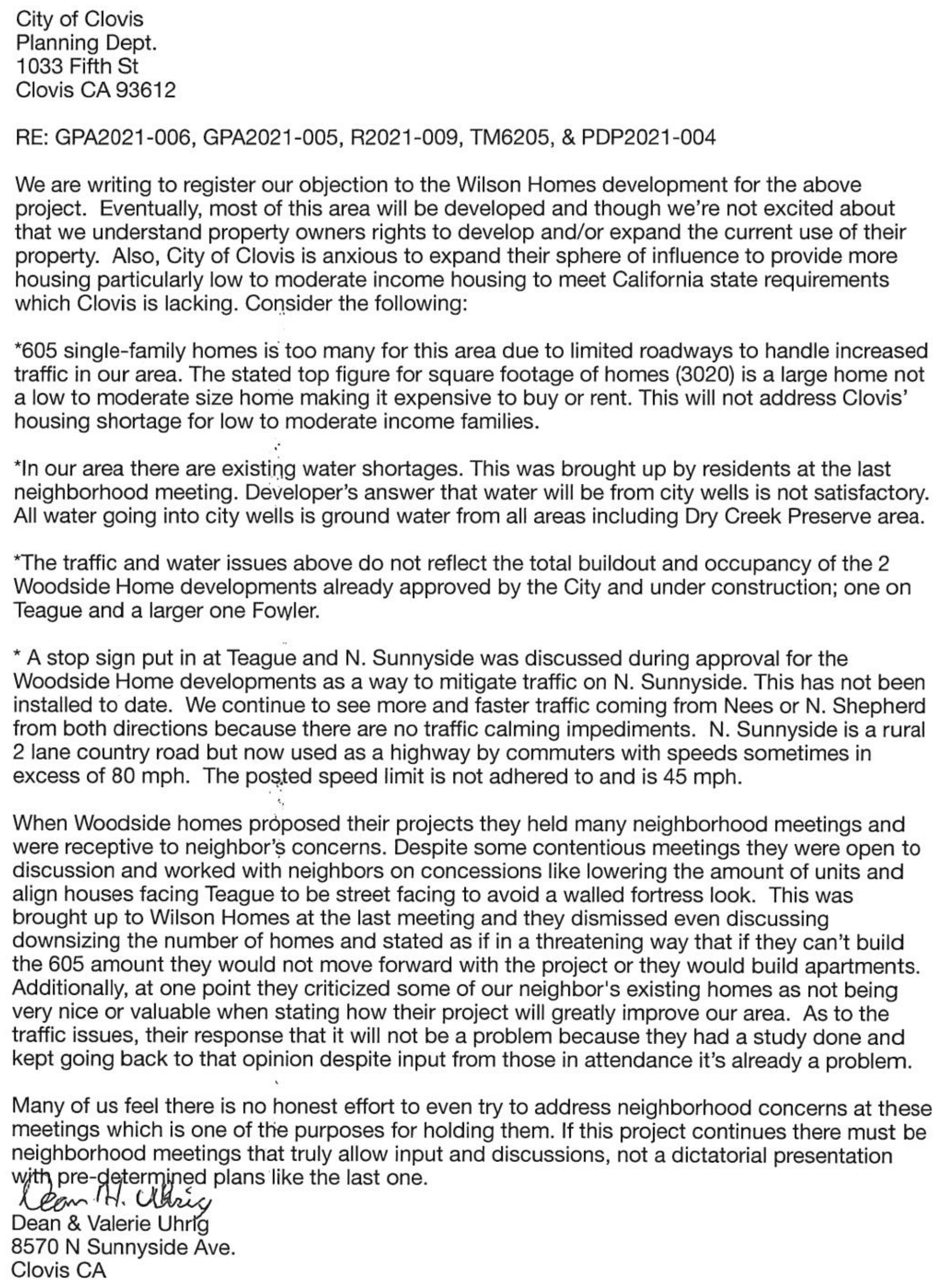
- The Draft EIR consists of two volumes, totaling 2,963 pages of information. This includes a substantial amount of technical analysis by experts in each respective technical discipline, each of which follows a method that is standard to the practice, or specifically defined in a rule or guideline. Each of the environmental topics claimed by the commenter to be fundamentally flawed have been thoroughly and appropriately analyzed, and a thorough response to the commenter's claims is provided in the responses above.

  The Project Description is addressed in DEIR Section 2.0 Project Description. This is an accurate representation of what is proposed (see also CEQA Guidelines, Section 15124, subd. (c) [a project description need only include a "general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities"]; *Dry Creek Citizens Coalition v. County of Tulare* (1999) 70 Cal.App.4th 20, 26-36 [upholding a generalized project description against an attack arguing that it was insufficiently specific].)

CEQA requires that a DEIR analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in a DEIR is governed by a "rule of reason" that requires a DEIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6, subdivision (f). A DEIR must "set forth only those alternatives necessary to permit a reasoned choice." (CEQA Guidelines, Section 15126.6, subdivision (f).) The CEQA Guidelines require only a "range of reasonable alternatives" and, thus limit the number and type of alternatives that need to be evaluated in an EIR. A DEIR need not include any alternatives inconsistent with the lead agency's fundamental underlying purpose in proposing a project. (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1166.). The following factors may be taken into consideration in the assessment of the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plan or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (CEQA Guidelines Section 15126.6, subdivision (f) (1).)

Four (4) alternatives to the proposed Project were developed based on input from City staff and the technical analysis performed to identify the environmental effects of the proposed Project. A more detailed discussion of the alternatives is provided in Response L-5-6.

The Planning Commission did not approve the vesting tentative tract map (TM6205). The Planning Commission denied all approvals and adopted a resolution recommending that the City Council deny all approvals. The comment regarding the Planning Commission's ability to approve the VTTM is moot.



City of Clovis
Planning Dept.
1033 Fifth St
Clovis CA 93612

RE: GPA2021-006, GPA2021-005, R2021-009, TM6205, & PDP2021-004

We are writing to register our objection to the Wilson Homes development for the above project. Eventually, most of this area will be developed and though we're not excited about that we understand property owners rights to develop and/or expand the current use of their property. Also, City of Clovis is anxious to expand their sphere of influence to provide more housing particularly low to moderate income housing to meet California state requirements which Clovis is lacking. Consider the following:

L-6-1

*605 single-family homes is too many for this area due to limited roadways to handle increased traffic in our area. The stated top figure for square footage of homes (3020) is a large home not a low to moderate size home making it expensive to buy or rent. This will not address Clovis' housing shortage for low to moderate income families.

L-6-2

*In our area there are existing water shortages. This was brought up by residents at the last neighborhood meeting. Developer's answer that water will be from city wells is not satisfactory. All water going into city wells is ground water from all areas including Dry Creek Preserve area.

L-6-3

*The traffic and water issues above do not reflect the total buildout and occupancy of the 2 Woodside Home developments already approved by the City and under construction; one on Teague and a larger one Fowler.

L-6-4

* A stop sign put in at Teague and N. Sunnyside was discussed during approval for the Woodside Home developments as a way to mitigate traffic on N. Sunnyside. This has not been installed to date. We continue to see more and faster traffic coming from Nees or N. Shepherd from both directions because there are no traffic calming impediments. N. Sunnyside is a rural 2 lane country road but now used as a highway by commuters with speeds sometimes in excess of 80 mph. The posted speed limit is not adhered to and is 45 mph.

L-6-5

When Woodside homes proposed their projects they held many neighborhood meetings and were receptive to neighbor's concerns. Despite some contentious meetings they were open to discussion and worked with neighbors on concessions like lowering the amount of units and align houses facing Teague to be street facing to avoid a walled fortress look. This was brought up to Wilson Homes at the last meeting and they dismissed even discussing downsizing the number of homes and stated as if in a threatening way that if they can't build the 605 amount they would not move forward with the project or they would build apartments. Additionally, at one point they criticized some of our neighbor's existing homes as not being very nice or valuable when stating how their project will greatly improve our area. As to the traffic issues, their response that it will not be a problem because they had a study done and kept going back to that opinion despite input from those in attendance it's already a problem.

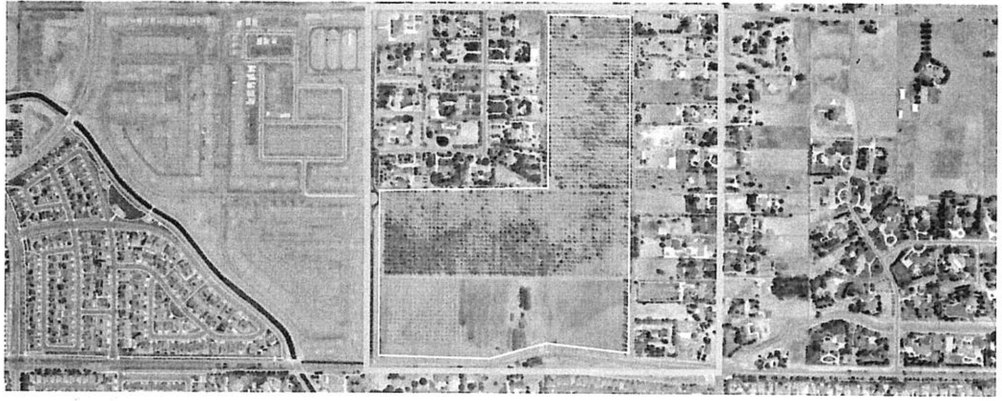
L-6-6

Many of us feel there is no honest effort to even try to address neighborhood concerns at these meetings which is one of the purposes for holding them. If this project continues there must be neighborhood meetings that truly allow input and discussions, not a dictatorial presentation with pre-determined plans like the last one.

L-6-7

Dean H. Uhrig
Dean & Valerie Uhrig
8570 N Sunnyside Ave.
Clovis CA

GENERAL AREA MAP



L-6-7 Cont

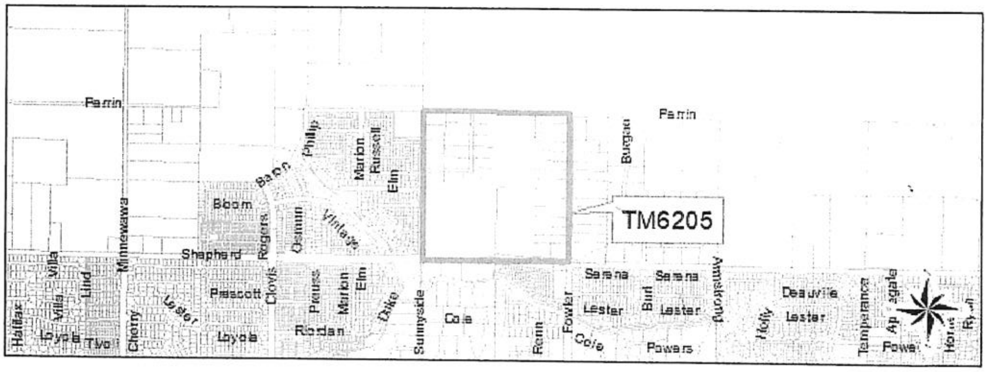
CITY of CLOVIS
CITY HALL - 1033 FIFTH STREET - CLOVIS CA 93612

UHRIG DEAN H & VALERIE A TRUSTEES
OR CURRENT RESIDENT
8570 N SUNNYSIDE
CLOVIS CA 93611

THIS IS A LEGAL NOTICE

GPA2021-006, GPA2021-005, R2021-009, TM6205, & PDP2021-004

SPECIFIC LOCATION MAP



Response to Letter L-6: Dean & Valerie Uhrig, Residents of Clovis

Response L-6-1: This comment is an introductory statement, indicating first that the commenter objects to the Project. The commenter then states "*Eventually, most of this area will be developed and though we're not excited about that we understand property owners rights to develop and/or expand the current use of their property. Also, City of Clovis is anxious to expand their sphere of influence to provide more housing particularly low to moderate income housing to meet California state requirements which Clovis is lacking.*"

- This comment is noted. There are no specific environmental concerns identified in the comment. This comment does not require any further response.

Response L-6-2: This comment states: "*605 single-family homes is too many for this area due to limited roadways to handle increased traffic in our area. The stated top figure for square footage of homes (3020) is a large home not a low to moderate size home making it expensive to buy or rent. This will not address Clovis' housing shortage for low to moderate income families.* "

- The Project's potential traffic impacts are addressed in Section 3.13 of the Draft EIR. Additional discussion was provided in Master Responses 7, 8, and 10. The City's roadways are designed and improved to provide sufficient capacity to handle traffic in the area. The modeling shows that the roadways operation at an acceptable level of service with the planned improvements. The comments regarding the size and cost of homes and low to moderate income families is not a CEQA topic. Nevertheless, these comments will be provided to the City for its consideration.

Response L-6-3: This comment states: "*In our area there are existing water shortages. This was brought up by residents at the last neighborhood meeting. Developer's answer that water will be from city wells is not satisfactory. All water going into city wells is ground water from all areas including Dry Creek Preserve area.*"

- The Draft EIR has analyzed the potential impact of the project on water supplies. The Final EIR also provided supplemental discussion on the topic. Water is specifically addressed in Master Responses 1, 2, 3, 4, and 5. The combination of the information contained in the Draft EIR and the Final EIR provide a sufficient analysis of water.

Response L-6-4: This comment states: "*The traffic and water issues above do not reflect the total buildout and occupancy of the 2 Woodside Home developments already approved by the City and under construction; one on Teague and a larger one Fowler.*"

- The baseline, or existing condition, includes all existing development in Clovis. The two Woodside Home developments that are referenced in the comment are part of the existing condition given that they are already approved projects, and some are partially built. The existing condition is represented in the project-level analysis, as well as the cumulative-level analysis.

Response L-6-5: This comment states: "*A stop sign put in at Teague and N. Sunnyside was discussed during approval for the Woodside Home developments as a way to mitigate traffic on N. Sunnyside. This has not been installed to date. We continue to see more and faster traffic coming from Nees or N. Shepherd from both directions because there are no traffic calming impediments. N. Sunnyside is a rural 2 lane country road but now used as a highway by commuters with speeds sometimes in excess of 80 mph. The posted speed limit is not adhered to and is 45 mph.*"

- The TIA included an in-depth analysis of Sunnyside Avenue at the project vicinity. As explained in the TIA, two signals have been proposed at the intersections of Sunnyside Avenue/Shepherd Avenue and Sunnyside Avenue/Nees Avenue, to eliminate the operational deficiency. Installing signals at these locations will also help alleviate speeding issues along this corridor. With the implementation of these signals along this corridor, the corridor is anticipated to experience improved traffic flow, and alleviate current safety concerns. Both signals are in the City's Development Impact Fee program and the City will be implementing these improvements.

  It is noted that the City and County are updating their MOU to add this 1-mile stretch of Sunnyside from Shepherd Avenue to Nees Avenue to the jurisdiction of Clovis with regards to enforcement of speeds. The City utilizes the police department to enforce speed limits, and violators that are caught are cited and fined. The comments on excessive speed on the roadway will be provided to the City Police Department so that they can be aware of the commenters' observations of excessive speeding.

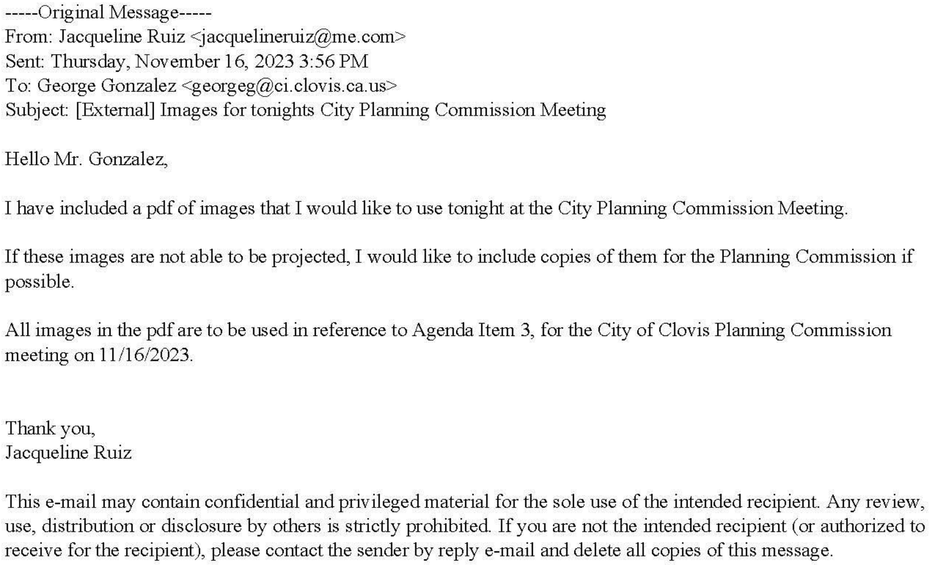
  Additionally, as included in the TIA, the roadway segments of Sunnyside Avenue between Shepherd and Teague Avenue, and between Teague and Nees Avenue, as well as the intersection of Sunnyside Avenue/Teague Avenue is forecast to operate at or better than LOS D, consistent with City threshold, and County's threshold within the City of Fresno and Clovis Sphere of Influence area. Therefore, no further improvements or traffic calming measures are recommended at the intersection of Sunnyside Avenue/Teague Avenue. Additionally, no additional traffic calming measure would be required for this area.

Response L-6-6: This comment states: "*When Woodside homes proposed their projects they held many neighborhood meetings and were receptive to neighbor's concerns. Despite some contentious meetings they were open to discussion and worked with neighbors on* *concessions like lowering the amount of units and align houses facing Teague to be street facing to avoid a walled fortress look. This was brought up to Wilson Homes at the last meeting and they dismissed even discussing downsizing the number of homes and stated as if in a threatening way that if they can't build the 605 amount they would not move forward with the project or they would build apartments. Additionally, at one point they criticized some of our neighbor's existing homes as not being very nice or valuable when stating how their project will greatly improve our area. As to the traffic issues, their response that it will not be a problem because they had a study done and kept going back to that opinion despite input from those in attendance it's already a problem."*

- The neighborhood meetings are addressed in Master Response 15. These meetings were held by the Project applicant and are not administered by the City. The City has held a scoping meeting, and Planning Commission Hearing. A City Council hearing will also be held. There are no specific environmental concerns identified in the comment and no further response is warranted.

Response L-6-7: This comment states: "*Many of us feel there is no honest effort to even try to address neighborhood concerns at these meetings which is one of the purposes for holding them. If this project continues there must be neighborhood meetings that truly allow input and discussions, not a dictatorial presentation with pre-determined plans like the last one."*

- The neighborhood meetings are addressed in Master Response 15. These meetings were held by the Project applicant and are not administered by the City. The City has held a scoping meeting, and Planning Commission Hearing. A City Council hearing will also be held. There are no specific environmental concerns identified in the comment and no further response is warranted.



-----Original Message-----
From: Jacqueline Ruiz <jacquelineruiz@me.com>
Sent: Thursday, November 16, 2023 3:56 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Images for tonights City Planning Commission Meeting

Hello Mr. Gonzalez,

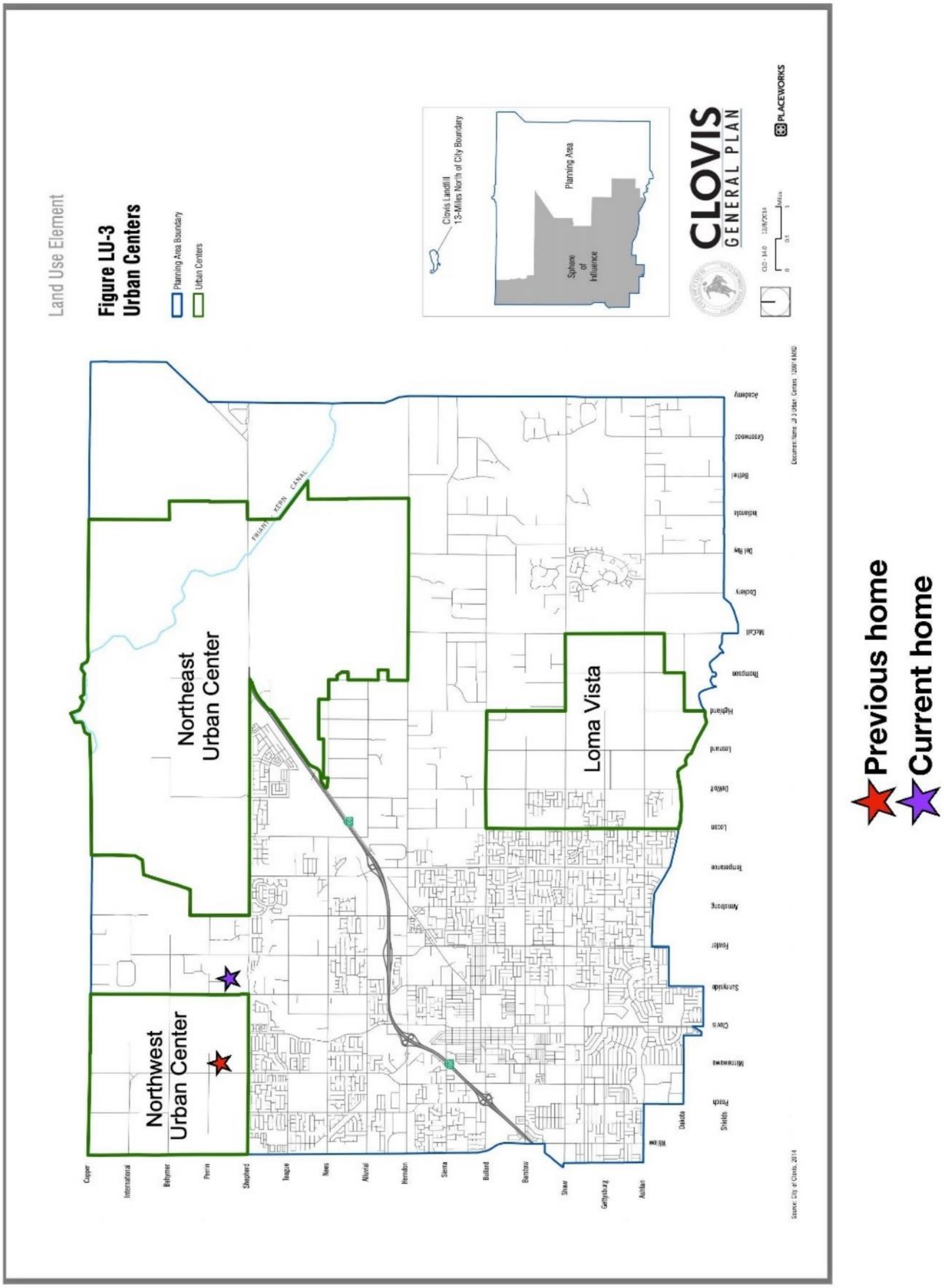
I have included a pdf of images that I would like to use tonight at the City Planning Commission Meeting.

If these images are not able to be projected, I would like to include copies of them for the Planning Commission if possible.

All images in the pdf are to be used in reference to Agenda Item 3, for the City of Clovis Planning Commission meeting on 11/16/2023.

Thank you,
Jacqueline Ruiz

L-7-1


Land Use Element
Figure LU-3
Urban Centers
Planning Area Boundary
Urban Centers
Clovis Landfill
13-Miles North of City Boundary
Planning Area
Sphere of Influence
CLOVIS
GENERAL PLAN
PLACEWORKS
Northeast Urban Center
Loma Vista
Northwest Urban Center
FRIANT-KERN CANAL
Copper
International
Behymer
Perrin
Shepherd
Teague
Nees
Alluvial
Herndon
Sierra
Bullard
Barstow
Shaw
Gettysburg
Ashlan
Dakota
Shields
Willow
Academy
Greenwood
Bethel
Indianola
Del Rey
Dockery
McCall
Thompson
Highland
Leonard
DeWolf
Locan
Temperance
Armstrong
Fowler
Sunnyside
Clovis
Minnewawa
Peach
Source: City of Clovis, 2014
Previous home
Current home

L-7-2

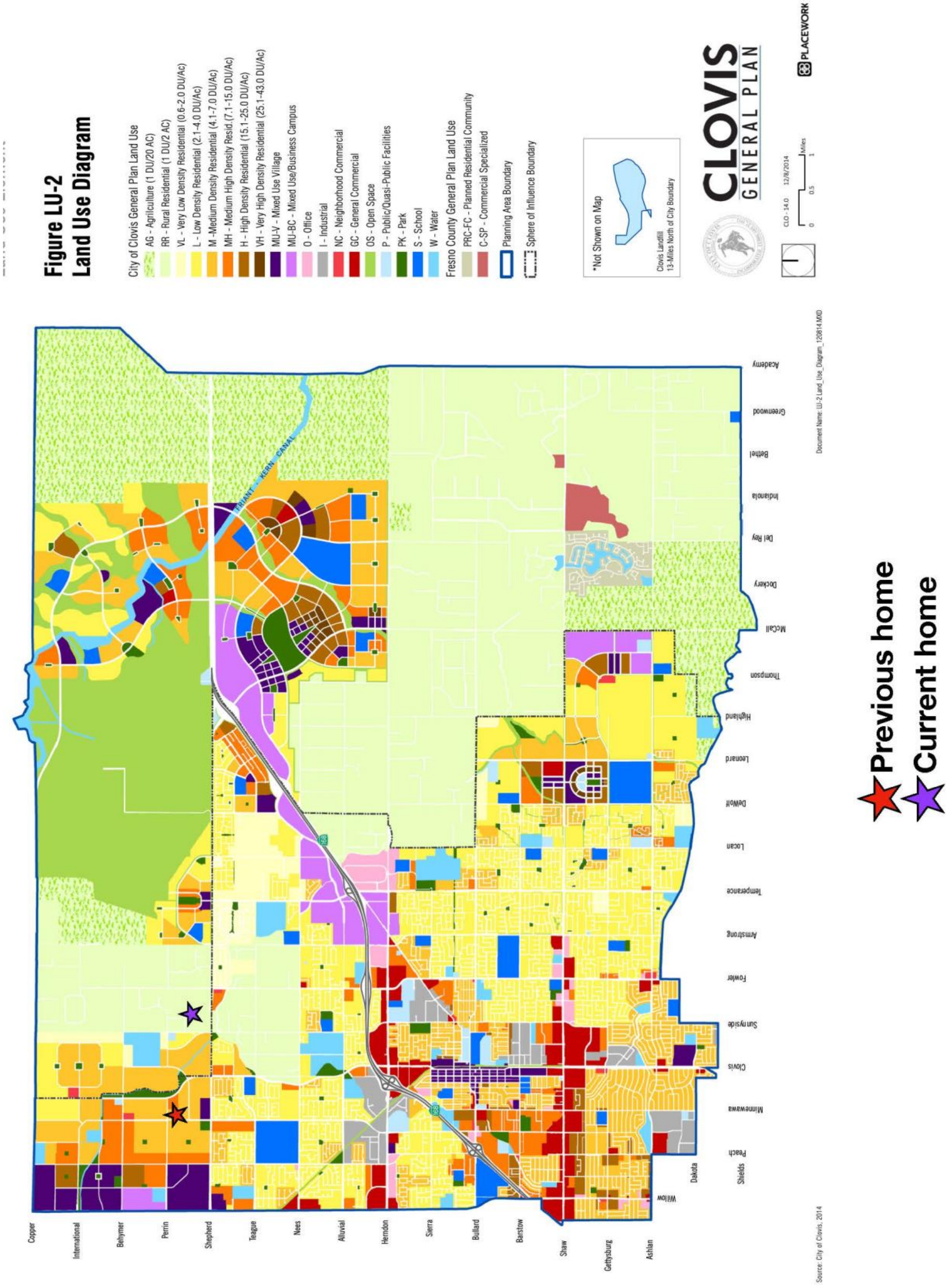
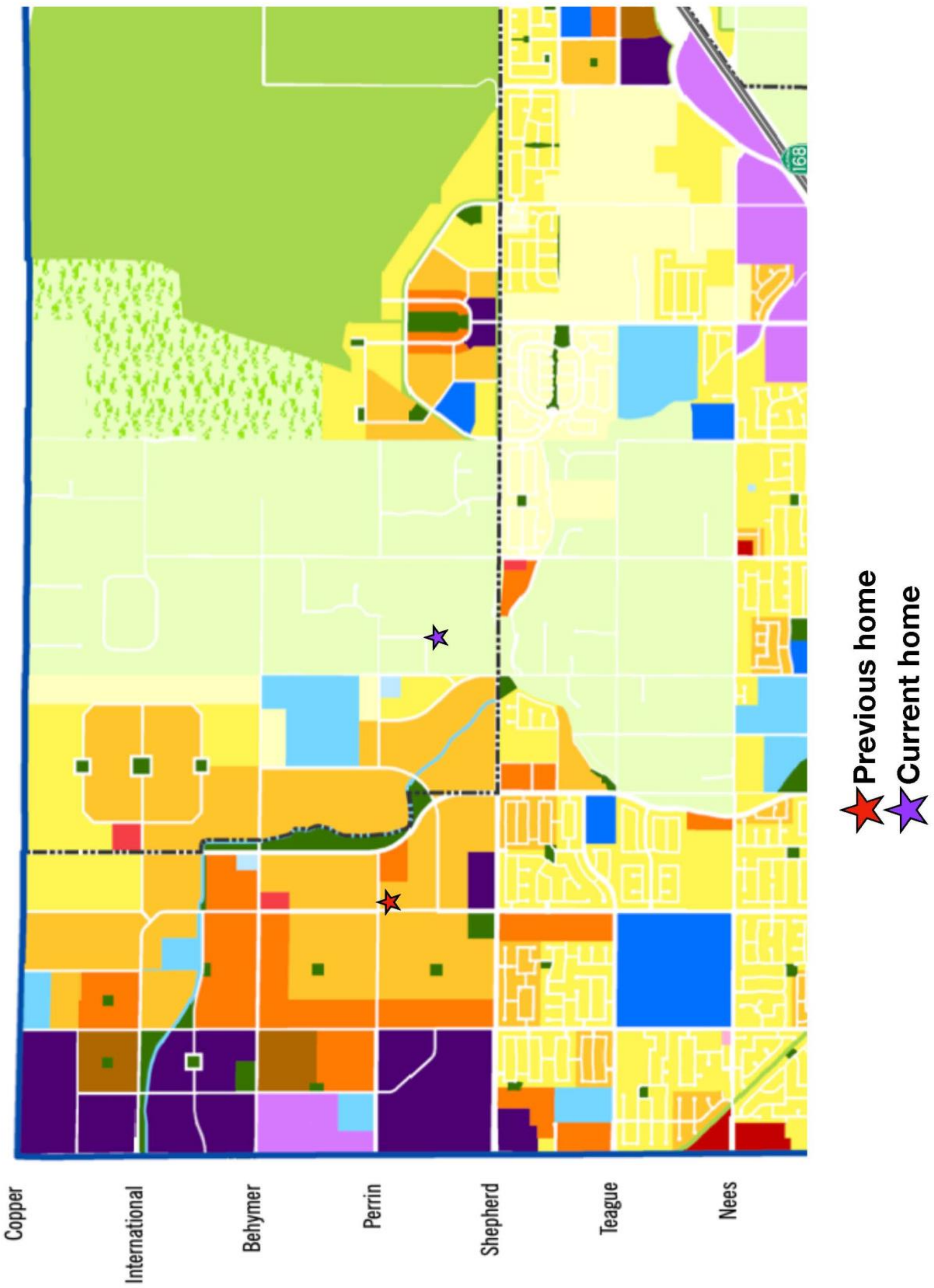
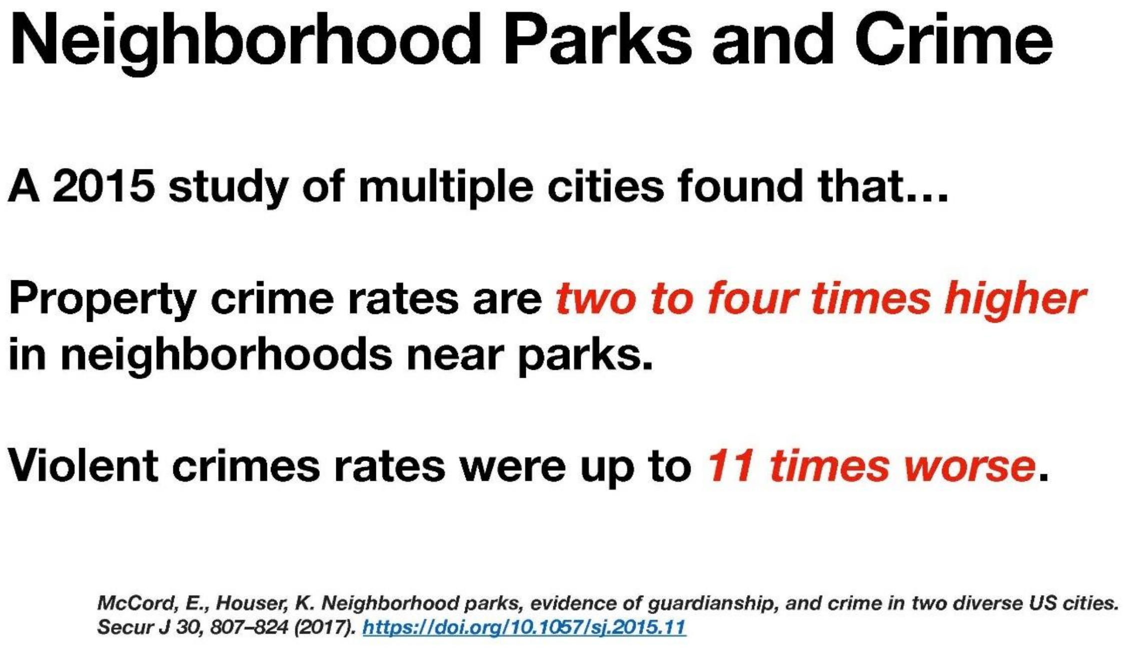


Figure LU-2
Land Use Diagram
City of Clovis General Plan Land Use
AG - Agriculture (1 DU/20 AC)
RR - Rural Residential (1 DU/2 AC)
VL - Very Low Density Residential (0.6-2.0 DU/Ac)
L - Low Density Residential (2.1-4.0 DU/Ac)
M - Medium Density Residential (4.1-7.0 DU/Ac)
MH - Medium High Density Resid.(7.1-15.0 DU/Ac)
H - High Density Residential (15.1-25.0 DU/Ac)
VH - Very High Density Residential (25.1-43.0 DU/Ac)
MU-V - Mixed Use Village
MU-BC - Mixed Use/Business Campus
O - Office
I - Industrial
NC - Neighborhood Commercial
GC - General Commercial
OS - Open Space
P - Public/Quasi-Public Facilities
PK - Park
S - School
W - Water
Fresno County General Plan Land Use
PRC-FC - Planned Residential Community
C-SP - Commercial Specialized
Planning Area Boundary
Sphere of Influence Boundary
*Not Shown on Map
Clovis Landfill
13-Miles North of City Boundary
CLO - 14.0 12/8/2014
0 0.5 1 Miles
CLOVIS
GENERAL PLAN
PLACEWORKS
Document Name: LU-2 Land_Use_Diagram_120814.MXD
Source: City of Clovis, 2014
FRIANT - KERN CANAL
Copper
International
Behymer
Perrin
Shepherd
Teague
Nees
Alluvial
Herndon
Sierra
Bullard
Barstow
Shaw
Gettysburg
Ashlan
Academy
Greenwood
Bethel
Indianola
Del Rey
Dockery
McCall
Thompson
Highland
Leonard
DeWolf
Locan
Temperance
Armstrong
Fowler
Sunnyside
Clovis
Minnewawa
Peach
Dakota
Shields
Willow
Previous home
Current home

L-7-2


168
Copper
International
Behymer
Perrin
Shepherd
Teague
Nees
★ Previous home
★ Current home

L-7-2



Neighborhood Parks and Crime

A 2015 study of multiple cities found that…

Property crime rates are *two to four times higher* in neighborhoods near parks.

Violent crimes rates were up to *11 times worse*.

McCord, E., Houser, K. Neighborhood parks, evidence of guardianship, and crime in two diverse US cities. Secur J 30, 807–824 (2017). https://doi.org/10.1057/sj.2015.11

L-7-2

Response to Letter L-7: Jacqueline Ruiz, Resident of Clovis

Response L-7-1: The commenter indicates that they have "*included a pdf of images that I would like to use tonight at the City Planning Commission Meeting…If these images are not able to be projected, I would like to include copies of them for the Planning Commission if possible…All images in the pdf are to be used in reference to Agenda Item 3, for the City of Clovis Planning Commission meeting on 11/16/2023.*"

- There are no specific environmental concerns identified in the comment, rather, the email serves as a transmission of images that the commenter desired to have available during the Planning Commission hearing. The images were available during the Planning Commission hearing. The images are noted and will be presented to the City for consideration. This comment does not require any further response.

Response L-7-2: This comment includes the attached pdf images that the commenter referred to in the first comment.

- The comment cites a study comparing crime in Philadelphia, PA and Louisville, KY. It is notable that the two cities in the study are generally high crime communities from the Midwest and East Coast, whereas the City of Clovis is a low crime community within the California. There are many significantly different community characteristics between Clovis and the other communities referenced in the study. Nevertheless, "crime" is not an environmental topic under the California Environmental Quality Act. Instead, "Public Services," including police and park services, are CEQA topics. However, the focus of CEQA as it relates to these Public Services, is not the physical facilities (i.e. police station or parks), the construction of which would cause a physical environmental impact. The DEIR concludes the Project would not result in any significant impact on police resources, nor would it result in the need to build new or expanded police facilities to serve the proposed Project. The DEIR also addresses the physical impacts that are associated with the construction of new parks within the Project site. It is noted, that the images served as a slide presented by the commenter during the Planning Commission hearing. The images were considered at the Planning Commission and be considered at future hearings of the City Council. This comment does not require any further response.

From: Pat Menagh <pmenagh@solerasd.com>
Sent: Thursday, November 16, 2023 1:06 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Subject: [External] Quail Run Public Mtg Tonight - Pictures for my comments

George,

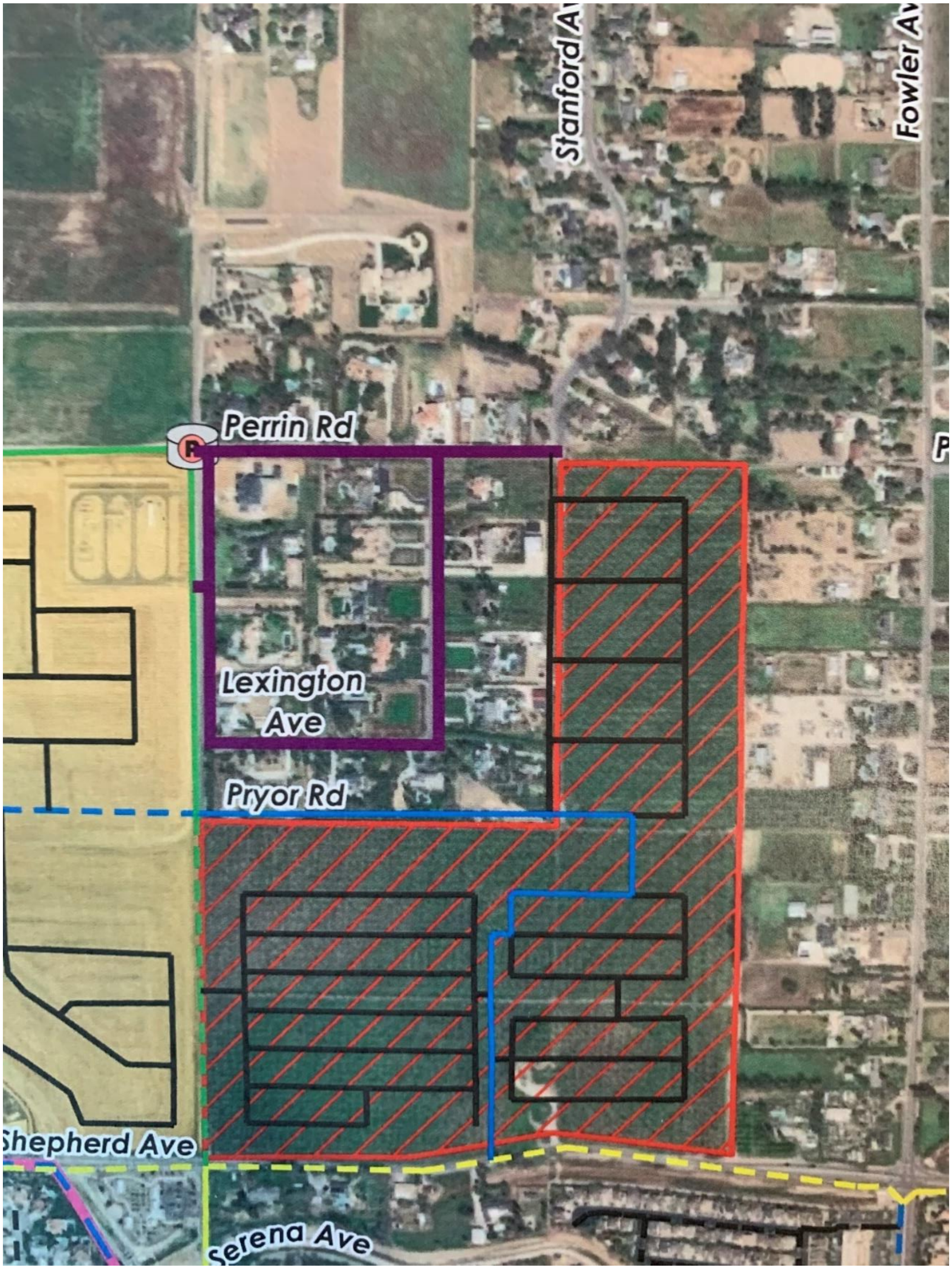
My name is Patrick Menagh and I am a resident of Quail Run – 9459 N. Purdue Ave, Clovis, CA 93619. I plan on using this opportunity to speak during the public comment period and was informed we could supply you with pictures that I can use when I speak. Please have the attached pictures available so I can use them. There are 16, but I assure you I will be brief with each one and remain within my allotted time. L-8-1

If you have any question, feel free to reach out.

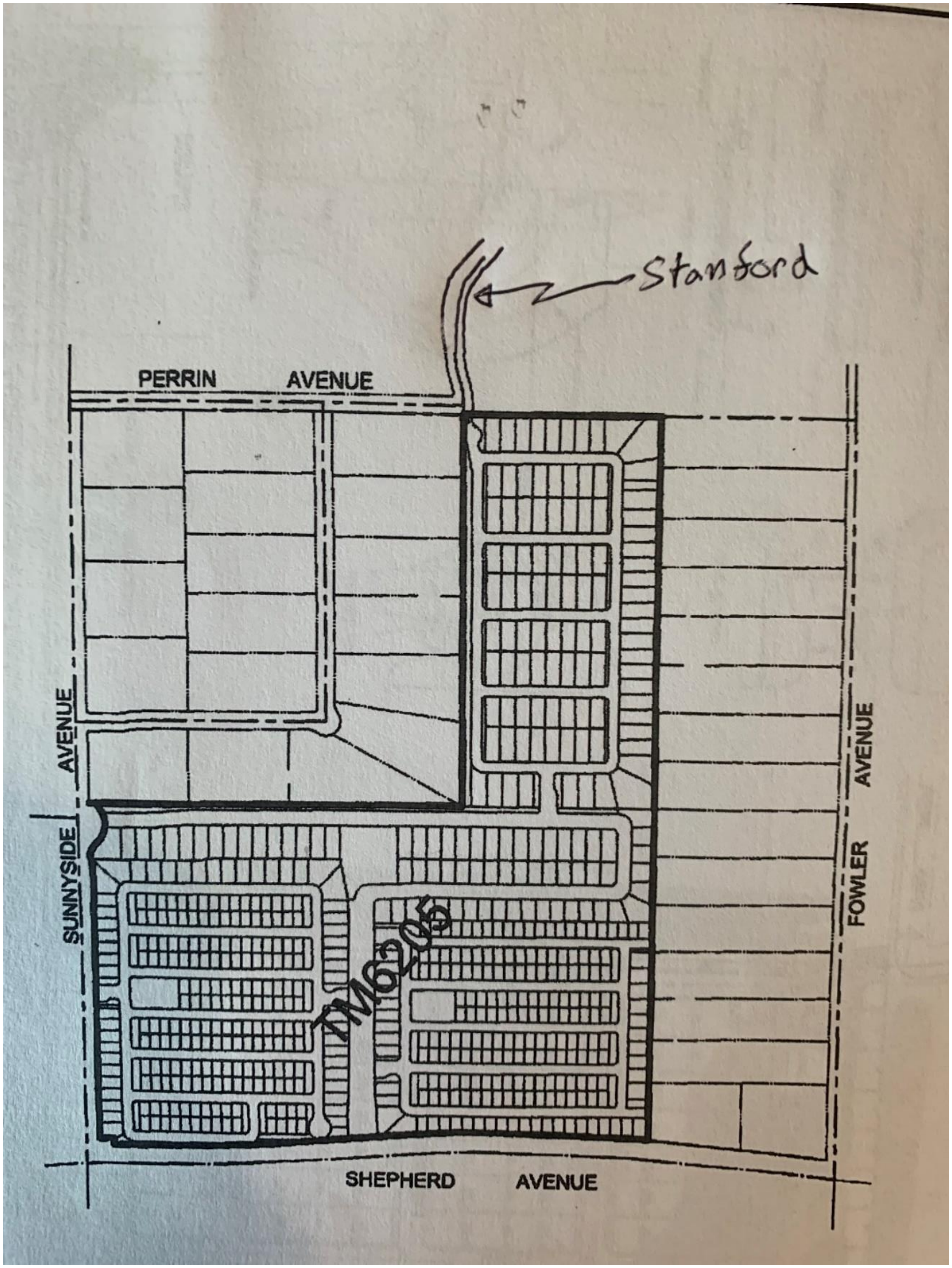
Sincerely,

Pat Menagh

Mbl. (559) 392-5547


Stanford Av
Fowler Av
Perrin Rd
P
Lexington Ave
Pryor Rd
Shepherd Ave
Serena Ave

L-8-1 Cont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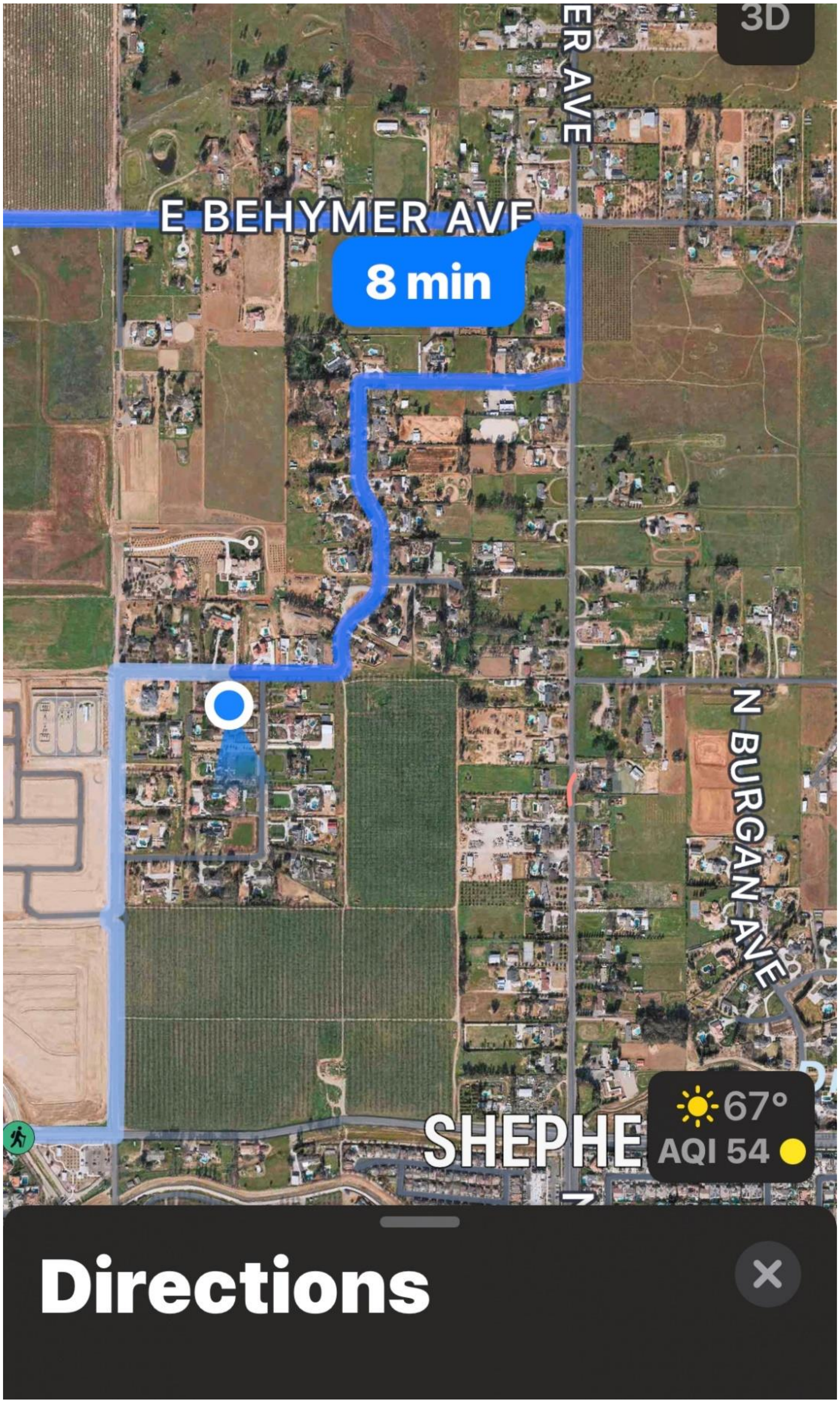
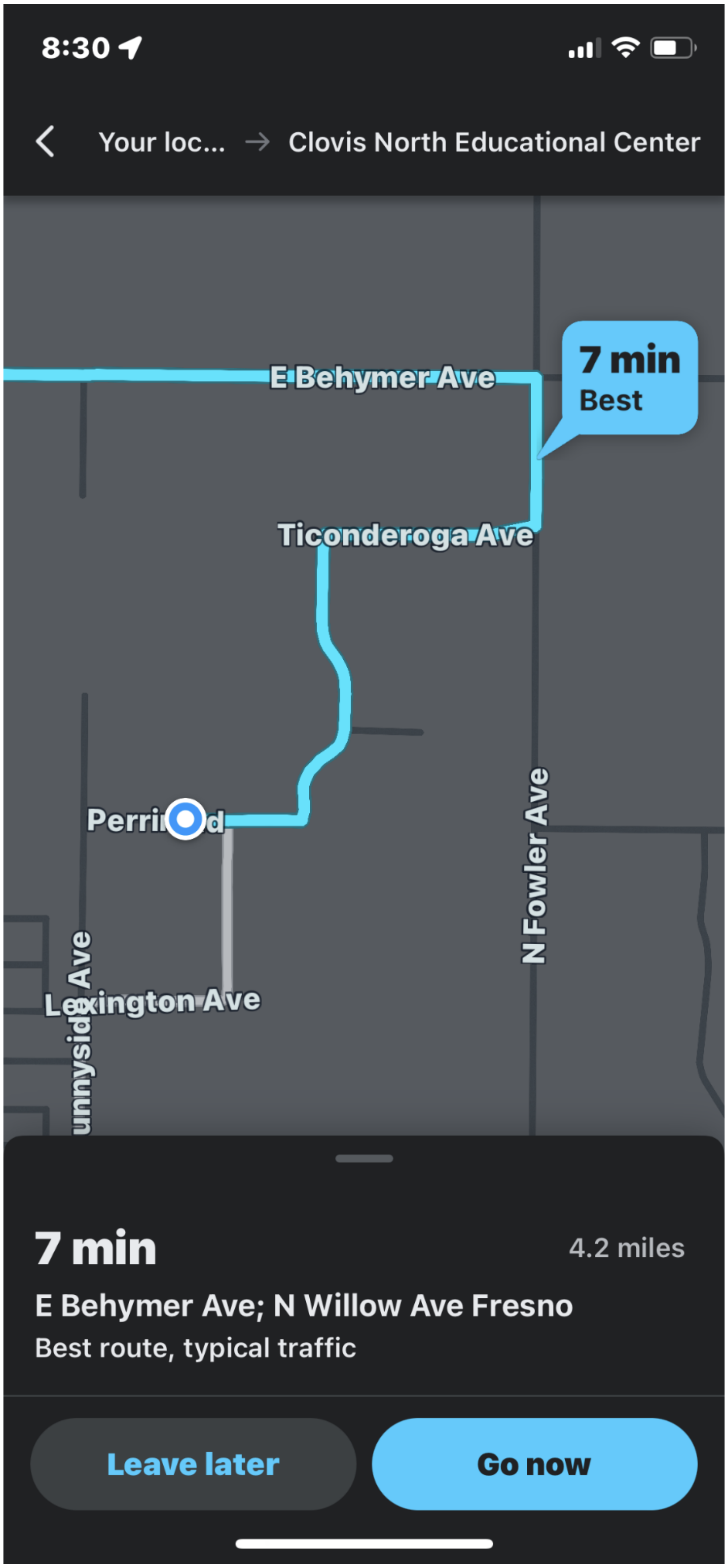
SUNNYSIDE AVENUE
FOWLER AVENUE
SHEPHERD AVENUE
TM6205

L-8-1 Cont



Directions

L-8-1 Cont



7 min 4.2 miles

E Behymer Ave; N Willow Ave Fresno

Best route, typical traffic

L-8-1 Cont

L-8-1 Cont

L-8-1 Cont

L-8-1 Cont

L-8-1 Cont

L-8-1 Cont

L-8-1 Cont

Response to Letter L-8: Peter Menagh, Resident of Clovis

Response L-8-1: This comment states the following:

> *"My name is Patrick Menagh and I am a resident of Quail Run – 9459 N. Purdue Ave, Clovis, CA 93619. I plan on using this opportunity to speak during the public comment period and was informed we could supply you with pictures that I can use when I speak. Please have the attached pictures available so I can use them. There are 16, but I assure you I will be brief with each one and remain within my allotted time."*

- This comment is noted. The pictures provided were made available at the Planning Commission hearing. The commenter subsequently provided oral comment regarding these pictures at the November 16, 2023 Planning Commission hearing. The commenter's Planning Commission comments are summarized below:

  > The commenter provided a video showing roadways captured from a car drive, and provided commentary. Staff was not able to accommodate the video during the hearing, but did provide the pictures. Commenter indicated that he now knows that the project entry near the corner of Perrin and Stanford will be gated. He noted that the Perrin and Stanford intersection gets 'really windy' and that there were no sidewalks. Commenter provided pictures to illustrate this comment. Commenter noted that there will be a lot of people living in the new community who will have children going to Clovis North. Commenter showed map route that his phone directed him to take, he described that route and the alternative route. Commenter noted that he tried Waves (a mapping App), and it had the same primary route so that was believed to be the best route. Heading out from his house, the intersection of Purdue and Perrin has no street lines, no sidewalks, no stop sign. The corner where the emergency only fire access road/gate will be (corner of Perrin and Stanford) is blind on the left, no lines, no sidewalks. Commenter notes that it is more than a 90-degree turn, suggested that it was more like 100 degrees. Coming right off that turn, there are no lines or sidewalks, neighbor on right paved an area to keep people from driving in that area and losing control. The commenter showed images heading towards the bend and on right side of road, sees oncoming car with not a lot of space for it go by. Commenter noted that he was doing about 10mph, with the oncoming car doing about 35mph and it almost hit him. Commenter noted that people drive fast through the area because of construction, and he is already seeing that problem exist. The next slide is Solar and Stanford, which has no stop sign, coming in to a T out of that cul de sac. Next slide is next bend, commenter notes that it is blind, no lines, no curbs; people walking this all the time, his wife walks it every day, will tell him once a week about almost getting hit. Commenter indicates that if you put an exit in that location, with a hundred homes, gated, they will go out on Shepherd, on Sunnyside, but if they have got an exit, it is

common sense, path of least resistance. Commenter indicates that the road is not built for speed but they are going to speed because they are going to be late. The curve at Stanford and Ticonderoga – blind, hedge on right cannot see cars coming around the corner and they cut the corner every time. There are no lines and they are swinging around there like a racetrack. Commenter indicates that it is going to get worse; you are going to have people get hit, going to have somebody hurt, going to have wrecks. God forbid you hurt somebody, especially after we have stood up here and told you it is a problem. The next slide shows Ticonderoga and Fowler, garbage truck hauling across Fowler doing about 45, that intersection does not have a stop sign on Fowler. Commenter notes that there was a wreck on Fowler on October 16th, car hit the telephone pole, cannot see it in picture but to the right. Commenter notes that about a month earlier another wreck occurred. Ever since there has been construction there have been more problems, because people coming in and out of the neighborhood, just with the construction. You get a hundred homes, with people going to school, because that is going to be the best way, you are going to have wrecks. We are already seeing it, look it up; it just happened last month. I have got pictures on my phone. You are going to have backups because if you have ever been on it about 7:30, 8 o'clock, it is a zoo, then you do the same thing about 4:30, 5:30; it is a zoo trying to get down Fowler. Commenter indicates that it is a problem, we are talking about lives, we are talking about our neighborhood. We want a nice, quiet neighborhood, we want it the way we had it in the past. I am not saying that we cannot develop, but you got to use your brains, got to be reasonable. There is a problem here, and there has got to be a better way to get traffic through here because it is going to be a problem. The next slide is another look at where that exit is coming the other way, blind on the right. The next slide, where Sunnyside and Perrin meet, blind on the left and right both, no stop sign and that's Sunnyside. The next slide, example of new road built by Lennar; road on right looks like they gave up and just decided to make it narrow, go back to narrow roads already there. Gives you an idea of difference between nice wide road and our narrow roads. Next slide, cul de sac talking about, Lennar on right, Wilson on left; it is tight, if you have not driven it go try. Cones everywhere but it is tight. Going to be fun when you have all those people coming out of there. Please take time to drive it, try it, before making a decision. You are going to go 'wait, this is kind of crazy.' So, to summarize, heard a lot of things about different kinds of impacts, there's impact, we live there every day. Can find an expert to say anything, happens all the time in the courtroom, one side has expert saying this, other side has expert saying that. Think common sense would dictate talk to people who live there. Not against the project, just against it not being done right or safe. Lower the density, does not make sense. Can find middle ground here. Think about water issue, we are willing to work with you. We are willing to find some middle ground that will work for the City, the developer, and for the community, because there are issues.

The primary concerns expressed were the potential traffic related impacts from the proposed Project at the egress location at Perrin and Stanford Avenue, as well as the overall circulation and traffic conditions throughout the vicinity. It should be noted, that City Planning Staff has met with the Fire Department and agreed upon a compromise to make the northern access an EVA only, resulting in no Project traffic impacting the Perrin/Stanford area. The traffic analysis shows that there are no significant impacts related to traffic safety.

From: Jared Callister <callister@flclaw.net>
Sent: Thursday, November 16, 2023 12:51 PM
To: George Gonzalez <georgeg@ci.clovis.ca.us>; George Gonzalez <georgeg@ci.clovis.ca.us>
Cc: Rich Wathen <Rich@wchomes.com>
Subject: [External] JRC Public Comment sldes (planning commission.pptx

George,

Below are my comments for tonight's hearing. I have attached some slides I may reference as well.

Note that I may be late to the meeting and if I am not there, I've asked another member of the community to read my letter on my behalf. L-9-1

Good evening, members of the Clovis Planning Commission. My name is Jared Callister, and I reside at 9318 N. Sunnyside Ave., Clovis. I tried my best to make it here this evening to deliver these comments in-person but I have a daughter receiving an award and a son undergoing physical therapy tonight at this time. I write these comments as a concerned member of the Quail Run 18 Association. Our association consists of 18 homeowners who find themselves at the heart of the proposed Spensley property development. L-9-2

While we have entrusted the law firm of Remy Moose & Manly to articulate many of our legal concerns, we, the members of the Quail Run 18, also feel it imperative to voice our specific issues and personal experiences. We fully endorse and agree with our law firm's comments that the EIR for this Project is insufficient.

Let's be clear: this development will have a significant impact on neighboring communities. It defies common sense to argue otherwise. The magnitude of change and impact on our lives cannot be overstated. This is a case where common sense must prevail. L-9-3

This development process is rushed and hurried, lacking adequate evaluation of the complex challenges facing our community. It's important to note that this development, positioned in County Service Area 51, is an area with a history of water issues. Additionally, its proximity to the Dry Creek Preserve raises significant complicating factors. L-9-4

While it may seem that this development has been "years" in the making, the reality is that the only item "years" in the making was the concept of a Sphere of Influence boundary change. Indeed, the actual tract map was only released with the Draft EIR just a few months ago.. The final EIR was issued just two weeks ago. This accelerated timeline is out of the ordinary and not in alignment with what we were led to expect.

For years, we were told by the City that this would be a multi-step process, allowing for community input at every stage: first the Sphere of Influence change, followed by annexation and proposed entitlements, and then, at a later stage a tract map. Instead, what we are witnessing is a rapid consolidation of these steps into a single action. This approach contradicts the very essence of proper planning.

The intent of a step-by-step process is to be deliberative, allowing all stakeholders to understand, contribute, and voice their concerns effectively. The current trajectory of this project, as proposed, is unacceptable without substantial revisions. L-9-4 Cont'd

Therefore, I urge the Planning Commission to vote no on this project and to put this project on hold. In reality, the Developer needs to go back to the drawing board and actually present a tract map that takes into consideration the input from the community. There is a need for genuine engagement with the community members. We ask for a reconsideration and revision of the tract map to reflect the concerns and inputs of all stakeholders. L-9-5

Thank you for your time and consideration.

Response to Letter L-9: Jared Callister, Resident of Clovis

Response L-9-1: This comment is an introductory statement, and a request to provides their slides to be available at the Planning Commission hearing. The commenter notes that they may be late to the meeting, and that they have asked another member to read the letter on their behalf.

- This comment is noted. The slides were made available at the Planning Commission hearing. The letter was also read at the hearing. There is no further response warranted for this comment.

Response L-9-2: This comment is an introductory statement to a letter that was read at the Planning Commission. It identifies the commenter, their address, and hardships they have in attending the hearing based on prior obligations. The commenter indicates that they are a concerned member of the Quail Run 18 Association, which consists of 18 homeowners who "*find themselves at the heart of the proposed Spensley property development*." The commenter indicates that the Association has entrusted the law firm Remy Moose & Manly to articulate their legal concerns, but they also feel it imperative to voice their specific issues and personal experiences. This comment concludes that they fully agree with the law firms' comments that the EIR for the proposed Project is insufficient.

- This comment is noted. The comments provided by their law firm are included as Comment L-5 by Nathan O. George of Remy Moose & Manly dated November 16, 2023. That comment letter is addressed in Response L-5 earlier in this document. There are no other specific environmental concerns presented in this comment. The commenter's opposition to the proposed Project is noted and will be provided to the City for its consideration.

Response L-9-3: This commenter states "*Let's be clear: this development will have a significant impact on neighboring communities. It defies common sense to argue otherwise. The magnitude of change and impact on our lives cannot be overstated. This is a case where common sense must prevail.*"

- There is not a specific comment identified that relates to the environmental information provided in the EIR, rather, the comment presents their concerns relating to the impact on their lives from change if the proposed Project were built. The commenters concerns are noted and will be provided to the City for its consideration.

Response L-9-4: This comment states:

"This development process is rushed and hurried, lacking adequate evaluation of the complex challenges facing our community. It's important to note that this development,

positioned in County Service Area 51, is an area with a history of water issues. Additionally, its proximity to the Dry Creek Preserve raises significant complicating factors.

While it may seem that this development has been "years" in the making, the reality is that the only item "years" in the making was the concept of a Sphere of Influence boundary change. Indeed, the actual tract map was only released with the Draft EIR just a few months ago.. The final EIR was issued just two weeks ago. This accelerated timeline is out of the ordinary and not in alignment with what we were led to expect.

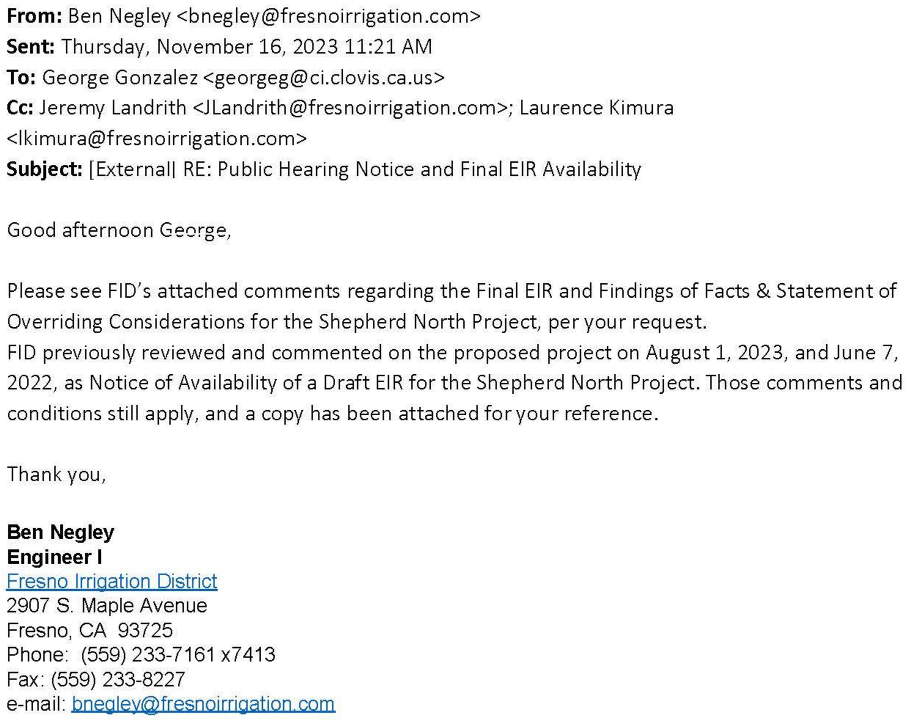
For years, we were told by the City that this would be a multi-step process, allowing for community input at every stage: first the Sphere of Influence change, followed by annexation and proposed entitlements, and then, at a later stage a tract map. Instead, what we are witnessing is a rapid consolidation of these steps into a single action. This approach contradicts the very essence of proper planning.

The intent of a step-by-step process is to be deliberative, allowing all stakeholders to understand, contribute, and voice their concerns effectively. The current trajectory of this project, as proposed, is unacceptable without substantial revisions."

- The topics of water are addressed in the Draft EIR in Sections 3.9 Hydrology and Water Quality, and 3.14 Utilities. These topics are also discussed in additional detail in Master Response 1, 2, 3, 4, and 5. The comment that indicating that the "*development process is rushed and hurried, lacking adequate evaluation"* is not an accurate understanding of the process that has transpired. The Draft EIR is a result of extensive technical analysis by a team of consultants working closely with City staff since 2021 (over two years). During that time, there was a significant amount of analysis, peer review, design changes, and supplemental analysis necessary to fully analyze the impacts, and reduce or avoid impacts associated with project development. This two-year time frame is inclusive of the environmental review process, but the planning and application process extends even farther back in time. The CEQA process involves the accumulation of numerous technical reports that are summarized in the DEIR. In effect, the CEQA document functions to synthesize numerous technical analyses into a single document that can be distributed out to the public for review for a more simplified review of the technical analyses. City staff has thoroughly examined the details of the application, including the design and the environmental impacts, and will ultimately present their findings to the City Council for its consideration.

Response L-9-5: This comment is a conclusion to the letter, urging the Planning Commission to vote no on this project and to put this project on hold. The commenter states *"In reality, the Developer needs to go back to the drawing board and actually present a tract map that* *takes into consideration the input from the community. There is a need for genuine engagement with the community members. We ask for a reconsideration and revision of the tract map to reflect the concerns and inputs of all stakeholders."*

- The concerns and recommendation provided in the comment are noted and will be provided to the City for consideration.



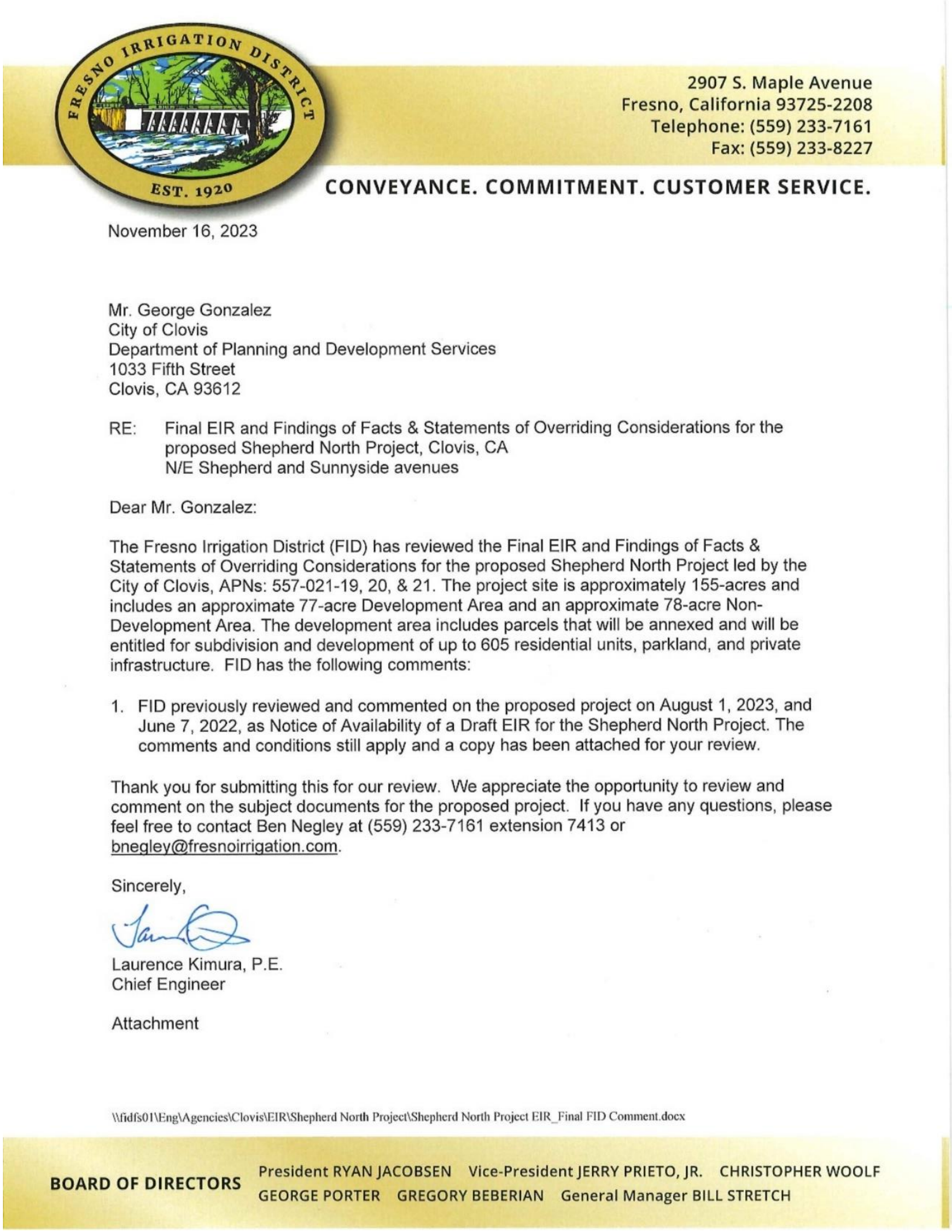
From: Ben Negley <bnegley@fresnoirrigation.com>
Sent: Thursday, November 16, 2023 11:21 AM
To: George Gonzalez <georgeg@ci.clovis.ca.us>
Cc: Jeremy Landrith <JLandrith@fresnoirrigation.com>; Laurence Kimura <lkimura@fresnoirrigation.com>
Subject: [External] RE: Public Hearing Notice and Final EIR Availability

Good afternoon George,

Please see FID's attached comments regarding the Final EIR and Findings of Facts & Statement of Overriding Considerations for the Shepherd North Project, per your request.
FID previously reviewed and commented on the proposed project on August 1, 2023, and June 7, 2022, as Notice of Availability of a Draft EIR for the Shepherd North Project. Those comments and conditions still apply, and a copy has been attached for your reference. L-10-1

Thank you,

Ben Negley
Engineer I
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725
Phone: (559) 233-7161 x7413
Fax: (559) 233-8227
e-mail: bnegley@fresnoirrigation.com



FRESNO IRRIGATION DISTRICT
EST. 1920

2907 S. Maple Avenue
Fresno, California 93725-2208
Telephone: (559) 233-7161
Fax: (559) 233-8227

CONVEYANCE. COMMITMENT. CUSTOMER SERVICE.

November 16, 2023

Mr. George Gonzalez
City of Clovis
Department of Planning and Development Services
1033 Fifth Street
Clovis, CA 93612

RE: Final EIR and Findings of Facts & Statements of Overriding Considerations for the proposed Shepherd North Project, Clovis, CA
N/E Shepherd and Sunnyside avenues

Dear Mr. Gonzalez:

The Fresno Irrigation District (FID) has reviewed the Final EIR and Findings of Facts & Statements of Overriding Considerations for the proposed Shepherd North Project led by the City of Clovis, APNs: 557-021-19, 20, & 21. The project site is approximately 155-acres and includes an approximate 77-acre Development Area and an approximate 78-acre Non-Development Area. The development area includes parcels that will be annexed and will be entitled for subdivision and development of up to 605 residential units, parkland, and private infrastructure. FID has the following comments: L-10-2

1. FID previously reviewed and commented on the proposed project on August 1, 2023, and June 7, 2022, as Notice of Availability of a Draft EIR for the Shepherd North Project. The comments and conditions still apply and a copy has been attached for your review.

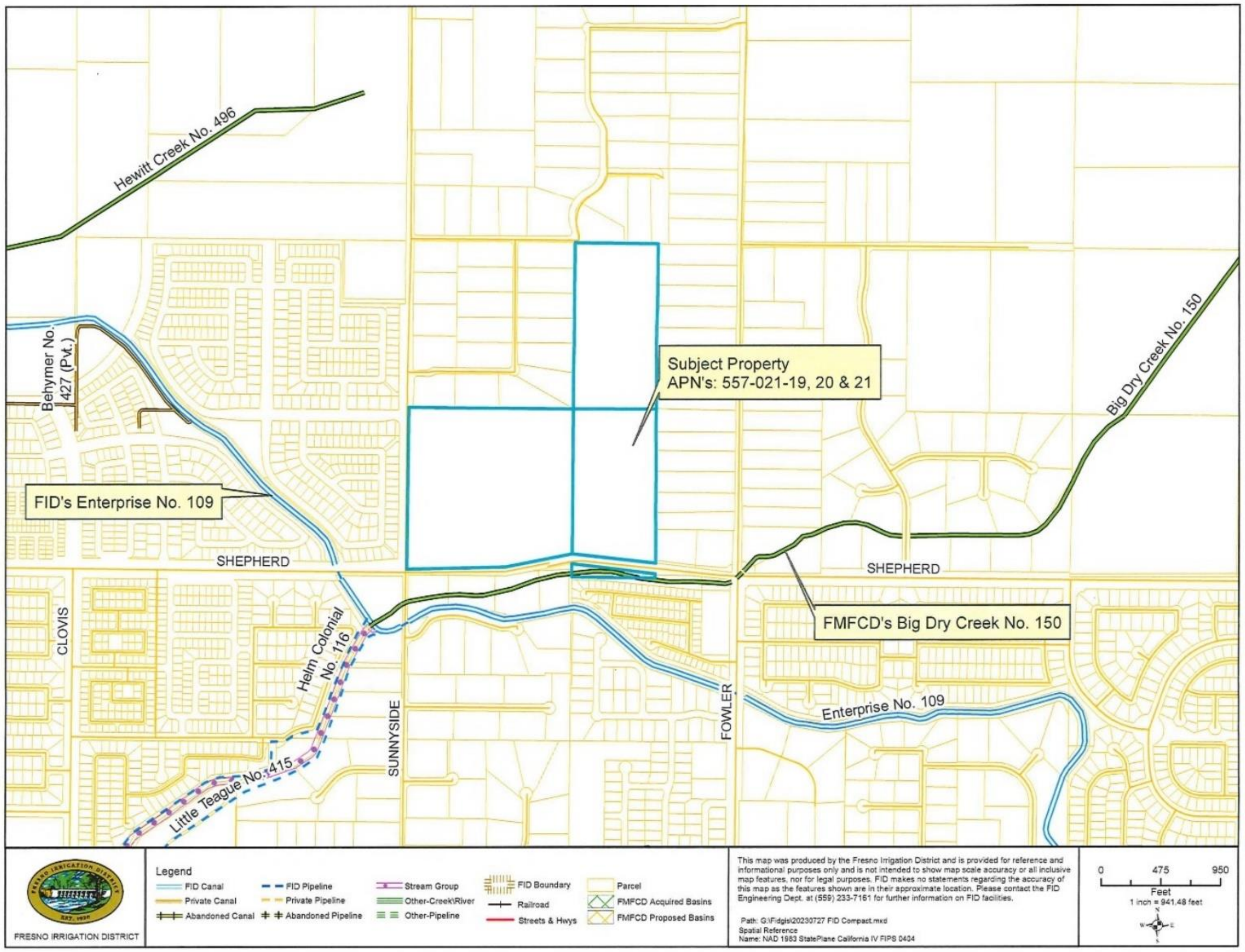
Thank you for submitting this for our review. We appreciate the opportunity to review and comment on the subject documents for the proposed project. If you have any questions, please feel free to contact Ben Negley at (559) 233-7161 extension 7413 or bnegley@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment

\\fidfs01\Eng\Agencies\Clovis\EIR\Shepherd North Project\Shepherd North Project EIR_Final FID Comment.docx


Hewitt Creek No. 496
Behymer No. 427 (Pvt.)
FID's Enterprise No. 109
SHEPHERD
CLOVIS
Helm Colonial No. 116
Little Teague No. 415
SUNNYSIDE
Subject Property
APN's: 557-021-19, 20 & 21
Big Dry Creek No. 150
SHEPHERD
FMFCD's Big Dry Creek No. 150
FOWLER
Enterprise No. 109
FRESNO IRRIGATION DISTRICT
Legend
FID Canal
Private Canal
Abandoned Canal
FID Pipeline
Private Pipeline
Abandoned Pipeline
Stream Group
Other-Creek\River
Other-Pipeline
FID Boundary
Railroad
Streets & Hwys
Parcel
FMFCD Acquired Basins
FMFCD Proposed Basins
This map was produced by the Fresno Irrigation District and is provided for reference and informational purposes only and is not intended to show map scale accuracy or all inclusive map features, nor for legal purposes. FID makes no statements regarding the accuracy of this map as the features shown are in their approximate location. Please contact the FID Engineering Dept. at (559) 233-7161 for further information on FID facilities.
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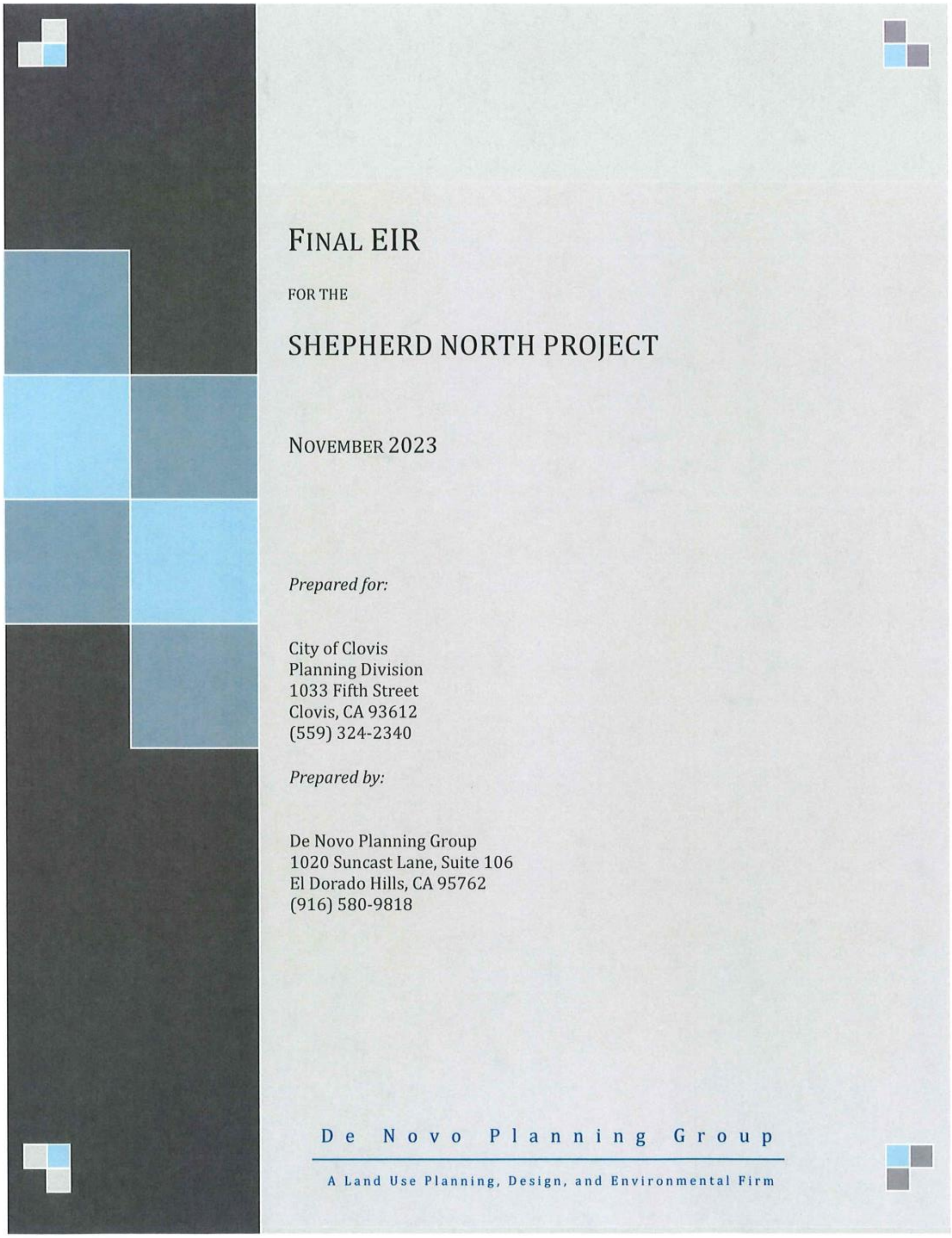
L-10-2



FINAL EIR

FOR THE

SHEPHERD NORTH PROJECT

NOVEMBER 2023

Prepared for:

City of Clovis
Planning Division
1033 Fifth Street
Clovis, CA 93612
(559) 324-2340

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

L-10-2

FINAL EIR

FOR THE

SHEPHERD NORTH PROJECT

NOVEMBER 2023

L-10-2

Prepared for:

City of Clovis
Planning Division
1033 Fifth Street
Clovis, CA 93612
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1020 Suncast Lane, Suite 106
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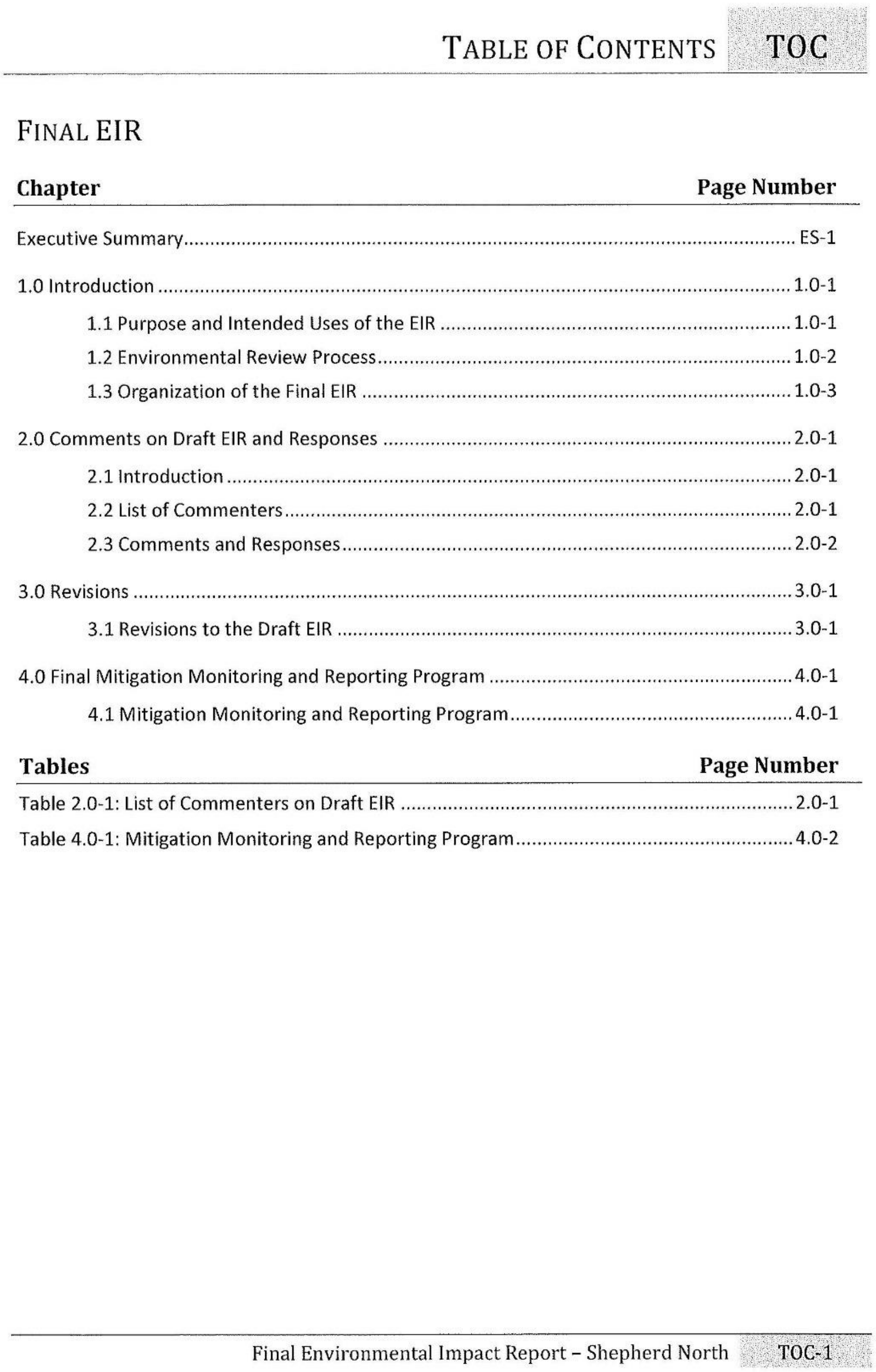

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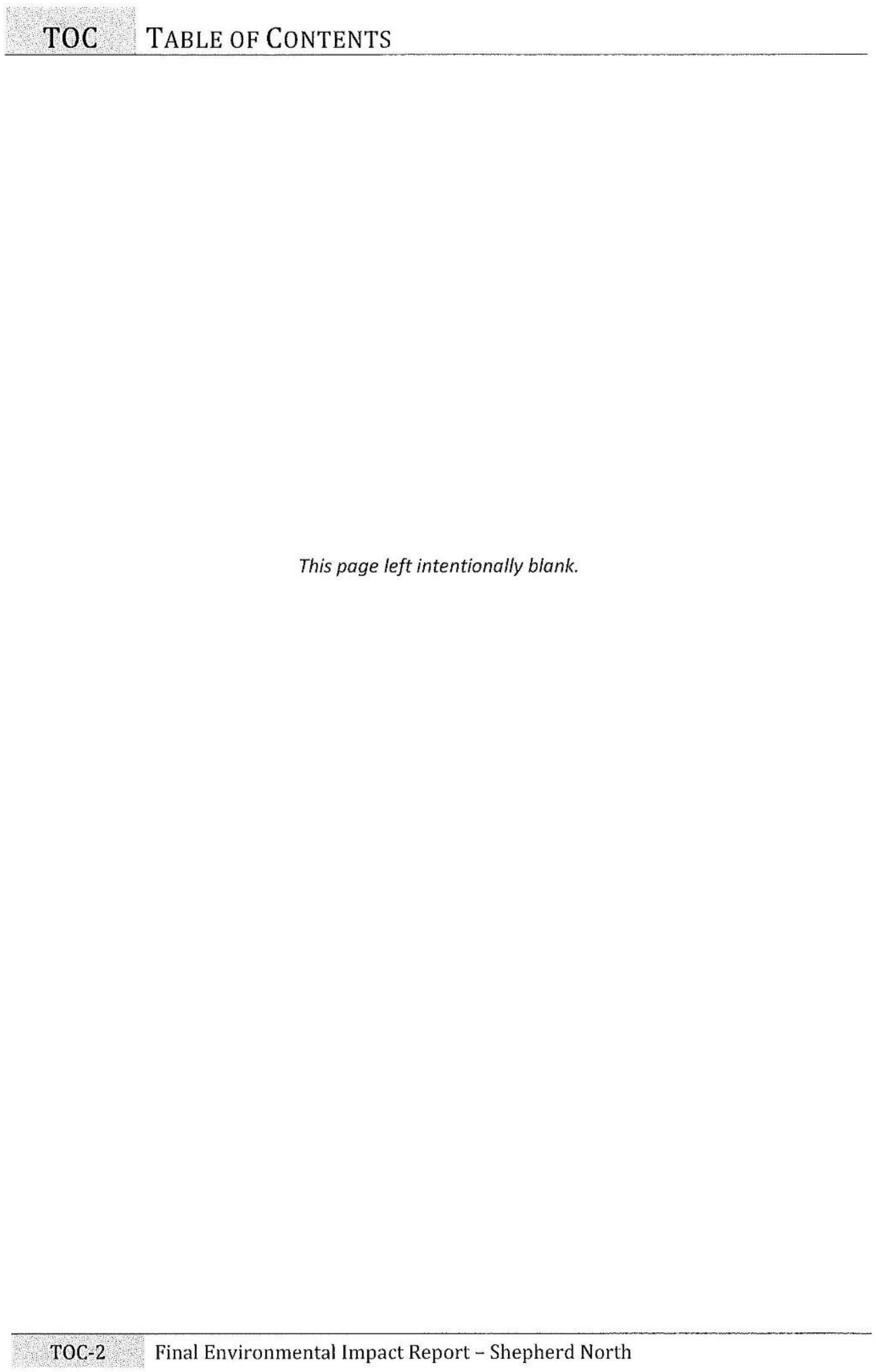
FINAL EIR

L-10-2



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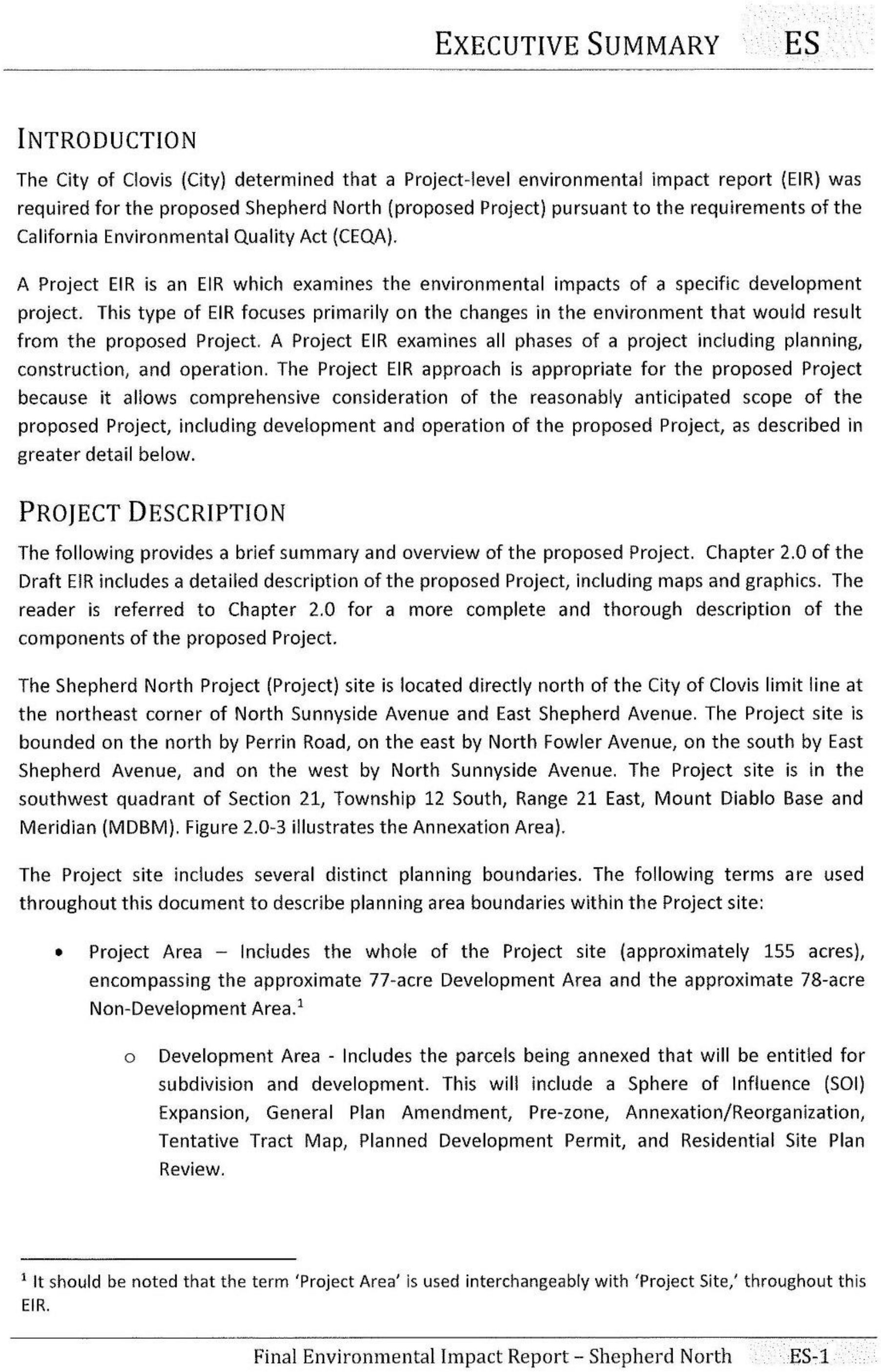
TOC-2 Final Environmental Impact Report – Shepherd North

L-10-2



INTRODUCTION

The City of Clovis (City) determined that a Project-level environmental impact report (EIR) was required for the proposed Shepherd North (proposed Project) pursuant to the requirements of the California Environmental Quality Act (CEQA).

A Project EIR is an EIR which examines the environmental impacts of a specific development project. This type of EIR focuses primarily on the changes in the environment that would result from the proposed Project. A Project EIR examines all phases of a project including planning, construction, and operation. The Project EIR approach is appropriate for the proposed Project because it allows comprehensive consideration of the reasonably anticipated scope of the proposed Project, including development and operation of the proposed Project, as described in greater detail below.

PROJECT DESCRIPTION

L-10-2

The following provides a brief summary and overview of the proposed Project. Chapter 2.0 of the Draft EIR includes a detailed description of the proposed Project, including maps and graphics. The reader is referred to Chapter 2.0 for a more complete and thorough description of the components of the proposed Project.

The Shepherd North Project (Project) site is located directly north of the City of Clovis limit line at the northeast corner of North Sunnyside Avenue and East Shepherd Avenue. The Project site is bounded on the north by Perrin Road, on the east by North Fowler Avenue, on the south by East Shepherd Avenue, and on the west by North Sunnyside Avenue. The Project site is in the southwest quadrant of Section 21, Township 12 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). Figure 2.0-3 illustrates the Annexation Area).

The Project site includes several distinct planning boundaries. The following terms are used throughout this document to describe planning area boundaries within the Project site:

- Project Area – Includes the whole of the Project site (approximately 155 acres), encompassing the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area.[1]
    - Development Area - Includes the parcels being annexed that will be entitled for subdivision and development. This will include a Sphere of Influence (SOI) Expansion, General Plan Amendment, Pre-zone, Annexation/Reorganization, Tentative Tract Map, Planned Development Permit, and Residential Site Plan Review.

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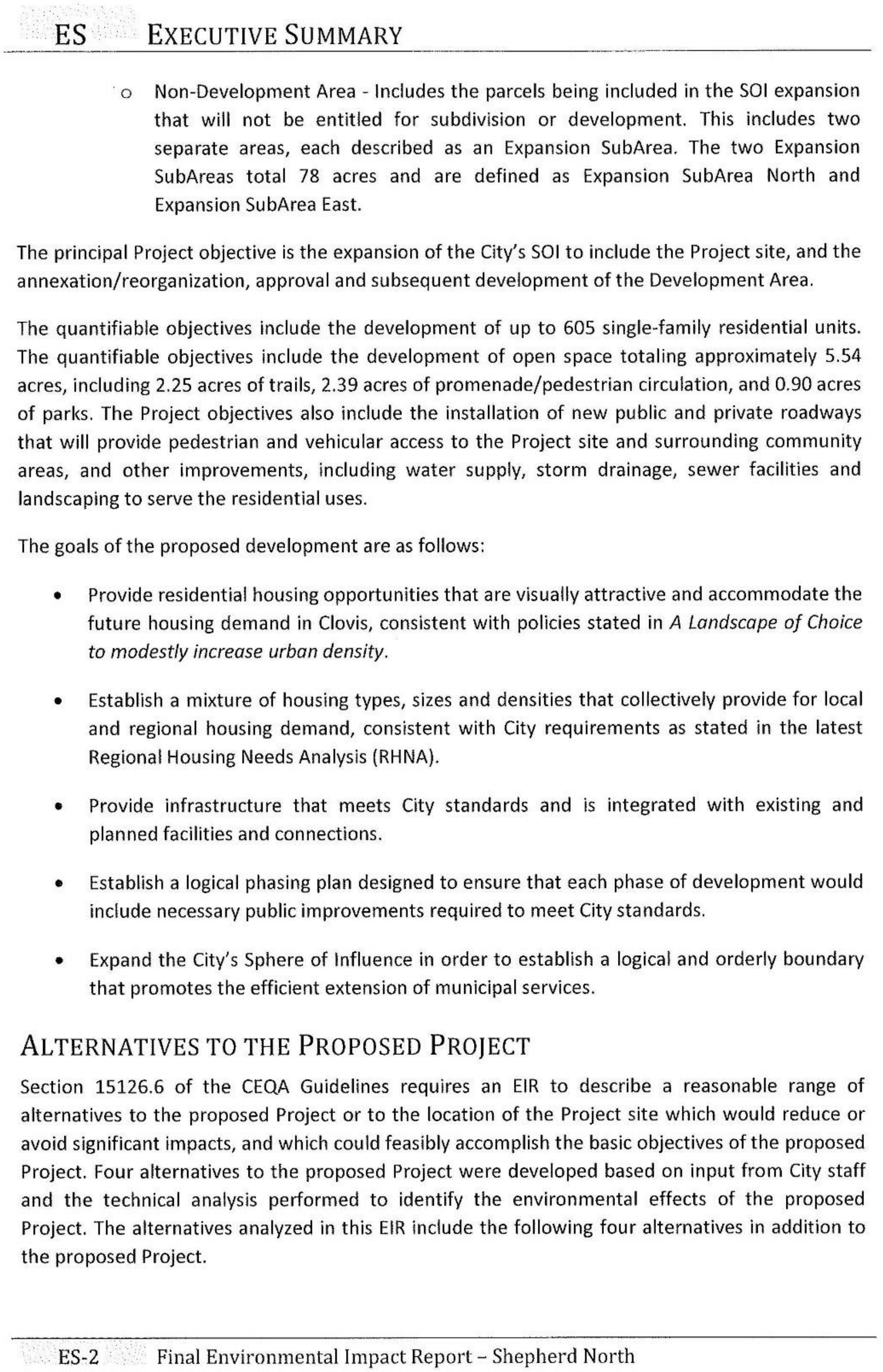
[1] It should be noted that the term 'Project Area' is used interchangeably with 'Project Site,' throughout this EIR.



- Non-Development Area - Includes the parcels being included in the SOI expansion that will not be entitled for subdivision or development. This includes two separate areas, each described as an Expansion SubArea. The two Expansion SubAreas total 78 acres and are defined as Expansion SubArea North and Expansion SubArea East.

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.

The quantifiable objectives include the development of up to 605 single-family residential units. The quantifiable objectives include the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping to serve the residential uses.

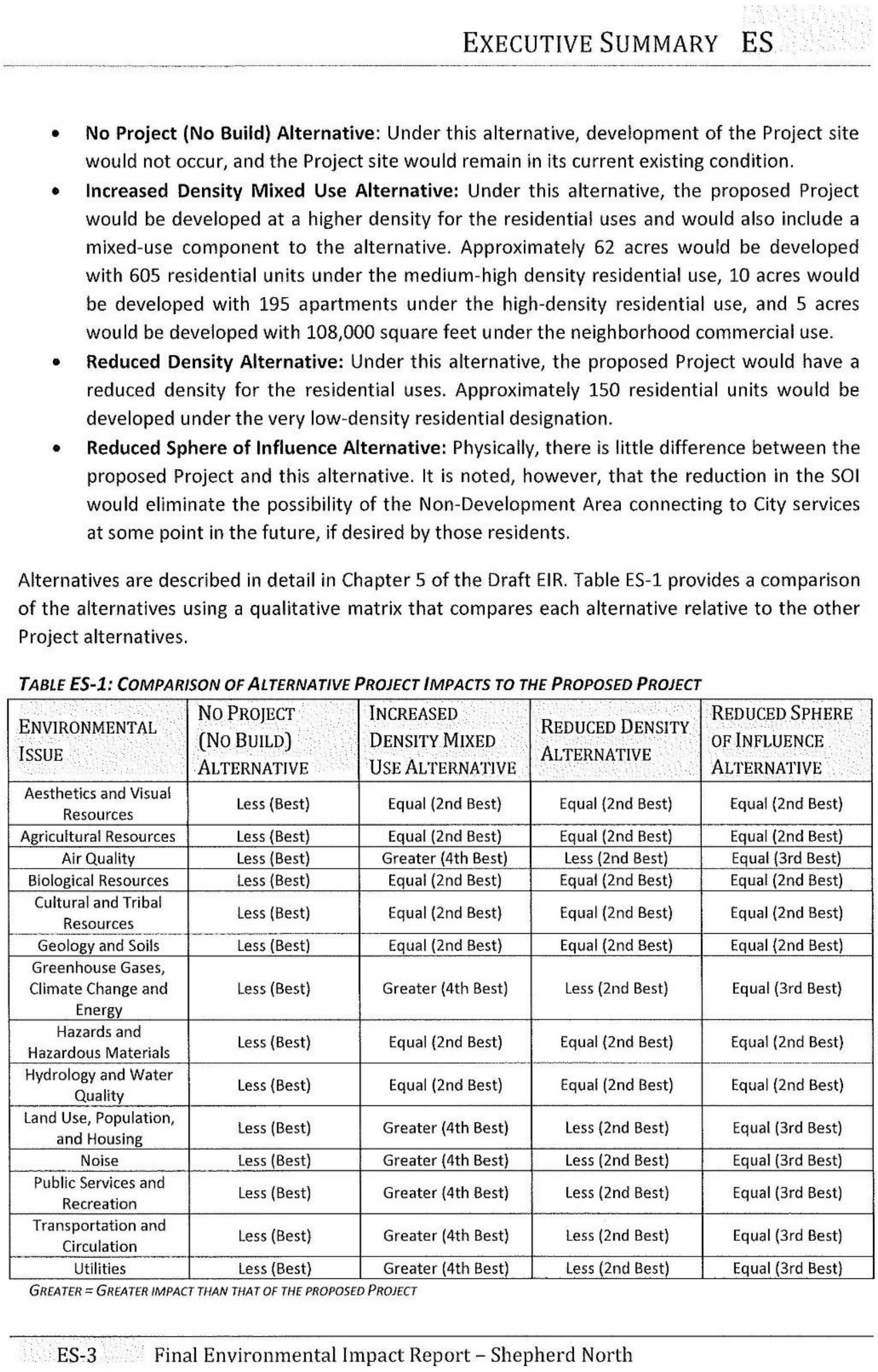
L-10-2

The goals of the proposed development are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice to modestly increase urban density*.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

ALTERNATIVES TO THE PROPOSED PROJECT

Section 15126.6 of the CEQA Guidelines requires an EIR to describe a reasonable range of alternatives to the proposed Project or to the location of the Project site which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed Project. Four alternatives to the proposed Project were developed based on input from City staff and the technical analysis performed to identify the environmental effects of the proposed Project. The alternatives analyzed in this EIR include the following four alternatives in addition to the proposed Project.



- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Increased Density Mixed Use Alternative:** Under this alternative, the proposed Project would be developed at a higher density for the residential uses and would also include a mixed-use component to the alternative. Approximately 62 acres would be developed with 605 residential units under the medium-high density residential use, 10 acres would be developed with 195 apartments under the high-density residential use, and 5 acres would be developed with 108,000 square feet under the neighborhood commercial use.
- **Reduced Density Alternative:** Under this alternative, the proposed Project would have a reduced density for the residential uses. Approximately 150 residential units would be developed under the very low-density residential designation.
- **Reduced Sphere of Influence Alternative:** Physically, there is little difference between the proposed Project and this alternative. It is noted, however, that the reduction in the SOI would eliminate the possibility of the Non-Development Area connecting to City services at some point in the future, if desired by those residents.

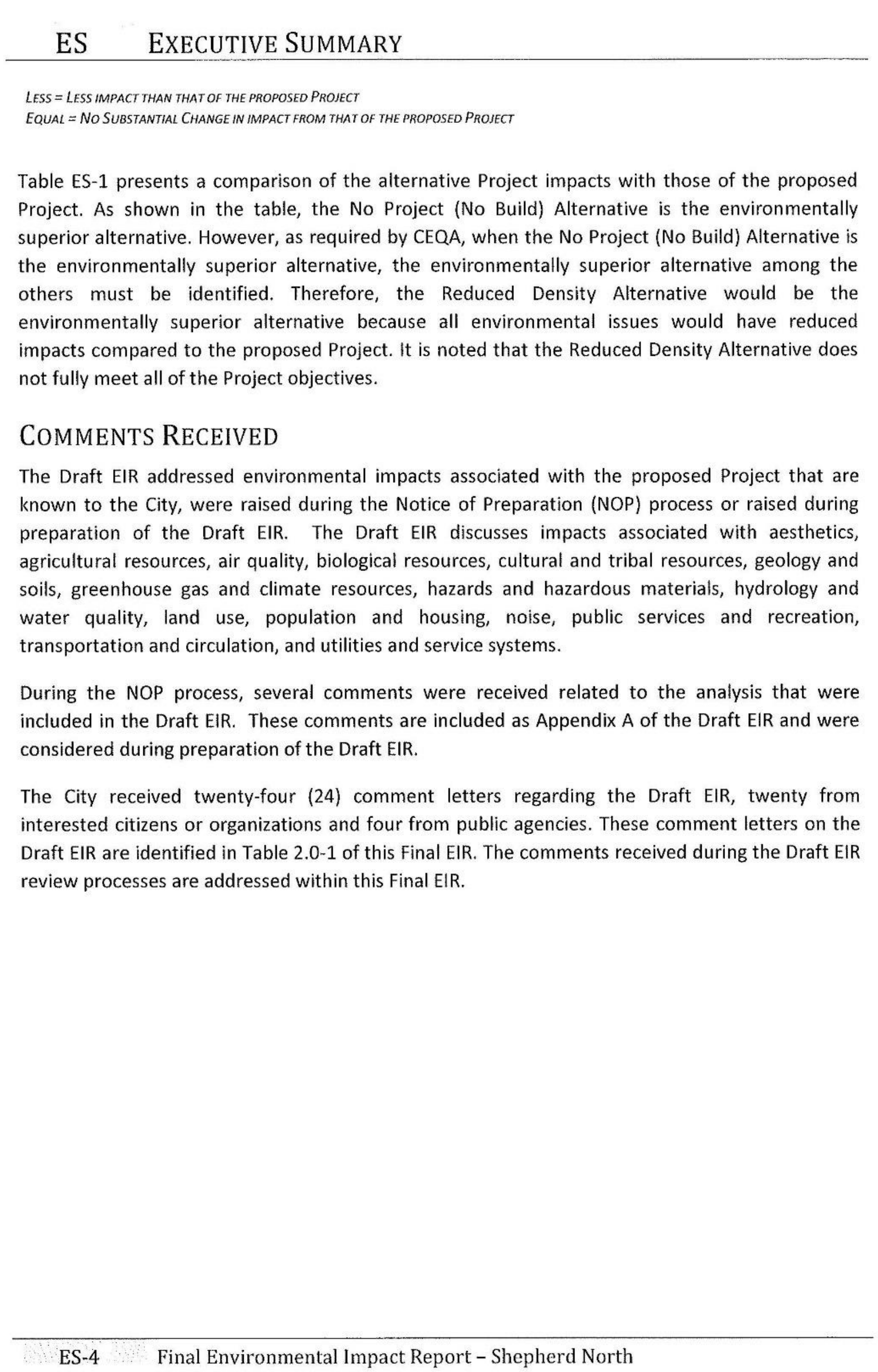
L-10-2

Alternatives are described in detail in Chapter 5 of the Draft EIR. Table ES-1 provides a comparison of the alternatives using a qualitative matrix that compares each alternative relative to the other Project alternatives.

TABLE ES-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	NO PROJECT (NO BUILD) ALTERNATIVE	INCREASED DENSITY MIXED USE ALTERNATIVE	REDUCED DENSITY ALTERNATIVE	REDUCED SPHERE OF INFLUENCE ALTERNATIVE
Aesthetics and Visual Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Agricultural Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Air Quality	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Cultural and Tribal Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Geology and Soils	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Hydrology and Water Quality	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Land Use, Population, and Housing	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Noise	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Public Services and Recreation	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Transportation and Circulation	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT



LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

Table ES-1 presents a comparison of the alternative Project impacts with those of the proposed Project. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Density Alternative would be the environmentally superior alternative because all environmental issues would have reduced impacts compared to the proposed Project. It is noted that the Reduced Density Alternative does not fully meet all of the Project objectives.

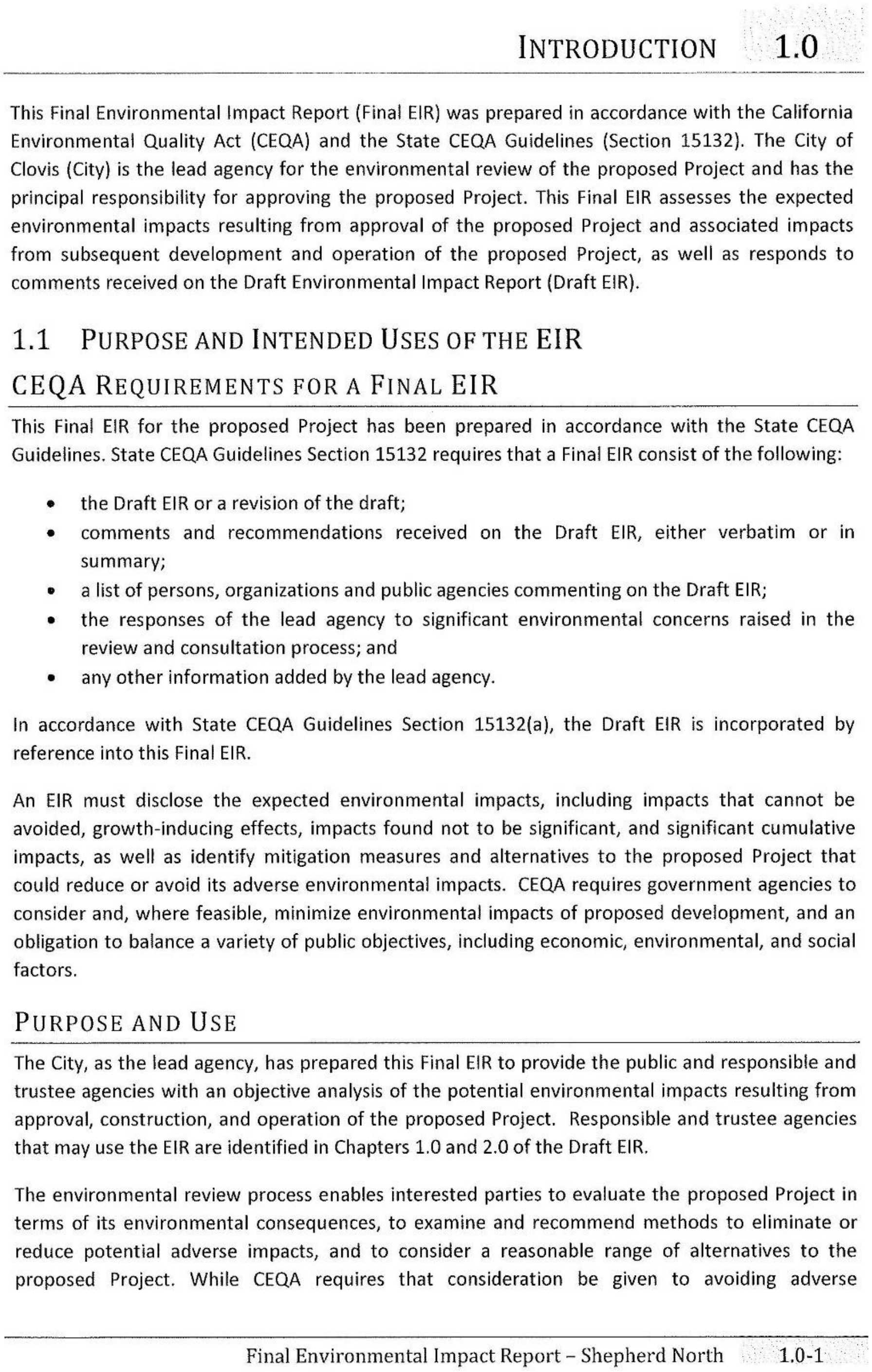
COMMENTS RECEIVED

The Draft EIR addressed environmental impacts associated with the proposed Project that are known to the City, were raised during the Notice of Preparation (NOP) process or raised during preparation of the Draft EIR. The Draft EIR discusses impacts associated with aesthetics, agricultural resources, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gas and climate resources, hazards and hazardous materials, hydrology and water quality, land use, population and housing, noise, public services and recreation, transportation and circulation, and utilities and service systems.

L-10-2

During the NOP process, several comments were received related to the analysis that were included in the Draft EIR. These comments are included as Appendix A of the Draft EIR and were considered during preparation of the Draft EIR.

The City received twenty-four (24) comment letters regarding the Draft EIR, twenty from interested citizens or organizations and four from public agencies. These comment letters on the Draft EIR are identified in Table 2.0-1 of this Final EIR. The comments received during the Draft EIR review processes are addressed within this Final EIR.



INTRODUCTION 1.0

This Final Environmental Impact Report (Final EIR) was prepared in accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines (Section 15132). The City of Clovis (City) is the lead agency for the environmental review of the proposed Project and has the principal responsibility for approving the proposed Project. This Final EIR assesses the expected environmental impacts resulting from approval of the proposed Project and associated impacts from subsequent development and operation of the proposed Project, as well as responds to comments received on the Draft Environmental Impact Report (Draft EIR).

1.1 PURPOSE AND INTENDED USES OF THE EIR

CEQA REQUIREMENTS FOR A FINAL EIR

This Final EIR for the proposed Project has been prepared in accordance with the State CEQA Guidelines. State CEQA Guidelines Section 15132 requires that a Final EIR consist of the following:

- the Draft EIR or a revision of the draft;
- comments and recommendations received on the Draft EIR, either verbatim or in summary;
- a list of persons, organizations and public agencies commenting on the Draft EIR;
- the responses of the lead agency to significant environmental concerns raised in the review and consultation process; and
- any other information added by the lead agency.

L-10-2

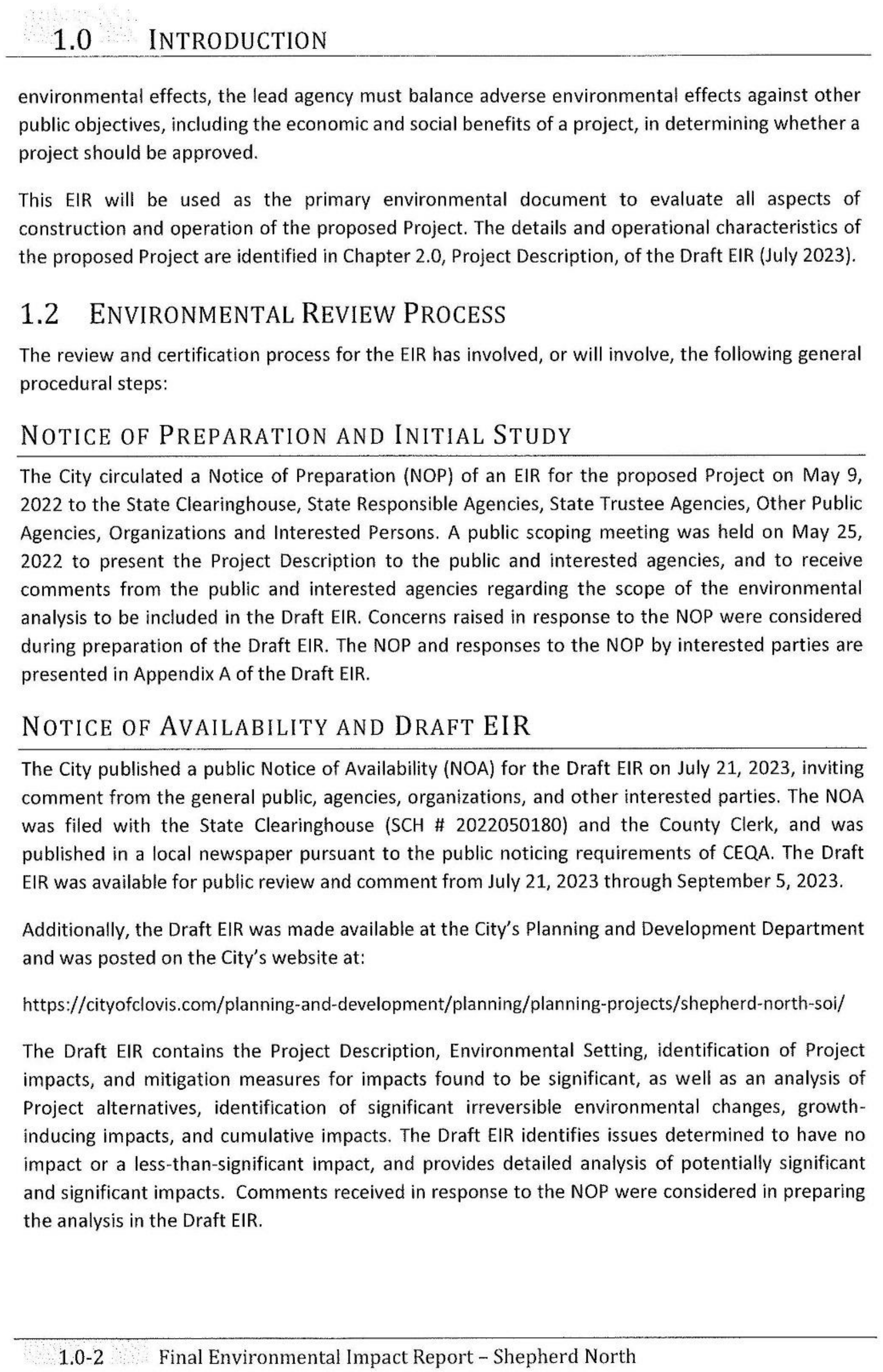
In accordance with State CEQA Guidelines Section 15132(a), the Draft EIR is incorporated by reference into this Final EIR.

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed Project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

PURPOSE AND USE

The City, as the lead agency, has prepared this Final EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from approval, construction, and operation of the proposed Project. Responsible and trustee agencies that may use the EIR are identified in Chapters 1.0 and 2.0 of the Draft EIR.

The environmental review process enables interested parties to evaluate the proposed Project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the proposed Project. While CEQA requires that consideration be given to avoiding adverse



environmental effects, the lead agency must balance adverse environmental effects against other public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used as the primary environmental document to evaluate all aspects of construction and operation of the proposed Project. The details and operational characteristics of the proposed Project are identified in Chapter 2.0, Project Description, of the Draft EIR (July 2023).

1.2 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION AND INITIAL STUDY

The City circulated a Notice of Preparation (NOP) of an EIR for the proposed Project on May 9, 2022 to the State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, Organizations and Interested Persons. A public scoping meeting was held on May 25, 2022 to present the Project Description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and responses to the NOP by interested parties are presented in Appendix A of the Draft EIR.

L-10-2

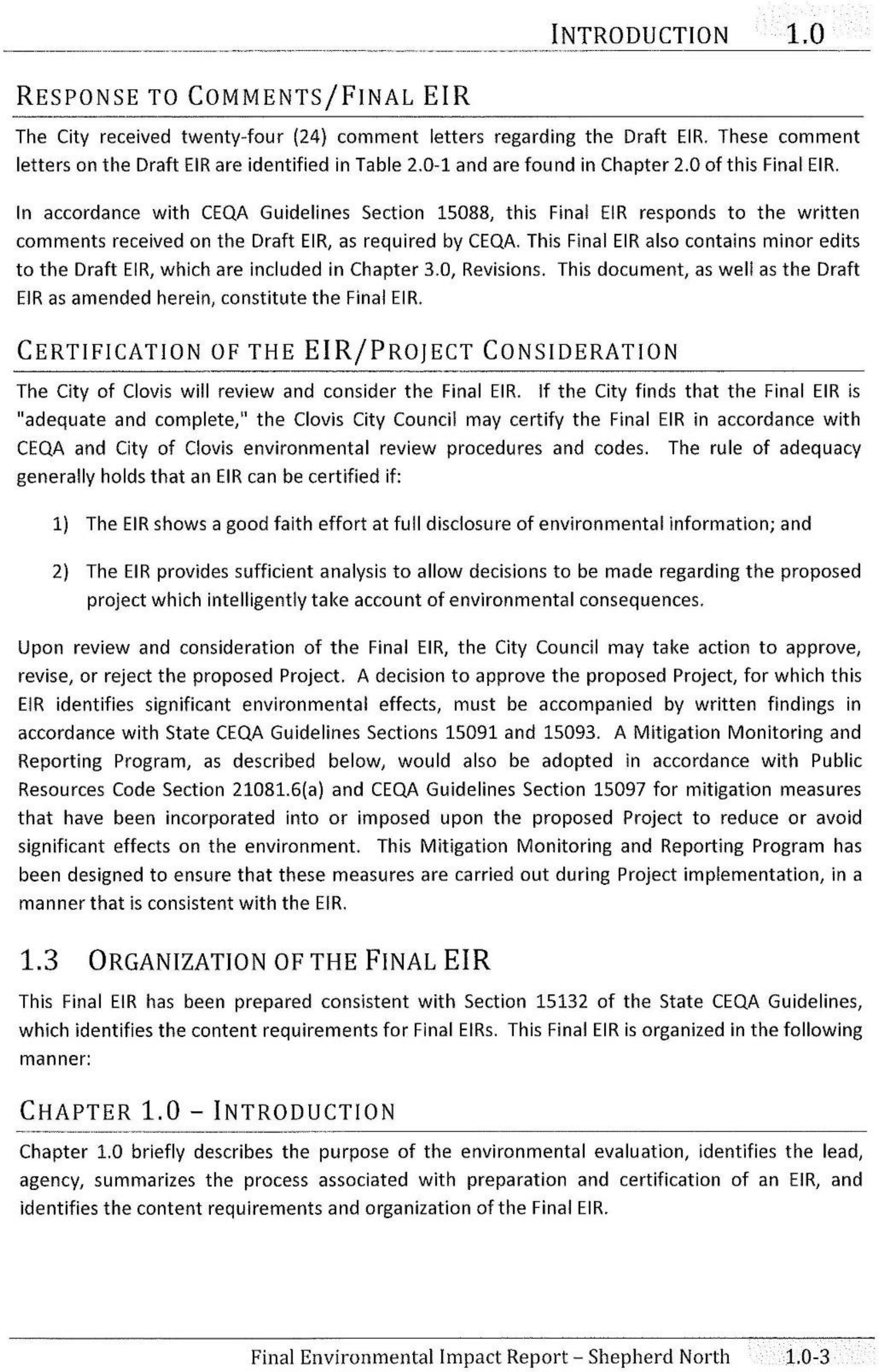
NOTICE OF AVAILABILITY AND DRAFT EIR

The City published a public Notice of Availability (NOA) for the Draft EIR on July 21, 2023, inviting comment from the general public, agencies, organizations, and other interested parties. The NOA was filed with the State Clearinghouse (SCH # 2022050180) and the County Clerk, and was published in a local newspaper pursuant to the public noticing requirements of CEQA. The Draft EIR was available for public review and comment from July 21, 2023 through September 5, 2023.

Additionally, the Draft EIR was made available at the City's Planning and Development Department and was posted on the City's website at:

https://cityofclovis.com/planning-and-development/planning/planning-projects/shepherd-north-soi/

The Draft EIR contains the Project Description, Environmental Setting, identification of Project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The Draft EIR identifies issues determined to have no impact or a less-than-significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in the Draft EIR.



RESPONSE TO COMMENTS/FINAL EIR

The City received twenty-four (24) comment letters regarding the Draft EIR. These comment letters on the Draft EIR are identified in Table 2.0-1 and are found in Chapter 2.0 of this Final EIR.

In accordance with CEQA Guidelines Section 15088, this Final EIR responds to the written comments received on the Draft EIR, as required by CEQA. This Final EIR also contains minor edits to the Draft EIR, which are included in Chapter 3.0, Revisions. This document, as well as the Draft EIR as amended herein, constitute the Final EIR.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City of Clovis will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete," the Clovis City Council may certify the Final EIR in accordance with CEQA and City of Clovis environmental review procedures and codes. The rule of adequacy generally holds that an EIR can be certified if:

1) The EIR shows a good faith effort at full disclosure of environmental information; and

2) The EIR provides sufficient analysis to allow decisions to be made regarding the proposed project which intelligently take account of environmental consequences.

L-10-2

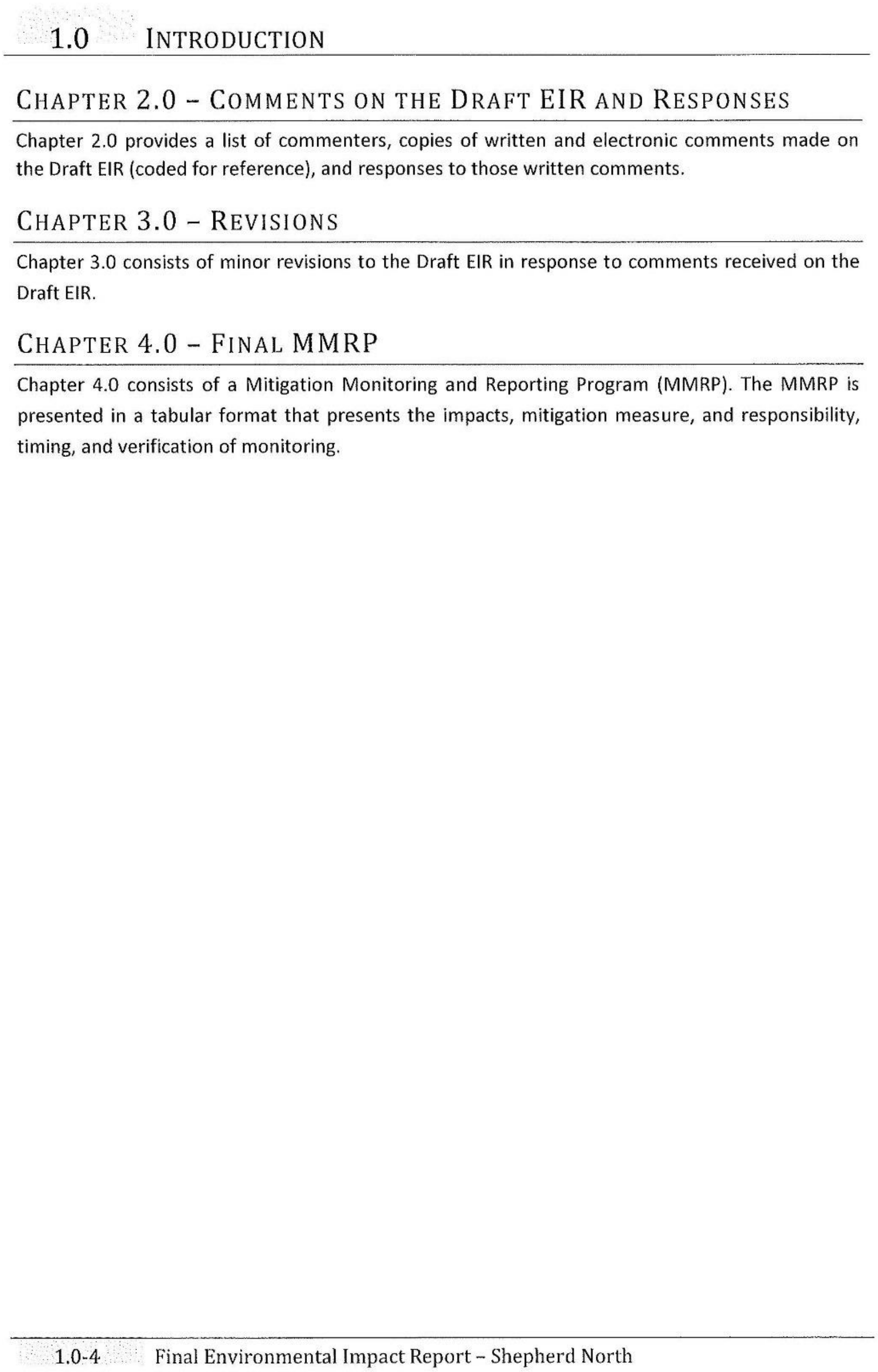
Upon review and consideration of the Final EIR, the City Council may take action to approve, revise, or reject the proposed Project. A decision to approve the proposed Project, for which this EIR identifies significant environmental effects, must be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring and Reporting Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the proposed Project to reduce or avoid significant effects on the environment. This Mitigation Monitoring and Reporting Program has been designed to ensure that these measures are carried out during Project implementation, in a manner that is consistent with the EIR.

1.3 ORGANIZATION OF THE FINAL EIR

This Final EIR has been prepared consistent with Section 15132 of the State CEQA Guidelines, which identifies the content requirements for Final EIRs. This Final EIR is organized in the following manner:

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the purpose of the environmental evaluation, identifies the lead, agency, summarizes the process associated with preparation and certification of an EIR, and identifies the content requirements and organization of the Final EIR.



1.0 INTRODUCTION

CHAPTER 2.0 – COMMENTS ON THE DRAFT EIR AND RESPONSES

Chapter 2.0 provides a list of commenters, copies of written and electronic comments made on the Draft EIR (coded for reference), and responses to those written comments.

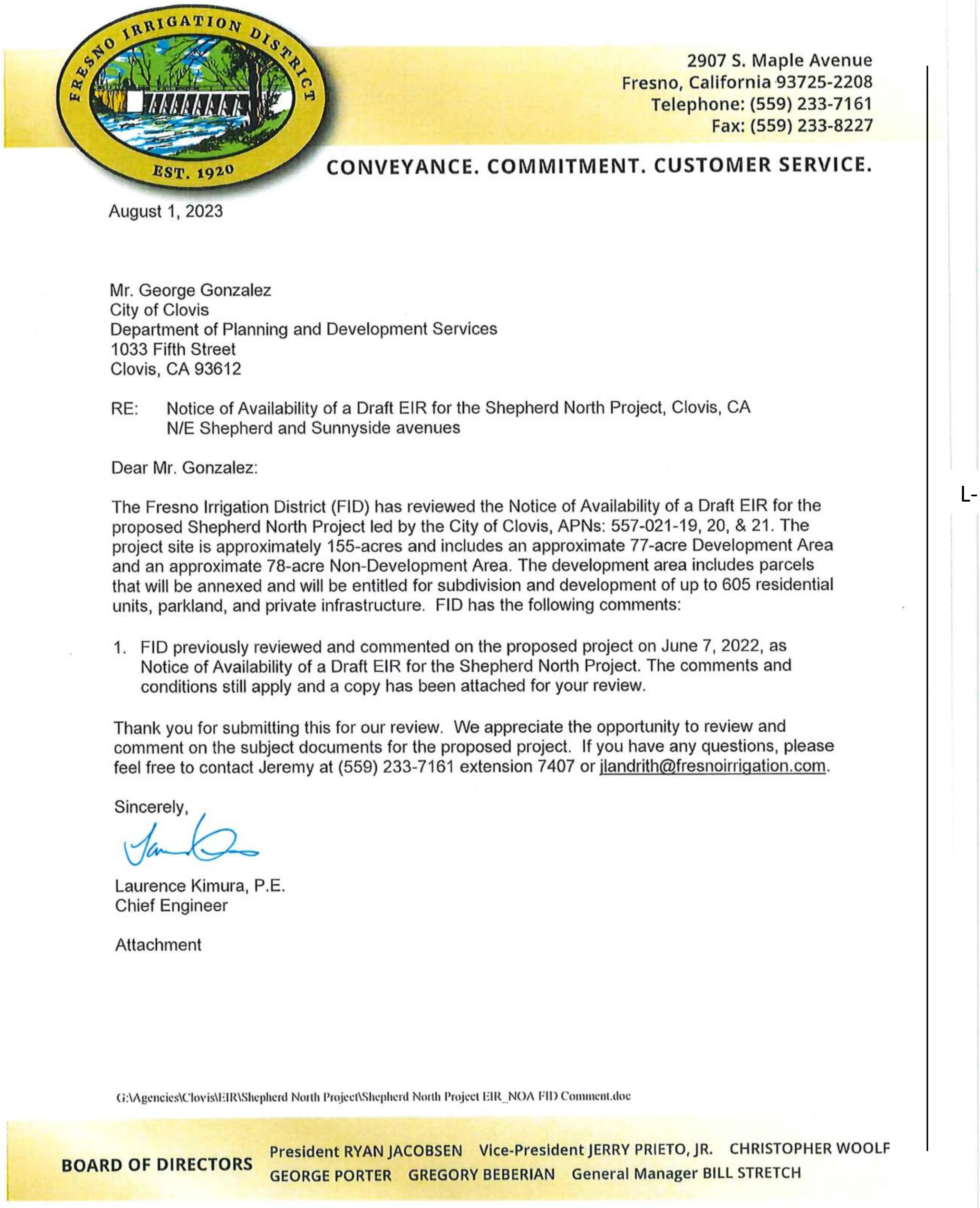
CHAPTER 3.0 – REVISIONS

Chapter 3.0 consists of minor revisions to the Draft EIR in response to comments received on the Draft EIR.

CHAPTER 4.0 – FINAL MMRP

Chapter 4.0 consists of a Mitigation Monitoring and Reporting Program (MMRP). The MMRP is presented in a tabular format that presents the impacts, mitigation measure, and responsibility, timing, and verification of monitoring.

L-10-2



FRESNO IRRIGATION DISTRICT
EST. 1920

2907 S. Maple Avenue
Fresno, California 93725-2208
Telephone: (559) 233-7161
Fax: (559) 233-8227

CONVEYANCE. COMMITMENT. CUSTOMER SERVICE.

August 1, 2023

Mr. George Gonzalez
City of Clovis
Department of Planning and Development Services
1033 Fifth Street
Clovis, CA 93612

RE: Notice of Availability of a Draft EIR for the Shepherd North Project, Clovis, CA
N/E Shepherd and Sunnyside avenues

Dear Mr. Gonzalez:

L-10-3

The Fresno Irrigation District (FID) has reviewed the Notice of Availability of a Draft EIR for the proposed Shepherd North Project led by the City of Clovis, APNs: 557-021-19, 20, & 21. The project site is approximately 155-acres and includes an approximate 77-acre Development Area and an approximate 78-acre Non-Development Area. The development area includes parcels that will be annexed and will be entitled for subdivision and development of up to 605 residential units, parkland, and private infrastructure. FID has the following comments:

1. FID previously reviewed and commented on the proposed project on June 7, 2022, as Notice of Availability of a Draft EIR for the Shepherd North Project. The comments and conditions still apply and a copy has been attached for your review.

Thank you for submitting this for our review. We appreciate the opportunity to review and comment on the subject documents for the proposed project. If you have any questions, please feel free to contact Jeremy at (559) 233-7161 extension 7407 or jlandrith@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment

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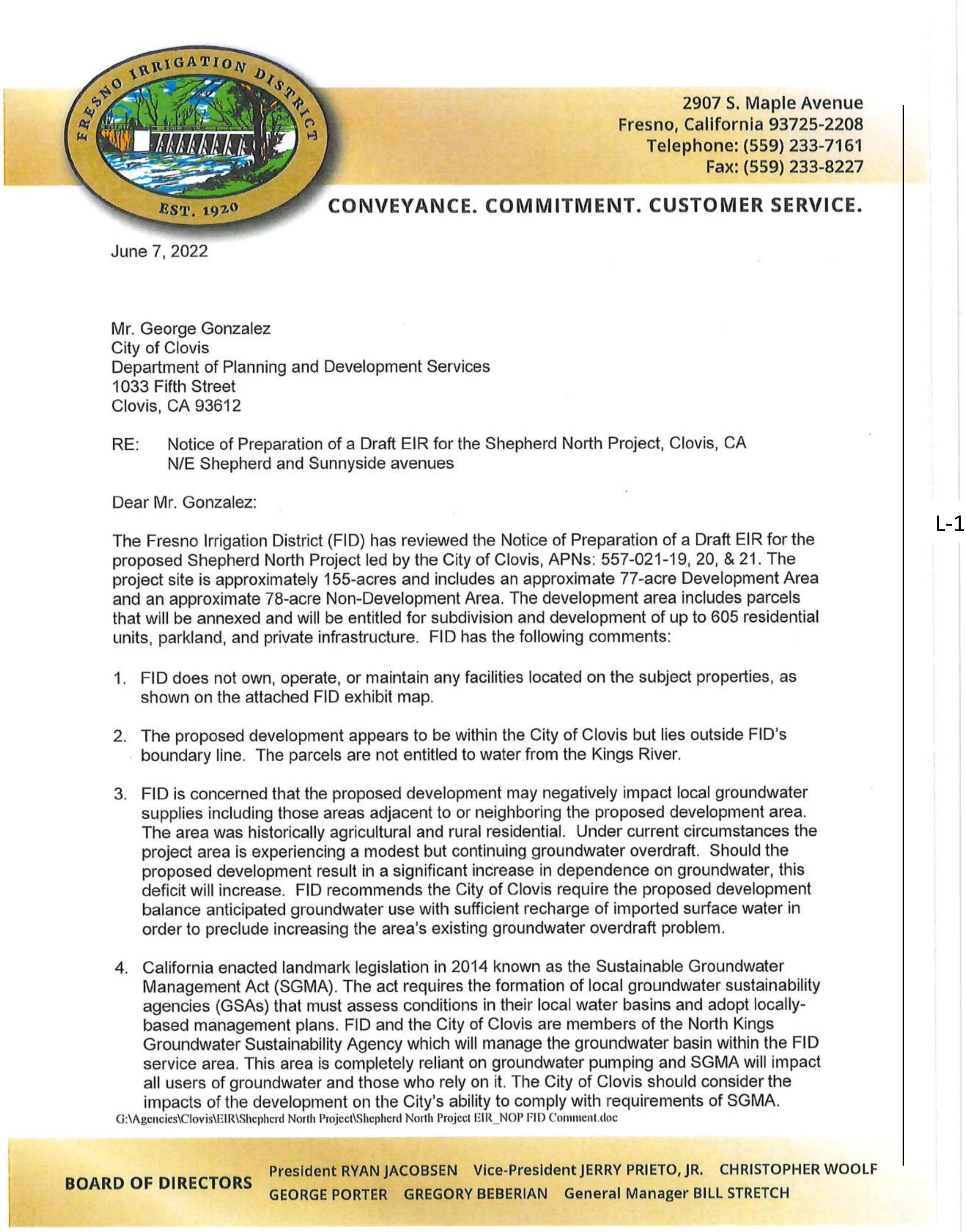

2907 S. Maple Avenue
Fresno, California 93725-2208
Telephone: (559) 233-7161
Fax: (559) 233-8227

CONVEYANCE. COMMITMENT. CUSTOMER SERVICE.

June 7, 2022

Mr. George Gonzalez
City of Clovis
Department of Planning and Development Services
1033 Fifth Street
Clovis, CA 93612

RE: Notice of Preparation of a Draft EIR for the Shepherd North Project, Clovis, CA
N/E Shepherd and Sunnyside avenues

Dear Mr. Gonzalez:

The Fresno Irrigation District (FID) has reviewed the Notice of Preparation of a Draft EIR for the proposed Shepherd North Project led by the City of Clovis, APNs: 557-021-19, 20, & 21. The project site is approximately 155-acres and includes an approximate 77-acre Development Area and an approximate 78-acre Non-Development Area. The development area includes parcels that will be annexed and will be entitled for subdivision and development of up to 605 residential units, parkland, and private infrastructure. FID has the following comments:

L-10-4

1. FID does not own, operate, or maintain any facilities located on the subject properties, as shown on the attached FID exhibit map.
2. The proposed development appears to be within the City of Clovis but lies outside FID's boundary line. The parcels are not entitled to water from the Kings River.
3. FID is concerned that the proposed development may negatively impact local groundwater supplies including those areas adjacent to or neighboring the proposed development area. The area was historically agricultural and rural residential. Under current circumstances the project area is experiencing a modest but continuing groundwater overdraft. Should the proposed development result in a significant increase in dependence on groundwater, this deficit will increase. FID recommends the City of Clovis require the proposed development balance anticipated groundwater use with sufficient recharge of imported surface water in order to preclude increasing the area's existing groundwater overdraft problem.
4. California enacted landmark legislation in 2014 known as the Sustainable Groundwater Management Act (SGMA). The act requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally-based management plans. FID and the City of Clovis are members of the North Kings Groundwater Sustainability Agency which will manage the groundwater basin within the FID service area. This area is completely reliant on groundwater pumping and SGMA will impact all users of groundwater and those who rely on it. The City of Clovis should consider the impacts of the development on the City's ability to comply with requirements of SGMA.

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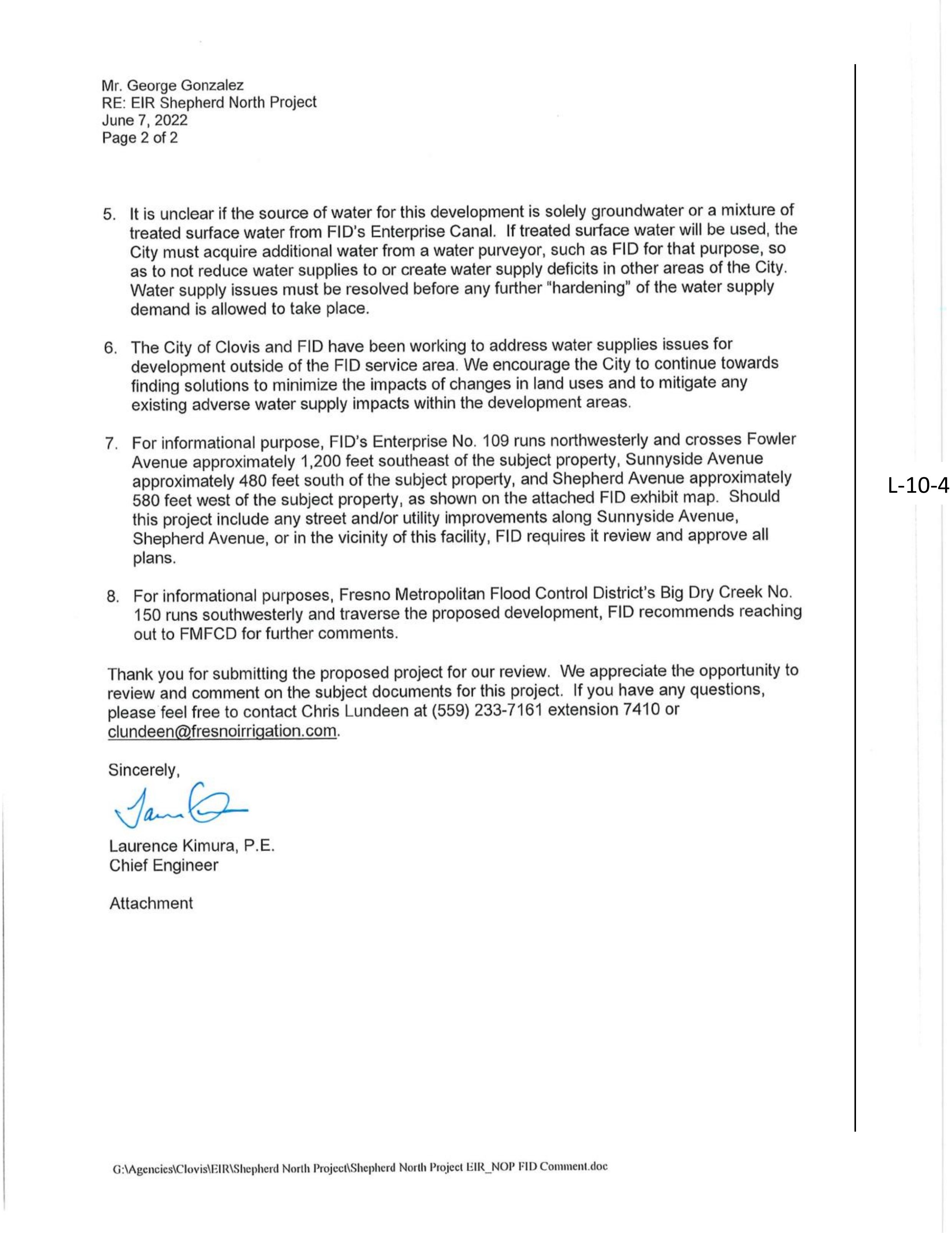

Mr. George Gonzalez
RE: EIR Shepherd North Project
June 7, 2022
Page 2 of 2

5. It is unclear if the source of water for this development is solely groundwater or a mixture of treated surface water from FID's Enterprise Canal. If treated surface water will be used, the City must acquire additional water from a water purveyor, such as FID for that purpose, so as to not reduce water supplies to or create water supply deficits in other areas of the City. Water supply issues must be resolved before any further "hardening" of the water supply demand is allowed to take place.
6. The City of Clovis and FID have been working to address water supplies issues for development outside of the FID service area. We encourage the City to continue towards finding solutions to minimize the impacts of changes in land uses and to mitigate any existing adverse water supply impacts within the development areas.
7. For informational purpose, FID's Enterprise No. 109 runs northwesterly and crosses Fowler Avenue approximately 1,200 feet southeast of the subject property, Sunnyside Avenue approximately 480 feet south of the subject property, and Shepherd Avenue approximately 580 feet west of the subject property, as shown on the attached FID exhibit map. Should this project include any street and/or utility improvements along Sunnyside Avenue, Shepherd Avenue, or in the vicinity of this facility, FID requires it review and approve all plans.
8. For informational purposes, Fresno Metropolitan Flood Control District's Big Dry Creek No. 150 runs southwesterly and traverse the proposed development, FID recommends reaching out to FMFCD for further comments.

L-10-4

Thank you for submitting the proposed project for our review. We appreciate the opportunity to review and comment on the subject documents for this project. If you have any questions, please feel free to contact Chris Lundeen at (559) 233-7161 extension 7410 or clundeen@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment

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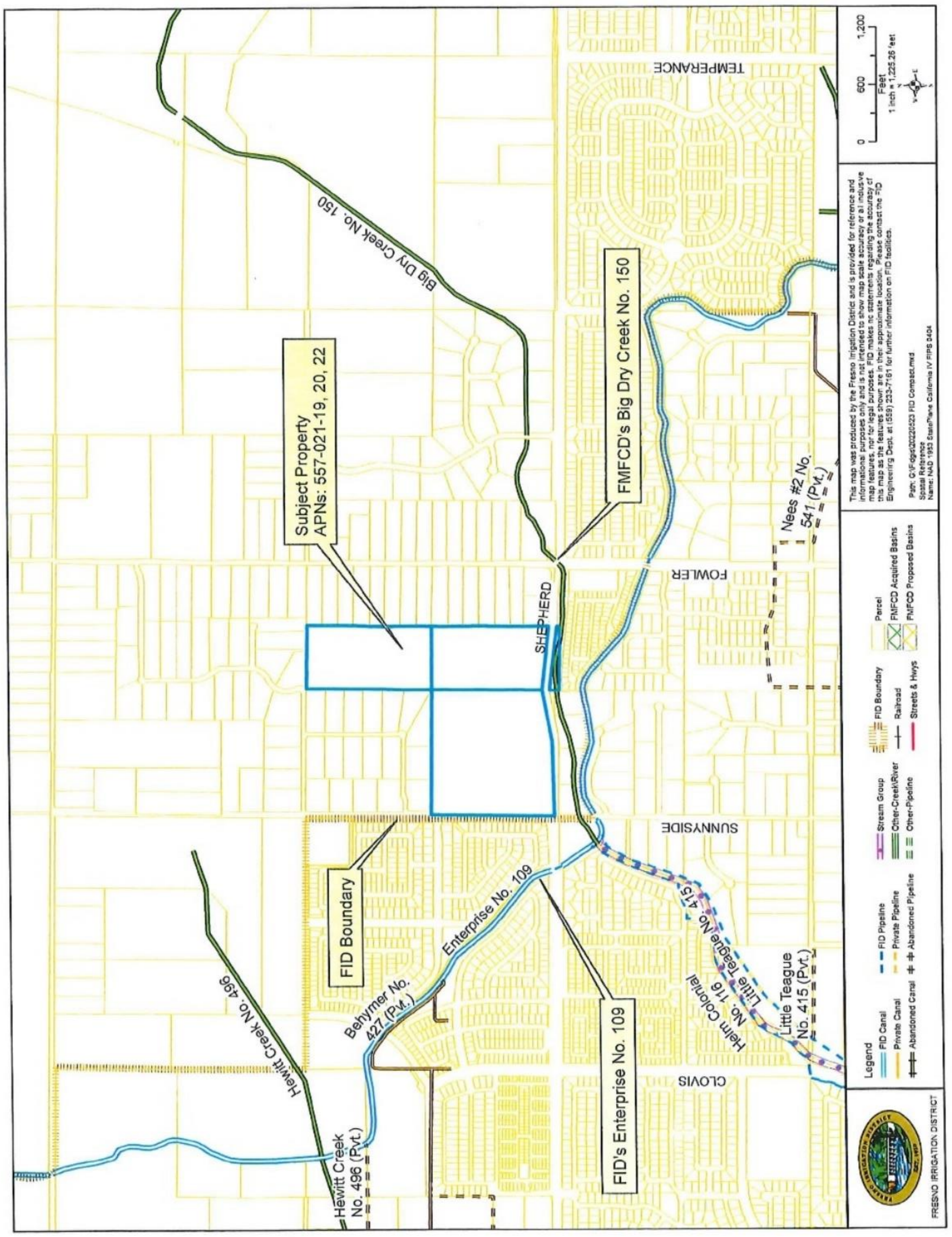

Big Dry Creek No. 150
TEMPERANCE
Subject Property
APNs: 557-021-19, 20, 22
FMFCD's Big Dry Creek No. 150
SHEPHERD
FOWLER
Nees #2 No. 541 (Pvt.)
SUNNYSIDE
FID Boundary
Enterprise No. 109
FID's Enterprise No. 109
Helm Colonial No. 116
Little Teague No. 415
Little Teague No. 415 (Pvt.)
Behymer No. 427 (Pvt.)
Hewitt Creek No. 496
Hewitt Creek No. 496 (Pvt.)
CLOVIS
FRESNO IRRIGATION DISTRICT
Legend
FID Canal
Private Canal
Abandoned Canal
FID Pipeline
Private Pipeline
Abandoned Pipeline
Stream Group
Other-Creek\River
Other-Pipeline
FID Boundary
Railroad
Streets & Hwys
Parcel
FMFCD Acquired Basins
FMFCD Proposed Basins
This map was produced by the Fresno Irrigation District and is provided for reference and informational purposes only and is not intended to show map scale accuracy or all inclusive map features, nor for legal purposes. FID makes no statements regarding the accuracy of this map as the features shown are in their approximate location. Please contact the FID Engineering Dept. at (559) 233-7161 for further information on FID facilities.
Path: G:\Fidgis\20220423 FID Compact.mxd
Spatial Reference
Name: NAD 1983 StatePlane California IV FIPS 0404
0
600
1,200
Feet
1 inch = 1,225.26 feet

L-10-4

Response to Letter L-10: Laurence Kimura, P.E., Fresno Irrigation District

Response L-10-1: This comment is an introductory email, which included a series of attachments including the commenter's comments regarding the Final EIR and Findings of Facts & Statement of Overriding Considerations. The commenter notes that they previously reviewed and commented on the proposed project on August 1, 2023, and June 7, 2022 and that those comments still apply.

- This comment is noted. There are not environmental concerns identified in the comment and no further response is warranted.

Response L-10-2: This comment is a letter summarizing their understanding of the project and indicating that their agency previously reviewed and commented on the proposed project on August 1, 2023, and June 7, 2022 and that those comments still apply.

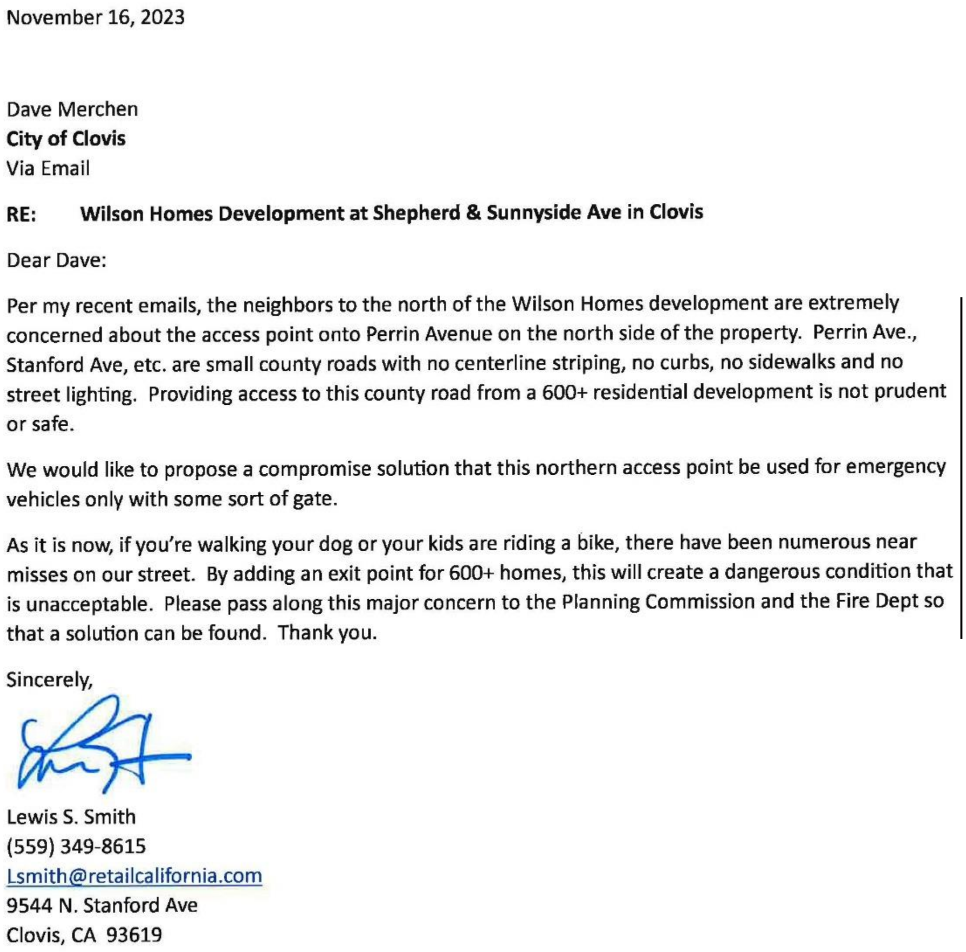
- This comment is noted. There are not environmental concerns identified in the comment and no further response is warranted. It is noted that the August 1, 2023 letter from the commenter is formally addressed in the Final EIR under Response A.

Response L-10-3: This comment is a letter is a previously submitted comment letter from August 1, 2023.

- The August 1, 2023 letter from the commenter is formally addressed in the Final EIR under Response A.

Response L-10-4: This comment is a letter of a previously submitted comment letter from June 7, 2022.

- The June 7, 2022 letter from the commenter is included in the Appendix to the Draft EIR, and the comments are addressed in the text of the EIR.



November 16, 2023

Dave Merchen
City of Clovis
Via Email

RE: Wilson Homes Development at Shepherd & Sunnyside Ave in Clovis

Dear Dave:

Per my recent emails, the neighbors to the north of the Wilson Homes development are extremely concerned about the access point onto Perrin Avenue on the north side of the property. Perrin Ave., Stanford Ave, etc. are small county roads with no centerline striping, no curbs, no sidewalks and no street lighting. Providing access to this county road from a 600+ residential development is not prudent or safe.

We would like to propose a compromise solution that this northern access point be used for emergency vehicles only with some sort of gate. L-11-1

As it is now, if you're walking your dog or your kids are riding a bike, there have been numerous near misses on our street. By adding an exit point for 600+ homes, this will create a dangerous condition that is unacceptable. Please pass along this major concern to the Planning Commission and the Fire Dept so that a solution can be found. Thank you.

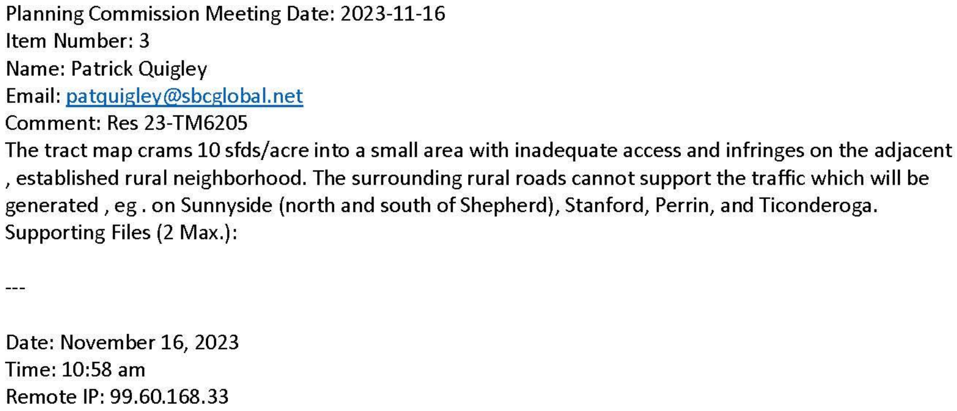
Sincerely,

Lewis S. Smith
(559) 349-8615
Lsmith@retailcalifornia.com
9544 N. Stanford Ave
Clovis, CA 93619

Response to Letter L-11: Lewis Smith, Resident of Clovis

Response L-11-1: This comment provides an introduction, presents concerns about access and the lack of roadway striping, sidewalks, curb/gutter, and lighting. The comment also suggests that there will be a dangerous condition that is not acceptable. The commenter offers a compromise solution to eliminate the northern access point, and instead make it an emergency vehicle access only.

- This comment is noted. City Planning staff has met with the Fire Department and agreed upon a compromise to make the northern access an EVA only, resulting in no Project traffic impacting the Perrin/Stanford area.



Planning Commission Meeting Date: 2023-11-16
Item Number: 3
Name: Patrick Quigley
Email: patquigley@sbcglobal.net
Comment: Res 23-TM6205
The tract map crams 10 sfds/acre into a small area with inadequate access and infringes on the adjacent , established rural neighborhood. The surrounding rural roads cannot support the traffic which will be generated , eg . on Sunnyside (north and south of Shepherd), Stanford, Perrin, and Ticonderoga.
Supporting Files (2 Max.):

Date: November 16, 2023
Time: 10:58 am
Remote IP: 99.60.168.33

L-12-1

Response to Letter L-12: Patrick Quigley, Resident of Clovis

Response L-12-1: This comment indicates that the surrounding rural roads cannot support the traffic that will be generated.

- This comment is addressed in Master Responses 7 through 13.

-----Original Message-----
From: Marcus DiBuduo <marcus@dibuduo.com>
Sent: Friday, November 17, 2023 7:59 AM
To: George Gonzalez <georgeg@ci.clovis.ca.us>; David Merchen <davidm@ci.clovis.ca.us>
Cc: Jared Callister <Callister@flclaw.net>; Norman Morrison <patroller@hotmail.com>
Subject: [External] Muni code

Hey George,

Im a bit confused on when comments to the planning commission need to be received to not be considered late. The website says by 4 pm of the day of the meeting, but you referenced a municipal code that apparently says otherwise. Just want to make sure that in the future I get comments in on time. L-13-1

Separately, it seems like traffic is the hot topic. Has the city considered offering a public explanatory meeting of the EIR findings on this subject? At least I would be interested in discussing with you and Sean the impact on Sunnyside south of Shepherd. Frankly I'm perplexed how the EIR said there were no impacts to Sunnyside that needed to be mitigated. Maybe it's because the VMT model - while perhaps legally sufficient for EIR purposes - fails to consider the unique characteristics of that roadway segment. L-13-2

Marcus

Response to Letter L-13: Marcus DiBuduo, Resident of Clovis

Response L-13-1: This comment indicates that the commenter is "*a bit confused on when comments to the planning commission need to be received to not be considered late*." The commenter indicates that the "*website says by 4 pm of the day of the meeting, but you referenced a municipal code that apparently says otherwise. Just want to make sure that in the future I get comments in on time*."

- The commenter is correct that the Clovis Municipal Code section 9.96.010 [Timely Public Comments.] addresses time public comments and specifically indicates that "i*n order to provide proper consideration of public comments, any written comments should be submitted not less than five (5) calendar days before the scheduled public hearing*." However, the City staff provides a statement on Planning Commission agendas that "*If a written comment is received after 4:00 p.m. on the day of the meeting, efforts will be made to provide the comment to the Planning Commission during the meeting. However, staff cannot guarantee that written comments received after 4:00 p.m. will be provided to the Planning Commission during the meeting. All written comments received prior to the end of the meeting will be made part of the record of proceedings*." While this may appear to be a discrepancy, it is consistent with the Clovis Municipal Code section 9.96.010 [Timely Public Comments.] which indicates that "*Written comments and documents submitted after that time…including comments and documents submitted the day of the public hearing, will be considered at the discretion of the reviewing body. If considered, the late comments, including any response thereto, shall be given the weight they are due.*" What this means is that comments received submitted not less than five (5) calendar days before the scheduled public hearing will be fully considered, and for those comments that are received after that, the City will attempt to respond, but not guarantee a response or consideration by the reviewing body. The text of Clovis Municipal Code section 9.96.010 [Timely Public Comments.] is provided below:
  - *Comments from the public and interested agencies on discretionary land use entitlements are welcome and strongly encouraged. In order to provide proper consideration of public comments, any written comments should be submitted not less than five (5) calendar days before the scheduled public hearing. Written comments and documents submitted after that time, unless also within the noticed public review period, including comments and documents submitted the day of the public hearing, will be considered at the discretion of the reviewing body. If considered, the late comments, including any response thereto, shall be*

given the weight they are due. Factors to consider in evaluating whether and how to respond to late comments include, but are not limited to:

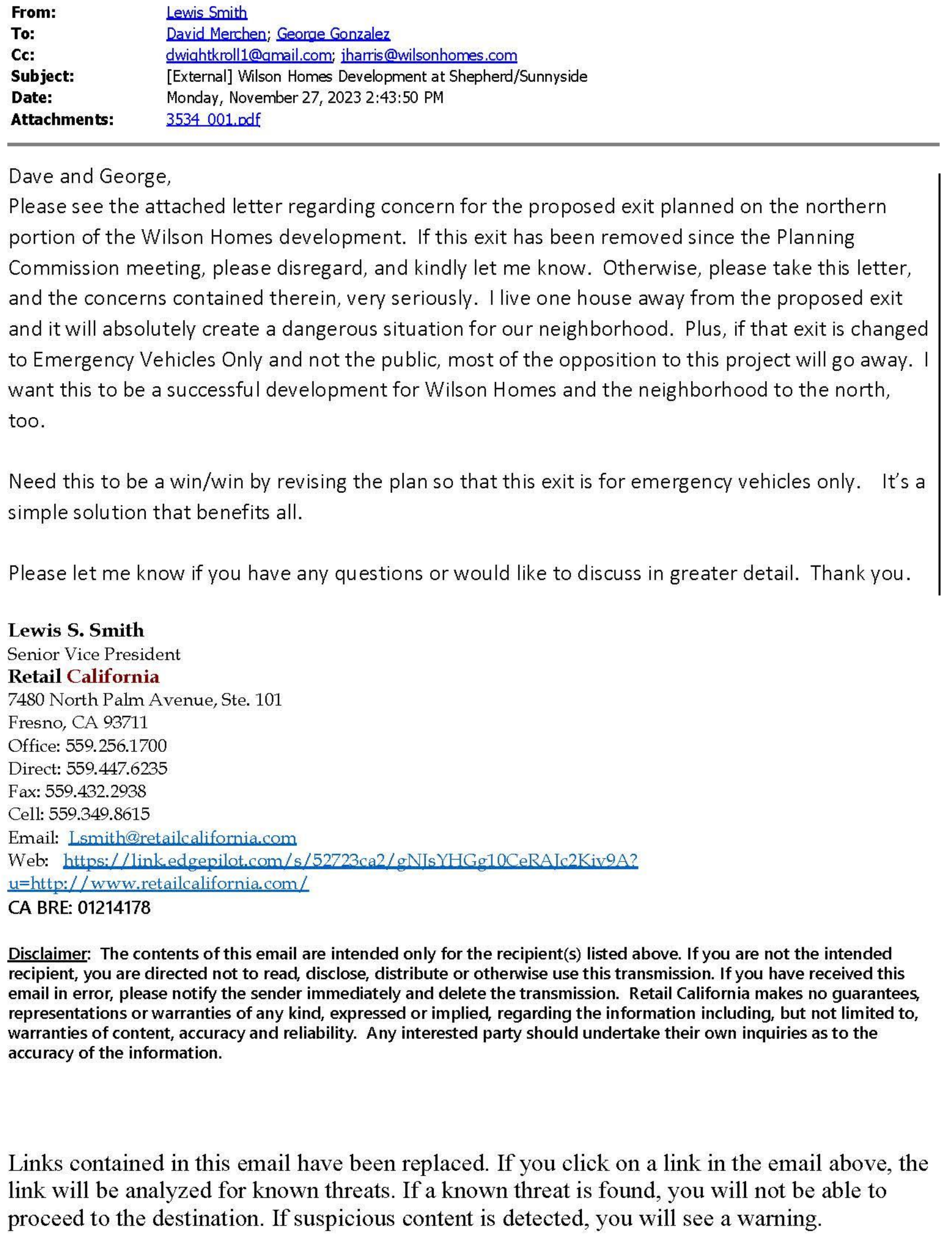
- *A. Time period provided for public review.*
- *B. Accuracy of public hearing notice.*
- *C. Level of detail in comments.*
- *D. Explanation of relevance of comments and documents.*
- *E. Reasons for failing to comment earlier.*

Despite this, to date the City here has responded to all written comments provided to the City, regardless of whether they are timely under the Clovis Municipal Code.

Response L-13-2: This comment indicates that the commenter is "*it seems like traffic is the hot topic. Has the city considered offering a public explanatory meeting of the EIR findings on this subject? At least I would be interested in discussing with you and Sean the impact on Sunnyside south of Shepherd. Frankly I'm perplexed how the EIR said there were no impacts to Sunnyside that needed to be mitigated. Maybe it's because the VMT model - while perhaps legally sufficient for EIR purposes - fails to consider the unique characteristics of that roadway segment."*

- The traffic analysis in the EIR bases its impact conclusion on the VMT impacts of the proposed Project in alignment with the requirements of SB743. However, the City has also performed a supplemental analysis of traffic operations outside of the requirements for CEQA, to appropriately plan and engineer the roadway system. The traffic operations analysis follows standards for levels of service and is intended to inform as to when and where traffic improvements are necessary based on capacity and anticipated congestion on roadways. It should be noted that the traffic operations analysis is not intended to be used as supporting evidence in any CEQA impact conclusion, as such conclusions are prohibited under the requirements specified in SB 743. Instead, the traffic operations analysis helps guide transportation improvement planning in the near and long term, and it helps guide capital improvement planning and financing.

  The traffic operations analysis for the proposed Project shows that the modeled traffic on Sunnyside in year 2046 with the addition of the proposed Project (i.e. Cumulative +Project Conditions) needs to increase by double before going from LOS C to the low range of LOS D. In other words, the traffic levels would need to more than double from existing conditions before it would degrade to an unacceptable level of service. The roadway operates well within its existing volume capacity even though it has seen some increases over the years.



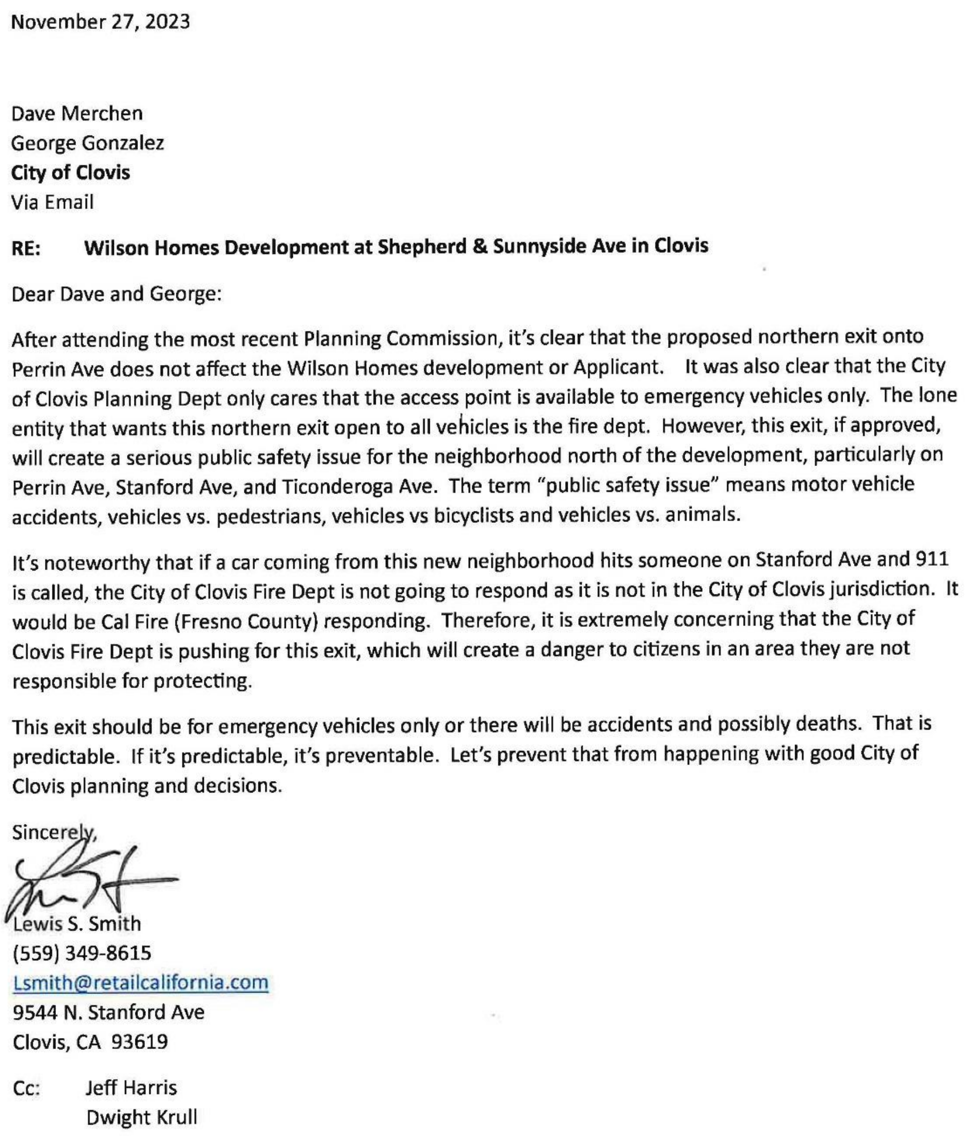
From: Lewis Smith
To: David Merchen; George Gonzalez
Cc: dwightkroll1@gmail.com; jharris@wilsonhomes.com
Subject: [External] Wilson Homes Development at Shepherd/Sunnyside
Date: Monday, November 27, 2023 2:43:50 PM
Attachments: 3534_001.pdf

Dave and George,
Please see the attached letter regarding concern for the proposed exit planned on the northern portion of the Wilson Homes development. If this exit has been removed since the Planning Commission meeting, please disregard, and kindly let me know. Otherwise, please take this letter, and the concerns contained therein, very seriously. I live one house away from the proposed exit and it will absolutely create a dangerous situation for our neighborhood. Plus, if that exit is changed to Emergency Vehicles Only and not the public, most of the opposition to this project will go away. I want this to be a successful development for Wilson Homes and the neighborhood to the north, too. L-14-1

Need this to be a win/win by revising the plan so that this exit is for emergency vehicles only. It's a simple solution that benefits all.

Please let me know if you have any questions or would like to discuss in greater detail. Thank you.

Lewis S. Smith
Senior Vice President
Retail California
7480 North Palm Avenue, Ste. 101
Fresno, CA 93711
Office: 559.256.1700
Direct: 559.447.6235
Fax: 559.432.2938
Cell: 559.349.8615
Email: Lsmith@retailcalifornia.com
Web: https://link.edgepilot.com/s/52723ca2/gNJsYHGg10CeRAJc2Kiv9A?u=http://www.retailcalifornia.com/
CA BRE: 01214178



November 27, 2023

Dave Merchen
George Gonzalez
City of Clovis
Via Email

RE: Wilson Homes Development at Shepherd & Sunnyside Ave in Clovis

Dear Dave and George:

After attending the most recent Planning Commission, it's clear that the proposed northern exit onto Perrin Ave does not affect the Wilson Homes development or Applicant. It was also clear that the City of Clovis Planning Dept only cares that the access point is available to emergency vehicles only. The lone entity that wants this northern exit open to all vehicles is the fire dept. However, this exit, if approved, will create a serious public safety issue for the neighborhood north of the development, particularly on Perrin Ave, Stanford Ave, and Ticonderoga Ave. The term "public safety issue" means motor vehicle accidents, vehicles vs. pedestrians, vehicles vs bicyclists and vehicles vs. animals.

L-14-2

It's noteworthy that if a car coming from this new neighborhood hits someone on Stanford Ave and 911 is called, the City of Clovis Fire Dept is not going to respond as it is not in the City of Clovis jurisdiction. It would be Cal Fire (Fresno County) responding. Therefore, it is extremely concerning that the City of Clovis Fire Dept is pushing for this exit, which will create a danger to citizens in an area they are not responsible for protecting.

This exit should be for emergency vehicles only or there will be accidents and possibly deaths. That is predictable. If it's predictable, it's preventable. Let's prevent that from happening with good City of Clovis planning and decisions.

Sincerely,

Lewis S. Smith
(559) 349-8615
Lsmith@retailcalifornia.com
9544 N. Stanford Ave
Clovis, CA 93619

Cc: Jeff Harris
Dwight Krull

Response to Letter L-14: Lewis Smith, Resident of Clovis

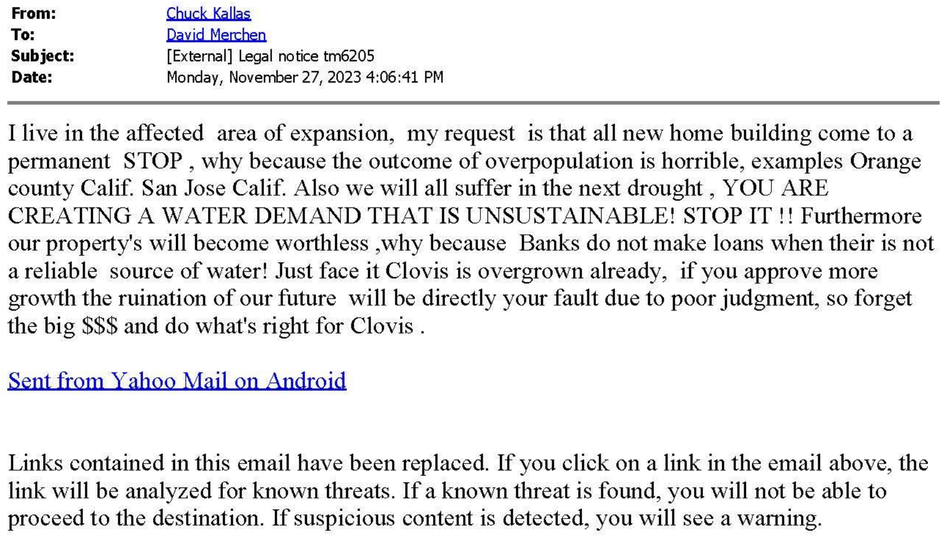
Response L-14-1: This comment is an introductory email presenting a letter attachment. The email expresses concern about the *proposed exit planned on the northern portion of the Wilson Homes development."*

- The concerns expressed in the introductory email are reiterated in the letter attached to the email. See the following responses.

Response L-14-1: This comment is an introductory email presenting a letter attachment. The email expresses concern about the "*proposed northern exit planned onto Perrin Ave."* The commenter states "*It was also clear that the City of Clovis Planning Dept only cares that the access point is available to emergency vehicles only. The lone entity that wants this northern exit open to all vehicles is the fire dept. However, this exit, if approved, will create a serious public safety issue for the neighborhood north of the development, particularly on Perrin Ave, Stanford Ave, and Ticonderoga Ave. The term "public safety issue" means motor vehicle accidents, vehicles vs. pedestrians, vehicles vs bicyclists and vehicles vs. animals."* The letter continues by stating "*It's noteworthy that if a car coming from this new neighborhood hits someone on Stanford Ave and 911 is called, the City of Clovis Fire Dept is not going to respond as it is not in the City of Clovis jurisdiction. It would be Cal Fire (Fresno County) responding. Therefore, it is extremely concerning that the City of Clovis Fire Dept is pushing for this exit, which will create a danger to citizens in an area they are not responsible for protecting.*

- The concerns expressed in the comment letter are partially addressed in Master Response 12, which indicates that the project will have three separate public access points, and one access point that is for emergency access only (Perrin Road), such that in the case of any fire related events, Firefighters can access the project through multiple access points around the project site. The Fire Department evaluates neighborhood roadway designs to ensure that there is adequate access for emergency vehicles. They have evaluated the proposed Project and determined that the access points, including the emergency access point on Perrin/Stanford, in the proposed Project are adequate for the provision of emergency services. More specifically, the northern Perrin/Stanford Road access will be an emergency access only, and will not allow vehicles to exit or enter the development. The access point on Perrin/Stanford is a modification to this access based on public comment and further review by the Clovis Fire Department. It was determined that this could be an emergency access only. The modification of Perrin to an emergency only access will redistribute the limited number of trips to the three other project accesses. The additional trips will not create a substantial increase to the project accesses and there will not be a need for additional analysis.

The comment that the City of Clovis Fire Department is not going to respond to calls on Stanford is not accurate. The City of Clovis Fire Department has mutual aid agreements with other fire departments in the County and neighboring jurisdictions, and when called upon to serve they respond to the call even if it falls outside the jurisdictional boundaries of the City. The decisions to respond are based on 911 dispatchers and not on the Clovis Fire Department.



From: Chuck Kallas
To: David Merchen
Subject: [External] Legal notice tm6205
Date: Monday, November 27, 2023 4:06:41 PM

I live in the affected area of expansion, my request is that all new home building come to a permanent STOP , why because the outcome of overpopulation is horrible, examples Orange county Calif. San Jose Calif. Also we will all suffer in the next drought , YOU ARE CREATING A WATER DEMAND THAT IS UNSUSTAINABLE! STOP IT !! Furthermore our property's will become worthless ,why because Banks do not make loans when their is not a reliable source of water! Just face it Clovis is overgrown already, if you approve more growth the ruination of our future will be directly your fault due to poor judgment, so forget the big $$$ and do what's right for Clovis .

Sent from Yahoo Mail on Android

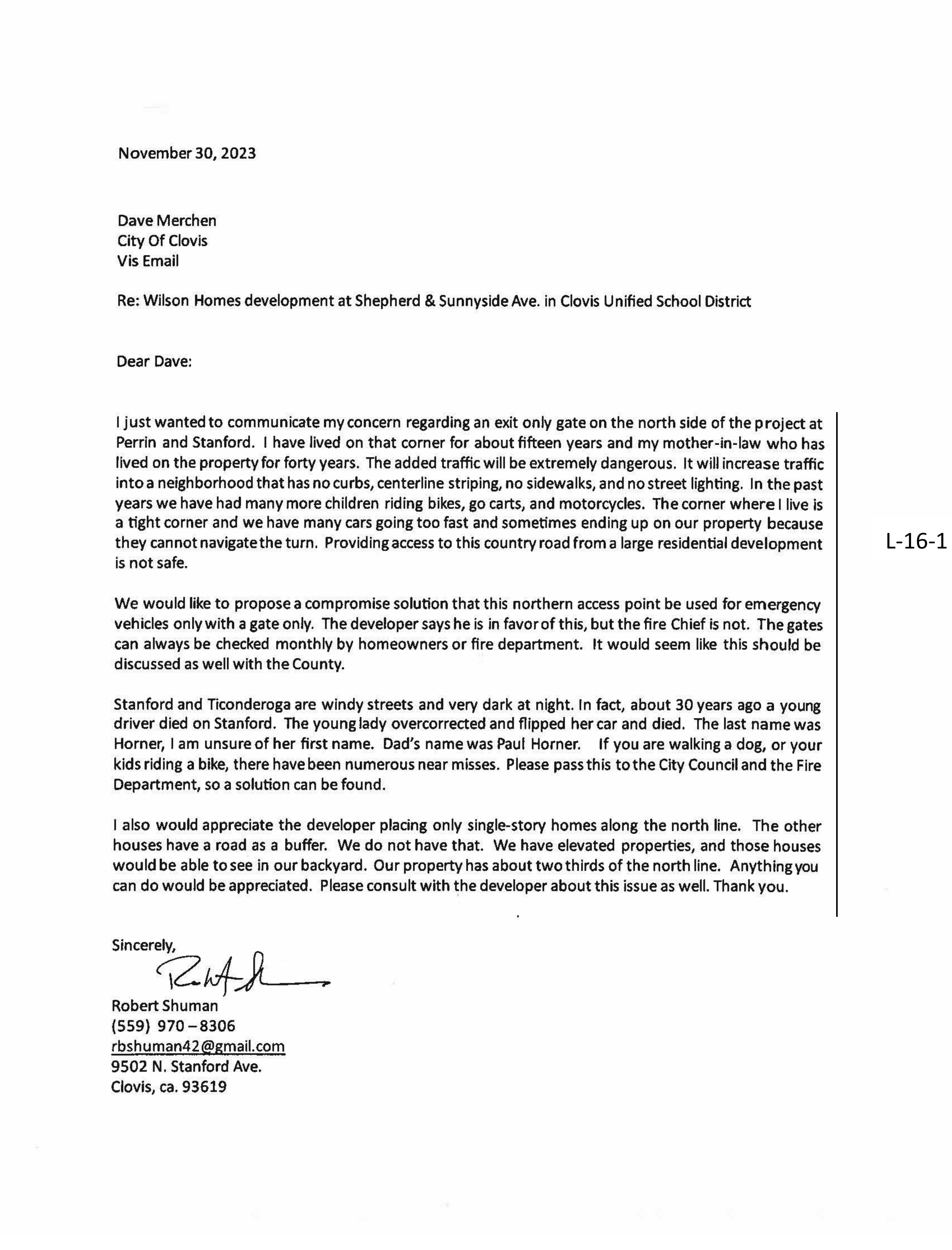
Links contained in this email have been replaced. If you click on a link in the email above, the link will be analyzed for known threats. If a known threat is found, you will not be able to proceed to the destination. If suspicious content is detected, you will see a warning.

L-15-1

Response to Letter L-15: Chuck Kallas, Resident of Clovis

Response L-15-1: This comment expresses the commenter opposition to the project. Environmental concerns identified in the letter include overpopulation and growth, unsustainable and unreliable water demand and drought.

- Concerns regarding unsustainable and unreliable water demand and drought are addressed in the Master Response 3, 4, and 5. Master Response 14 addresses population, population density, and orderly growth associated with annexation and SOI Expansion. Additionally, Chapter 3.10 Land Use, Population, and Housing addresses population and growth. This comment is noted, and the concerns will be presented to the City for consideration. This comment does not require any further response.



November 30, 2023

Dave Merchen
City Of Clovis
Vis Email

Re: Wilson Homes development at Shepherd & Sunnyside Ave. in Clovis Unified School District

Dear Dave:

I just wanted to communicate my concern regarding an exit only gate on the north side of the project at Perrin and Stanford. I have lived on that corner for about fifteen years and my mother-in-law who has lived on the property for forty years. The added traffic will be extremely dangerous. It will increase traffic into a neighborhood that has no curbs, centerline striping, no sidewalks, and no street lighting. In the past years we have had many more children riding bikes, go carts, and motorcycles. The corner where I live is a tight corner and we have many cars going too fast and sometimes ending up on our property because they cannot navigate the turn. Providing access to this country road from a large residential development is not safe.

We would like to propose a compromise solution that this northern access point be used for emergency vehicles only with a gate only. The developer says he is in favor of this, but the fire Chief is not. The gates can always be checked monthly by homeowners or fire department. It would seem like this should be discussed as well with the County.

Stanford and Ticonderoga are windy streets and very dark at night. In fact, about 30 years ago a young driver died on Stanford. The young lady overcorrected and flipped her car and died. The last name was Horner, I am unsure of her first name. Dad's name was Paul Horner. If you are walking a dog, or your kids riding a bike, there have been numerous near misses. Please pass this to the City Council and the Fire Department, so a solution can be found.

I also would appreciate the developer placing only single-story homes along the north line. The other houses have a road as a buffer. We do not have that. We have elevated properties, and those houses would be able to see in our backyard. Our property has about two thirds of the north line. Anything you can do would be appreciated. Please consult with the developer about this issue as well. Thank you.

L-16-1

Sincerely,

Robert Shuman
(559) 970 – 8306
rbshuman42@gmail.com
9502 N. Stanford Ave.
Clovis, ca. 93619

Response to Letter L-16: Robert Shuman, Resident of Clovis

Response L-16-1: This comment provides an introduction, presents concerns about access and the lack of roadway striping, sidewalks, curb/gutter, and lighting. The comment also suggests that there will be a dangerous condition that is not acceptable. The commenter provides several examples of safety issues that have occurred in the past. The commenter offers a compromise solution to eliminate the northern access point, and instead make it an emergency vehicle access only. Lastly, the commenter requests that place single story homes on the northern property line.

- This comment is noted. The City Planning staff has met with the Fire Department and agreed upon a compromise to make the northern access an EVA only, resulting in no Project traffic impacting the Perrin/Stanford area.

  It is noted that the project is not proposed as a pre-plotted subdivision that identifies specific housing architecture or floor plans on each lot. For example, the City does not have any knowledge of whether a one- or two-story residence would be built backing up to the commenter's residence. The zoning code dictates the development standards for zones throughout the City, and it will dictate the standards that apply to the proposed subdivision. One- and two-story residences are allowed up to the height limits defined in the zone. The concept of limiting the height of homes backing up to the commenter's residence can be presented as a concept for the Applicant to consider, but City's zoning code does not restrict the height to a one story. This concern does not present an environmental impact pursuant to CEQA. Nevertheless, this comment will be provided to the City for consideration.

This chapter includes minor edits to the EIR. These modifications resulted from responses to comments received during the Draft EIR public review period, as well as additional comments that were received leading up to the Planning Commission Hearing as well as some received after that hearing. The Errata revisions provided here are intended to supersede those provided in the Final EIR that was publicly circulated prior to the Planning Commission hearing.

Revisions herein do not result in new significant environmental impacts, do not constitute significant new information, and do not alter the conclusions of the environmental analysis that would warrant recirculation of the Draft EIR pursuant to State CEQA Guidelines Section 15088.5. Changes are provided in revision marks with underline for new text and ~~strike out for deleted text~~.

4.1 REVISIONS TO THE DRAFT EIR

EXECUTIVE SUMMARY

The following edits are made to pages ES-17 in the Executive Summary of the DEIR.

NOISE			
Impact 3.11-1: Operational Noise- The proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	PS	***Mitigation Measure 3.11-1:*** *A 6-foot-tall barrier shall be constructed along the ~~south~~ boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue (along all unshielded residential private yards within 100 ft of the centerline of Sunnyside and Shepherd Avenues), in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department.*	LS
Impact 3.11-2: Construction Noise- The proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	PS	***Mitigation Measure 3.11-3:*** *Construction activities shall adhere to the requirements of the City of Clovis Municipal Code with respect to hours of operation. This requirement shall be noted in the improvements plans prior to approval by the City's Public Utilities Department.* *As soon as practicable (after grading operations), install permanent fencing along the boundary of the area being Developed and the adjacent Non-Development Area. Fencing should be a minimum of 6 feet tall and continuous between the source of noise and adjacent residences.* ***Mitigation Measure 3.11-4****: The contractor shall ensure that the following noise attenuating strategies are implemented during project construction:*	LS

		- *During construction, the contractor shall ensure mufflers are properly installed on all construction equipment capable of being outfitted with mufflers~~is equipped with appropriate noise attenuating devices~~.* - *Idling equipment shall be turned off when not in use.* - *Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.*	

1.0 INTRODUCTION

No changes were made to Chapter 1.0 of the DEIR.

2.0 PROJECT DESCRIPTION

The following edits are made to pages 2.0-3 through 2.0-4 in Section 2.0 of the DEIR.

2.4 PROJECT GOALS AND OBJECTIVES

A clear statement of objectives and the underlying purpose of the proposed Project are discussed per CEQA Guidelines Section 151024(b).

PROJECT OBJECTIVES

The project objectives include a collection of goals and objectives, which clearly define the purpose of the Project. In developing the project objectives, it is notable that the City considered the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and it is clearly within a city's exercise of its legislative discretion to facilitate the construction of new housing, which is defined by the Project Description after thorough evaluation of the development potential. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects."

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.

~~The quantifiable objectives include the development of up to 605 single-family residential units. The quantifiable objectives include the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping to serve the residential uses.~~

The City has established five additional objectives project goals and objectives ~~goals~~ of the proposed development that more fully inform the Project purpose. These project goals and objectives are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice to modestly increase urban density*.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

The Project goals and objectives presented above, were developed by the City in response to the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and the City's desire to facilitate the construction of new housing in the face of the housing crisis. The City staff has responded with adequate attention to the economic, environmental, and social costs of reduced housing density by establishing a quantified target density that provided the City with significant flexibility to evaluate different scenarios for residential projects on the Project site.

3.1 AESTHETICS AND VISUAL RESOURCES

The following edits are made to pages 3.1-3 through 3.1-4 in Section 3.1 of the DEIR.

LIGHT AND GLARE

During the day, sunlight reflecting from structures is a primary source of glare, while nighttime light and glare can be divided into both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and street lights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination. This ambient light environment can be accentuated during periods of low clouds or fog.

The variety of ~~urban~~ developed and inhabited land uses in the City of Clovis are the main source of daytime and nighttime light and glare. They are typified by single and multi-family residences, commercial structures, industrial areas, and street lights. These areas and their associated human activities (inclusive of vehicular traffic) characterize the existing light and glare environment present during daytime and nighttime hours in the urbanized portions of the City. Sources of light and glare in the City of Clovis include building (interior and exterior), security, sign illumination, and parking-area lighting. Other sources of nighttime light and glare include street lights and vehicular traffic along surrounding roadways. Additionally, ~~The~~ the General Plan EIR (page 5.1-10) notes that there is a significant amount of ambient lighting that comes from surrounding communities and roadways.

Because the City of Clovis is adjacent to highly urbanized portions of the City of Fresno to the west and south, ambient light in the community is substantially impacted by land uses in Fresno. Large, light-intensive institutions and facilities near the City's boundary include Fresno Yosemite International Airport and CSU Fresno. Nevertheless, areas within the City Limits and SOI, which account for nearly half of the entire Planning Area of the City of Clovis, are mainly rural residential and agricultural land and have very few sources of light and glare, allowing for clear day and nighttime views. This is the case of the Project site given that it is in the northern portion of Clovis, which is distant from the more ~~urban~~ developed and densely populated areas of downtown Fresno and Clovis. The Development Area is characterized as undeveloped agricultural land, and the Non-development Area is characterized as developed rural residential land. Areas immediately surrounding the Project site include rural residential to the north and east, and suburban to the south and west. Surrounding lands are characterized further below.

Sources of glare in ~~urbanized~~ developed portions of the City come from light reflecting off surfaces, including glass, and certain siding and paving materials, as well as metal roofing. The ~~urbanized~~ developed suburban areas of Clovis contain street lights, sidewalks, and paved parking areas, which reflect street and vehicle lights. The developed rural residential areas of Clovis (including unincorporated County) generally do not contain street lights or sidewalks, but typically have dirt or gravel parking areas on the property frontage with reflective properties.

The existing light environment found in the vicinity of the Project site is considered typical of both suburban and rural residential areas. The existing suburban lighting exists along Shepherd Avenue immediately south of the Project site from just west of Fowler Avenue to approximately SR 168 (an approximately 3.2-mile suburban corridor). Additionally, existing suburban lighting exists along Shepherd Avenue immediately west of the Project site from Sunnyside Avenue to North Friant Road (an approximately 4.7-mile suburban corridor). In total, approximately 7.9 miles of roadway corridor along Shepherd Avenue south of the Project site is best characterized as suburban, and lighting is typical of suburban developed areas in this location.

To the north of Shepherd Avenue in the vicinity of the Project site is a mix of suburban and rural residential areas. Immediately to the west is suburban residential in the neighborhoods north of Shepherd Avenue (i.e. Lennar Heritage Grove). Immediately to the north and east of the Project site is rural residential development, which has a lower intensity of lighting then what is common in the suburban neighborhoods in the vicinity.

These rural residential areas have typical residential building lighting (i.e., lights on the building structure in the front and backyard, landscaping lighting, and indoor lighting) like the suburban neighborhoods, but there is a lower density of buildings so overall lighting intensity is lower in these areas when compared to the surrounding suburban lighting. Additionally, some of the rural residential areas do not have street lighting, unlike more intensively developed areas in the vicinity. However, these areas are typical of suburban areas within and immediately outside the City of Clovis, where rural residential neighborhoods are often located adjacent to suburban or urban uses. The mix of lighting is typical of many suburban neighborhoods along the periphery of the City and within certain areas, such as the Dry Creek Preserve.

Sky glow is the effect created by light reflecting into the night sky. Sky glow is of particular concern in areas surrounding observatories, where darker night sky conditions are necessary, but is also of concern in more rural or natural areas where a darker night sky is either the norm or is important to wildlife. Developed areas have existing light sources that illuminate the night sky. In other words, sky glow is considered part of the existing conditions (i.e., the baseline conditions under CEQA). ~~Due to the urban nature of the City limits, a number of existing light sources affect residential areas and illuminate the night sky. Isolating impacts of particular sources of light or glare is therefore not appropriate or feasible for the proposed Project~~. Sky glow can increase significantly based on certain intensive uses—such as a project that contemplates stadium lights, spotlights, and strobe lights.

The following edits are made to pages 3.1-15 through 3.1-18 in Section 3.1 of the DEIR.

Impact 3.1-3: Project implementation may result in light and glare impacts. (Less than Significant)

During the day, sunlight reflecting from structures is a primary source of glare, while nighttime light and glare can be divided into both stationary and mobile sources. Some types of stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and street lights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination.

The developed and inhabited land uses in the City of Clovis are the main source of daytime and nighttime light and glare. They are typified by single and multi-family residences, commercial structures, industrial areas, and street lights. These areas and their associated human activities (inclusive of vehicular traffic) characterize the existing light and glare environment present during daytime and nighttime hours in the urbanized portions of the City.

The General Plan EIR (page 5.1-10) notes that there is a significant amount of ambient lighting that comes from surrounding communities and roadways. Because the City of Clovis is adjacent to highly urbanized portions of the City of Fresno to the west and south, ambient light in the community is substantially affected by land uses in Fresno. Large, light-intensive institutions and facilities near the City's boundary include Fresno Yosemite International Airport and CSU Fresno. Nevertheless, areas within the City Limits and SOI, which account for nearly half of the entire Planning Area of the City of Clovis, include rural residential and agricultural land and have very few sources of light and glare, allowing for clear day and nighttime views. The other half of the entire Planning Area of the City of Clovis is more densely developed, consisting of single and multi-family residences, commercial structures, industrial areas, and street lights typical of suburban communities.

The Project site is in the northern portion of Clovis, which is distant from the more developed and densely populated areas of downtown Fresno and Clovis, and is best characterized as a mix of suburban, and rural residential. The Development Area is best characterized as undeveloped agricultural land, and the Non-development Area is characterized as developed rural residential land. Areas immediately surrounding the Project site include rural residential to the north and east, and suburban to the south and west.

As noted in Impact 3.1-1, the proposed Project involves the development of up to 605 single-family residential units, open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks, and associated roadway improvements. The existing light environment found in the vicinity of the Project site is considered typical of both suburban and rural residential areas. Existing suburban lighting exists along Shepherd Avenue immediately south of the Project site from just west of Fowler Avenue to approximately SR 168 (an approximately 3.2-mile suburban corridor). Existing suburban lighting also exists along Shepherd Avenue immediately west of the Project site from Sunnyside Avenue to North Friant Road (an approximately 4.7-mile suburban corridor). In total, approximately 7.9 miles of roadway corridor along Shepherd Avenue south of the Project site is best characterized as suburban, and lighting is typical of suburban developed areas.

To the north of Shepherd Avenue in the vicinity of the Project site is a mix of suburban and rural residential areas. Immediately to the west is suburban residential in the neighborhoods north of Shepherd Avenue (i.e. Lennar Heritage Grove). Immediately to the north and east of the Project site is rural residential development, which has a lower intensity of lighting then what is common in the suburban neighborhoods in the vicinity.

These rural residential areas have typical residential building lighting (i.e., lights on the building structure in the front and backyard, landscaping lighting, and indoor lighting) like the suburban neighborhoods, but there is a lower density of buildings so overall lighting intensity is lower in these areas when compared to the surrounding suburban lighting. Additionally, some of the rural residential areas do not have street lighting, unlike more intensively developed areas in the vicinity. However, these areas are typical of suburban areas within and immediately outside the City of Clovis, where rural residential neighborhoods are often located adjacent to suburban or urban uses. The mix of lighting is typical of many suburban neighborhoods along the periphery of the City and within certain areas, such as the Dry Creek Preserve.

The Project is located within a largely developed area of Fresno County, and surrounded by developed land uses, a number of existing light sources already affect residential areas and illuminate the night sky. In other words, sky glow is present under existing conditions, and the introduction of a residential development adjacent to those existing developments would not result in a significant increase in sky glow. While sky glow can increase based on certain intensive uses—such as a project that contemplates stadium lights, spotlights, and strobe lights—no such intensive uses are contemplated for the Project. As a result, any increase in sky glow resulting from this Project would be imperceptible compared to baseline conditions and thus impossible to measure. The Project would therefore not result in new or substantially increased sky glow. In other words, sky glow is considered part of the existing conditions (i.e., the baseline conditions under CEQA).

The proposed Project also does not have any areas where there would be spillover of light, or high intensity or excessively bright lights. There would be normal City standard street lights that include standard shields to direct lighting to the roadway rights-of-way, without spilling over onto adjacent properties. This new light would not be a potentially significant impact. The new lighting expected would consist of lights on the building structure in the front and backyard, landscaping lighting, and indoor lighting. Although there would be new lighting associated with the residential buildings, the lighting attached to the building structures would be normal residential lighting subject to the City's standards. The implementation of these lighting standards are part of the Project's design and would avoid nuisance light and spillover issues.

Some buildings within the Project would be two-story, and it is therefore possible that lighting from the second story windows could be visible from adjacent properties; however, such second story indoor lighting would not be directed at, or to, the adjacent properties, and would not have a potentially significant impact on those adjacent properties. Additionally, the proposed Project does not include any lights that are considered excessively bright with the potential to create sky glow, such as stadium lights, strobe lights, spotlights, etc. In addition, there are no sources of significant glare associated with the proposed Project.

New sources of glare from the proposed Project would occur primarily from the windshields of vehicles travelling to and from the Development Area and from vehicles parked within the Project site. However, parking for the proposed residential uses in the Development Area would primarily occur within enclosed garages and driveways. Headlights and windshields would be shielded by the proposed residential structures within the site. Additionally, the Project includes plans for extensive landscaping and open space areas throughout the site, which would provide visual screening and block potential windshield glare for sensitive receptors within the Project site. Residential structures placed along the boundaries of the Development Area would provide visual screening and block potential windshield glare to areas surrounding the Project site. Glare from traveling vehicles is a function of the density of vehicles on the roadway, the time that they are present, and the time of day. Generally, glare from traveling vehicles to a receptor is very short lived (fractions of a second) given that the glare is dependent on the amount of time in which the vehicle is positioned at the perfect angle for the sun to reflect light off the vehicle to a receptor. The potential for glare changes throughout the day as the angle of the sun changes. There is always some potential for glare reflecting off of traveling vehicles, but the City does not consider glare from vehicles traveling along roadways as a significant impact. The proposed Project is not anticipated to have high concentrations of glare, and the impact from glare is less than significant.

Additionally, several roadways would be constructed within the Development Area to serve the proposed single-family residential uses. These roadways would result in the introduction of street lighting into a currently undeveloped site. However, the proposed single-family residential uses and local roadway would be typical of what is already experienced as a result of the existing single-family residential uses and local roadways that occur within the surrounding area. The proposed single-family residential uses would be an extension of single-family residential uses adjacent to the Project site.

The proposed Project would be required to implement existing City regulations aimed at reducing light and glare impacts to ensure that no unusual daytime glare or nighttime lighting is produced. Specifically, the Clovis Development Code states that direct glare shall not be permitted and provides standards for nuisance prevention and shielding requirements. Section 9.22.050 of the Clovis Development Code contains standards and provisions related to exterior lighting. While implementation of regulations and standards within the Clovis Development Code would reduce impacts associated with increased light and glare, the impacts would not be eliminated entirely, and the overall level of light and glare in the Project site would increase in general as urban development occurs.

Overall, the proposed Project would introduce new sources of daytime and nighttime lighting within the Project site that do not currently exist. However, it is noted there are no specific features within the proposed Project that would create unusual light and glare. Light sources from the proposed Project can have an adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, light sources can create light spillover impacts on surrounding land uses in the absence of a lighting plan that includes photometrics of the lighting. The proposed Project, however, does not have any areas where there would be spillover of light, or high intensity or excessively bright lights. There would be normal City standard street lights that include standard shields to direct lighting to the roadway rights-of-way, without spilling over onto adjacent properties, or causing sky glow. This new light would not be a potentially significant impact.

Any new lighting associated with implementation of the proposed Project would be pedestrian-scale lighting and the fixtures would be consistent with the style and technical specifications approved by the City, including compliance with the City's light and glare regulations under Section 9.22.050 of the Clovis Development Code, which requires that light be shielded so that light does not spill onto adjacent properties. The City's existing requirements require a lighting plan to be submitted to the City for review and approval for the improvement plans, as well as for the building plans. All proposed outdoor lighting is required to meet applicable City standards regulating outdoor lighting, including 9.22.050 Exterior light and glare of the City's Development code, in order to minimize any impacts resulting from outdoor lighting on adjacent properties. Implementation of the existing City standards would reduce potential impacts associated with nighttime lighting and light spillage onto adjacent properties to a **less than significant** level.

3.2 AGRICULTURAL AND FOREST RESOURCES

The following edits are made to pages 3.2-9 through 3.2-10 in Section 3.2 of the DEIR.

Availability of Water Resources and Feasibility

For several years, the current property owner has been responsible for managing the former Cal-Pecan orchard located on the Project site. In recent years, primarily due to drought conditions and expansion of new development surrounding the former Cal-Pecan orchard, the economic~~ally~~ viability~~e~~ of irrigated agricultural production has diminished. The Project site is located entirely north and east of the Enterprise Canal and therefore outside of the nearby Fresno Irrigation District boundary. It is therefore not eligible to receive deliveries of surface water from any irrigation district. This is an entirely different situation from other properties located in the region, such as the nearby Heritage Grove growth area. A portion of Heritage Grove is located on the west side of the Enterprise Canal and continues to receive deliveries of surface water to support agricultural production. Recent ~~SIGMA~~ SGMA regulatory changes that now severely limit groundwater pumping has constrained the ability of any agricultural properties located outside of an irrigation district to support intensive agricultural uses that require regular and timely irrigation; further, groundwater pumping on this property has proven to be unpredictable and unreliable in recent years as available water from the aquifer under the Project site had been highly variable and provided an unreliable supply. The property owner has indicated that they made every effort to continue irrigating the trees throughout the drought conditions last summer, but the wells on the Project site went entirely dry and caused the pumps to burn out. The pecan trees suffered tremendous damage without available irrigation water and it resulted in large-scale tree mortality.

Additionally, as a result of the recent ~~SIGMA~~ SGMA regulatory changes, virtually all agricultural lending banks and institutions have recently changed their lending requirements to now demand availability of two sources of water (groundwater and surface water) as a condition for continued lending. The Project site cannot meet the new lending requirement because it is located outside of an irrigation district and is no longer eligible to obtain agricultural loans to support commercial agricultural operations.

The property owner also has noted that the soil substructure varies greatly on the Project site and is not accurately reflected in the more generic soil types documented in the Soil Survey for the region. The property owner has indicated that the soils are not conducive to produce high agricultural yields because there is a cemented silty sand, clayey sand, and silty sand with clay, locally referred to as "hardpan" that is encountered below 2 feet across much of the Project site. This cementation retards the free percolation of surface water into the soil stratum below the hardpan, frequently resulting in a temporary perched water table condition at or near the ground surface during winter periods of precipitation. The perched water table can result in anerobic conditions in the root zone, which can result in root mortality and damage or death to the crop. This hardpan layer limits the types of crops that can be successful and is generally a variable that makes the property less economically viable for agricultural production.

The property owner has also indicated that the proximity of the Project site to existing urban development diminishes the economic viability of agricultural production. The property owner has indicated that there is increased vandalism, theft and harassment costs in recent years. The property owner cited last summer as particularly troublesome when neighbors would routinely shut-off irrigation pumps during the night and the valves in the orchard rows that are necessary to regulate pressure to operate the system were stolen. The property owner noted that equipment vandalism and theft occurred regularly and continued agricultural operations are now virtually impossible.

3.3 AIR QUALITY

No changes were made to Section 3.3 of the DEIR.

3.4 BIOLOGICAL RESOURCES

No changes were made to Section 3.4 of the DEIR.

3.5 CULTURAL AND TRIBAL RESOURCES

No changes were made to Section 3.5 of the DEIR.

3.6 GEOLOGY

No changes were made to Section 3.6 of the DEIR.

3.7 GREENHOUSE GAS, CLIMATE CHANGE AND ENERGY

No changes were made to Section 3.7 of the DEIR.

3.8 HAZARDS AND HAZARDOUS MATERIALS

No changes were made to Section 3.8 of the DEIR.

3.9 HYDROLOGY AND WATER QUALITY

No changes were made to Section 3.9 of the DEIR.

3.10 LAND USE PLANNING, POPULATION, AND HOUSING

The following edits are made to Section 3.10 of the DEIR starting on page 3.10-19. This text revision is intended to clarify that the mitigating features of the Project are presented in the text as Project Design Features, and not as “Mitigation Measure 3.13-1.” It is acknowledged that Mitigation Measure 3.13-1 does not exist in the Draft EIR. Additional text was also added to amplify the discussion regarding relevant CAPCOA measures incorporated into the Project to mitigate, or reduce, VMT. Also added, is a discussion of the EV measures that also are incorporated into the Project to reduce greenhouse gas emissions and other local pollutant emissions.

AIR QUALITY ELEMENT	
AIR-Policy 1.1: Land use and transportation. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.	**Consistent.** As discussed previously, the Project includes well-designed pedestrian and bicycle systems. These systems would help reduce mobile GHG emissions by reducing vehicle-miles-traveled (VMT). ~~Beyond the proposed improvements, as required by Mitigation Measure~~ As described under Impact 3.13-1 in Section 3.13 of the Draft EIR, the applicant would be required to implement Project Design Features that are proposed as measures to help reduce VMT. These are discussed on page 3.13-19 under the heading "Project Design Features and Mitigation Measures." The VMT reduction from these Project Design Features have been estimated using ~~, which are identified in~~ the California Air Pollution Control Officers Association's (CAPCOA) Draft Handbook for Analyzing GHG Emission Reductions, assessing Climate Vulnerabilities, and Advancing Health and Equity (GHG Handbook). Many of the strategies listed in this ~~mitigation measure~~ Project Design Features pertain to transit, pedestrian, and bicycle systems. As shown on page 3.13-20, the Project Design features are in alignment with CAPCOA transportation measure T-18: Provide Pedestrian Network Improvement, T-17: Improve Street Connectivity, T-19A: Construct or Improve Bike Facility. In addition, the Project Design Features include Electric Vehicle (EV) Charging capabilities. Collectively, these Project Design Features functionally serve to mitigate, or reduce the impact to the extent possible.

3.11 NOISE

The following edits are made to pages 3.11-16 through 3.11-17 in Section 3.11 of the DEIR.

TABLE 3.11-9: EXISTING PLUS PROJECT SCENARIO - NOISE LEVELS ALONG ROADWAYS (DBA CNEL)

ROADWAY	SEGMENT	EXISTING	EXISTING WITH PROJECT	
		CNEL @ 50' DBA	CNEL @ 50' DBA	CHANGE IN NOISE LEVEL
Behymer Avenue	Willow Avenue to Minnewawa Avenue	60.4	60.5	0.1
Behymer Avenue	Minnewawa Avenue to Sunnyside Avenue	62.5	62.5	0.0
Behymer Avenue	Sunnyside Avenue to Fowler Avenue	62.4	62.4	0.0
Shepherd Avenue	Willow Avenue to Minnewawa Avenue	67.7	68.2	0.5

Roadway	Segment	Existing	Existing with Project	
		CNEL @ 50' dBA	CNEL @ 50' dBA	Change in Noise Level
Shepherd Avenue	Minnewawa Avenue to Clovis Avenue	67.3	68.2	0.9
Shepherd Avenue	Clovis Avenue to Sunnyside Avenue	66.6	68.2	1.6
Shepherd Avenue	Sunnyside Avenue to Project ~~Intersection~~ Driveway (Fordham Avenue) 3	65.1	66.8	1.7
Shepherd Avenue	Project ~~Intersection~~ Driveway (Fordham Avenue) 3 to Fowler Avenue	65.1	65.8	0.7
Herndon Avenue	State Route 168 Eastbound Ramps to Clovis Avenue	69.4	69.6	0.2
Willow Avenue	Behymer Avenue to Shepherd Avenue	72.4	72.5	0.1
Minnewawa Avenue	Behymer Avenue to Shepherd Avenue	63.5	63.5	0.0
Clovis Avenue	Shepherd Avenue to Teague Avenue	64.1	65.3	1.2
Clovis Avenue	Teague Avenue to Nees Avenue	66.3	66.9	0.6
Clovis Avenue	Nees Avenue to Alluvial Avenue	67.9	68.4	0.5
Clovis Avenue	Alluvial Avenue to Herndon Avenue	69.9	70.2	0.3
Sunnyside Avenue	Project ~~Intersection~~ Driveway 1 to Shepherd Avenue	54.4	60.5	6.1
Sunnyside Avenue	Shepherd Avenue to Teague Avenue	60.3	61.6	1.3
Sunnyside Avenue	Teague Avenue to Nees Avenue	60.6	61.8	1.2
Fowler Avenue	Behymer Avenue to Ticonderoga	63.4	63.5	0.1
Fowler Avenue	Ticonderoga to Shepherd Avenue	64.4	64.4	0.0
Fowler Avenue	Shepherd Avenue to Teague Avenue	65.1	65.7	0.6
Fowler Avenue	Teague Avenue to Nees Avenue	65.1	65.7	0.6
Fowler Avenue	Nees Avenue to State Route 168 Westbound Ramps	69.9	70.1	0.2

Source: FHWA-RD-77-108 with inputs from MD Acoustics. 2023.

When comparing existing plus project levels to existing levels, Sunnyside Avenue from Project ~~Intersection~~ Driveway 1 to Shepherd Avenue has the potential for significant impact as the only roadway segment with an increase of more than 3 dB.

The following edits are made to pages 3.11-19 in Section 3.11 of the DEIR. Modified to provide clarification consistent with the findings in the draft EIR.

Mitigation Measure 3.11-1: *A 6-foot-tall barrier shall be constructed along the ~~south~~ boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue(along all unshielded residential private yards within 100 ft of the centerline of Sunnyside and Shepherd Avenues), in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department.*

The following edits are made to pages 3.11-20 in Section 3.11 of the DEIR. Modified to provide additional construction related requirements at the recommendation of a commenter.

Mitigation Measure 3.11-3: *Construction activities shall adhere to the requirements of the City of Clovis Municipal Code with respect to hours of operation. This requirement shall be noted in the improvements plans prior to approval by the City's Public Utilities Department.*

As soon as practicable (after grading operations), install permanent fencing along the boundary of the area being Developed and the adjacent Non-Development Area. Fencing should be a minimum of 6 feet tall and continuous between the source of noise and adjacent residences.

Mitigation Measure 3.11-4*: The contractor shall ensure that the following noise attenuating strategies are implemented during project construction:*

- *During construction, the contractor shall ensure mufflers are properly installed on all construction equipment capable of being outfitted with mufflers~~is equipped with appropriate noise attenuating devices~~.*
- *Idling equipment shall be turned off when not in use.*
- *Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.*

The following edits are made to pages 3.11-23 through 3.11-24 in Section 3.11 of the DEIR.

Table 3.11-10: 2046 Scenario - Noise Levels Along Roadways (dBA CNEL)

Roadway	Segment	Existing	Existing with Project	
		CNEL @ 50' dBA	CNEL @ 50' dBA	Change in Noise Level
Behymer Avenue	Willow Avenue to Minnewawa Avenue	66.4	66.4	0.0
Behymer Avenue	Minnewawa Avenue to Sunnyside Avenue	67.0	67.0	0.0
Behymer Avenue	Sunnyside Avenue to Fowler Avenue	63.3	63.4	0.1
Shepherd Avenue	Willow Avenue to Minnewawa Avenue	71.9	72.1	0.2

Roadway	Segment	Existing	Existing with Project	
		CNEL @ 50' dBA	CNEL @ 50' dBA	Change in Noise Level
Shepherd Avenue	Minnewawa Avenue to Clovis Avenue	71.2	71.6	0.4
Shepherd Avenue	Clovis Avenue to Sunnyside Avenue	70.8	71.5	0.7
Shepherd Avenue	Sunnyside Avenue to Project ~~Intersection~~ Driveway (Fordham Avenue) 3	69.0	69.8	0.8
Shepherd Avenue	Project ~~Intersection~~ Driveway (Fordham Avenue) 3 to Fowler Avenue	69.0	69.3	0.3
Herndon Avenue	State Route 168 Eastbound Ramps to Clovis Avenue	70.5	70.6	0.1
Willow Avenue	Behymer Avenue to Shepherd Avenue	76.3	76.3	0.1
Minnewawa Avenue	Behymer Avenue to Shepherd Avenue	68.6	68.6	0.0
Clovis Avenue	Shepherd Avenue to Teague Avenue	69.9	70.2	0.3
Clovis Avenue	Teague Avenue to Nees Avenue	69.9	70.2	0.3
Clovis Avenue	Nees Avenue to Alluvial Avenue	70.9	71.1	0.3
Clovis Avenue	Alluvial Avenue to Herndon Avenue	71.8	72.1	0.2
Sunnyside Avenue	Project ~~Intersection~~ Driveway 1 to Shepherd Avenue	68.7	69.2	0.5
Sunnyside Avenue	Shepherd Avenue to Teague Avenue	64.1	64.7	0.6
Sunnyside Avenue	Teague Avenue to Nees Avenue	63.9	64.5	0.6
Fowler Avenue	Behymer Avenue to Ticonderoga	64.3	64.3	0.0
Fowler Avenue	Ticonderoga to Shepherd Avenue	67.9	67.9	0.0
Fowler Avenue	Shepherd Avenue to Teague Avenue	68.4	68.7	0.3
Fowler Avenue	Teague Avenue to Nees Avenue	67.9	68.2	0.3
Fowler Avenue	Nees Avenue to State Route 168 Westbound Ramps	71.4	71.6	0.1

Source: FHWA-RD-77-108 with inputs from MD Acoustics. 2023.

As shown in Table 3.11-10, the Cumulative 2046 scenario has a maximum change in noise level of 0.7 dBA CNEL. Sunnyside Avenue from Project ~~Intersection~~ Driveway 1 to Shepherd Avenue has a 0.5 dBA CNEL change. Future residential uses will be in the normally compatible level along that segment. Therefore, a **less than significant** impact would occur with regard to this impact.

3.12 PUBLIC SERVICES AND RECREATION

No changes were made to Section 3.12 of the DEIR.

3.13 TRANSPORTATION AND CIRCULATION

The following edits are made to pages 3.13-18 in Section 3.13 of the DEIR.

Impact 3.13-1: Project implementation would ~~not~~ result in VMT increases that are greater than 87 percent of Baseline conditions. (Significant and Unavoidable)

3.14 UTILITIES AND SERVICE SYSTEMS

The following edits are made to pages 3.14-31 through 3.14-33 in Section 3.14 of the DEIR.

ENVIRONMENTAL SETTING

Stormwater throughout the City of Clovis is collected in Fresno Metropolitan Flood Control District's (FMFCD) basins. Unless the storm season is particularly wet, the collected stormwater is allowed to percolate into the soil as groundwater recharge. Additionally, the FMFCD allows the City to utilize 17 stormwater basins throughout the City's Service Area for recharge purposes. (Provost & Pritchard, 2021B).

FMFCD covers the entire Fresno/Clovis Metropolitan Area and is authorized to control storm waters within an urban and rural foothill watershed of approximately 400 square miles, known as the Fresno County Stream Group. The FMFCD provides storm drainage through a system of inlets, drainage pipes, drainage ponds, and a system of dams and channels upstream. This system provides the primary means of urban storm drainage control for the City of Clovis and its sphere of influence. New storm drainage improvements are made by either development fees or by formation of assessment or improvement districts. The City of Clovis has a representative on the FMFCD Board. (City of Clovis, 2014).

On September 16, 1994, the Central Valley Regional Water Quality Control Board (Regional Water Board) issued the first municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit No. CA0083500 to the Fresno Metropolitan Flood Control District (District) and four other Co-Permittees, including the City of Clovis. The Regional Water Board renewed the permit on May 31, 2013 (Order No. R5-2013-0080). (FMFCD, 2020).

The FMFCD operates and maintains all master plan improvements, including the retention basins. The City is responsible for operation and maintenance of all temporary facilities where master plan improvements are not complete. The City is also responsible for all surface flooding in streets and other areas where storm water cannot reach inlets and pipes quickly enough. Storm drainage collection facilities are designed for two-year storm ~~capacity~~frequency. Storm drain retention basins are designed for 50-year storm ~~frequency~~capacity. Development impact fees finance acquisition and construction of ponding basins. Storm drainage improvement districts fund development of storm drainage systems for existing urban areas. (City of Clovis, 2014).

Clovis is traversed by three natural stream systems. Each of these systems consists of sub streams or creeks that collect together to discharge to a centralized natural drainage channel. These systems are the Red Bank, Fancher, and Dog Creek System; the Dry and Dog Creek System; and the Pup Creek/Alluvial Drain System. The latter is a tributary of the original Dry Creek channel. These stream systems collect storm runoff from the foothills east of Clovis and convey such runoff through the Clovis/Fresno metropolitan areas to the Fresno Slough, which is located west of the City of Fresno. (County of Fresno, 2018).

The City's Public Utilities Department has three Stormwater Patrol teams, made up of 22 public utilities employees, to implement emergency flood control measures. The plan contains information and procedures to rapidly address flooding throughout the City. Contact information and team assignment data is updated regularly as are geographic locations subject to flooding. Appendices include suppliers/contractors, storm basin list, problem drain lists, and partnerships and agencies with shared responsibility for storm preparedness, mitigation, and response. (County of Fresno, 2018).

Existing City Stormwater and Flood Control Facilities

Flood protection in Clovis is afforded by Big Dry Creek Dam on Dry Creek. Big Dry Creek Dam is located approximately 3.5 miles upstream of the City of Clovis. Its main purpose is flood control, and it has a storage capacity of ~~16,250~~30,200 acre-feet. Big Dry Creek Reservoir has prevented an estimated $15 million in damage in the Fresno-Clovis area (possibly more after last year's winter, which would have flooded much of downtown and areas of Fresno and Clovis) since its completion in 1948. (County of Fresno, 2018).

The Big Dry Creek Dam impounds stormwater runoff from Big Dry Creek in the Big Dry Creek Reservoir. The Big Dry Creek Reservoir is owned and operated by the FMFCD and is intended primarily for flood control of winter runoff from the Dry Creek and Dog Creek watersheds. In the 1990s, modifications were made to increase the capacity of the reservoir, and it now provides protection against the ~~200~~230-year flood. (County of Fresno, 2018).

Under wet conditions, the Big Dry Creek Reservoir captures runoff and controls releases into artificial ditches and canals, which drain into either Little Dry Creek, located north of the reservoir, or in a southerly direction into ~~Mill Ditch~~ Big Dry Creek. Flows from Little Dry Creek and ~~Mill Ditch~~ Big Dry Creek eventually drain to the San Joaquin River. Flows from the reservoir can also be diverted into Dog Creek, which also eventually drains into the San Joaquin River. During dry weather conditions, the reservoir does not discharge water and is normally empty, with the exception of a 156-acre-foot residual pool. The top of the pool remains below the elevation of an existing discharge gate. (County of Fresno, 2018).

Further, on average, FMFCD's regional stormwater basin system captures 92 percent of annual rainfall, of which, 70-85 percent of the captured stormwater runoff is recharged into the local groundwater aquifer. The stormwater basins also remove 50-80 percent of the typical stormwater pollutants. (FMFCD, 2020).

Mitigation activities continue to be done in accordance with applicable state and federal requirements for floodplain management and in coordination with the FMFCD. Additional mitigation measures for critical infrastructure protection and rehabilitation are done through the City's Capital Improvement Project (CIP) budget. To date, those mitigation projects have included fire station security, water/sewer infrastructure improvements and City Hall building rehabilitation. (County of Fresno, 2018).

Future Stormwater Drainage Demand and System Improvements

The 2016 Storm Fresno Metropolitan Flood Control District (FMFCD) Services Plan provides a comprehensive planning document to guide improvement and expansion of the City's storm drainage system to meet current and future needs in a safe and reliable manner while maintaining compliance with all applicable regulations.

~~The FMFCD has finalized the design of the Dry Creek Extension Basin located near Brawley and Annadale Avenues. This will be a rural flood control basin located southwest of the City of Fresno. It will provide storage for floodwaters flowing through Dry Creek and other canals, which will provide groundwater recharge benefits. The initial design of the basin was for a 20-acre basin site which is fully excavated. The FMFCD added an adjacent 23-acre site to provide additional storage. This basin is being constructed by the District and is not part of the Federal Redbank and Fancher Creeks Project. (FMFCD, 2017).~~The FMFCD operates the Big Dry Creek Detention Basin (BDB) (located at 168/Ashlan) and Basin "NN" (located at Valentine/Church), which provide flood relief for Dry Creek/Gould Extension. BDB is a 24-acre site and NN is a 37-acre site. The FMFCD also operates the Dry Creek Extension Basin located near Brawley and Annadale Avenues. This is a rural flood control basin located southwest of the City of Fresno that provides storage for floodwaters flowing through Dry Creek and other canals, also provides groundwater recharge benefits. The initial design of the basin was for a 20-acre basin site, which is fully excavated. The FMFCD added an adjacent 23-acre site to provide additional storage. This basin is being constructed by the District and is not part of the Federal Redbank and Fancher Creeks Project. (FMFCD, 2017).

The FMFCD has identified four primary groups of construction projects: (1) the Redbank-Fancher Creeks Flood Control Project; (2) District LCA enhancement projects; (3) new development projects; and (4) other routine District maintenance and construction projects. (FMFCD, 2017).

The Corps' Redbank-Fancher Creeks Project, completed in the summer of 1993, provides the points of control for the flows that will pass through the rural streams storm and flood conveyance system. Under the LCA with the Corps, the FMFCD is obligated to ensure proper functioning of the Redbank Fancher Creeks Project components. Through implementation of the rural streams program, the FMFCD will improve conveyance capacities of existing channels where necessary, restore obstructed and eradicated channels, and once adequate capacity is achieved, maintain appropriate project conveyance capabilities. These efforts will involve close coordination with private property owners and developers to obtain necessary channel easement dedications. These dedications preserve flooding rights-of-way and allow District access to the stream channels for operation and maintenance. (FMFCD, 2017).

As future development needs warrant, local drainage facilities will be added to augment the flood control facilities. The FMFCD will review new development plans to ensure appropriate design of channels according to the Rural Streams Design Manual, which is currently being developed by the District. Other routine District activities include construction, repair, and maintenance of flood control structures throughout the rural streams/flood control system. (FMFCD, 2017).

The following edits are made to pages 3.14-39 through 3.14-41 in Section 3.14 of the DEIR.

Impact 3.14-5: The proposed Project has the potential to require or result in the construction of new stormwater drainage facilities, the construction of which could cause significant environmental effects. (Less than Significant)

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

As shown on Figure 3.9-2, the majority of the Project site is located within the 500-year flood zone, and the northern and northeastern portion of the Project site is within the 100-year flood zone. It is noted that a small portion in the north of the Development Area is within the 100-year flood zone. The majority of the Development Area within the Project site is located in an area designated to have a minimal flood hazard. The flood zone designation of the site is also not due to a reduced risk from a levee nor is it located within a regulatory floodway.

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

The portions of the Project site that lie within the 100-year flood zone would require a Letter of Map Revision (LOMR) before development would be allowed. A LOMR is a document that officially revises a portion of the effective FEMA Flood Insurance Rate Map (FIRM) according to requirements and procedures outlined in the National Flood Insurance Program (NFIP) regulations. A LOMR allows FEMA to revise flood hazard information on a FIRM map via letter without physically revising and reprinting the entire map panel. The LOMR will reflect changes in elevation from grading and no flood insurance requirements would be imposed on structures in these areas once the LOMR is approved by FEMA. The LOMR process is a standard requirement for all new construction or substantial improvements of structures to ensure that they are elevated to or above the base flood elevation. Through compliance with these existing regulations, impacts would be **less than significant** and no new structures would be constructed within the 100-year flood plain.

The proposed stormwater collection system functions through storm drainage collection, treatment and discharge. The exact sizing of the underground piping will be engineered during the preparation of the improvement plans, which will be in coordination with FMFCD. The proposed storm drainage collection and detention system will be subject to the State Water Resources Control Board Requirements (SWRCB) and City of Clovis regulations; Phase II, National Pollutant Discharge Elimination System (NPDES) Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

FMFCD will require lot coverage to be provided prior to submittal of improvement plans. The lot coverage is calculated by the District to include the front yard walkway, sidewalk walkway and the rear yard patio equaling an additional 6% of impervious area in addition to the City’s typical lot coverage calculation. This calculation cannot be calculated at this time given that building plans and lot specific landscaping and site improvements have not been prepared. This very detailed level of design would be performed at either the improvement plan or building plan phase of the project. Ultimately, FMFCD charges a drainage fee that is calculated commensurate with the lot coverage calculation.

FMFCD reviews all grading and improvement plans for consistency with the FMFCD Master Plan. This review ensures that grading does not have an adverse impact to major storm conveyance and to the passage of storm water to the adjacent roadways and existing storm drainage pipelines and inlets. They require all projects to provide the appropriate surface flowage easements or covenants for any portion of the development area that cannot convey storm water to the public right-of-way without crossing private property.

The initial review by FMFCD has indicated that the "Development Area" is currently located within FMFCD's adopted Rural Master Plan Drainage Area "BY1." The adopted Rural Master Plan drainage system is designed to serve the existing land uses of open space, range/pasture and rural residential housing densities ranging from 0 to 0.7 dwelling unit/acre (du/ac). FMFCD has indicated that the existing planned drainage facilities do not have capacity to serve the proposed higher urban density residential land use. FMFCD has indicated that the "Development Area" is required to mitigate the impacts of the increased runoff from the proposed higher density residential land use to the adopted rural planned rate. FMFCD indicated that the "Development Area" may either make improvements to the existing pipeline system to provide additional capacity or may use some type of onsite permanent peak reducing facility in order to match the adopted Rural Master Plan flow rates and eliminate any adverse impacts on the downstream drainage system. FMFCD requested that the grading Engineer contact the District as early as possible to review the proposed site grading for verification and acceptance of design prior to preparing a grading plan.

FMFCD noted that the construction of the Optional Master Plan Facilities and Optional Non-Master Plan Facilities (as shown on Exhibit No. 1 of their letter), will provide permanent drainage service to the portion of the "Development Area" located north of Heirloom Avenue if it were constructed. The construction of the Optional Non-Master Plan Facilities, as shown on Exhibit No. 1, is conceptual at this time, but~~will~~ would provide permanent drainage service to the portion of the "Development Area" located south of Heirloom Avenue upon construction of facilities by in Tracts 6292 and 6344. If these optional facilities are not constructed, FMFCD recommends temporary facilities until permanent service is available. It is noted that the currently proposed storm drainage alignment for the Development Area does not align with this conceptual Optional Non-Master Plan Facilities.

FMFCD noted that the "Development Area" shall not block the historical drainage patterns of existing homes located within the parcels to the east and west side of the "Development Area." The "Development Area" shall verify to the satisfaction of FMFCD that runoff from these areas has the ability to surface drain to adjacent streets or be collected into PER-3, as shown on Exhibit No. 1 or another alignment that is approved by FMFCD. Either a stub street, channel, or a combination of both shall be provided for those areas, as shown on Exhibit No. 1, unless another alternative is approved by FMFCD.

FMFCD noted that the "Development Area" must identify what streets will pass the major storm and provide calculations that show structures will have adequate flood protection. Based on historical drainage patterns, some of the streets located within the "Development Area" may need to be resized or reconfigured (including, but not limited to, streets that include traffic calming curbs) to pass larger event storms. FMFCD approval is not extended to street configuration. A drainage report indicating the path of the major storm flow and calculations confirming there is adequate protection of finished floors will be necessary.

Stormwater quality standards imposed and monitored by the Environmental Protection Agency (EPA) and the SWRCB through the NPDES permit require treatment of stormwater runoff prior to its release into drainage features. Stormwater quality is an integral part of FMFCD's stormwater management system. With the design and construction of flood control improvements included in the proposed storm drainage system in accordance with FMFCD's requirements, the proposed Project would have a **less than significant** impact relative to this topic.

4.0 Cumulative/Other CEQA-Required Topics

The following edits are made to pages 4.0-19 in Section 4.0 of the DEIR.

Impact 4.20: Under Cumulative conditions, Project implementation would result in VMT increases that are greater than 87 percent of Baseline conditions (Cumulatively Considerable and Significant and Unavoidable)

Table ~~3.13-12~~ 3.13-2 in Section 3.13 presents the existing (2019) Regional and Project VMT per Capita. As shown in Table 3.13-2, the Project VMT per capita is 20.7 percent higher than the City's VMT per capita threshold. Project design features aim to promote overall mobility with the goal of reducing VMT and reducing greenhouse gas emissions. Implementation of these Project design features may possibly reduce the Project's VMT. The Project design features can help offset some of the VMT impacts of the Project.

Because the development would generate vehicle travel exceeding 13~~15~~ percent below the established city-wide average under Existing and Cumulative Conditions, even with implementation of Project Design measures that provide mitigating effects, development of the proposed Project would have a **cumulatively considerable contribution** and **a significant and unavoidable** impact.

The following edit is made to page 4.0-28 in Section 4.3 of the DEIR.

Impact 3.13-1: Project implementation would ~~not~~ result in VMT increases that are greater than 87 percent of Baseline conditions;

5.0 Alternatives

The following edits are made to pages 5.0-1 through 5.0-2 in Section 5.0 of the DEIR.

Project Objectives

The project objectives include a collection of goals and objectives, which clearly define the purpose of the Project. In developing the project objectives, it is notable that the City considered the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and it is clearly within a city's exercise of its legislative discretion to facilitate the construction of new housing, which is defined by the Project Description after thorough evaluation of the development potential. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects."

The principal Project objective is the expansion of the City's SOI to include the Project site, and the annexation/reorganization, approval and subsequent development of the Development Area.

~~The quantifiable objectives include the development of up to 605 single-family residential units. The quantifiable objectives include the development of open space totaling approximately 5.54 acres, including 2.25 acres of trails, 2.39 acres of promenade/pedestrian circulation, and 0.90 acres of parks. The Project objectives also include the installation of new public and private roadways that will provide pedestrian and vehicular access to the Project site and surrounding community areas, and other improvements, including water supply, storm drainage, sewer facilities and landscaping to serve the residential uses.~~

The City has established five additional objectives project goals and objectives ~~goals~~ of the proposed development that more fully inform the Project purpose. These project goals and objectives are as follows:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice to modestly increase urban density*.
- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City requirements as stated in the latest Regional Housing Needs Analysis (RHNA).
- Provide infrastructure that meets City standards and is integrated with existing and planned facilities and connections.
- Establish a logical phasing plan designed to ensure that each phase of development would include necessary public improvements required to meet City standards.
- Expand the City's Sphere of Influence in order to establish a logical and orderly boundary that promotes the efficient extension of municipal services.

The Project goals and objectives presented above, were developed by the City in response to the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, and the City's desire to facilitate the construction of new housing in the face of the housing crisis. The City staff has responded with adequate attention to the economic, environmental, and social costs of reduced housing density by establishing a quantified target density that provided the City with significant flexibility to evaluate different scenarios for residential projects on the Project site.

The following edits are made to pages 5.0-72 through 5.0-73 in Section 5.0 of the DEIR.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project (No Build) Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed Project.

As Table 5.0-1 presents a comparison of the alternative Project impacts with those of the proposed Project. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Density Alternative would be the environmentally superior alternative because all environmental issues would have reduced impacts compared to the proposed Project. It is noted that the Reduced Density Alternative does not fully meet all of the Project objectives. The following two project objectives are not fully met:

- Provide residential housing opportunities that are visually attractive and accommodate the future housing demand in Clovis, consistent with policies stated in *A Landscape of Choice* to modestly increase urban density.

- Establish a mixture of housing types, sizes and densities that collectively provide for local and regional housing demand, consistent with City Requirements as stated in the latest Regional Housing Needs Analysis (RHNA).

The Reduced Density Alternative would provide housing (150 units), but it would be 455 units less then what is proposed. The first objective listed above references "*A Landscape of Choice*" which is a regional document that provides direction for the region to utilize urban land as efficiently as possible while providing an adequate supply of a broad range of housing types and densities to meet market demand. One of the guiding principles recommends measures to facilitate and encourage compact growth to all urban land uses, including commercial, industrial and institutional uses. The Reduced Density Alternative is not consistent with this guidance for the region.

The second objective listed above references establishing a mix of housing to provide for local and regional housing demand, and consistent with the City requirements in the latest Regional Housing Needs Analysis (RHNA). In light of the Legislature's repeated determinations in recent years that California is facing a statewide housing crisis, the State has provided the City with good reason to exercise its legislative discretion to facilitate the construction of new housing. Government Code section 65889.5, subdivision (a)(1)(A), states that "[t]he lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." Subdivision (a)(1)(D) of that section adds that "[m]any local governments do not give adequate attention to the economic, environmental, and social costs of decisions that result in disapproval of housing development projects, reduction in density of housing projects, and excessive standards for housing development projects." The Reduced Density Alternative would result in 455 fewer units then the proposed Project, which is not consistent with Legislature's guidance for solving California statewide housing crisis.

TABLE 5.0-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	NO PROJECT (NO BUILD) ALTERNATIVE	INCREASED DENSITY MIXED USE ALTERNATIVE	REDUCED DENSITY ALTERNATIVE	REDUCED SPHERE OF INFLUENCE ALTERNATIVE
Aesthetics and Visual Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Agricultural Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Air Quality	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Cultural and Tribal Resources	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Geology and Soils	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)

Environmental Issue	No Project (No Build) Alternative	Increased Density Mixed Use Alternative	Reduced Density Alternative	Reduced Sphere of Influence Alternative
Greenhouse Gases, Climate Change and Energy	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Hydrology and Water Quality	Less (Best)	Equal (2nd Best)	Equal (2nd Best)	Equal (2nd Best)
Land Use, Population, and Housing	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Noise	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Public Services and Recreation	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)
Transportation and Circulation	Less (Best)	Greater (4th Best)	Less~~Equal~~ (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Greater (4th Best)	Less (2nd Best)	Equal (3rd Best)

Greater = Greater impact than that of the proposed Project

Less = Less impact than that of the proposed Project

Equal = No Substantial Change in impact from that of the proposed Project

6.0 REPORT PREPARERS

No changes were made to Chapter 6.0 of the DEIR.

7.0 REFERENCES

No changes were made to Section 7.0 of the DEIR.

APPENDICES

The Appendices are updated to include a Supplementary Report on Groundwater. This is included in the Revised Final EIR as Appendix L as previously published in the Final EIR.

Appendix L

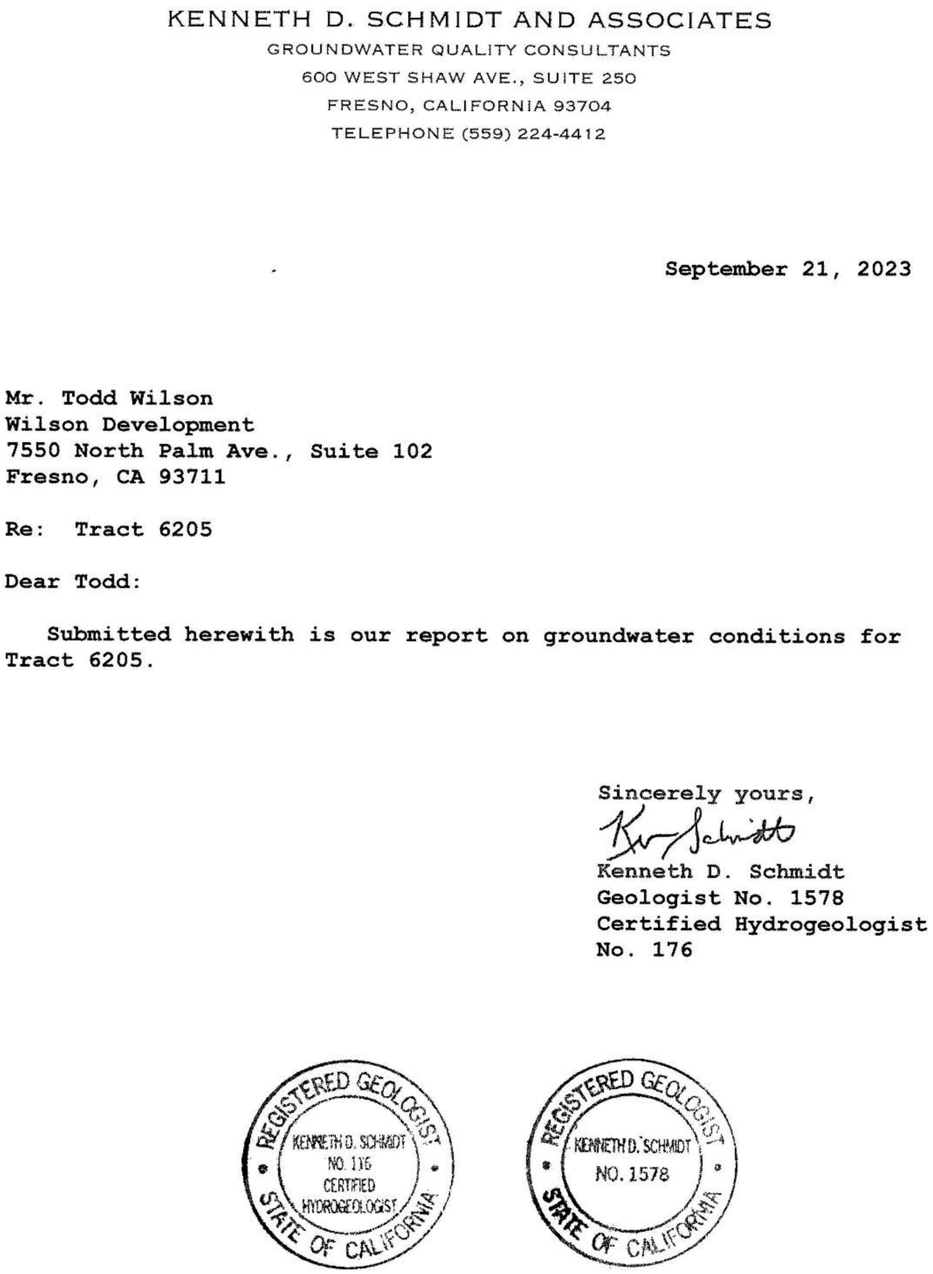
Supplementary Report on Groundwater Conditions by Ken Schmidt

GROUNDWATER CONDITIONS IN THE VICINITY OF PROPOSED TRACT 6205

prepared for
Wilson Development
Fresno, California

by
Kenneth D. Schmidt and Associates
Groundwater Quality Consultants
Fresno, California

September 2023



KENNETH D. SCHMIDT AND ASSOCIATES
GROUNDWATER QUALITY CONSULTANTS
600 WEST SHAW AVE., SUITE 250
FRESNO, CALIFORNIA 93704
TELEPHONE (559) 224-4412

September 21, 2023

Mr. Todd Wilson
Wilson Development
7550 North Palm Ave., Suite 102
Fresno, CA 93711

Re: Tract 6205

Dear Todd:

Submitted herewith is our report on groundwater conditions for Tract 6205.

Sincerely yours,

Ken Schmidt

Kenneth D. Schmidt
Geologist No. 1578
Certified Hydrogeologist
No. 176

REGISTERED GEOLOGIST
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NO. 176
CERTIFIED
HYDROGEOLOGIST
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KENNETH D. SCHMIDT
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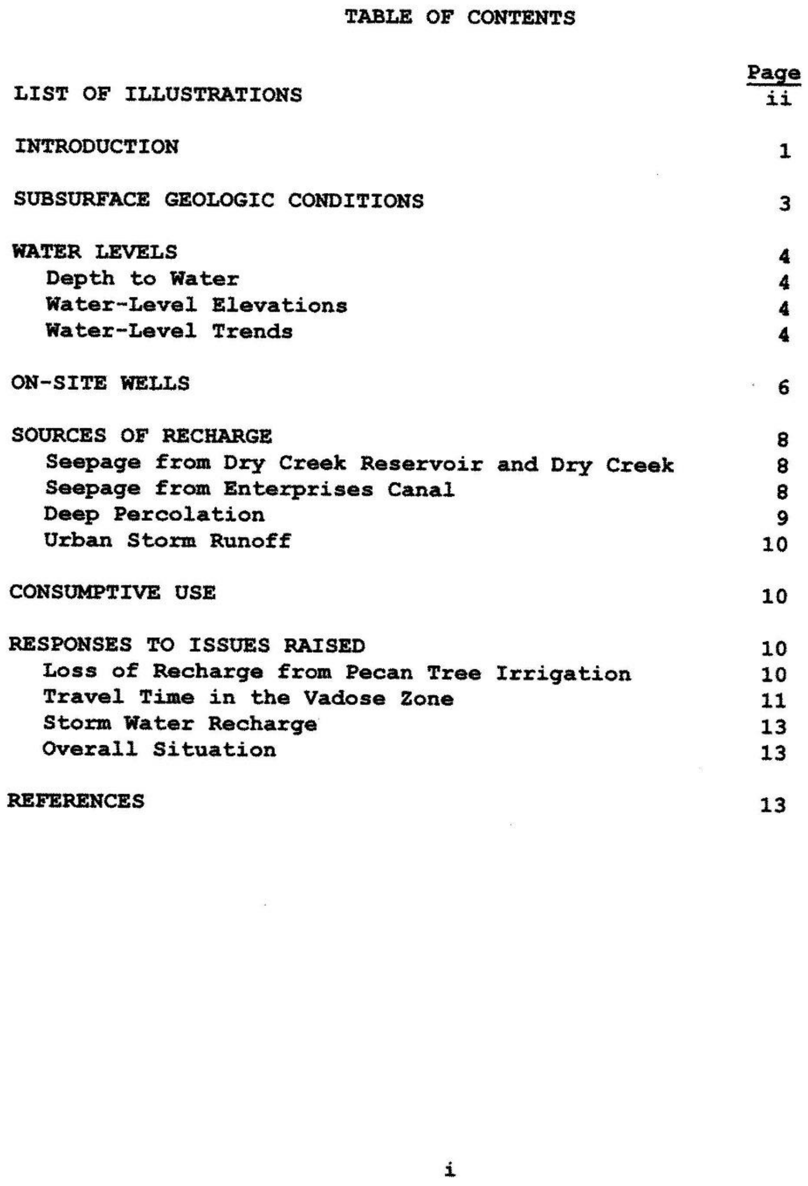

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GROUNDWATER CONDITIONS IN THE VICINITY OF PROPOSED TRACT 6205

INTRODUCTION

Tract 6205 would include 605 single family residential lots on about 77.5 acres. The proposed project site is bounded by Shepherd Avenue to the south, Perrin Avenue to the north, and Sunnyside Avenue to the west (Figure 1). The project is located in the southwest quarter of Section 21, T12S/R21E. Dry Creek is south of the site and Dry Creek Reservoir is about a mile to the east. The project would be served water from the City of Clovis water distribution system, which relies on wells and surface water supplies. Provost and Pritchard Consulting Group (2022) prepared a water supply assessment for Tract 6205. Hydrology and water quality for the vicinity were discussed in Section 3.9 of the Draft Environmental Impact Report for the Shepherd North area, which includes the project site.

A number of comments concerning groundwater were received for the project. Many of these concerned loss of recharge due to removal of the pecan trees which were formerly at the site, and disruption of recharge from rainfall. The purpose of the report is to provide information on the groundwater conditions in the area and impacts of the proposed project. Discussion of these conditions was minimal in the Water Supply Assessment, as surface water is to be used for the water supply.

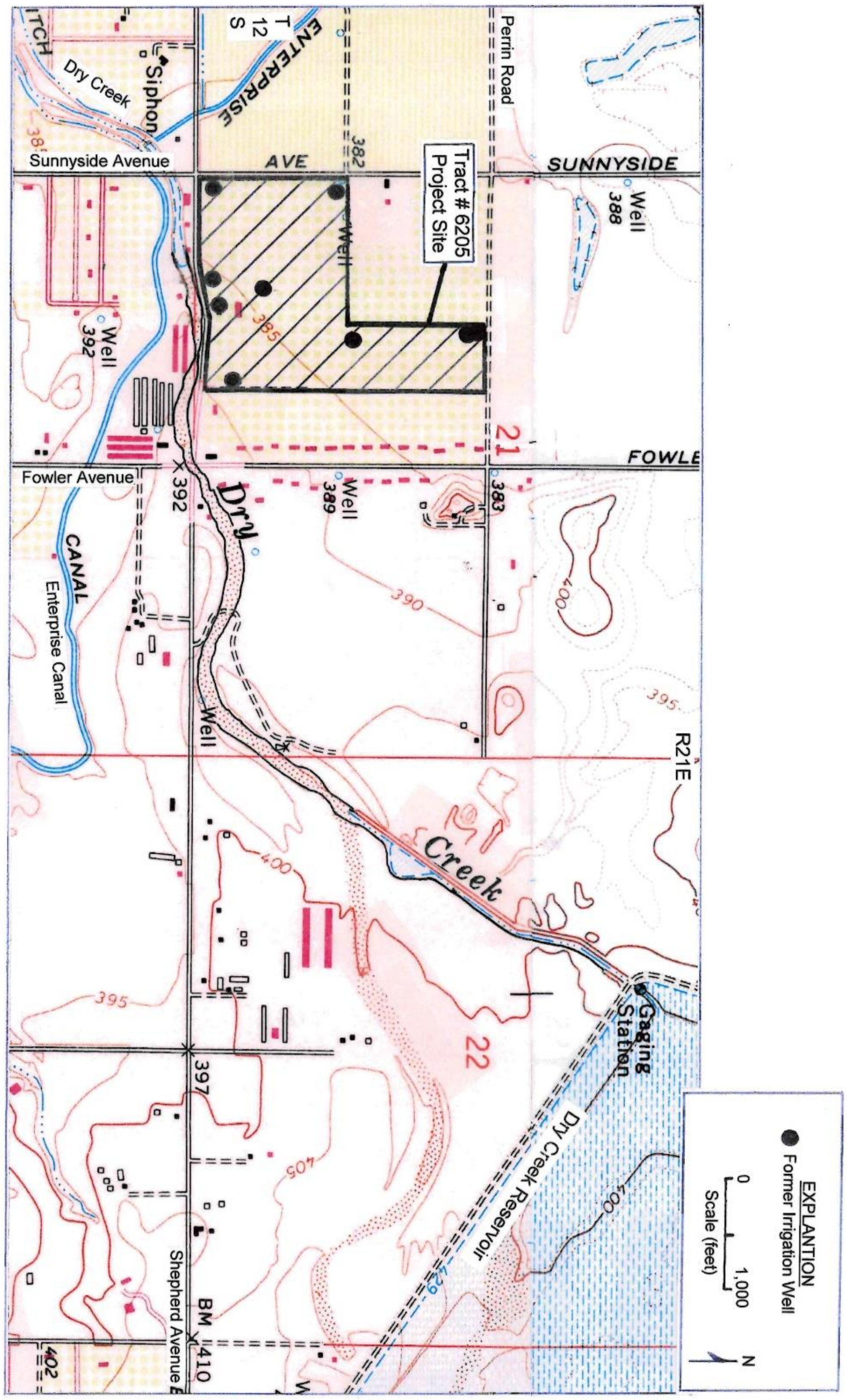
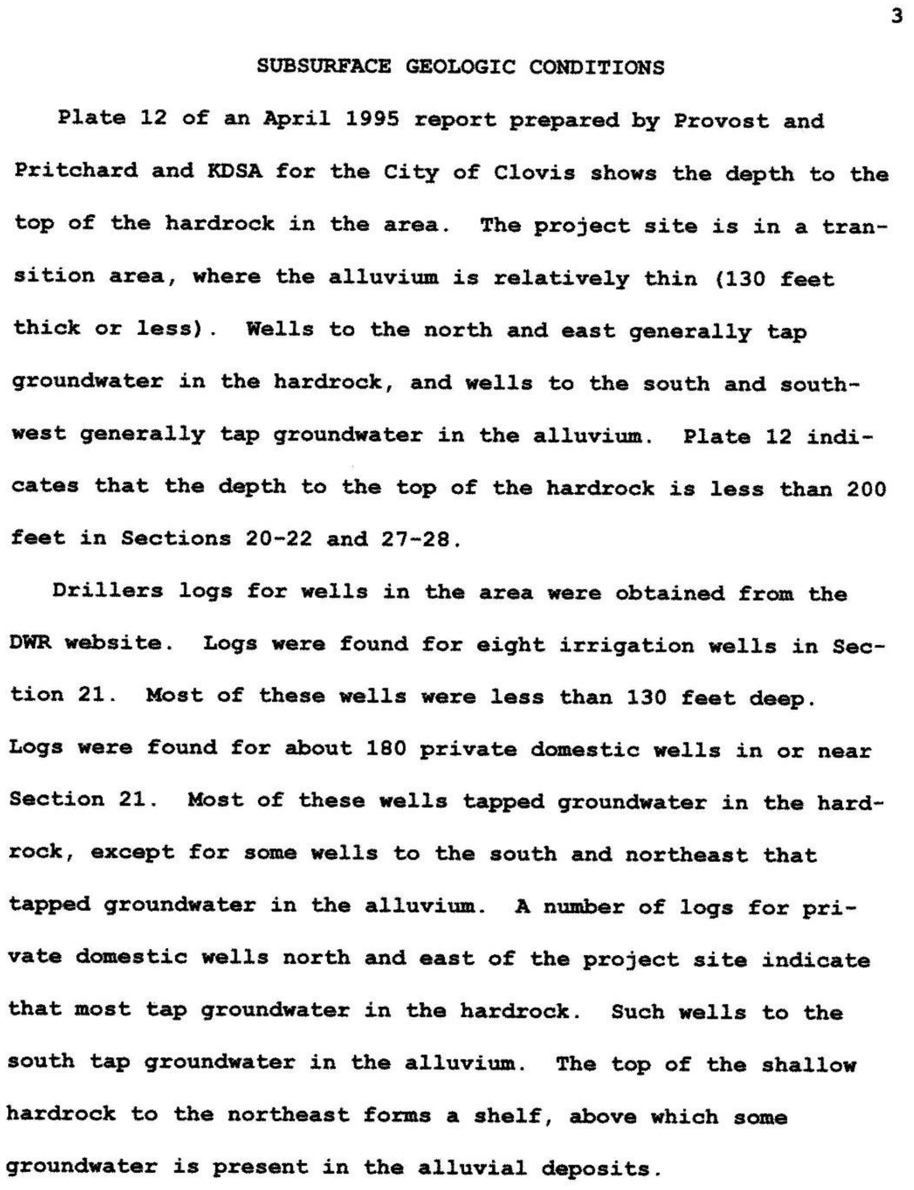


FIGURE 1-LOCATION OF PROJECT SITE AND VICINITY AND FORMER IRRIGATION WELLS AT SITE



SUBSURFACE GEOLOGIC CONDITIONS

Plate 12 of an April 1995 report prepared by Provost and Pritchard and KDSA for the City of Clovis shows the depth to the top of the hardrock in the area. The project site is in a transition area, where the alluvium is relatively thin (130 feet thick or less). Wells to the north and east generally tap groundwater in the hardrock, and wells to the south and southwest generally tap groundwater in the alluvium. Plate 12 indicates that the depth to the top of the hardrock is less than 200 feet in Sections 20-22 and 27-28.

Drillers logs for wells in the area were obtained from the DWR website. Logs were found for eight irrigation wells in Section 21. Most of these wells were less than 130 feet deep. Logs were found for about 180 private domestic wells in or near Section 21. Most of these wells tapped groundwater in the hardrock, except for some wells to the south and northeast that tapped groundwater in the alluvium. A number of logs for private domestic wells north and east of the project site indicate that most tap groundwater in the hardrock. Such wells to the south tap groundwater in the alluvium. The top of the shallow hardrock to the northeast forms a shelf, above which some groundwater is present in the alluvial deposits.

WATER LEVELS

Depth to Water

A water-level elevation map for Fall 2022 is available for the Fresno Irrigation District, which is near the project site south of the Enterprise Canal (Figure 2). The water-level elevation beneath the project site in Fall 2022 was about 330 feet above mean sea level. This equates to a depth to water of about 55 feet at the project site. Depth to water was measured in five unused on-site wells on September 19, 2023 and ranged from 61.0 to 74.7 feet below the ground surface. The shallowest level was in the central part of the area and the deepest was near the southwest corner.

Water-Level Elevations

The water-level elevation map for Fall 2022 and a number of other maps for recent years indicate a westerly direction of groundwater flow beneath the project site. This indicates recharge from the Dry Creek Reservoir and Dry Creek streamflow. Other hydrogeologic studies in the area west and southwest of the Dry Creek Reservoir indicate that seepage from the reservoir is the major source of recharge in the area. Seepage from Dry Creek downstream of the reservoir is also significant.

Water-Level Trends

Depth to water in wells south of the Enterprise Canal have

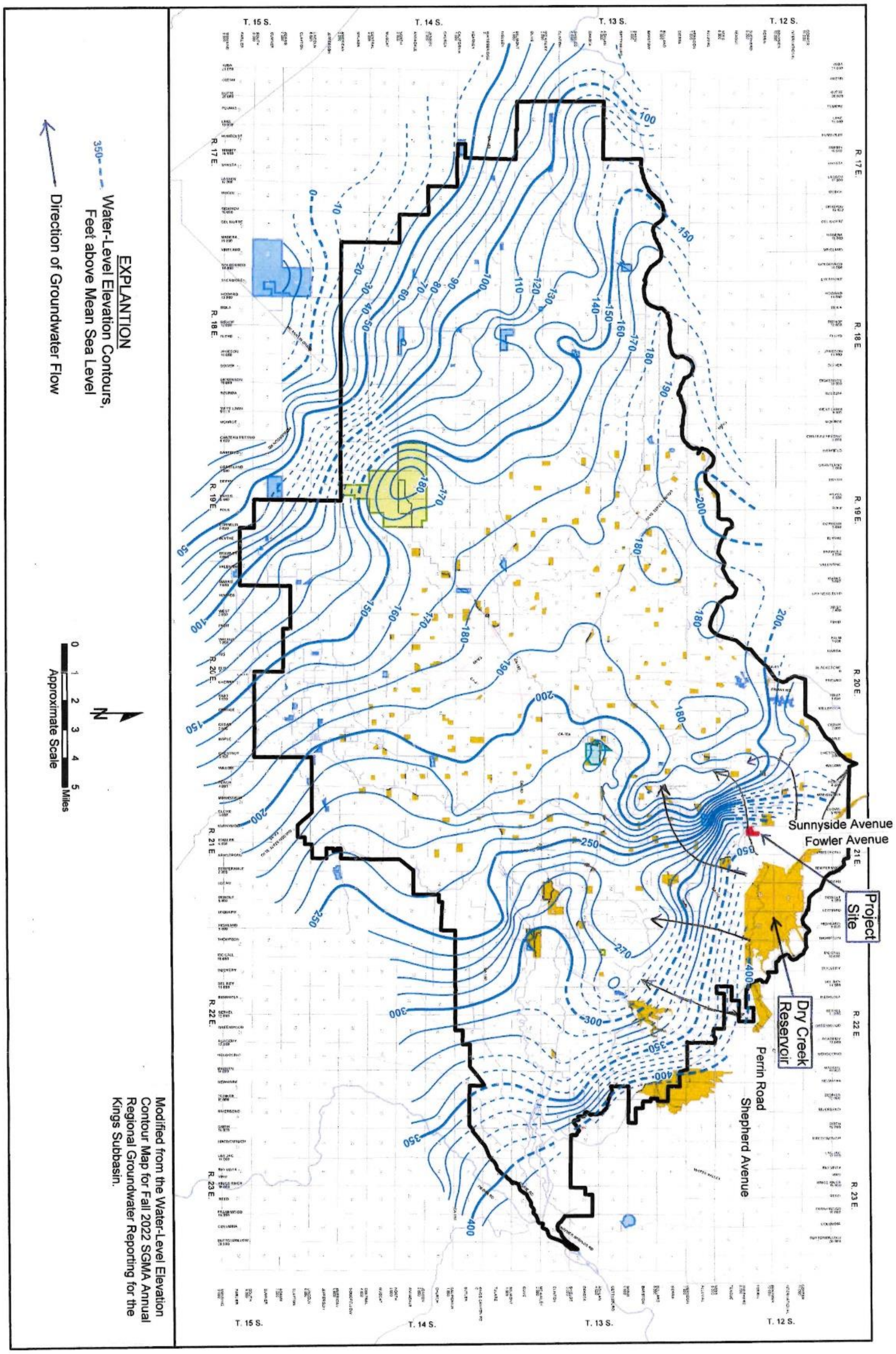


FIGURE 2-WATER-LEVEL ELEVATIONS AND DIRECTION OF GROUNDWATER FLOW (FALL 2022)

Modified from the Water-Level Elevation Contour Map for Fall 2022 SGMA Annual Regional Groundwater Reporting for the Kings Subbasin.

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been relatively stable in recent decades, falling during droughts and rising during wet periods. Early 2023 was a relatively wet period and large amounts of Dry Creek flows were diverted to Little Dry Creek and thence to the San Joaquin River.

A water-level hydrograph was prepared for Well T12S/R21E-29K1 (Figure 3). This well is located near Teague Avenue and Dry Creek, about half a mile downstream to the project site. The well taps groundwater in the alluvial deposits. Depth to water in this well has ranged from about 20 to 100 feet below land surface since 1974. The water level fell about 30 feet during the drought of the late 1980's to early 1990's, and did not recover. The water level fell during 1975-77, 2001-04, 2013-2015, and 2021-2023. Water levels recovered during 1978, 1995-96, 2005-06, and 2015-2016. These trends follow trends in the Dry Creek streamflow (discussed later).

ON-SITE WELLS

There is one private domestic well on site and about eight irrigation wells that were formerly used to irrigate the pecans at one time or another. Logs aren't available for most of these wells, but depths in some of them have been measured. These wells are about 100 to more than 130 feet deep. Wells located in the southwest tend to be deepest and to tap some groundwater

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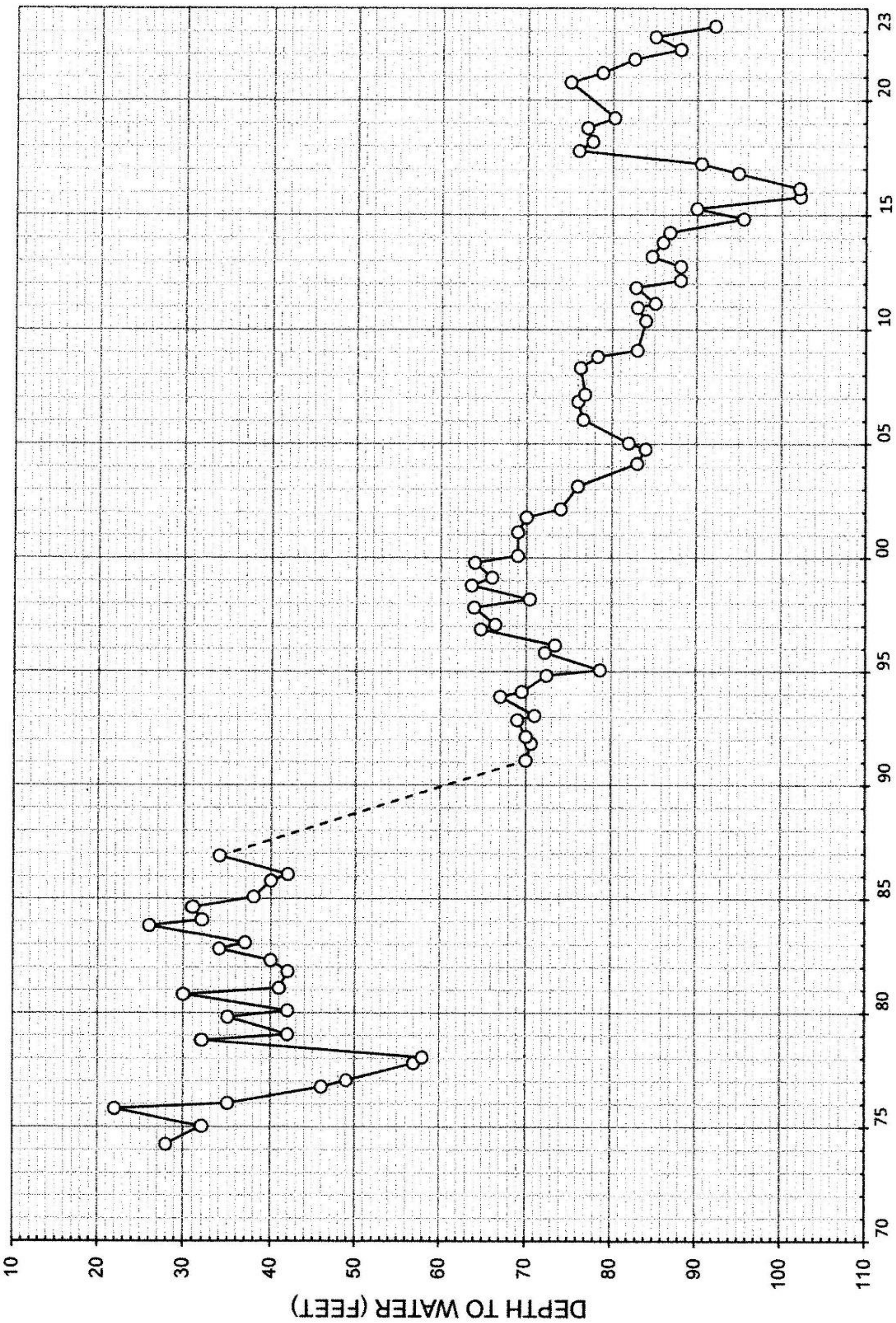


FIGURE 3-WATER-LEVEL HYDROGRAPH FOR WELL T12S/R21E-29K1

in the alluvium. The well near the southeast corner of the property was pump tested in August 2022. The static level was 61 feet deep and the pumping rate was 235 gpm. The well was measured to be 99 feet deep.

SOURCES OF RECHARGE

Seepage from Dry Creek Reservoir and Dry Creek

Dry Creek (Big Dry Creek) is located almost immediately south of the project site. Streamflow records for Big Dry Creek at the exit from the dam were obtained from the U.S. Army Corp. of Engineers for 1995-2023. There tend to be significant flows in wet years and no flow in dry years. During 1995-2023, there were four periods of little or no streamflow:

2002-2004 2013-2015
2007-2009 2018-2022

The longest of these periods was for 2018-2022. Water-level elevation maps such as the one for Fall 2022 show a large area of influence of seepage from the Dry Creek Reservoir, between Sunnyside Avenue and McCall Avenue.

Seepage from the Enterprise Canal

The Enterprise Canal is located about 400 feet south of the project site near Sunnyside Avenue and about 800 feet south of the project site near the east edge. Seepage from the canal is close enough to the south part of the project site to be a significant source of recharge to groundwater beneath that area.

Deep Percolation

Deep percolation is the difference between water applied for irrigation and the consumptive use of the applied water. When the pecans were grown at the site, the consumptive use of applied water was 2.6 acre-feet per year per acre, or 200 acre-feet per year. This is based on data from DWR Bulletin 113-3. Flood irrigation was used to water the pecans, and an average irrigation efficiency of about 50 percent is indicated, based on studies for the Tulare Lake Basin 5D in the early 1970's. The irrigation efficiency is the consumptive use of applied water divided by the applied water. The groundwater pumpage for the pecan irrigation would have averaged about 400 acre-feet per year. The deep percolation would have been about 200 acre-feet per year, all from groundwater pumpage.

For the proposed development, deep percolation is from the outside water use. The outside water use is the water demand from surface water of 255 acre-feet per year minus the sewer flow of 120 acre-feet per year, or 135 acre-feet per year. An irrigation efficiency of 70 percent is assumed for the outside water use. The deep percolation is the difference between the outside water use (135 acre-feet per year) minus the consumptive use (95 acre-feet per year), or about 40 acre-feet per year. All of this deep percolation would come from surface water.

Urban Storm Runoff

Harbour and Associates (2023) have estimated the project average storm water runoff to be about 40 acre-feet per year.

CONSUMPTIVE USE

When the pecans were grown at the project site, the average consumptive use of applied water was about 200 acre-feet per year. For the project, the average consumptive use of applied water for outside irrigation would be about 95 acre-feet per year, a reduction of about 105 acre-feet per year.

RESPONSES TO ISSUES RAISED

Loss of Recharge from Pecan Tree Irrigation

The reduction in deep percolation due to the proposed project would average about 160 acre-feet per year. Considering the direction of groundwater flow, only the north half of the project would appear to influence the groundwater in the rural residential area to the northwest. Many of the residences near Fowler Avenue are upgradient of the project and the influence would be minimal. Recharge from Dry Creek Reservoir and Dry Creek are indicated to be the most significant sources of recharge to groundwater in the area.

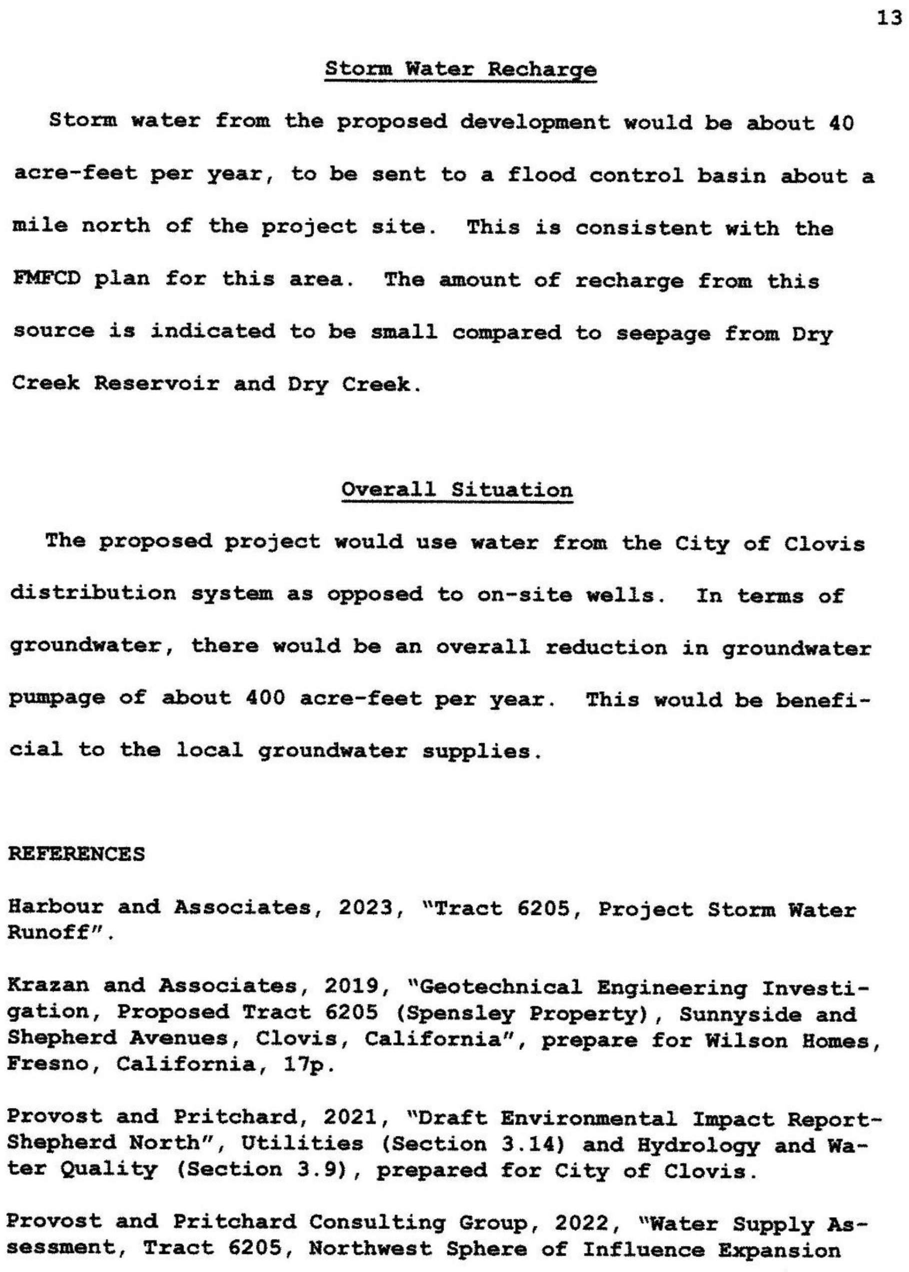
Some of the comments indicated that removal of the pecan trees coincided with reductions in yields of private domestic wells to the northwest. The water levels in wells apparently declined during 2018-2022, but this was primarily associated with a lack of recharge from Dry Creek streamflow and seepage from the reservoir.

Rural residential areas should have a net zero water balance, meaning that recharge of storm runoff should equal or exceed the consumptive use. The water supply for these areas should not be dependent on irrigation of other properties, which could have been stopped at any time. Irrigation of crops in white areas is likely to be decreased in the future because of the Sustainable Groundwater Management Act. Unless a source of surface water for this irrigation can be found, substantial reductions in groundwater pumpage will be necessary.

Travel Time in the Vadose Zone

The travel time for downward percolating water in the vadose zone (above the water table) is greatly different for deep percolation from irrigation compared to seepage from Dry Creek or the reservoir. This is because for irrigation return flow in the Fresno area, the rate of downward movement is commonly about 20 feet per year or less. At the project site, this is primarily due to the small amount of deep percolation (2.6 feet per year). In contrast, for seepage from a stream such as Dry Creek, the downward movement of seepage is indicated to be about one to two feet per day. Because of this large rate of recharge, the stream seepage commonly reaches the water table within a few weeks or months after leaving the ground surface.

Thus the reported drastic effects on water levels and yields for the domestic wells in the area after the pecans were removed was not due to removal of the pecans. Most of the domestic wells are hardrock wells, where deep percolation would have to pass through a vadose zone in the unsaturated alluvium, then through some saturated alluvium, then through fractures in the hardrock, some of which are indicated to be 200 to 300 feet deep. Thus, not enough time has elapsed for the loss of deep percolation from the previous pecan irrigation to have an effect on water levels or yields of the wells in this area. In contrast, water from Dry Creek and the reservoir can move quickly through the vadose zone. Past monitoring has indicated a rapid response of water levels to Dry Creek streamflow.



Storm Water Recharge

Storm water from the proposed development would be about 40 acre-feet per year, to be sent to a flood control basin about a mile north of the project site. This is consistent with the FMFCD plan for this area. The amount of recharge from this source is indicated to be small compared to seepage from Dry Creek Reservoir and Dry Creek.

Overall Situation

The proposed project would use water from the City of Clovis distribution system as opposed to on-site wells. In terms of groundwater, there would be an overall reduction in groundwater pumpage of about 400 acre-feet per year. This would be beneficial to the local groundwater supplies.

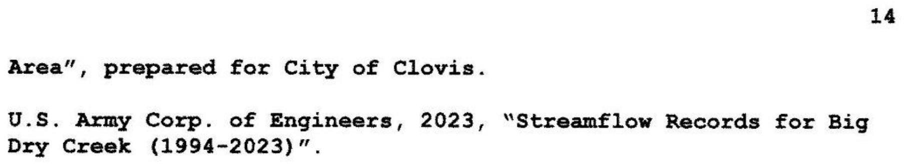
REFERENCES

Harbour and Associates, 2023, "Tract 6205, Project Storm Water Runoff".

Krazan and Associates, 2019, "Geotechnical Engineering Investigation, Proposed Tract 6205 (Spensley Property), Sunnyside and Shepherd Avenues, Clovis, California", prepare for Wilson Homes, Fresno, California, 17p.

Provost and Pritchard, 2021, "Draft Environmental Impact Report-Shepherd North", Utilities (Section 3.14) and Hydrology and Water Quality (Section 3.9), prepared for City of Clovis.

Provost and Pritchard Consulting Group, 2022, "Water Supply Assessment, Tract 6205, Northwest Sphere of Influence Expansion



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Area", prepared for City of Clovis.

U.S. Army Corp. of Engineers, 2023, "Streamflow Records for Big Dry Creek (1994-2023)".

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FINAL MITIGATION MONITORING AND REPORTING PROGRAM 5.0

This document is the Final Mitigation Monitoring and Reporting Program (FMMRP) for the Shepherd North (Project). This FMMRP has been prepared pursuant to Section 21081.6 of the California Public Resources Code, which requires public agencies to "adopt a reporting and monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment." A FMMRP is required for the proposed Project because the EIR has identified significant adverse impacts, and measures have been identified to mitigate those impacts.

The numbering of the individual mitigation measures follows the numbering sequence as found in the Draft EIR.

5.1 MITIGATION MONITORING AND REPORTING PROGRAM

The FMMRP, as outlined in the following table, describes mitigation timing, monitoring responsibilities, and compliance verification responsibility for all mitigation measures identified in this Revised Final EIR.

The City of Clovis will be the primary agency responsible for implementing the mitigation measures and will continue to monitor mitigation measures that are required to be implemented during the operation of the proposed Project.

The FMMRP is presented in tabular form on the following pages. The components of the FMMRP are described briefly below:

- **Mitigation Measures**: The mitigation measures are taken from the Draft EIR in the same order that they appear in that document.
- **Mitigation Timing**: Identifies at which stage of the project mitigation must be completed.
- **Monitoring Responsibility**: Identifies the agency that is responsible for mitigation monitoring.
- **Compliance Verification**: This is a space that is available for the monitor to date and initial when the monitoring or mitigation implementation took place.

TABLE 5.0-1: MITIGATION MONITORING AND REPORTING PROGRAM

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
BIOLOGICAL RESOURCES				
Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species.	***Mitigation Measure 3.4-1****: The Project applicant shall implement the following measure to avoid or minimize impacts on other protected bird species that may occur on the site:* • *Preconstruction surveys for active nests of special-status birds shall be conducted by a qualified biologist in all areas of suitable habitat within 500 feet of project disturbance. Surveys shall be conducted within 14 days before commencement of any construction activities that occur during the nesting season (February 15 to August 31) in a given area.* • *If any active nests, or behaviors indicating that active nests are present, are observed, appropriate buffers around the nest sites shall be determined by a qualified biologist to avoid nest failure resulting from project activities. The size of the buffer shall depend on the species, nest location, nest stage, and specific construction activities to be performed while the nest is active. The buffers may be adjusted if a qualified biologist determines, based on these same considerations, that a change in buffer size would not be likely to adversely affect the nest. If buffers are adjusted, monitoring will be conducted to confirm that project activity is not resulting in detectable adverse effects on nesting birds or their young. No project activity shall commence within the buffer areas until a qualified biologist has determined that the young have fledged or the nest site is otherwise no longer in use.*	City of Clovis Planning and Development Services Department, Engineering Division Qualified Biologist	Prior to construction activities	
Impact 3.4-4: The proposed Project has the potential to result in direct or indirect effects on special-status mammal species.	***Mitigation Measure 3.4-2:*** *Prior to grading of each Project development phase, the Project applicant shall conduct a survey of the area to be graded for bat roosts, and if present, the Project applicant shall implement the following measures to avoid or minimize impacts on special-status bats:* • *If removal of suitable roosting areas (i.e., buildings, trees, shrubs, bridges, etc.) must occur during the bat pupping season (April 1 through July 31), surveys for active maternity roosts shall be*	City of Clovis Planning and Development Services Department, Engineering Division	Prior to any grading activities	

Environmental Impact	*Mitigation Measure*	*Monitoring Responsibility*	*Timing*	*Verification (Date/Initials)*
	conducted by a qualified biologist. The surveys shall be conducted from dusk until dark. • *If a special-status bat maternity roost is located, appropriate buffers around the roost sites shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from habitat removal or other project activities. The size of the buffer shall depend on the species, roost location, and specific construction activities to be performed in the vicinity. No project activity shall commence within the buffer areas until the end of the pupping season (August 1) or until a qualified biologist conforms the maternity roost is no longer active.* • *If a non-maternal roost is located, eviction and exclusion techniques shall be conducted as recommended by the qualified biologist. Methods may include opening the roosting area to change the air flow and lighting, installing one-way doors, or other appropriate methods that allow the bats to exit and find a new roost. After eviction is believed to be completed, acoustic monitoring, and an evening emergence survey shall be performed by the qualified biologist to ensure eviction is complete. For tree removal, a two-step tree removal process involving removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree.*	Qualified Biologist		
CULTURAL AND TRIBAL RESOURCES				
Impact 3.5-1: Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5	**Mitigation Measure 3.5-1:** If subsurface deposits believed to be cultural, historical, archaeological, tribal, and/or human in origin are discovered during construction and/or ground disturbance, all work must halt within a 100-foot radius of the discovery. A Native American Representative from traditionally and culturally affiliated Native American Tribes that requested consultation shall be immediately contacted and invited to assess the significance of the find and make recommendations for further evaluation and treatment, as necessary. If deemed necessary by the City, a qualified cultural resources specialist meeting the Secretary of Interior's Professional Qualifications Standards for Archaeology, may also assess the	City of Clovis Planning and Development Services Department, Engineering Division Qualified	If any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources are	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	significance of the find in joint consultation with Native American Representatives to ensure that Tribal values are considered. Work at the discovery location cannot resume until it is determined by the City, in consultation with culturally affiliated tribes, that the find is not a tribal cultural resource, or that the find is a tribal cultural resource and all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied. The qualified cultural resources specialist shall have the authority to modify the no-work radius as appropriate, using professional judgement. The following notifications and measures shall apply to potential unique archaeological resources and potential historical resources of an archaeological nature (as opposed to tribal cultural resources), depending on the nature of the find: • If the professional archaeologist determines that the find does not represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature, work may resume immediately and no agency notifications are required. • If the professional archaeologist determines that the find does represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature from any time period or cultural affiliation, he or she shall immediately notify the City and applicable landowner. The professional archaeologist and a representative from the City shall consult to determine whether any unique archaeological resources or historical resources of an archaeological nature are present, in part based on a finding of eligibility for inclusion in the NRHP or CRHR. If it is determined that unique archaeological resources or historical resources of an archaeological nature are present, the qualified archaeologist shall develop mitigation or treatment measures for consideration and approval by the City. Mitigation shall be developed and implemented in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section	Archaeologist	found during grading and construction activities	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If approved by the City, such measures shall be implemented and completed prior to commencing further work for which grading or building permits were issued, unless otherwise directed by the City. Avoidance or preservation of unique archaeological resources or historical resources of an archaeological nature shall not be required where such avoidance or preservation in place would preclude the construction of important structures or infrastructure or require exorbitant expenditures, as determined by the City. Where avoidance or preservation are not appropriate for these reasons, the professional archaeologist, in consultation with the City, shall prepare a detailed recommended a treatment plan for consideration and approval by the City, which may include data recovery. If employed, data recovery strategies for unique archaeological resources that do not also qualify as historical resources of an archaeological nature shall follow the applicable requirements and limitations set forth in Public Resources Code Section 21083.2. Data recovery will normally consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of recovering important scientific data contained within the unique archaeological resource or historical resource of an archaeological nature. The data recovery plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. If data recovery is determined by the City to not be appropriate, then an equally effective treatment shall be proposed and implemented. Work may not resume within the no-work radius until the City, in consultation with the professional archaeologist, determines that the site either: 1) does not contain unique archaeological resources or historical resources of an archaeological nature; or			

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	2) that the preservation and/or treatment measures have been completed to the satisfaction of the City. • If the find includes human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (§5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.			
Impact 3.5-2: Project Implementation has the potential to disturb human remains, including those interred outside of formal cemeteries.	**Reference is Made to Mitigation Measure 3-5.1**	City of Clovis Planning and Development Services Department,	If any cultural resources, including prehistoric or historic	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
		Engineering Division Qualified Archeologist	artifacts, or other indications of archaeological resources are found during grading and construction activities	
Impact 3.5.3: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1 (k), or a resource determined by the lead agency.	**Reference is Made to Mitigation Measure 3-5.1**	City of Clovis Planning and Development Services Department, Engineering Division Qualified Archeologist	If any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources are found during grading and construction activities	
GEOLOGY, SOILS, AND MINERAL RESOURCES				
Impact 3.6-6: The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	***Mitigation Measure 3.6-1:*** *Prior to approval of a grading permit, the Project proponent shall ensure that grading and improvement plans include the following note: "If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in*	City of Clovis Planning and Development Services Department, Engineering Division Qualified	Prior to issuance of grading permit	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
	place or relocating on the Project site, *if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology."*	Paleontologist		
HAZARDS AND HAZARDOUS MATERIALS				
Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	***Mitigation Measure 3.8-1:*** *Prior to the acceptance of improvements, the Project proponent shall hire a licensed well contractor to obtain a well abandonment permit from Fresno County Department of Public Health Environmental Health Division, and properly abandon the on-site wells, pursuant to review and approval of the City Engineer and the Fresno County Department of Public Health Environmental Health Division.*	Fresno County Department of Public Health Environmental Health Division	Prior to approval of improvements plans	
	Mitigation Measure 3.8-2: *The Project proponent shall hire a qualified consultant to perform additional testing prior to the issuance of grading permits for construction activities in the following areas that have been deemed to have potentially hazardous conditions present:* • *The area near the three ASTs and four 55-gallon drums (see Figure 3.8-1 of the Draft EIR).* • *The areas where USTs may exist, including near the former warehouse and former residences.* • *The soils in the area where farming equipment and above ground tanks have been used, and near the former warehouse and former residences (see Figure 3.8-1 of the Draft EIR).* • *The area near the four pole-mounted transformers (see Figure 3.8-1 of the Draft EIR).* *The intent of the additional testing is to investigate whether any of the areas, facilities, or soils contain hazardous materials. All activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The ACBM and lead shall be disposed of properly at an appropriate offsite disposal facility. If surface staining is found on the Project site, a hazardous waste specialist shall be*	Fresno County Department of Public Health Environmental Health Division.	Prior to issuance of grading permit	

ENVIRONMENTAL IMPACT	MITIGATION MEASURE	MONITORING RESPONSIBILITY	TIMING	VERIFICATION (DATE/INITIALS)
	engaged to further assess the stained area. *Should further soil sampling be required in any stained areas, evenly distributed soil samples shall be conducted for analysis of pesticides and heavy metals. The samples shall be submitted for laboratory analysis of pesticides and heavy metals per DTSC and EPA protocols. The results of the soil sampling shall be submitted to the Fresno County Department of Public Health Environmental Health Division. If elevated levels of pesticides or heavy metals are detected during the laboratory analysis of the soils, a soil cleanup and remediation plan shall be prepared and implemented prior to the commencement of grading activities.* *Further, in the event of a future release/leak of insulating fluids from any of the four pole-mounted transformers, PG&E shall be contacted regarding the testing of the transformers for PCB fluids or for their removal/replacement.*			
NOISE				
Impact 3.11-1: Operational Noise - The Proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	***Mitigation Measure 3.11-1:*** *A 6-foot-tall barrier shall be constructed along the boundary of the Project site, adjacent to Sunnyside Avenue and Shepherd Avenue (along all unshielded residential private yards within 100 ft of the centerline of Sunnyside and Shepherd Avenues), in order to achieve the City's exterior noise standards. Noise barrier walls shall be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials that achieve the required total height. Wood is not recommended due to eventual warping and degradation of acoustical performance. These walls must be at least 4.2 lbs/ft. These requirements shall be included in the improvements plans prior to their approval by the City's Public Utilities Department.* ***Mitigation Measure 3.11-2:*** *The Project developer will ensure that any unshielded residential glass facades within 100 ft of the centerline of Shepherd Avenue or Sunnyside Avenue directly facing the subject roadway must have an STC rating of 30 or more. This includes any 2nd-floor windows, which would not be shielded by the 6- foot sound walls.*	City of Clovis Public Utilities Department	Prior to approval of improvements plans	

ENVIRONMENTAL IMPACT	*MITIGATION MEASURE*	*MONITORING RESPONSIBILITY*	*TIMING*	*VERIFICATION (DATE/INITIALS)*
Impact 3.11-2: Construction Noise - The Proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	***Mitigation Measure 3.11-3:*** *Construction activities shall adhere to the requirements of the City of Clovis Municipal Code with respect to hours of operation. This requirement shall be noted in the improvements plans prior to approval by the City's Public Utilities Department.* *As soon as practicable (after grading operations), install permanent fencing along the boundary of the area being Developed and the adjacent Non-Development Area. Fencing should be a minimum of 6 feet tall and continuous between the source of noise and adjacent residences.* ***Mitigation Measure 3.11-4****: The contractor shall ensure that the following noise attenuating strategies are implemented during project construction:* • *During construction, the contractor shall ensure mufflers are properly installed on all construction equipment capable of being outfitted with mufflers.* • *Idling equipment shall be turned off when not in use.* • *Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.*	City of Clovis Public Utilities Department	During project construction	

CLOVIS
UNIFIED
SCHOOL DISTRICT

August 1, 2023

George Gonzalez, MPA, Senior Planner
Planning and Development Services Dept.
1033 Fifth St.
Clovis, CA 93612

SUBJECT: T-6205; 605-lot single-family subdivision
North of Shepherd Avenue, between N Sunnyside & N Fowler Avenue
APN: 557-020-19,20,21

Dear George Gonzalez:

The purpose of this letter is to provide school district information relative to the above-referenced development and to comply with Business and Professions Code section 11010, subdivision (b)(11)(A) regarding the provision of school-related information to the developer/owner and the State Department of Real Estate.

1. Elementary School Information:

   (a) The subject land is presently within the attendance area of the elementary school (grades K-6) listed below:

   School Name: *Riverview Elementary*
   Address: *2491 E Behymer Ave Fresno CA 93730-5419*
   Telephone: (559) 327-8600
   Capacity: *875*
   Enrollment: 656 (CBEDS enrollment *2022-23* school year)

   (b) Because of projected growth in the District and the District's plans for construction of new school facilities, it is possible that (1) adjustment of school attendance areas could occur in the future such that students residing in the project area may be required to attend an elementary school other than the school listed above, and (2) students residing in the project area may attend more than one elementary school within the District during their elementary school years.

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ATTACHMENT 20

1450 Herndon Avenue • Clovis, CA 93611-0599
559-327-9000 • www.cusd.com

2. Intermediate School Information:

School Name: *Granite Ridge Intermediate*
Address: *2770 E International Ave Fresno CA 93730-5400*
Telephone: (559) 327-5000
Capacity: *1512*
Enrollment: 1118 (CBEDS enrollment *2022-23* school year)

3. High School Information:

School Name: *Clovis North High School*
Address: *2770 E International Ave Fresno CA 93730-5400*
Telephone: (559) 327-5000
Capacity: *2700*
Enrollment: 2389 (CBEDS enrollment *2022-23* school year)

4. Bus transportation is currently provided for grades K-6 students residing further than one mile from school and for grades 7-12 students residing further than two and one-half miles from school. Transportation will be available for students attending the above-identified elementary, intermediate and high schools in accordance with District standards in effect at the time of enrollment.

5. The District currently levies a school facilities fee of $5.68 per square foot (as of July 3, 2023) for residential development. The fee is adjusted periodically in accordance with law. New development on the subject property will be subject to the fee in place at the time fee certificates are obtained.

The District hereby requests that the information in this letter be provided by the owner/subdivider to all prospective purchasers of property within the project.

Thank you for the opportunity to comment on the project. Please contact me if you have any questions regarding this letter.

Sincerely,

Michael Johnston
Associate Superintendent
Administrative Services

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWS

California Department of Transportation

DISTRICT 6 OFFICE
1352 WEST OLIVE AVENUE | P.O. BOX 12616 | FRESNO, CA 93778-2616
(559) 908-7064 | FAX (559) 488-4195 | TTY 711
www.dot.ca.gov

August 15, 2023

FRE-168-R7.805
Application for TTM – Tentative Tract Map
TM 6205, GPA 2021-005, GPA 2021-006
PDP 2021, R 2021-009, RO 307
https://ld-igr-gts.dot.ca.gov/district/6/report/26417

SENT VIA EMAIL

George Gonzalez, Senior Planner
Planning and Development Services Department
City of Clovis
1033 Fifth Street
Clovis, CA 93612

Dear Mx. Gonzalez:

Thank you for the opportunity to the Tentative Tract Map 6205 and the associated entitlements for the Shepherd North project which proposes to develop approximately 155 acres of land for the construction of 605 single-family residential units and parkland that is currently outside the City of Clovis' city limits. The project is approximately 2 miles north of the State Route (SR) 168 and Fowler Avenue interchange and 2.3 miles northeast of the SR 168 and Herndon Avenue interchange.

This project was previously reviewed as part of the Notice of Preparation (NOP) of an Draft Environmental Impact Report (DEIR) and a Scope of Work (SOW) for a Transportation Impact Analysis (TIA) with our office providing comment letters dated June 10, 2022 and June 22, 2022 respectively. All previous comment letters still apply to this project. Please see Attachment "A"

Our office is currently reviewing and plans on submitting a comment letter on the project's released DEIR with comments on the document due September 4, 2023.

If you have any other questions, please call or email Christopher Xiong at (559) 908-7064 or Christopher.Xiong@dot.ca.gov.

Sincerely,

DAVID PADILLA, Branch Chief
Transportation Planning – North

Attachment A:
Previous Review Comment Letters

Attachment A

AGENDA ITEM NO. 6.

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWS

California Department of Transportation

DISTRICT 6 OFFICE
1352 WEST OLIVE AVENUE | P.O. BOX 12616 | FRESNO, CA 93778-2616
(559) 908-7064 | FAX (559) 488-4195 | TTY 711
www.dot.ca.gov

June 10, 2022

FRE-168-R7.805
Notice of Preparation of an EIR
Shepherd North Project
https://ld-igr-gts.dot.ca.gov/district/6/report/26417

SENT VIA EMAIL

George Gonzalez, Senior Planner
Planning and Development Services Department
City of Clovis
1033 Fifth Street
Clovis, CA 93612

Dear Mr. Gonzalez:

Thank you for the opportunity to review the Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Shepherd North Project. The project proposes to develop approximately 155 acres of land for the construction of 605 single-family residential units and parkland that is currently outside the City of Clovis' city limits. Approximately 2 miles north of the State Route (SR) 168 and Fowler Avenue interchange, the project is located on the northwest quadrant of Shepherd and Fowler Avenue with the project being bounded on the north by Perrin Road, on the east by Fowler Avenue, on the south by Shepherd Avenue, and on the west by Sunnyside Avenue.

Additional subsequent actions and approvals from the City include a General Plan Amendment, Residential Site Plan Review, Vesting Tentative Maps, and other permits and annexation requests.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. To ensure a safe and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation networks

Caltrans provides the following comments consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. Caltrans requests that prior to initiating the Transportation section of the Draft EIR, Caltrans be provided an opportunity to provide comments on the scope of work. If a kick-off meeting for the development of the Draft EIR is planned to be held by the City, Caltrans requests to be included in this meeting

2. Given the proposed number of single-family housing units and proximity to State Route facilities, the proposed project could have potential impacts on state highway facilities. Caltrans recommends that a transportation impact study (TIS) including a Vehicle miles traveled (VMT) analysis be conducted and the scope of the study should include interchanges of SR 168 at Herndon Avenue and Fowler Avenue, and the SR 168/Shepherd Avenue intersection.

3. Caltrans requests that the Draft EIR be submitted for review once completed and circulated by the City.

4. Caltrans recommends the project proponents consider working with the City to convert a portion of the planned residential units to affordable housing units.

5. It is recommended that the City consider a multimodal transportation system (such as bicycle and pedestrian facilities as well as public transportation) to provide connectivity of modes between the residential uses and commercial/retail uses to reduce VMT impacts from the project.

6. Caltrans recommends the City consider creating a VMT Mitigation Impact Fee to help reduce potential impacts on the State Highway System.

7. Alternative transportation policies should be applied to the development. An assessment of multimodal facilities should be conducted to develop an integrated multimodal transportation system to serve and help alleviate traffic congestion resulting from the project and related development in the area of the City. The assessment should include the following:

    a. Pedestrian walkways should not only be limited to the project's internal connectivity but be connected to existing walkways and transit facilities outside the project area.

    b. The project should consider coordinating connections to local and regional bicycle pathways to encourage the use of bicycles for commuter and recreational purposes.

    c. If transit is not available within 1/4-mile of the project area, transit should be extended to provide services to high activity centers of the project.

8. As part of the statewide effort to reduce greenhouse gas emissions, Caltrans recommends the project proponent consider the installation of public Level 2 Electric Vehicle (EV) and DC Fast Charging EV charging stations.

9. Active Transportation Plans and Smart Growth efforts support the state's 2050 Climate goals. Caltrans supports reducing VMT and GHG emissions in ways that increase the likelihood people will use and benefit from a multimodal transportation network.

If you have any other questions, please call or email Christopher Xiong at (559) 908-7064 or Christopher.Xiong@dot.ca.gov.

Sincerely,

DAVID PADILLA, Branch Chief
Transportation Planning – North

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWS

California Department of Transportation

DISTRICT 6 OFFICE
1352 WEST OLIVE AVENUE | P.O. BOX 12616 | FRESNO, CA 93778-2616
(559) 981-1041 | FAX (559) 488-4195 | TTY 711
www.dot.ca.gov

6/22/2022

FRE-168-R7.805
Shepherd North Traffic Scope
https://ld-igr-gts.dot.ca.gov/district/6/report/26417

SENT VIA EMAIL

Sean K. Smith
Supervising Civil Engineer
Engineering Division, City of Clovis
1033 Fifth Street
Clovis, California 93612

Dear Mr. Smith,

Thank you for the opportunity to review the scope of work for the North Shepherd Sphere of Influence (SOI) Expansion Transportation Impact Analysis. The 155-acre project site is located on the northeast corner of the Sunnyside Avenue/Shepherd Avenue intersection, approximately 2 miles north of the State Route (SR) 168/Fowler Avenue interchange and approximately 2.5 miles northeast of the SR 168/Herndon Avenue interchange.

General Comments

The project will be a residential development including 605 single-family homes on approximately 77-acres and an additional 78 acres will be used for the local road network utilities, greenspace, landscaping, and pedestrian paths.

The scope of work indicated the TIA will examine the following Caltrans intersections:

- State Route 168 (SR-168) Westbound Ramps/Herndon Avenue
- SR-168 Eastbound Ramps/Herndon Avenue

Project related comments

Caltrans provides the following comments consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. Caltrans concurs the SR 168/Herndon Avenue interchange be included in the TIA. Caltrans recommends a ramp queuing analysis be completed at the SR 168/ Herndon Avenue interchange to identify potential traffic safety impacts. The evaluation for traffic safety impacts should include a review for speed differential between the exit ramps queue and the mainline of SR 99 during the same peak hour study period.

2. In addition, Caltrans anticipates the project related trips will utilize the SR 168/Fowler Avenue interchange. Therefore, Caltrans request the SR 168/Fowler Avenue interchange undergo the same analysis as mentioned in comment #1.

3. Caltrans concurs with the project including a vehicle-miles traveled (VMT) study. Improvements for existing/future bike and pedestrian facilities on roads in the vicinity of the Project and connectivity between home to work/home to shops should be considered and included in the VMT mitigation plan.

4. Caltrans recommends the City consider creating a VMT Mitigation Impact Fee so that projects, such as this one, can pay into to mitigate their fair share and provide funding for future transportation projects such as active transportation infrastructure.

5. Caltrans recommends the project proponent(s) consider working with the City to convert a portion of the planned residential units to affordable housing units.

6. Active Transportation Plans and Smart Growth efforts support the state's 2050 Climate goals. Caltrans supports reducing VMT and GHG emissions in ways that increase the likelihood people will use and benefit from a multimodal transportation network.

7. In summary, the trip generation, peak hours, study scenarios, VMT analysis, and methodology seem reasonable.

If you have any other questions, please call or email Edgar Hernandez at (559) 981-7436 or edgar.hernandez@dot.ca.gov.

Sincerely,

David Padilla, Branch Chief
Transportation Planning – North

2907 S. Maple Avenue
Fresno, California 93725-2208
Telephone: (559) 233-7161
Fax: (559) 233-8227

CONVEYANCE. COMMITMENT. CUSTOMER SERVICE.

August 9, 2023

George Gonzalez
Planning Division
City of Clovis
1033 Fifth Street
Clovis, CA 93612

RE: Vesting Tentative Tract Map Application No. TM6205
N/E Shepherd and Sunnyside avenues

Dear Mr. George:

The Fresno Irrigation District (FID) has reviewed the Vesting Tentative Tract Map Application No. TM6205 for which the applicant proposes a 605-lot single-family planned residential development, APNs: 557-021-19, 20, 21. This request is being processed with SOI Expansion, RO307, GPA2021-005, GPA2021-006, R2021-009, and PDP2021-004. FID has the following comments:

1. FID previously reviewed and commented on the subject property on December 2, 2021, as Development Review Committee Application No. 21-00053, and March 15, 2022, as Development Review Committee Application No. 2022-013. Those comments and conditions still apply, and a copy has been attached for your reference.

Thank you for submitting this for our review. We appreciate the opportunity to review and comment on the subject documents for the proposed project. If you have any questions, please feel free to contact Chris Lundeen at (559) 233-7161 extension 7410 or clundeen@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment

G:\Agencies\Clovis\Tract Map\TM6205\TM6205 FID Comments.doc

2907 S. Maple Avenue
Fresno, California 93725-2208
Telephone: (559) 233-7161
Fax: (559) 233-8227

CONVEYANCE. COMMITMENT. CUSTOMER SERVICE.

March 15, 2022

Kelsey George
City of Clovis
Planning Division
1033 Fifth Street
Clovis, CA 93612

RE: Development Review Committee Application No. 2022-013
N/E Shepherd and Sunnyside avenues

Dear Ms. George:

The Fresno Irrigation District (FID) has reviewed the Development Review Committee Application No. 2022-013 for which the applicant proposes a single-family residential development, APNs: 557-021-19, 20, 21. FID has the following comments:

1. FID previously commented on the subject property on December 2, 2021, as Development Review Committee Application No. 21-00053. Those comments and conditions still apply, and a copy has been attached for your reference.

Thank you for submitting this for our review. We appreciate the opportunity to review and comment on the subject documents for the proposed project. If you have any questions, please feel free to contact Chris Lundeen at (559) 233-7161 extension 7410 or clundeen@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment

G:\Agencies\Clovis\DRC Meetings\DRC2022-013\DRC2022-013 FID Comment.doc

FRESNO IRRIGATION DISTRICT
EST. 1920

2907 S. Maple Avenue
Fresno, California 93725-2208
Telephone: (559) 233-7161
Fax: (559) 233-8227

CONVEYANCE. COMMITMENT. CUSTOMER SERVICE.

December 2, 2021

Kelsey George
City of Clovis
Planning Division
1033 Fifth Street
Clovis, CA 93612

RE: Development Review Committee Application No. 21-00053
N/E Shepherd and Sunnyside avenues

Dear Ms. George:

The Fresno Irrigation District (FID) has reviewed the Development Review Committee Application No. 21-00053 for which the applicant proposes a single-family residential development, APNs: 557-021-19, 20, 21. FID has the following comments:

1. FID does not own, operate, or maintain any facilities located on the subject property, as shown on the attached FID exhibit map. The property is located just outside the FID boundary and is not entitled to surface water from FID under the current Conveyance Agreement with the City of Clovis.

2. If treated surface water will be used, the City must acquire additional water from a water purveyor, such as FID for that purpose, so as to not impact water supplies to or create water supply deficits in other areas of the City or in the groundwater basin. Water supply issues must be resolved before any further "hardening" of the water supply demand is allowed to take place.

3. FID is concerned that the proposed development may negatively impact local groundwater supplies. The area is currently farmland completely dependent on groundwater pumping supplemented by annual rainfall. Under current circumstances the project area is experiencing a modest but continuing groundwater overdraft. Should the proposed development result in a conversion from imported surface water to groundwater, this deficit will increase. FID recommends the City of Clovis require the proposed development balance anticipated groundwater use with sufficient recharge of imported surface water in order to preclude increasing the area's existing groundwater overdraft problem.

G:\Agencies\Clovis\DRC Meetings\DRC2021-053\DRC-21-00053 FID Comment.doc

4. California enacted landmark legislation in 2014 known as the Sustainable Groundwater Management Act (SGMA). The act requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally-based management plans. FID and the City of Clovis are members of the North Kings Groundwater Sustainability Agency which will manage the groundwater basin within the FID service area. This area is completely reliant on groundwater pumping and SGMA will impact all users of groundwater and those who rely on it. The City should consider the impacts of the development on the City's ability to comply with requirements of SGMA.

5. For informational purposes, FID's active Enterprise No. 109 runs northwesterly and crosses Fowler Avenue approximately 1,200 feet southeast of the subject property, Sunnyside Avenue approximately 440 feet south of the subject property, and Shepherd Avenue approximately 560 feet west of the subject property, as shown on the attached FID exhibit map. Should this project include any street and/or utility improvements along Fowler Avenue, Sunnyside Avenue, Shepherd Avenue, or in the vicinity of this facility, FID requires it review and approve all plans.

6. For informational purposes, Fresno Metropolitan Flood Control District's Big Dry Creek No. 150 runs westerly along south side of Shepherd Avenue and may be impacted by the proposed project. FID recommends contacting FMFCD for further comments and/or conditions they may have.

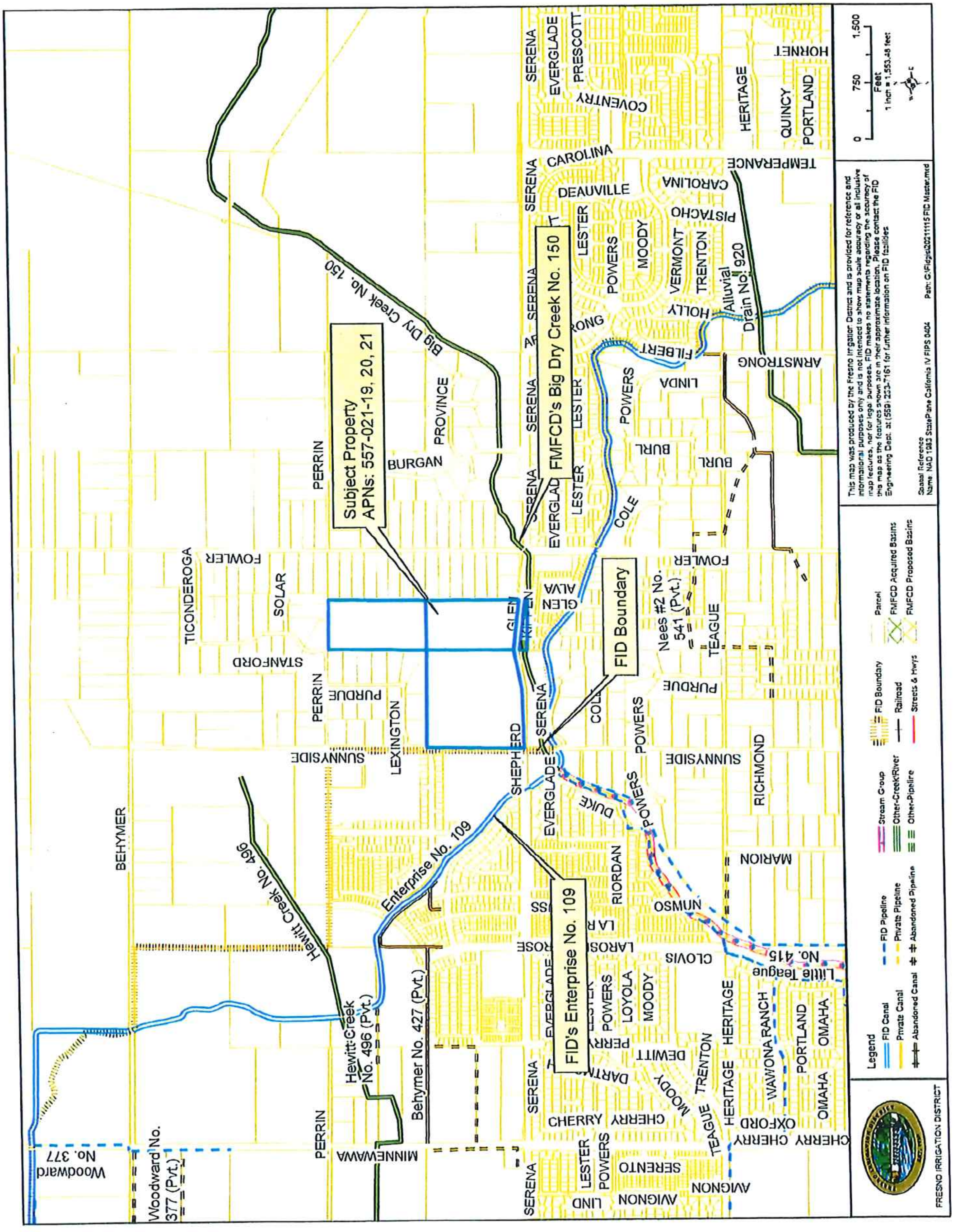
Thank you for submitting this for our review. We appreciate the opportunity to review and comment on the subject documents for the proposed project. If you have any questions, please feel free to contact Chris Lundeen at (559) 233-7161 extension 7410 or clundeen@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment

G:\Agencies\Clovis\DRC Meetings\DRC2021-053\DRC-21-00053 FID Comment.doc


Subject Property
APNs: 557-021-19, 20, 21
FMFCD's Big Dry Creek No. 150
FID Boundary
FID's Enterprise No. 109
Big Dry Creek No. 150
Enterprise No. 109
Hewitt Creek No. 496
Hewitt Creek No. 496 (Pvt.)
Behymer No. 427 (Pvt.)
Woodward No. 377
Woodward No. 377 (Pvt.)
Nees #2 No. 541 (Pvt.)
Alluvial Drain No. 920
Little Teague No. 415
BEHYMER
SUNNYSIDE
FOWLER
PERRIN
MINNEWAWA
SHEPHERD
SERENA
EVERGLADE
TEMPERANCE
ARMSTRONG
CLOVIS
HERITAGE
CHERRY
AVIGNON
Legend
FID Canal
Private Canal
Abandoned Canal
FID Pipeline
Private Pipeline
Abandoned Pipeline
Stream Group
Other-Creek/River
Other-Pipeline
FID Boundary
Railroad
Streets & Hwys
Parcel
FMFCD Acquired Basins
FMFCD Proposed Basins
This map was produced by the Fresno Irrigation District and is provided for reference and informational purposes only and is not intended to show map scale accuracy or all inclusive map features, nor for legal purposes. FID makes no statements regarding the accuracy of this map as the features shown are in their approximate location. Please contact the FID Engineering Dept. at (559) 233-7161 for further information on FID facilities
Spatial Reference
Name: NAD 1983 StatePlane California IV FIPS 0404
Path: G:\Fidgis\20211115 FID Master.mxd
0 750 1,500
Feet
1 inch = 1,553.48 feet
FRESNO IRRIGATION DISTRICT

City of Clovis
DEVELOPMENT REVIEW COMMITTEE (DRC) APPLICATION

City Hall, 1033 Fifth Street, Clovis, California 93612 / (559) 324-2340

Print clearly in black or blue ink or type. There is no fee for the DRC; the back of this form has information on other fees.

The Development Review Committee is a pre-application meeting scheduled between developers and City Staff. It is a service provided, without cost, which is intended to encourage discussion on potential development projects. City representatives on the Development Review Committee include representatives from the Fire, Police, Planning, Building, and Public Works Departments, in addition to the Clovis Community Development Agency. The County Health Department, as well as other outside agencies, may also be invited to attend the Development Review Committee meeting.

As a general rule, the Development Review Committee meets every other Wednesday. If you wish to have your proposal reviewed with the Development Review Committee, you should submit eleven (11) **folded** copies of your plans, maximum size of 8 ½" x 13", and the information form at least one week prior to the next scheduled meeting. A time will be scheduled for you at the time of application submittal. Please note that the more detailed the submittal the more complete the City's response will be.

A written list of comments will be sent to you approximately ten (10) days after the DRC meeting. Please keep in mind the list of comments is not meant to be an inclusive guideline, but only a list of suggestions, which may be in your best interest to examine closely.

NAME: Harbour & Associates

MAILING ADDRESS: 389 Clovis Ave., Suite 300, Clovis, CA. 93612

PHONE: (559) 325-7676 E-MAIL: lorrens@harbour-engineering.com

PROPOSED USE: Single family residential with two product types. All lots will be within gates.

SIZE OF PROPERTY: 77.5 Ac. +/- Gross

ASSESSOR'S PARCEL NUMBER: 557-021-19, 20 & 21

EXISTING BUILDINGS: There is one home on this site and this home will be removed.

PROJECT LOCATION: Northeast corner of Sunnyside Avenue and Shepherd Avenue.

(FOR OFFICE USE ONLY)

File No: DRC-21-00053

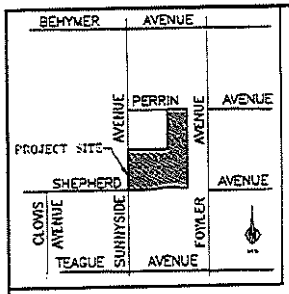
Date: 12/22/21

RHNA Site: N/A

All submitted plans should try to include the following items:

1. Scale of drawing (Engineering or Architectural scale).
2. North arrow (pointing to top of paper).
3. Name of property owner.
4. Existing uses and structures on the property.
5. Names of adjacent streets.
6. Correct location of centerlines of adjacent streets.
7. Correct location of property line.
8. If available, one copy of floor plans and elevations.
9. Indicate the land use of adjacent property.
10. Any existing off-site improvements (i.e. driveway approaches, fire hydrants, etc.).
11. Lotting pattern of adjacent parcels.

Should you have any questions, please feel free to contact the Planning Division at (559) 324-2340.

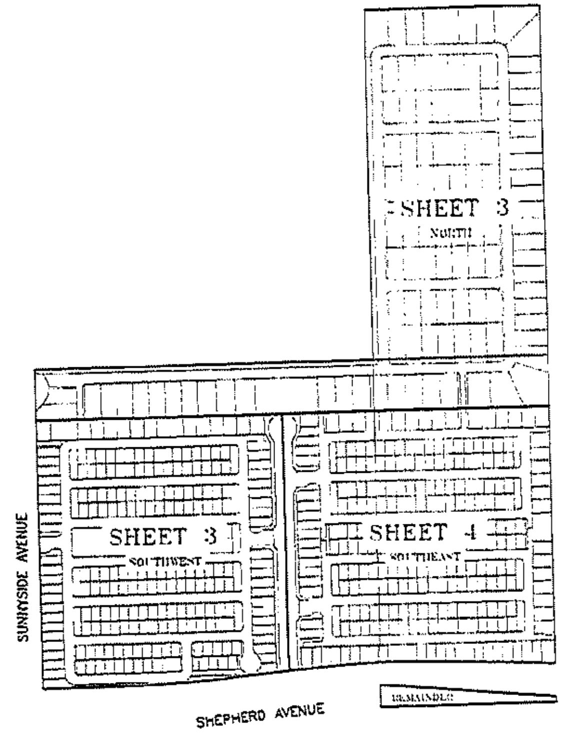


VICINITY MAP

VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



KEY MAP
NTS

LEGAL DESCRIPTION:

APN: 557-021-20

[illegible]

APN: 557-021-19

[illegible]

[illegible]

[illegible]

[illegible]

APN: 557-021-21

[illegible]

[illegible]

NOTES:

1. [illegible]
2. [illegible]
3. [illegible]

EXISTING BUILDINGS
[illegible]

EXISTING TREES
[illegible]

EXISTING USE
[illegible]

EXISTING ZONING
[illegible]

PROPOSED ZONING
[illegible]

PROPOSED USE
[illegible]

SOURCE OF WATER
[illegible]

SOURCE OF SEWAGE DISPOSAL
[illegible]

SOURCE OF WASTE DISPOSAL
[illegible]

SOURCE OF ELECTRICITY
[illegible]

SOURCE OF GAS
[illegible]

SOURCE OF CABLE T.V.
[illegible]

SOURCE OF TELEPHONE
[illegible]

ASSESSOR'S PARCEL NUMBER
[illegible]

SITE AREA
[illegible]

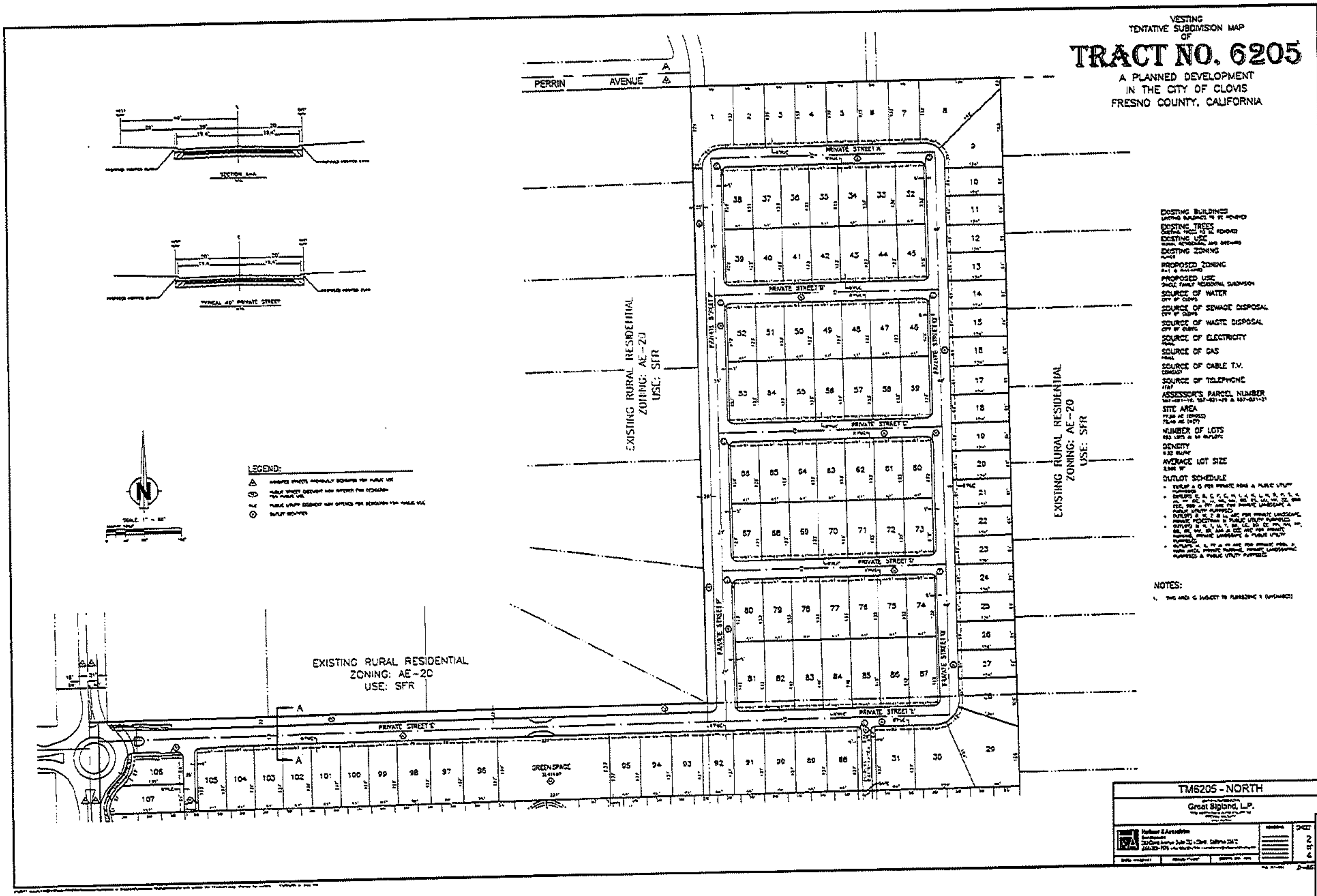
NUMBER OF LOTS
[illegible]

DENSITY
[illegible]

AVERAGE LOT SIZE
[illegible]

OUTLOT SCHEDULE
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

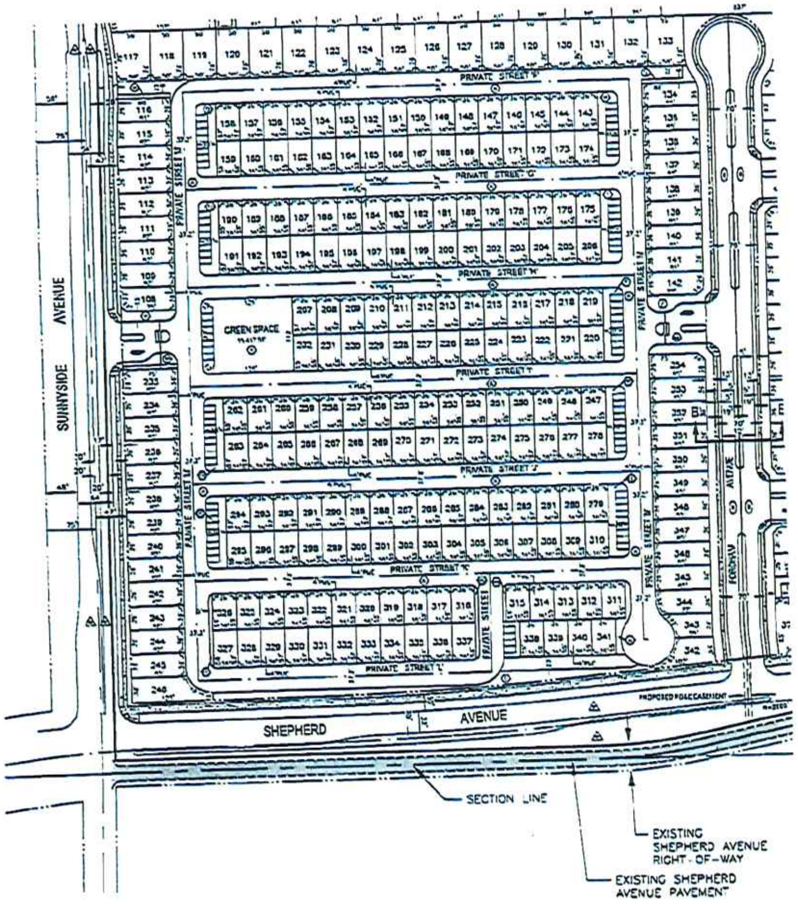
TENTATIVE SUBDIVISION MAP
Great Bigland, L.P.
[illegible]

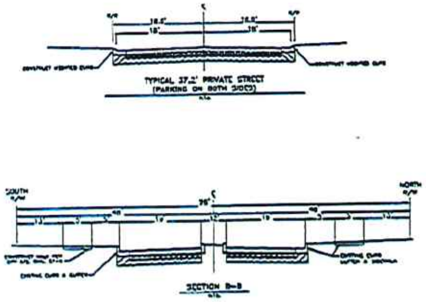

VESTING
TENTATIVE SUBDIVISION MAP
OF
TRACT NO. 6205
A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA
EXISTING BUILDINGS
EXISTING TREES
EXISTING USE
EXISTING ZONING
PROPOSED ZONING
PROPOSED USE
SOURCE OF WATER
SOURCE OF SEWAGE DISPOSAL
SOURCE OF WASTE DISPOSAL
SOURCE OF ELECTRICITY
SOURCE OF GAS
SOURCE OF CABLE T.V.
SOURCE OF TELEPHONE
ASSESSOR'S PARCEL NUMBER
SITE AREA
NUMBER OF LOTS
DENSITY
AVERAGE LOT SIZE
OUTLOT SCHEDULE
NOTES:
PERRIN
AVENUE
A
PRIVATE STREET 'A'
PRIVATE STREET 'B'
PRIVATE STREET 'C'
PRIVATE STREET 'D'
PRIVATE STREET 'E'
PRIVATE STREET 'F'
EXISTING RURAL RESIDENTIAL
ZONING: AE-20
USE: SFR
GREENSPACE
SECTION A-A
TYPICAL 40' PRIVATE STREET
LEGEND:
N
TM6205 - NORTH
Great Sigland, L.P.
SHEET
2
of
4

VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA





EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AL-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.30 AC (GROSS)
72.40 AC (NET)

NUMBER OF LOTS
603 LOTS & 58 OUTLOTS

DENSITY
8.32 DU/AC

AVERAGE LOT SIZE
3,383 SF

OUTLOT SCHEDULE

- OUTLOT A IS FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES
- OUTLOTS C, D, E, F, G, H, [illegible] ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS B, W, Z & LL ARE FOR PRIVATE LANDSCAPE, [illegible] & PUBLIC UTILITY PURPOSES
- OUTLOTS Q, R, T, U, Y, BB, CC, DD, EE, [illegible] ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS [illegible] ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING PURPOSES & PUBLIC UTILITY PURPOSES

SCALE: 1" = 80'

LEGEND:

△	ROADWAY STREETS PREVIOUSLY DEDICATED FOR PUBLIC USE
⊖	PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
PUE	PUBLIC UTILITY EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
⊙	OUTLOT IDENTIFIER

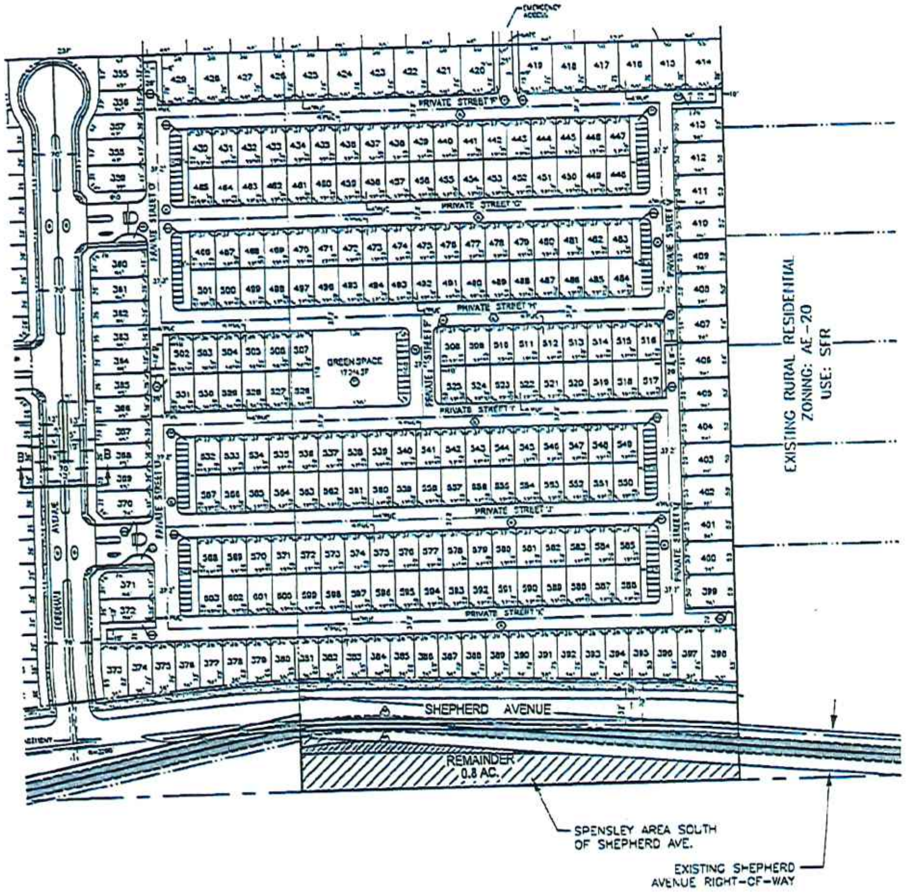
TM6205 - SOUTHWEST
Great Bigland, L.P.
Harbour & Associates
Civil Engineers
[illegible]

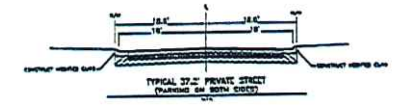
SHEET
3
of
4

VESTING
TENTATIVE SUBDIVISION MAP
OF

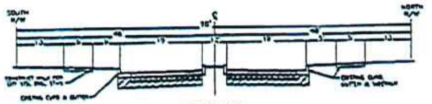
TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA





TYPICAL 37.2' PRIVATE STREET
(PARKING ON BOTH SIDES)



SECTION D-D

EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING

PROPOSED ZONING
[illegible]

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.56 AC (GROSS)
72.40 AC (NET)

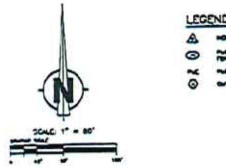
NUMBER OF LOTS
603 LOTS & 58 OUTLOTS

DENSITY
8.33 DU/AC

AVERAGE LOT SIZE
3,382 SF

OUTLOT SCHEDULE

- OUTLOT A IS FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES
- OUTLOTS C, D, E, F, G, H, I, J, [illegible] ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS [illegible] ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN & PUBLIC UTILITY PURPOSES
- OUTLOTS [illegible] ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS [illegible] ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING PURPOSES & PUBLIC UTILITY PURPOSES



LEGEND:

- △ [illegible] STREETS PREVIOUSLY DEDICATED FOR PUBLIC USE
- ⊖ PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
- PUE PUBLIC UTILITY EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
- ⊙ OUTLOT IDENTIFIER

TM6205 - SOUTHEAST

Great Bigland, L.P.

Harbour & Associates
300 Clovis Avenue, Suite 130 • Clovis, California [illegible]

SHEET NO
4 of 4

D-857

AGENDA ITEM NO. 6.

City of Clovis
DEVELOPMENT REVIEW COMMITTEE (DRC) APPLICATION

City Hall, 1033 Fifth Street, Clovis, California 93612 / (559) 324-2340

Print clearly in black or blue ink or type. There is no fee for the DRC; the back of this form has information on other fees.

The Development Review Committee is a pre-application meeting scheduled between developers and City Staff. It is a service provided, without cost, which is intended to encourage discussion on potential development projects. City representatives on the Development Review Committee include representatives from the Fire, Police, Planning, Building, and Public Works Departments, in addition to the Clovis Community Development Agency. The County Health Department, as well as other outside agencies, may also be invited to attend the Development Review Committee meeting.

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NAME: Harbour & Associates

MAILING ADDRESS: 389 Clovis Ave., Suite 300, Clovis, CA. 93612

PHONE: (559) 325-7676 E-MAIL: lorrens@harbour-engineering.com

PROPOSED USE: The proposed use single family residential. The northerly portion will have larger homes, Wilson Homes Windsor product. Most of these lots will be within gates, but not all. There will also be a smaller lot portion of this site that proposes Wilson Homes Elev8ions product with a few single story L!V homes as well. Not all of the smaller lots will be gated.

SIZE OF PROPERTY: 77.5 Ac. +/- Gross

ASSESSOR'S PARCEL NUMBER: 557-021-19, 20 & 21

EXISTING BUILDINGS: There are no existing buildings.

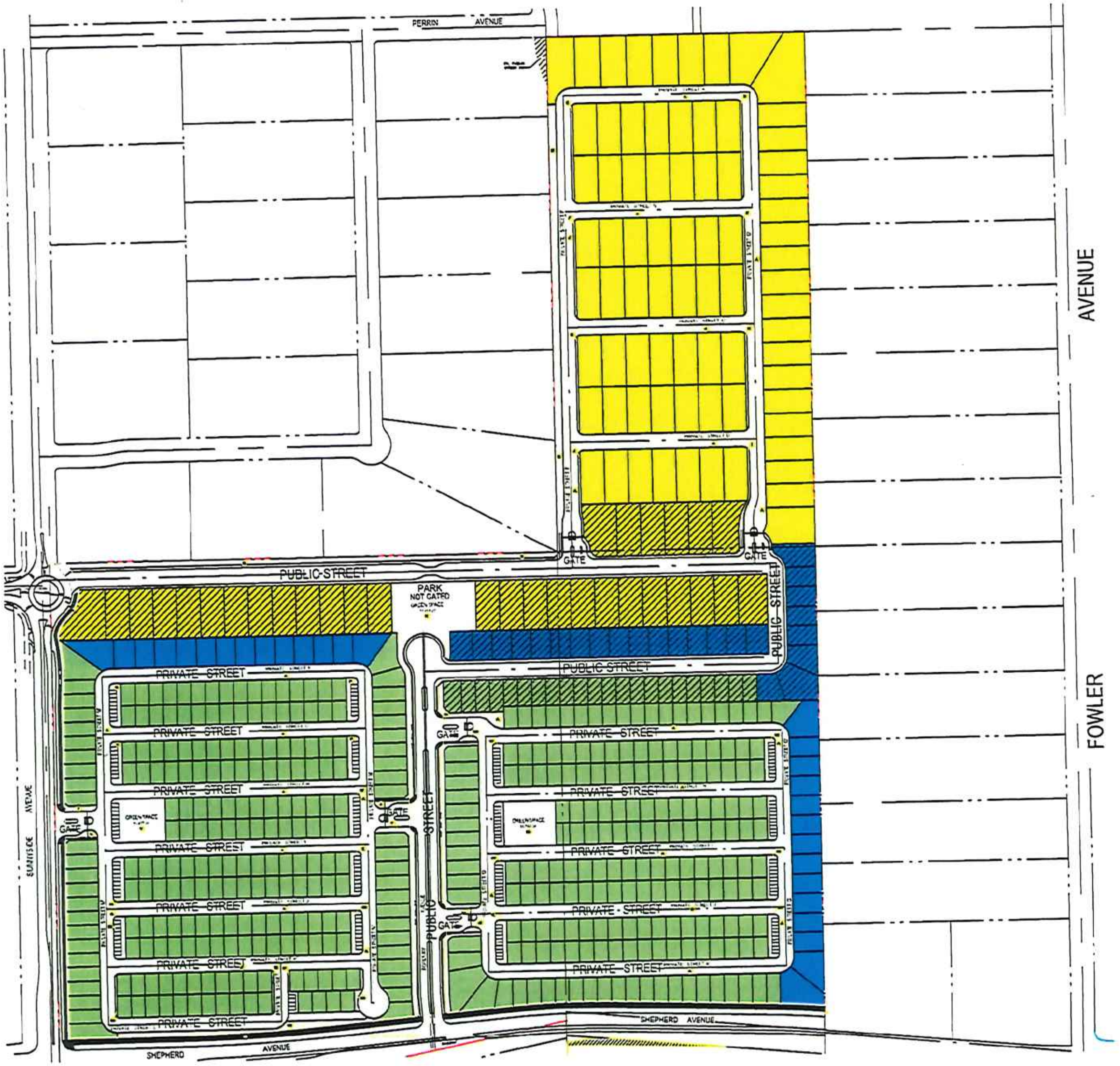
PROJECT LOCATION: Northeast corner of Sunnyside Avenue and Shepherd Avenue.

All submitted plans should try to include the following items:

DRC2022-013
Date: 3/16/22
RHNA: N/A

1. Scale of drawing (Engineering or Architectural scale).
2. North arrow (pointing to top of paper).
3. Name of property owner.
4. Existing uses and structures on the property.
5. Names of adjacent streets.
6. Correct location of centerlines of adjacent streets.
7. Correct location of property line.
8. If available, one copy of floor plans and elevations.
9. Indicate the land use of adjacent property.
10. Any existing off-site improvements (i.e. driveway approaches, fire hydrants, etc.).
11. Lotting pattern of adjacent parcels.

Should you have any questions, please feel free to contact the Planning Division at (559) 324-2340.



REVISED TM6205
606 LOTS

Windsor
76 Lots Gated
31 Lots Not Gated

Citrea
24 Lots Not Gated
14 Lots Gated (East)
14 Lots Gated (West)

Elev8ions
22 Lots Not Gated
193 Lots Gated (East)
232 Lots Gated (West)

City of Clovis

Department of Planning and Development Services

CITY HALL - 1033 Fifth Street - Clovis, CA 93612

Distribution Date: **7/25/2023**

PLANNING APPLICATION REQUEST FOR COMMENTS

Project Manager - George Gonzalez, MPA, Senior Planner

PLEASE ROUTE TO:

(In House)

- ☒ Planning Division
- ☒ Building Division
- ☒ Engineering Divisior
- ☒ Utilities Division
- ☒ Solid Waste Divisior
- ☒ Fire Department
- ☒ Police Department
- ☒ City Landscape Com
- ☒ Legal Description Review
- ☐ Other (Specify)
- ☐

(Out-of-House)

- ☒ Fresno Irrigation District
- ☒ Fresno Metropolitan Flood Control Dist.
- ☒ Pacific Gas & Electric
- ☒ AT&T
- ☒ Clovis Unified School District
- ☒ Cal Trans
- ☒ SJV Unified Air Pollution Control Dist.
- ☒ State of California Department of Fish and Game
- ☒ LAFCO (when annexation is involved)
- ☒ County of Fresno Development
- ☒ Fresno County Environmental Health

Item(s): **TM6205** Location: **North side of Shepherd Avenue, between N. Sunnyside & N. Fowler Ave.**

APN: **Multiple** Zoning: **County AL20** General Plan: **Clovis Rural Res.** RHNA Site: ____________

Name of Applicant: **Great Bigland, LP -Jeff Harris** Phone/Email: (559)224-7550/jharris@wilsondevelopment.com

Applicant Address: **7550 N. Palm Avenue, #102** City: **Fresno** State: **CA** Zip: **93711**

Previously Reviewed Under DRC: **DRC2022-013** Or Other Entitlement: ____________

Project Description: **TM6205; A request to approve a vesting tentative tract map for a 605-lot single-family planned residential development for land located on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues. This request is being processed concurrently with SOI Expansion, RO307, GPA2021-005, GPA2021-006, R2021-009, and PDP2021-004.**

This item is tentatively scheduled for a public hearing to be consi **City Council.**
The attached information is circulated for your comments. Please attach your comments and recommendations i
condition form and return to the project manag **8/15/2023**

Please check one below:

☐ No Comments ☐ Comments e-mailed or saved on: ____________

RECOMMENDED CONDITIONS: Please draft conditions in final form that are acceptable to your department
They must be legible. Please phrase positively and clearly:

GOOD EXAMPLE: "1. Prior to occupancy, the developer shall install all landscaping as per the approved plans."

POOR EXAMPLE: "1. Install landscaping."

REVIEWED BY (please sign): ____________

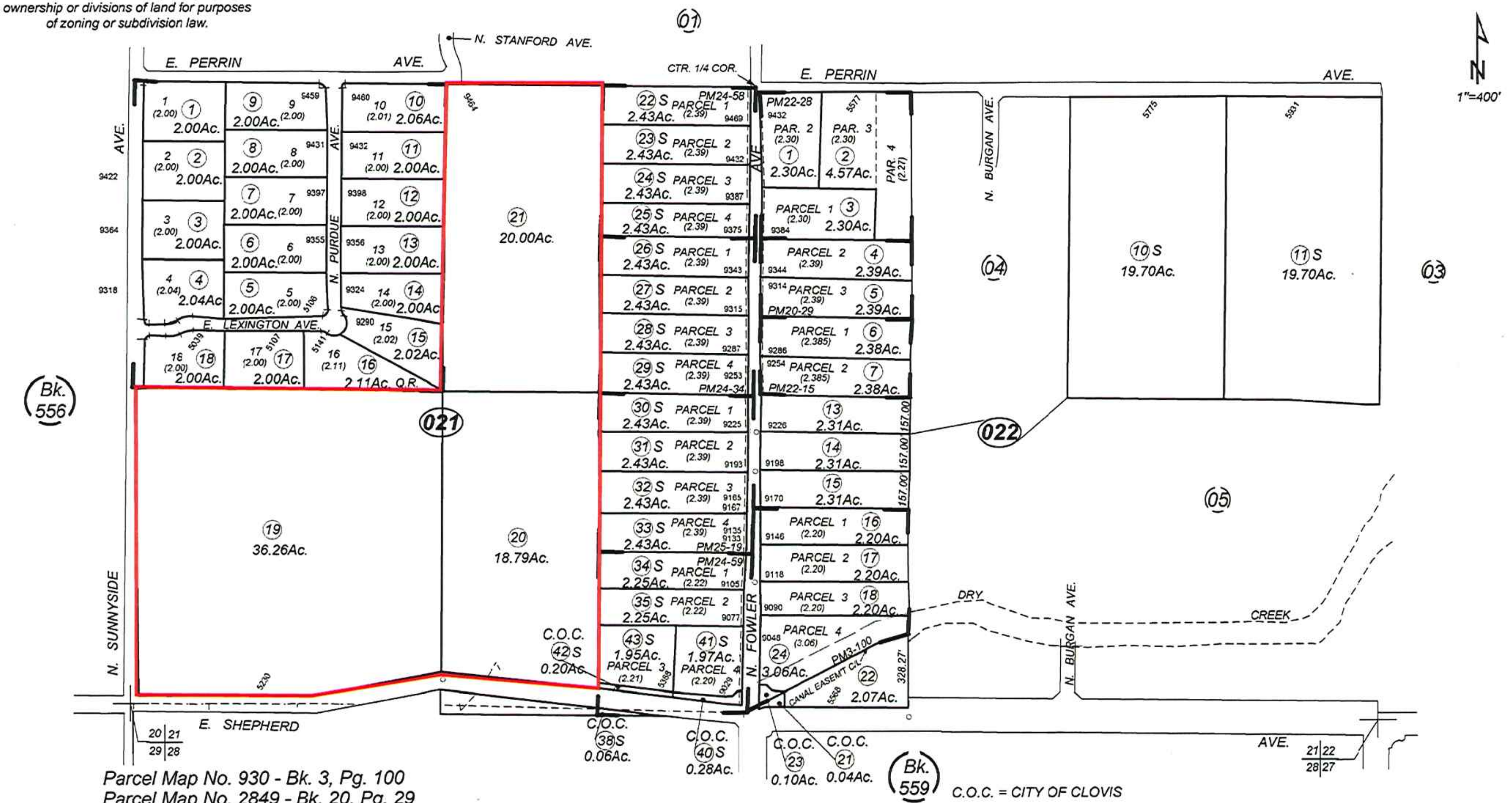
PLEASE RETURN TO:
George Gonzalez, MPA, Senior Planner
Planning and Development Services Dept.
1033 Fifth St., Clovis, CA 93612
Phone: 324-2383 Fax: 324-2866

-NOTE-
This map is for Assessment purposes only.
It is not to be construed as portraying legal
ownership or divisions of land for purposes
of zoning or subdivision law.

SUBDIVIDED LAND IN POR. SEC. 21, T. 12 S., R. 21 E., M.D.B. & M.

Tax Rate Area
76-045

557-02



C.O.C. = CITY OF CLOVIS

Parcel Map No. 930 - Bk. 3, Pg. 100
Parcel Map No. 2849 - Bk. 20, Pg. 29
Parcel Map No. 3373 - Bk. 22, Pg. 15
Parcel Map No. 3372 - Bk. 22, Pg. 28
Parcel Map No. 3654 - Bk. 24, Pg. 34
Parcel Map No. 3650 - Bk. 24, Pg. 58
Parcel Map No. 3637 - Bk. 24, Pg. 59

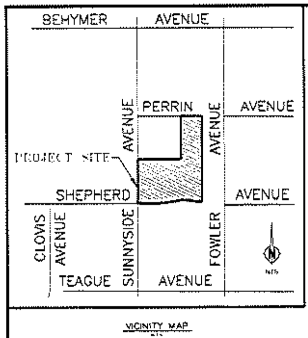
Parcel Map No. 3640 - Bk. 25, Pg. 19
Quail Run - Tract No. 3286 - Plat Bk. 37, Pg. 88

Assessor's Map Bk. 55 02
County of Fresno, Ca

Note - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

AGENDA ITEM NO. 6.

1/31/2019

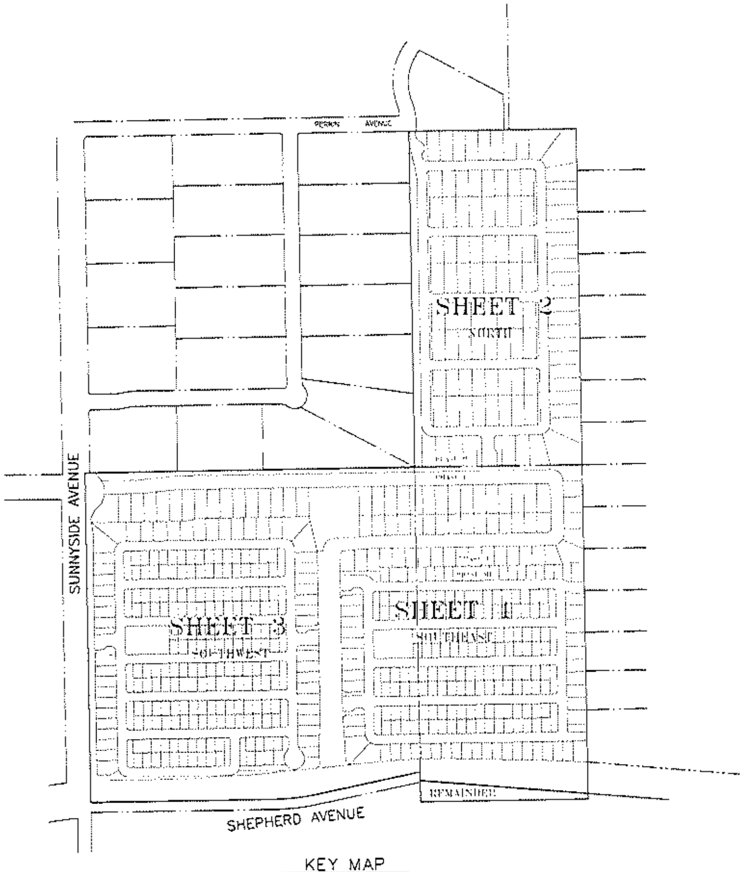


VICINITY MAP

VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



KEY MAP
N.T.S.

LEGAL DESCRIPTION:

APN: 557-021-20

THE SOUTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

APN: 557-021-19

THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21, EAST MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT PORTION THEREOF DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, THENCE NORTH 89°49'50" WEST, 567.24 FEET, ALONG THE SOUTHERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TO A POINT IN THE CENTERLINE OF SHEPHERD AVENUE WHICH IS SOUTH 89°49'50" EAST, 752.46 FEET FROM THE SOUTHWEST CORNER OF SECTION 21, THENCE EASTERLY ALONG THE CENTERLINE OF SHEPHERD AVENUE AS FOLLOWS:

ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 800 FEET, THROUGH A CENTER ANGLE OF 11°30'10", AN ARC DISTANCE OF 173.00 FEET THROUGH 78°31'00" EAST, 334.79 FEET, THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 840 FEET, THROUGH A CENTRAL ANGLE OF 3°33'20", AN ARC DISTANCE OF 58.53 FEET TO A POINT ON THE EASTERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, THENCE LEAVING THE CENTERLINE OF SHEPHERD AVENUE, SOUTH 0°02'20" EAST, 97.60 FEET ALONG THE EASTERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TO THE POINT OF COMMENCEMENT.

APN: 557-021-21

THE NORTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

TOGETHER WITH AN EASEMENT FOR ROAD PURPOSES OVER AND ACROSS THE EAST 30 FEET OF THE SOUTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE RIGHT-OF-WAY DEEDED TO THE CITY OF CLOVIS PER DEED DOCUMENT NUMBER 2022-0112534 RECORDED ON SEPTEMBER 8, 2022

NOTES:

1. THIS AREA IS SUBJECT TO FLOODZONE X (UNSHADED) AND FLOODZONE AH (SHADED)
2. ALL IMPROVEMENTS SHALL BE AS REQUIRED BY THE CITY OF CLOVIS TO CITY STANDARDS, AND SHALL INCLUDE SANITARY SEWER, DOMESTIC WATER, UNDERGROUND POWER, TELEPHONE, GAS, CONCRETE CURBS, GUTTERS, SIDEWALKS, PERMANENT STREET PAVEMENT STREET LIGHTS, ETC.
3. THERE SHALL BE NO GRADE DIFFERENTIALS OF GREATER THAN 6" WITHIN 200 FEET OF THE SITE UNLESS APPROVED BY THE CITY OF CLOVIS DEVELOPMENT DEPARTMENT.

EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AL-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.63 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.89 AC (GROSS)
72.37 AC (NET)

NUMBER OF LOTS
605 LOTS & 52 OUTLOTS

DENSITY
7.77 DU/AC

AVERAGE LOT SIZE
3,363 SF

OUTLOT SCHEDULE

- OUTLOTS A, B, & C ARE FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES
- OUTLOTS D, E, F, G, H, I, J, K, L, M, N, R, T, U, JJ, KK, LL, MM, NN, RR, SS, UU & ZZ ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS O, Q, U, & GG ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN & PUBLIC UTILITY PURPOSES
- OUTLOTS V, W, X, Y, AA, BB, CC, DD, EE, FF, HH, OO, QQ, TT, VV, WW, XX, & YY ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS S, Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES
- OUTLOT P IS FOR FMFCD DRAINAGE CHANNEL PURPOSES

TENTATIVE SUBDIVISION

Great Bigland, L.P.

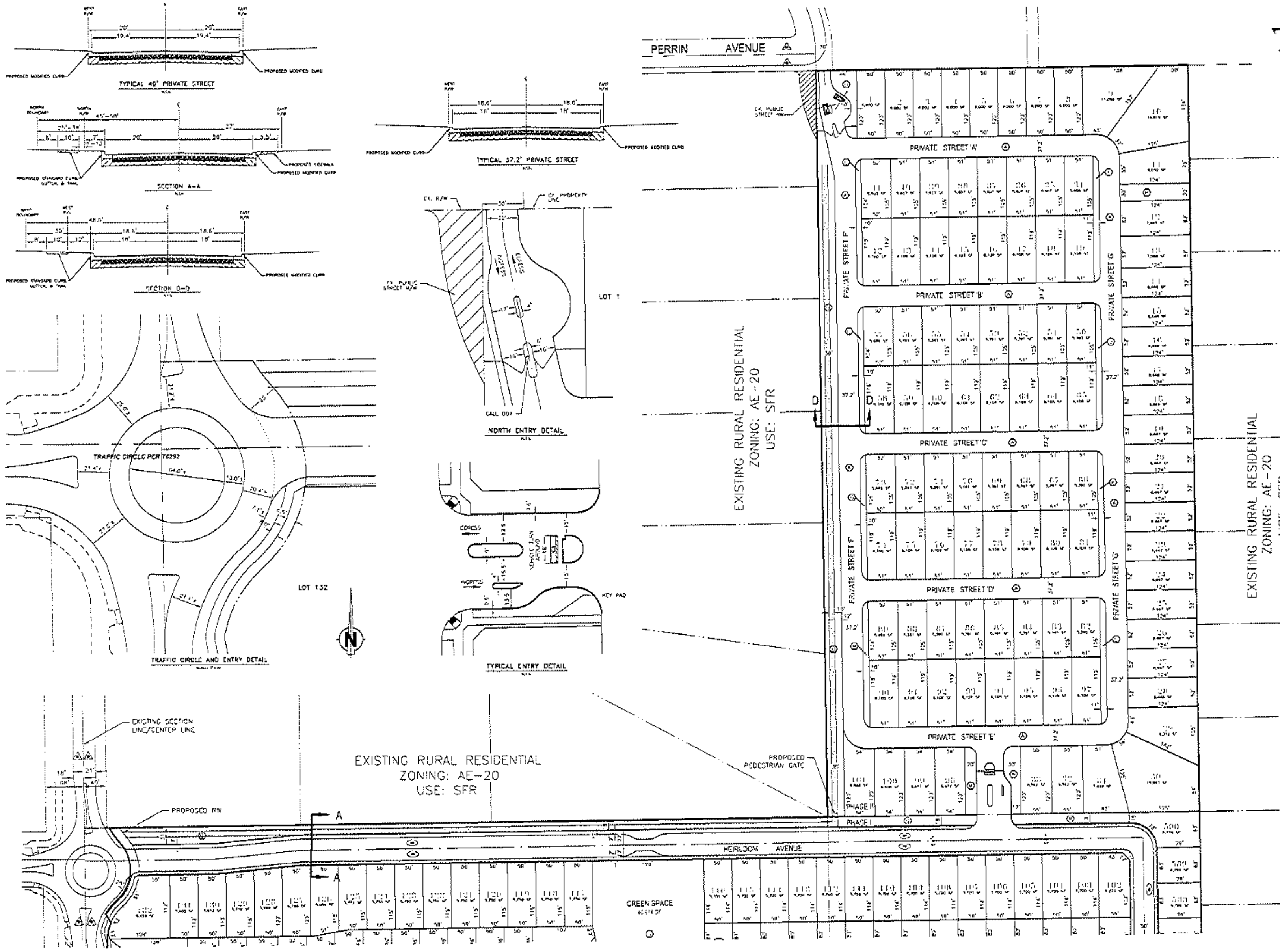
Harbour & Associates
Civil Engineers
[illegible]

DATE: [illegible] | DRAWN BY: [illegible]

VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AE-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.63 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.89 AC (GROSS)
72.37 AC (NET)

NUMBER OF LOTS
605 LOTS & 52 OUTLOTS

DENSITY
7.77 DU/AC

AVERAGE LOT SIZE
5,363 SF

OUTLOT SCHEDULE

- OUTLOTS A, B, & C ARE FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES
- OUTLOTS D, E, F, G, H, I, J, K, L, M, N, R, T, II, JJ, KK, LL, MM, NN, RR, SS, UU & ZZ ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS O, Q, U, & GG ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN & PUBLIC UTILITY PURPOSES
- OUTLOTS V, W, X, Y, AA, BB, CC, DD, EE, FF, HH, OO, QQ, TT, VV, WW, XX, & YY ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS S, Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES
- OUTLOT P IS FOR FMFCD DRAINAGE CHANNEL PURPOSES

LEGEND:

△	INDICATES STREETS PREVIOUSLY DEDICATED FOR PUBLIC USE
⬭	PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
PUE	PUBLIC UTILITY EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
Ⓐ	OUTLOT IDENTIFIER
▭	FLOODZONE 'AH'
•	CITY STD. '84' STREET SECTION

SCALE 1" = 80'
GRAPHIC SCALE
0 40' 80' 160'

TM6205 - NORTH

Great Bigland, L.P.

Harbour & Associates
Civil Engineers
389 Clovis Avenue, Suite 300 • Clovis, California 93612

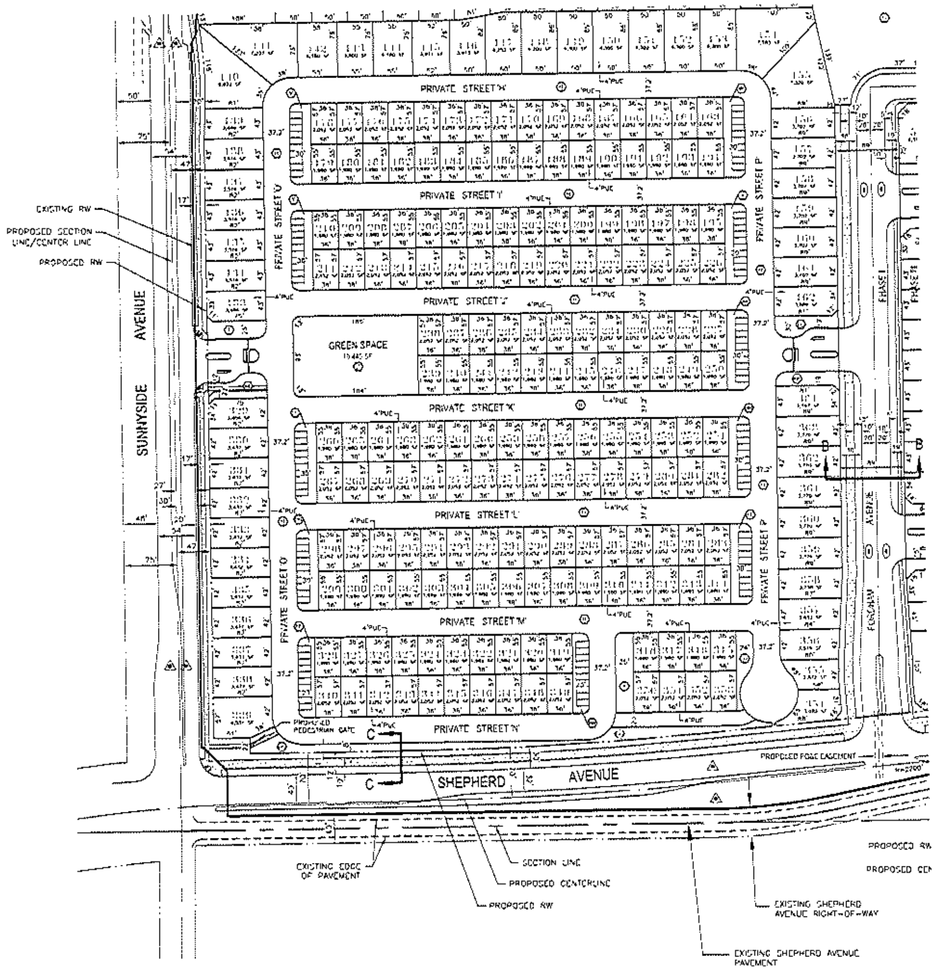
DATE: | SCALE: 1"=80' | DRAWN BY:

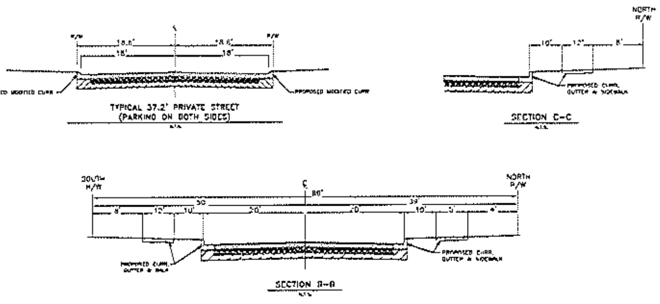
AGENDA ITEM NO. 6.

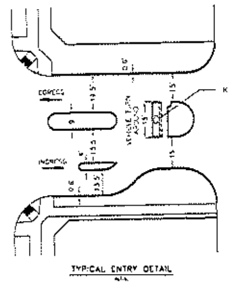
VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA







EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AL-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 7.43 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.89 AC (GROSS)
72.07 AC (NET)

NUMBER OF LOTS
605 LOTS & 52 OUTLOTS

DENSITY
7.77 DU/AC

AVERAGE LOT SIZE
3,363 SF

OUTLOT SCHEDULE

- OUTLOTS A, B, & C ARE FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES
- OUTLOTS D, E, F, G, H, I, J, K, L, M, N, R, T, S, JJ, KK, LL, MM, NN, RR, SS, UU & ZZ ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS O, Q, U, & GG ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN & PUBLIC UTILITY PURPOSES
- OUTLOTS V, W, X, Y, AA, BB, CC, DD, EE, FF, HH, OO, QQ, TT, VV, WW, XX, & YY ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS S, Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES
- OUTLOT P IS FOR FMFCD DRAINAGE CHANNEL PURPOSES

LEGEND:

△	INDICATES STREETS PREVIOUSLY DEDICATED FOR PUBLIC USE
⊖	PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
PUE	PUBLIC UTILITY EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
Ⓐ	OUTLOT IDENTIFIER
☐	FLOODZONE 'AH'

N

SCALE 1" = 80'
0 40 80 160

TM6205 - SOUTHWEST

Great Bigland, L.P.

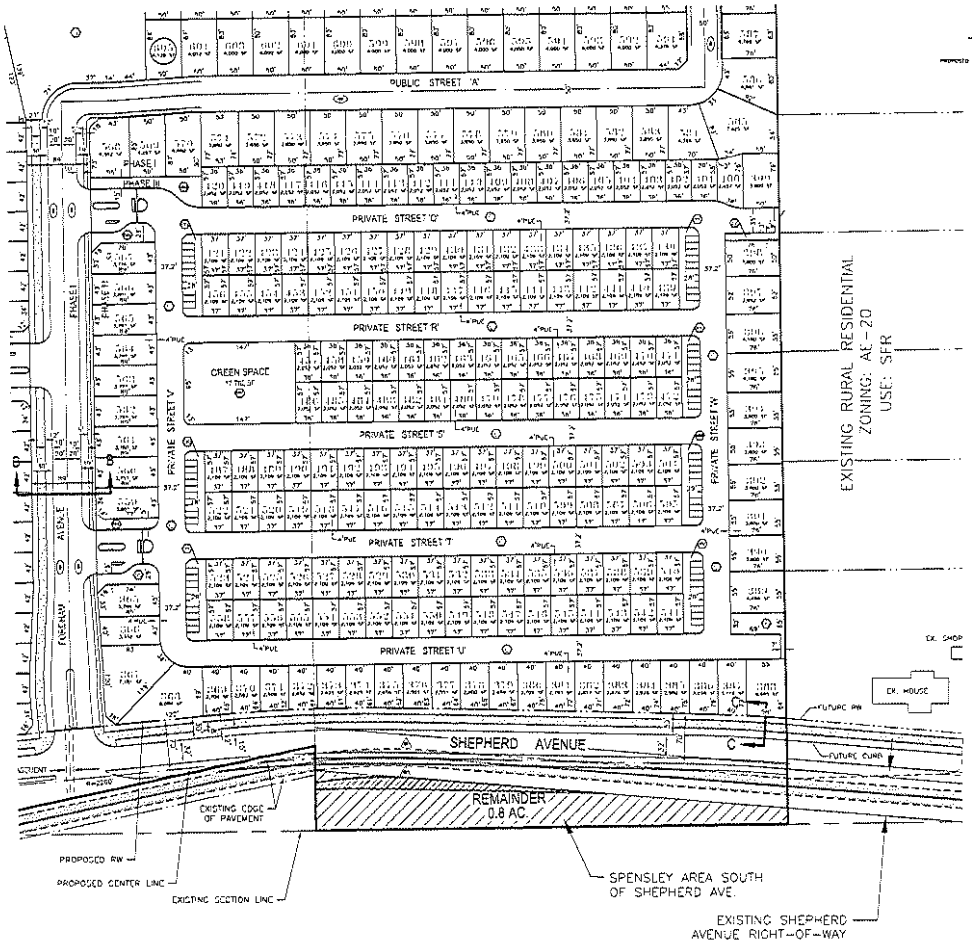
Harbour & Associates
Civil Engineers

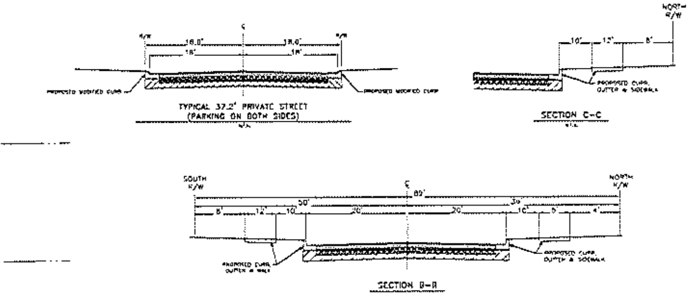
DATE: 4-14-23 SCALE: 1"=80' DRAWN BY: SDH

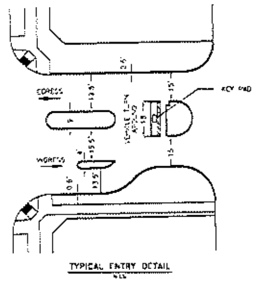
VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA







TYPICAL ENTRY DETAIL

EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AE-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.63 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.89 AC (GROSS)
72.37 AC (NET)

NUMBER OF LOTS
605 LOTS & 52 OUTLOTS

DENSITY
7.77 DU/AC

AVERAGE LOT SIZE
3,315 SF

OUTLOT SCHEDULE

- OUTLOTS A, B, & C ARE FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES
- OUTLOTS D, E, F, G, H, I, J, K, L, M, N, R, T, U, JJ, KK, LL, MM, NN, RR, SS, UU & ZZ ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS O, Q, U, & GG ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN & PUBLIC UTILITY PURPOSES
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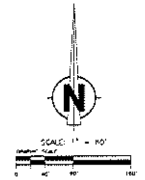
- OUTLOTS S, Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES
- OUTLOT P IS FOR PIPED DRAINAGE CHANNEL PURPOSES

LEGEND:

△	INDICATES STREETS PREVIOUSLY DEDICATED FOR PUBLIC USE
⬭	PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
PUE	PUBLIC UTILITY EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
Ⓐ	OUTLOT IDENTIFIER



TM6205 - SOUTHEAST

Great Bigland, L.P.

Harbour & Associates
Civil Engineers

DATE: 4-14-23
SCALE: 1"=80'
DRAWN BY: WH

City of Clovis

Department of Planning and Development Services

CITY HALL - 1033 Fifth Street - Clovis, CA 93612

Distribution Date: **7/25/2023**

PLANNING APPLICATION REQUEST FOR COMMENTS

Project Manager - George Gonzalez, MPA, Senior Planner

PLEASE ROUTE TO:

(In House)

- ☒ Planning Division
- ☒ Building Division
- ☒ Engineering Divisic
- ☒ Utilities Division
- ☒ Solid Waste Divisic
- ☒ Fire Department
- ☒ Police Department
- ☒ City Landscape Cor
- ☒ Legal Description Review
- ☐ Other (Specify)
- ☐

(Out-of-House)

- ☒ Fresno Irrigation District
- ☒ Fresno Metropolitan Flood Control Dist.
- ☒ Pacific Gas & Electric
- ☒ AT&T
- ☒ Clovis Unified School District
- ☒ Cal Trans
- ☒ SJV Unified Air Pollution Control Dist.
- ☒ State of California Department of Fish and Game
- ☒ LAFCO (when annexation is involved)
- ☒ County of Fresno Development
- ☒ Fresno County Environmental Health

Item(s): **Sphere of Influence Expansio** Location: **North side of Shepherd Avenue, between N. Sunnyside & N. Fowler Ave.**

APN: **Multiple** Zoning: **AL20, RR** General Plan: **LD Res. & Rural Res.** RHNA Site: ____________

Name of Applicant: **Great Bigland, LP -Jeff Harris** Phone/Email: (559)224-7550/jharris@wilsondevelopment.com

Applicant Address: **7550 N. Palm Avenue, #102** City: **Fresno** State: **CA** Zip: **93711**

Previously Reviewed Under DRC: **DRC2022-013** Or Other Entitlement: ____________

Project Description: **Sphere of Influence (SOI) Expansion; A request to expand the City's Sphere of Influence (SOI) to include approximately 155 acres of land located on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues. This request is being processed concurrently with RO307, GPA2021-005, GPA2021-006, R2021-009, PDP2021-004, and TM6205.**

This item is tentatively scheduled for a public hearing to be cons **City Council.**
The attached information is circulated for your comments. Please attach your comments and recommendations condition form and return to the project mana **8/15/2023**

Please check one below:

☐ No Comments ☐ Comments e-mailed or saved on: ____________

RECOMMENDED CONDITIONS: Please draft conditions in final form that are acceptable to your departmen They must be legible. Please phrase positively and clearly:

GOOD EXAMPLE: "1. Prior to occupancy, the developer shall install all landscaping as per the approved

POOR EXAMPLE: "1. Install landscaping."

REVIEWED BY (please sign)____________

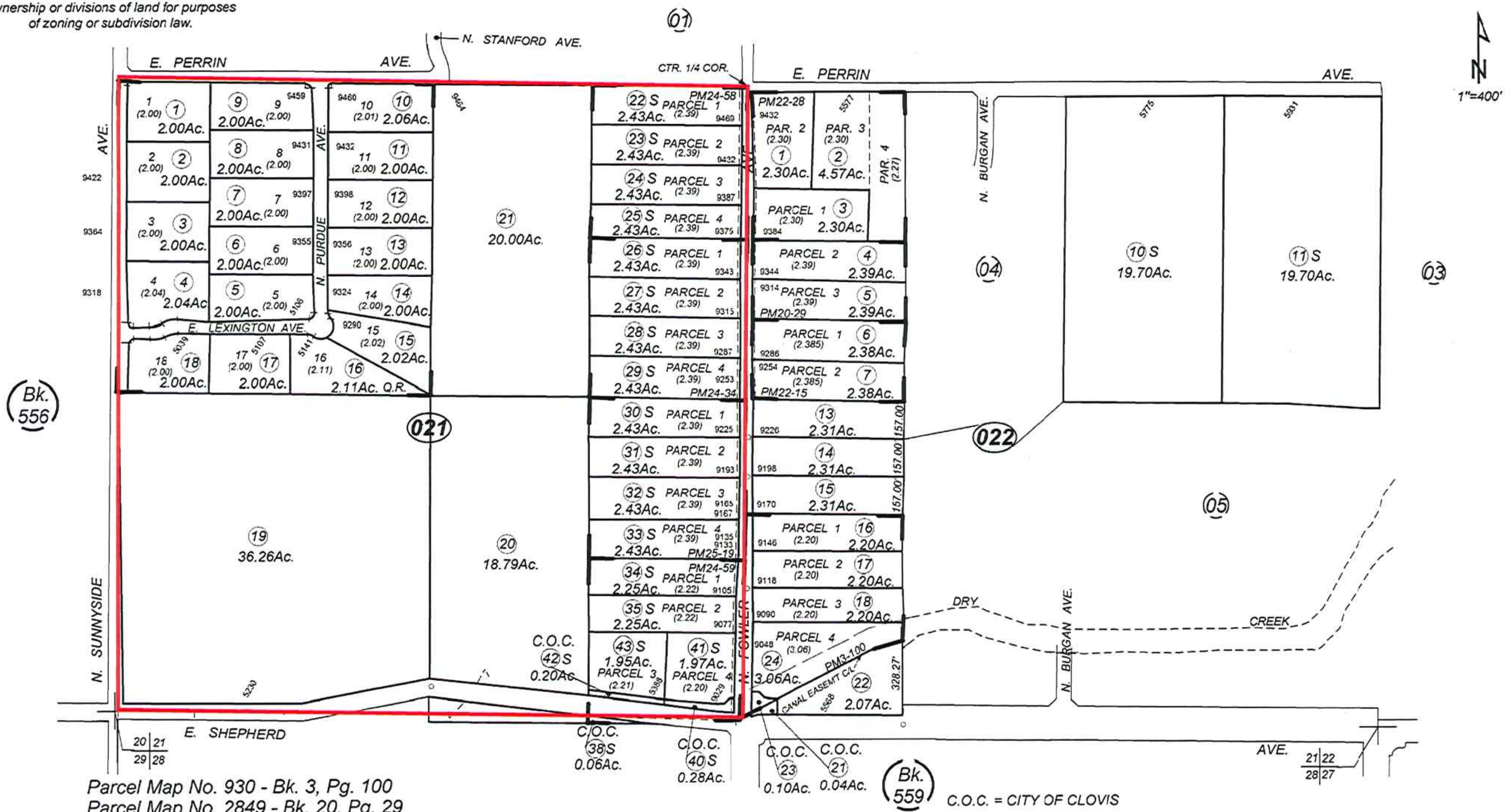
PLEASE RETURN TO:
George Gonzalez, MPA, Senior Planner
Planning and Development Services Dept.
1033 Fifth St., Clovis, CA 93612
Phone: 324-2383 Fax: 324-2866

-NOTE-
This map is for Assessment purposes only.
It is not to be construed as portraying legal
ownership or divisions of land for purposes
of zoning or subdivision law.

SUBDIVIDED LAND IN POR. SEC. 21, T. 12 S., R. 21 E., M.D.B. & M.

Tax Rate Area
76-045

557-02



Parcel Map No. 930 - Bk. 3, Pg. 100
Parcel Map No. 2849 - Bk. 20, Pg. 29
Parcel Map No. 3373 - Bk. 22, Pg. 15
Parcel Map No. 3372 - Bk. 22, Pg. 28
Parcel Map No. 3654 - Bk. 24, Pg. 34
Parcel Map No. 3650 - Bk. 24, Pg. 58
Parcel Map No. 3637 - Bk. 24, Pg. 59

Parcel Map No. 3640 - Bk. 25, Pg. 19
Quail Run - Tract No. 3286 - Plat Bk. 37, Pg. 88

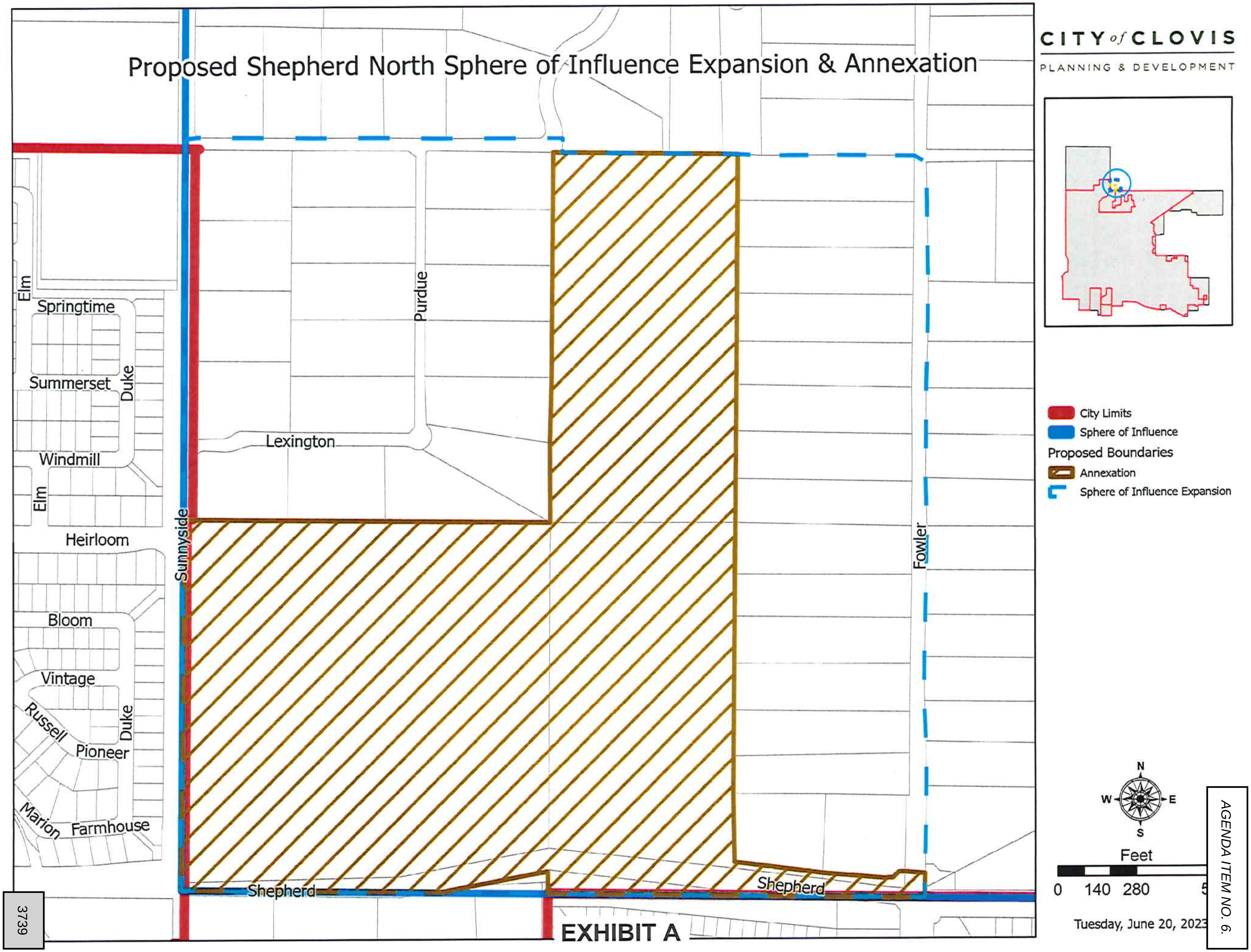
Assessor's Map Bk. 557 02
County of Fresno, Ca

Note - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

1/31/2019

AGENDA ITEM NO. 6.

Proposed Shepherd North Sphere of Influence Expansion & Annexation



Tuesday, June 20, 2023

EXHIBIT A

City of Clovis

Department of Planning and Development Services

CITY HALL - 1033 Fifth Street - Clovis, CA 93612

Distribution Date: **7/25/2023**

PLANNING APPLICATION REQUEST FOR COMMENTS

Project Manager - George Gonzalez, MPA, Senior Planner

PLEASE ROUTE TO:

(In House)

- ☒ Planning Division
- ☒ Building Division
- ☒ Engineering Divisic
- ☒ Utilities Division
- ☒ Solid Waste Divisic
- ☒ Fire Department
- ☒ Police Department
- ☒ City Landscape Cor
- ☒ Legal Description Review
- ☐ Other (Specify)
- ☐

(Out-of-House)

- ☒ Fresno Irrigation District
- ☒ Fresno Metropolitan Flood Control Dist.
- ☒ Pacific Gas & Electric
- ☒ AT&T
- ☒ Clovis Unified School District
- ☒ Cal Trans
- ☒ SJV Unified Air Pollution Control Dist.
- ☒ State of California Department of Fish and Game
- ☒ LAFCO (when annexation is involved)
- ☒ County of Fresno Development
- ☒ Fresno County Environmental Health

Item(s): **RO307** Location: **North side of Shepherd Avenue, between N. Sunnyside & N. Fowler Ave.**

APN: **Multiple** Zoning: **County AL20** General Plan: **Clovis Rural Res.** RHNA Site: ____________

Name of Applicant: **Great Bigland, LP -Jeff Harris** Phone/Email: (559)224-7550/jharris@wilsondevelopment.com

Applicant Address: **7550 N. Palm Avenue, #102** City: **Fresno** State: **CA** Zip: **93711**

Previously Reviewed Under DRC: **DRC2022-013** Or Other Entitlement: ____________

Project Description: **RO307; A Resolution of Application for the Annexation (approximately 77 acres) of the Territory known as the Shepherd-Sunnyside Northeast Reorganization. This request is being processed concurrently with SOI Expansion, GPA2021-005, GPA2021-006, R2021-009, PDP2021-004, and TM6205.**

This item is tentatively scheduled for a public hearing to be cons **City Council.**

The attached information is circulated for your comments. Please attach your comments and recommendations condition form and return to the project mana **8/15/2023**

Please check one below:

☐ No Comments ☐ Comments e-mailed or saved on: ____________

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POOR EXAMPLE: "1. Install landscaping."

REVIEWED BY (please sign)____________

PLEASE RETURN TO:
George Gonzalez, MPA, Senior Planner
Planning and Development Services Dept.
1033 Fifth St., Clovis, CA 93612
Phone: 324-2383 Fax: 324-2866

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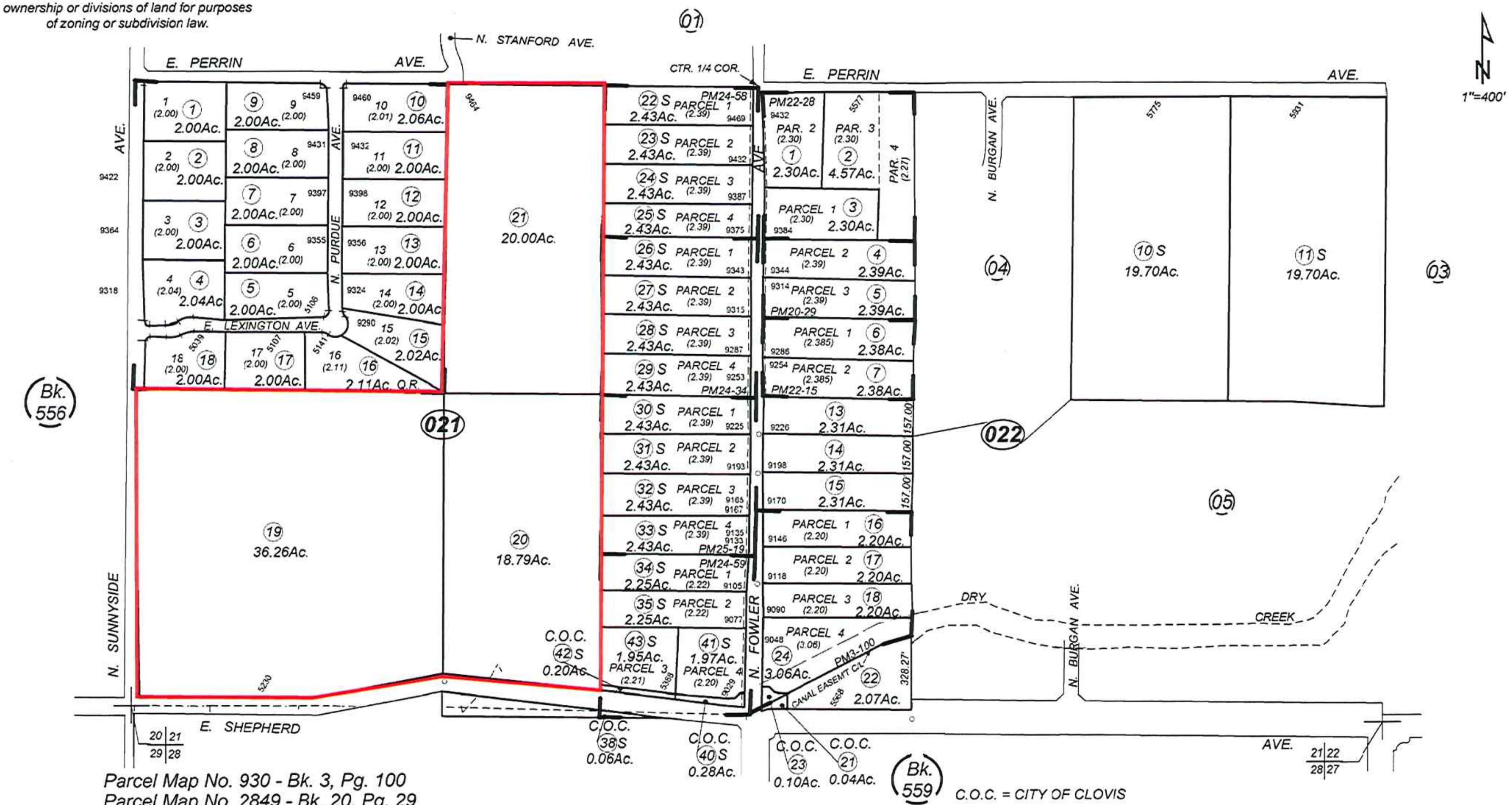
ownership or divisions of land for purposes
of zoning or subdivision law.

SUBDIVIDED LAND IN POR. SEC. 21, T. 12 S., R. 21 E., M.D.B. & M.

Tax Rate Area
76-045

557-02



C.O.C. = CITY OF CLOVIS

Parcel Map No. 930 - Bk. 3, Pg. 100
Parcel Map No. 2849 - Bk. 20, Pg. 29
Parcel Map No. 3373 - Bk. 22, Pg. 15
Parcel Map No. 3372 - Bk. 22, Pg. 28
Parcel Map No. 3654 - Bk. 24, Pg. 34
Parcel Map No. 3650 - Bk. 24, Pg. 58
Parcel Map No. 3637 - Bk. 24, Pg. 59

Parcel Map No. 3640 - Bk. 25, Pg. 19
Quail Run - Tract No. 3286 - Plat Bk. 37, Pg. 88

Assessor's Map Bk. 557 02
County of Fresno, Ca

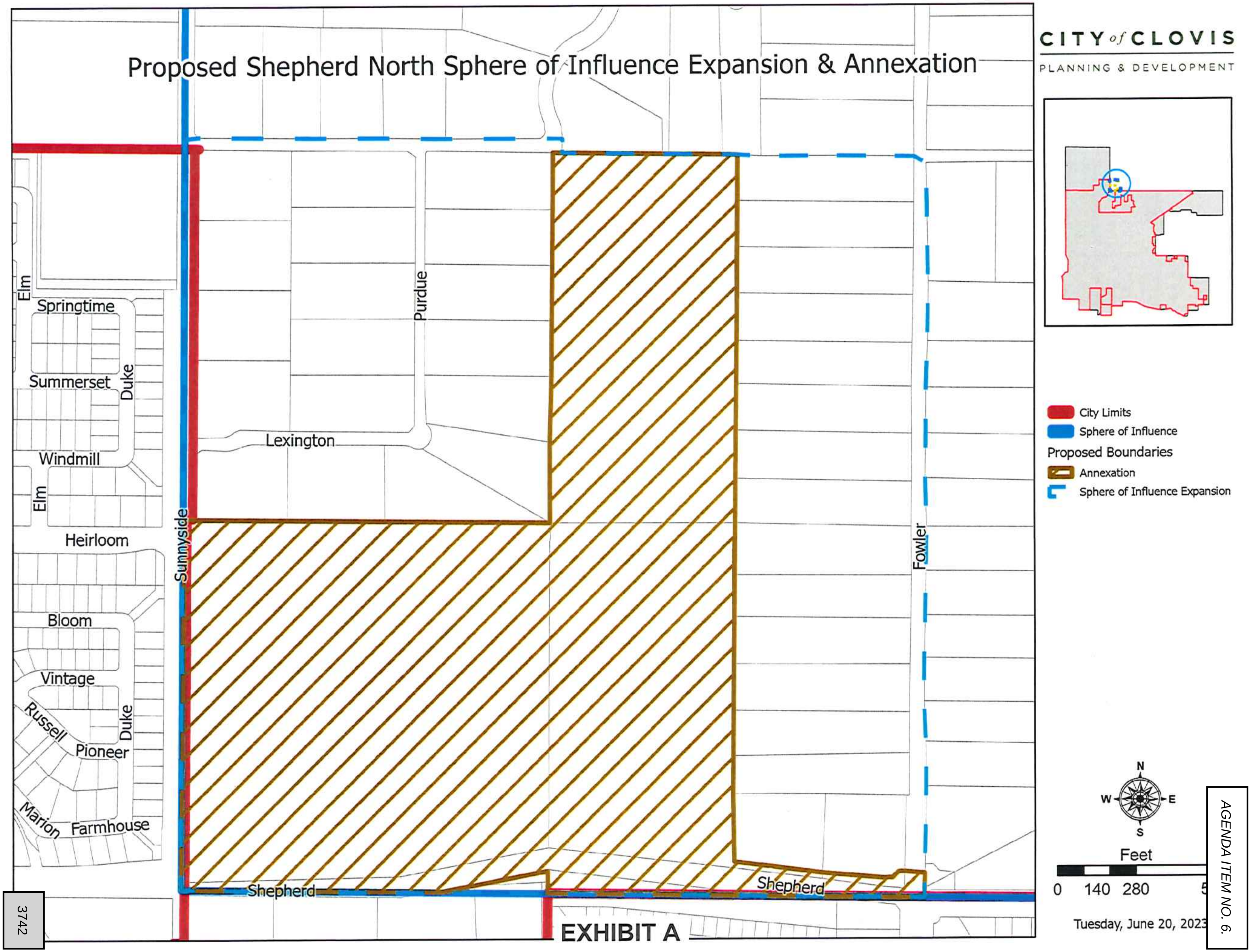
Note - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

1/31/2019

AGENDA ITEM NO. 6.

Proposed Shepherd North Sphere of Influence Expansion & Annexation

CITY of CLOVIS
PLANNING & DEVELOPMENT



Tuesday, June 20, 2023

EXHIBIT A

City of Clovis

Department of Planning and Development Services
CITY HALL - 1033 Fifth Street - Clovis, CA 93612

Distribution Date: **7/25/2023**

PLANNING APPLICATION REQUEST FOR COMMENTS

Project Manager - George Gonzalez, MPA, Senior Planner

PLEASE ROUTE TO:

(In House)

- ☒ Planning Division
- ☒ Building Division
- ☒ Engineering Divisior
- ☒ Utilities Division
- ☒ Solid Waste Divisior
- ☒ Fire Department
- ☒ Police Department
- ☒ City Landscape Com
- ☒ Legal Description Review
- ☐ Other (Specify)
- ☐

(Out-of-House)

- ☒ Fresno Irrigation District
- ☒ Fresno Metropolitan Flood Control Dist.
- ☒ Pacific Gas & Electric
- ☒ AT&T
- ☒ Clovis Unified School District
- ☒ Cal Trans
- ☒ SJV Unified Air Pollution Control Dist.
- ☒ State of California Department of Fish and Game
- ☒ LAFCO (when annexation is involved)
- ☒ County of Fresno Development
- ☒ Fresno County Environmental Health

Item(s): **GPA2021-005** Location: **North side of Shepherd Avenue, between N. Sunnyside & N. Fowler Ave.**

APN: **Multiple** Zoning: **County AL20** General Plan: **Clovis Rural Res.** RHNA Site: ____

Name of Applicant: **Great Bigland, LP -Jeff Harris** Phone/Email: (559)224-7550/jharris@wilsondevelopment.com

Applicant Address: **7550 N. Palm Avenue, #102** City: **Fresno** State: **CA** Zip: **93711**

Previously Reviewed Under DRC: **DRC2022-013** Or Other Entitlement: ____

Project Description: **GPA2021-005; A request to amend the General Plan for the Development Area (approx. 77 acres) from the Rural Residential land use designation to the Medium-High Density Residential land use designation. This request is being processed concurrently with SOI Expansion, RO307, GPA2021-006, R2021-009, PDP2021-004, and TM6205.**

This item is tentatively scheduled for a public hearing to be consi **City Council.**
The attached information is circulated for your comments. Please attach your comments and recommendations i
condition form and return to the project manag **8/15/2023**

Please check one below:

☐ No Comments ☐ Comments e-mailed or saved on: ____

RECOMMENDED CONDITIONS: Please draft conditions in final form that are acceptable to your department
They must be legible. Please phrase positively and clearly:

GOOD EXAMPLE: "1. Prior to occupancy, the developer shall install all landscaping as per the approved plans."

POOR EXAMPLE: "1. Install landscaping."

REVIEWED BY (please sign): ____

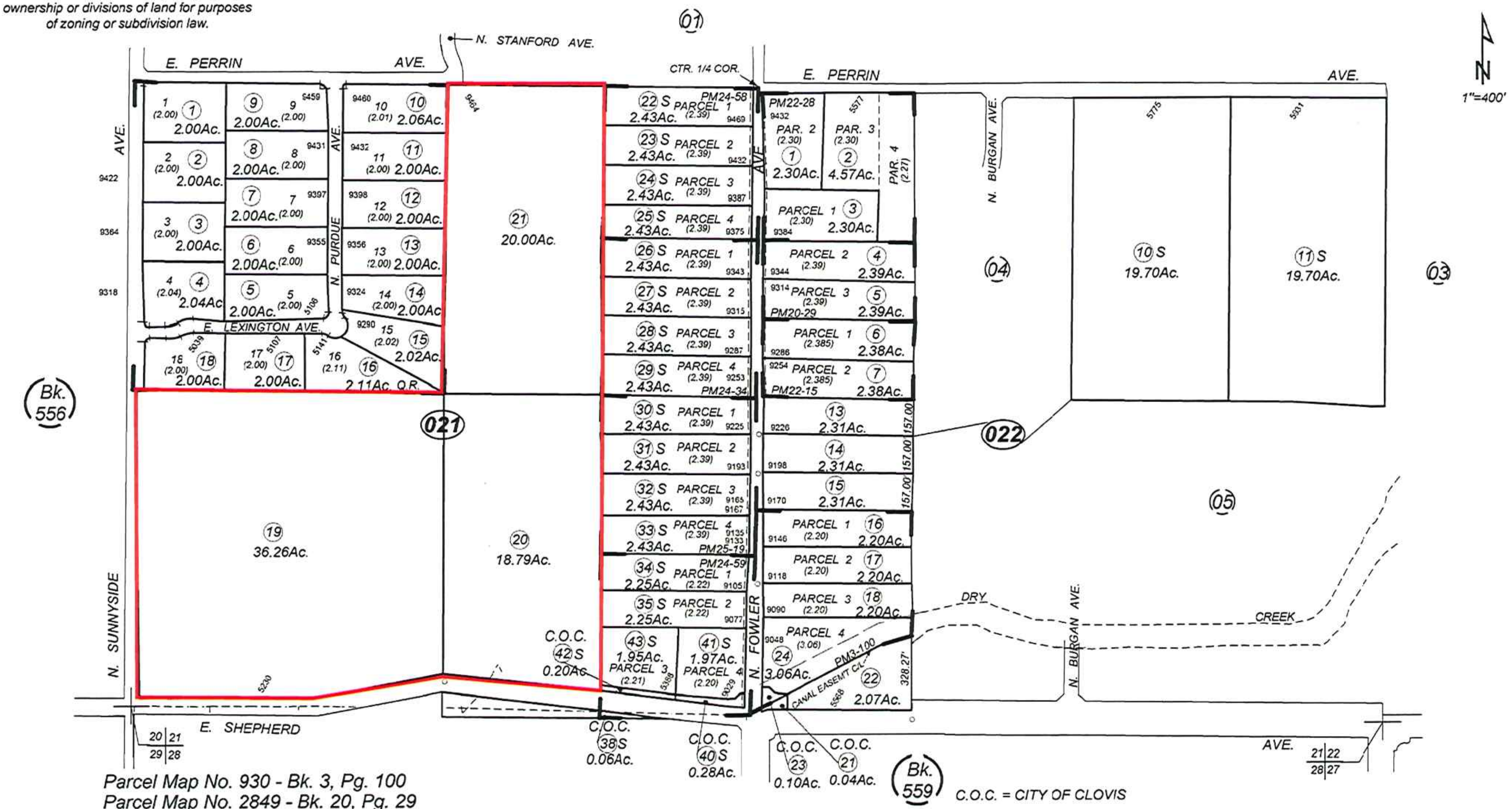
PLEASE RETURN TO:
George Gonzalez, MPA, Senior Planner
Planning and Development Services Dept.
1033 Fifth St., Clovis, CA 93612
Phone: 324-2383 Fax: 324-2866

-NOTE-
This map is for Assessment purposes only.
It is not to be construed as portraying legal
ownership or divisions of land for purposes
of zoning or subdivision law.

SUBDIVIDED LAND IN POR. SEC. 21, T. 12 S., R. 21 E., M.D.B. & M.

Tax Rate Area
76-045

557-02



C.O.C. = CITY OF CLOVIS

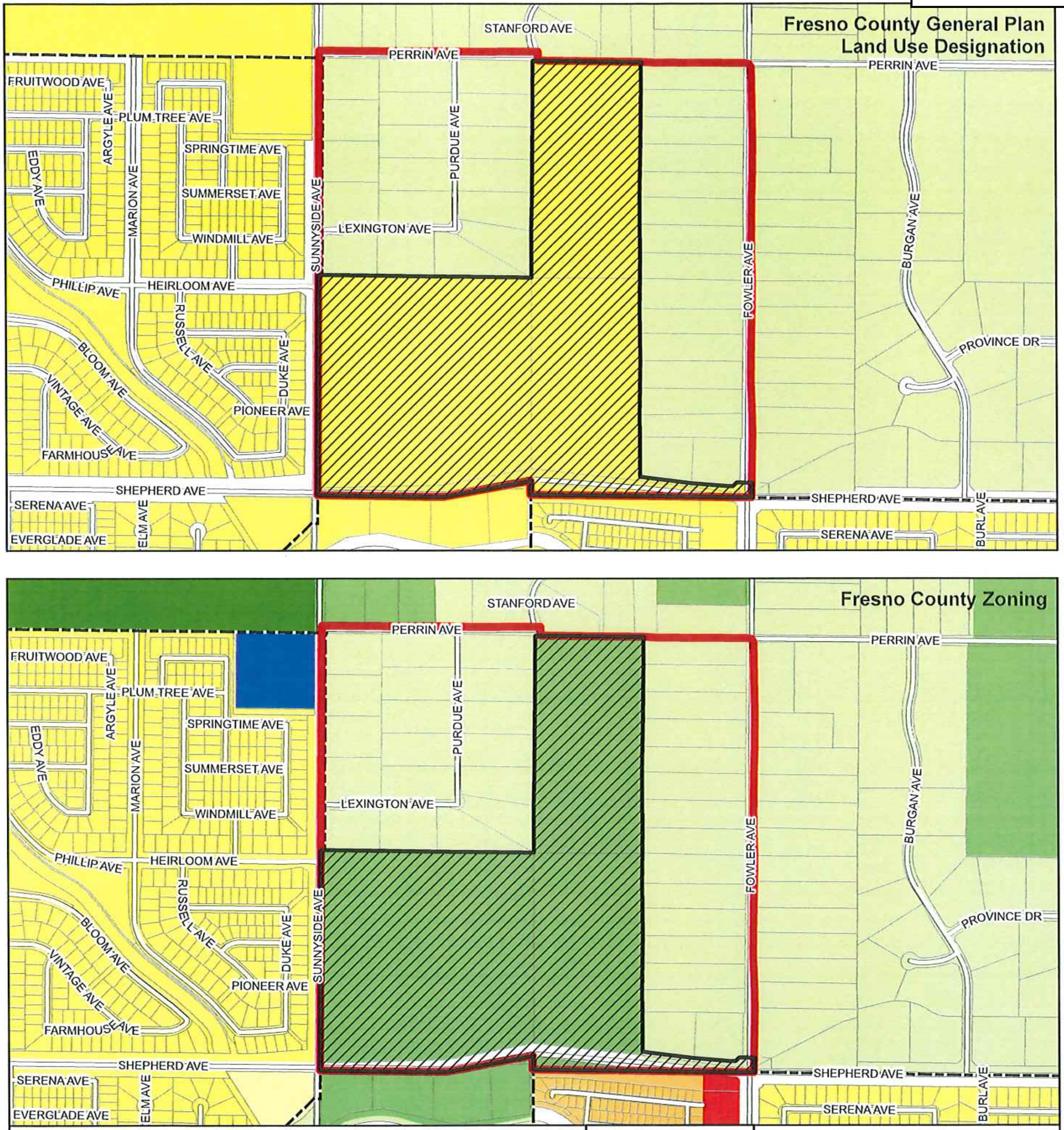
Parcel Map No. 930 - Bk. 3, Pg. 100
Parcel Map No. 2849 - Bk. 20, Pg. 29
Parcel Map No. 3373 - Bk. 22, Pg. 15
Parcel Map No. 3372 - Bk. 22, Pg. 28
Parcel Map No. 3654 - Bk. 24, Pg. 34
Parcel Map No. 3650 - Bk. 24, Pg. 58
Parcel Map No. 3637 - Bk. 24, Pg. 59

Parcel Map No. 3640 - Bk. 25, Pg. 19
Quail Run - Tract No. 3286 - Plat Bk. 37, Pg. 88

Assessor's Map Bk. 557 02
County of Fresno, Ca

Note - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

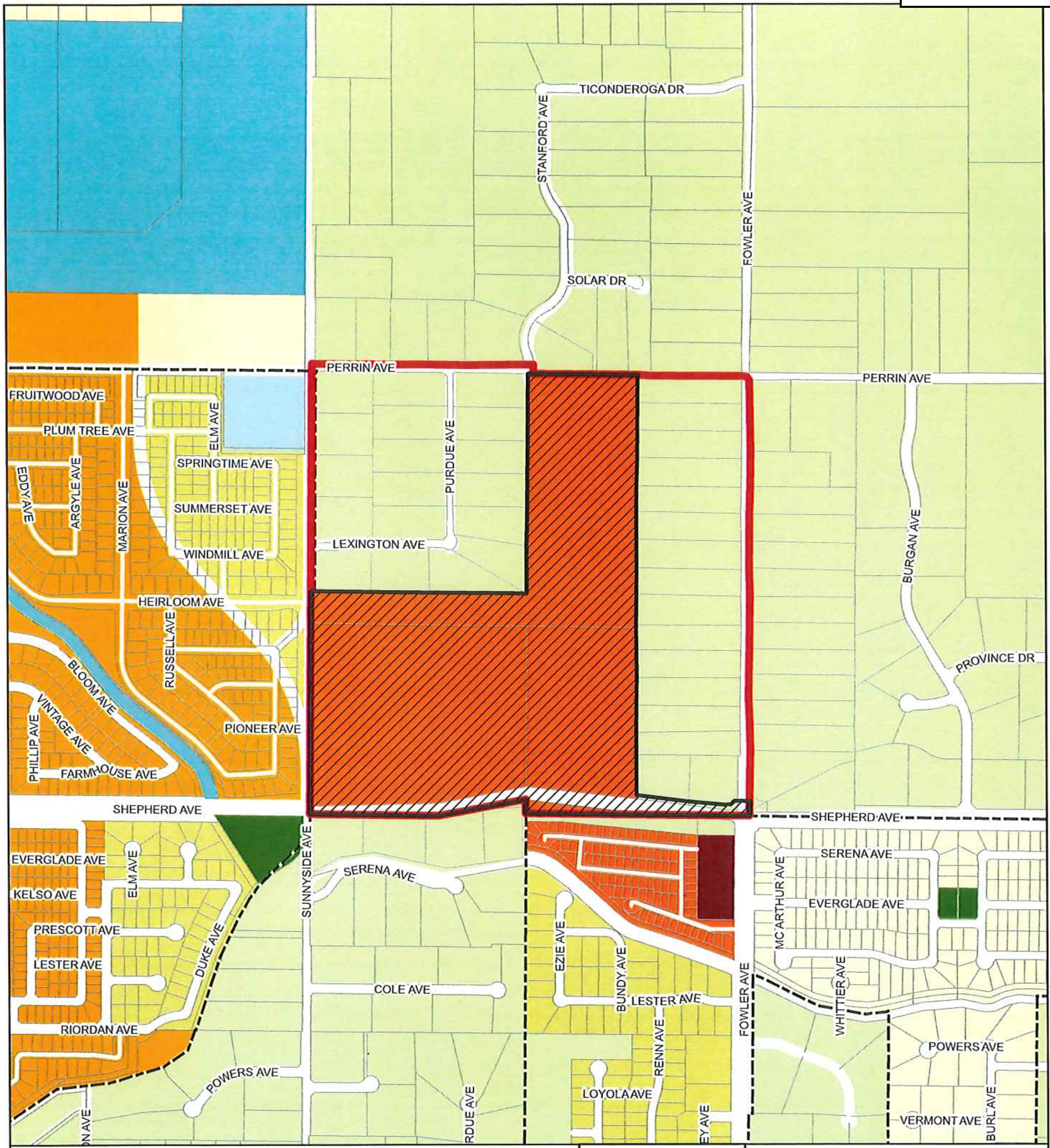
1/31/2019



SHEPHERD NORTH PROJECT

Figure 2.0-8. Fresno County General Plan Land Use and Zoning Designations

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm



LEGEND

▭ Project Boundary
▨ Developement Area
⬚ Clovis City Limits

City of Clovis General Plan Land Use

🟩 RR: Rural Residential
⬜ VL: Very Low Density Residential
🟨 L: Low Density Residential
🟧 M: Medium Density Residential
🟧 MH: Medium High Density Residential
🟫 GC: General Commercial
🟦 P: Public/Quasi-Public Facilities
🟩 PK: Park
🟦 W: Water

Source: Fresno County GIS Map [illegible] Mar 8, 2023

N

0 200 400
Feet

SHEPHERD NORTH PROJECT

Figure 2.0-9. Proposed General Plan Land Use Designations

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

City of Clovis

Department of Planning and Development Services

CITY HALL - 1033 Fifth Street - Clovis, CA 93612

Distribution Date: **7/25/2023**

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- ☒ County of Fresno Development
- ☒ Fresno County Environmental Health

Item(s): **GPA2021-006** Location: **North side of Shepherd Avenue, between N. Sunnyside & N. Fowler Ave.**

APN: **Multiple** Zoning: **County AL20** General Plan: **Clovis Rural Res.** RHNA Site: ____

Name of Applicant: **Great Bigland, LP -Jeff Harris** Phone/Email: (559)224-7550/jharris@wilsondevelopment.com

Applicant Address: **7550 N. Palm Avenue, #102** City: **Fresno** State: **CA** Zip: **93711**

Previously Reviewed Under DRC: **DRC2022-013** Or Other Entitlement: ____

Project Description: **GPA2021-006; A request to amend the General Plan to allow for Shepherd Avenue access associated with TM6205. This request is being processed concurrently with SOI Expansion, RO307, GPA2021-005, R2021-009, PDP2021-004, and TM6205.**

This item is tentatively scheduled for a public hearing to be consi **City Council.**

The attached information is circulated for your comments. Please attach your comments and recommendations i condition form and return to the project manag **8/15/2023**

Please check one below:

☐ No Comments ☐ Comments e-mailed or saved on: ____

RECOMMENDED CONDITIONS: Please draft conditions in final form that are acceptable to your department They must be legible. Please phrase positively and clearly:

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REVIEWED BY (please sign): ____

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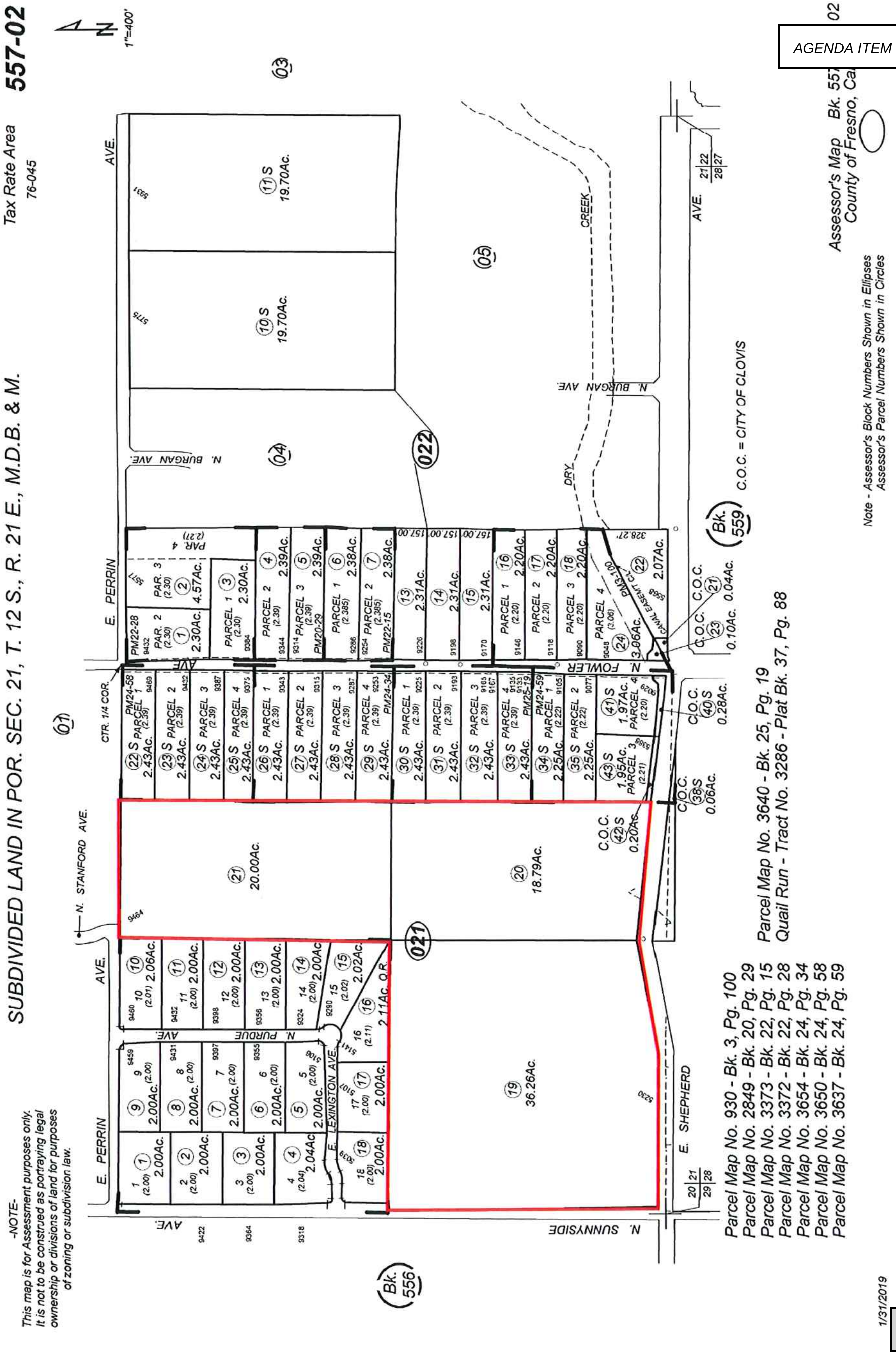
Planning and Development Services Dept.
1033 Fifth St., Clovis, CA 93612
Phone: 324-2383 Fax: 324-2866

AGENDA ITEM NO. 6.



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Tax Rate Area
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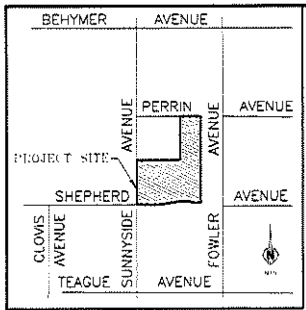
Assessor's Parcel Numbers Shown in Circles

Assessor's Map Bk. 557 - Pg. 02
County of Fresno, Calif.

1/31/2019

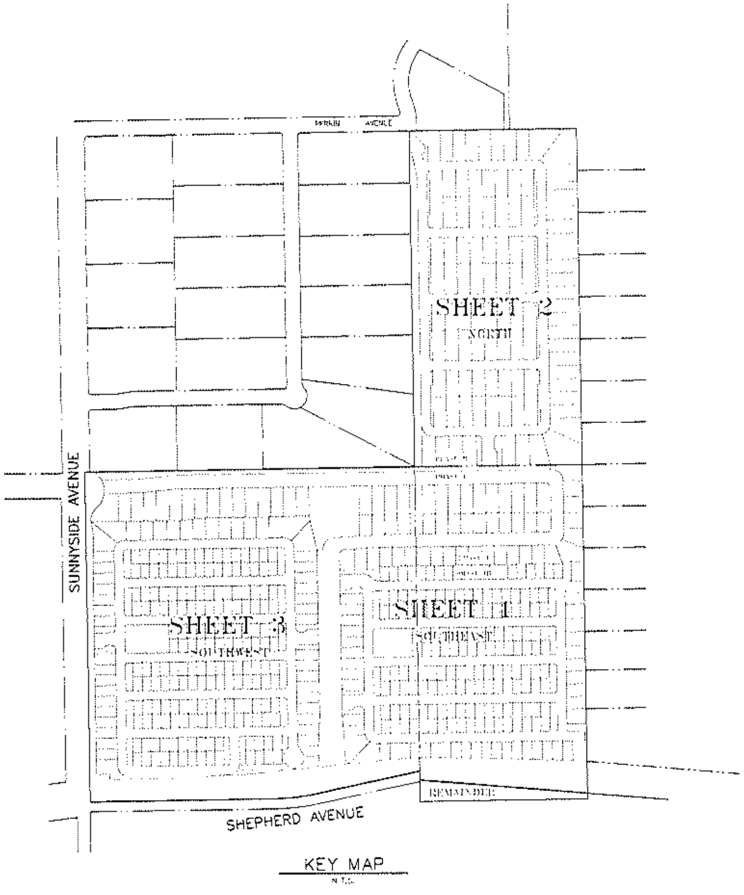


VICINITY MAP
N.T.S.

VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



KEY MAP
N.T.S.

LEGAL DESCRIPTION:

APN: 557-021-20

THE SOUTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

APN: 557-021-19

THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT PORTION THEREOF DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, THENCE NORTH 89°49'50" WEST, 567.24 FEET, ALONG THE SOUTHERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TO A POINT IN THE CENTERLINE OF SHEPHERD AVENUE WHICH IS SOUTH 89°49'50" EAST, 752.48 FEET FROM THE SOUTHWEST CORNER OF SECTION 21, THENCE EASTERLY ALONG THE CENTERLINE OF SHEPHERD AVENUE AS FOLLOWS:

ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 850 FEET, THROUGH A CENTER ANGLE OF 11°39'10", AN ARC DISTANCE OF 173.00 FEET THROUGH 78°21'00" EAST, 334.79 FEET, THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 940 FEET, THROUGH A CENTRAL ANGLE OF 3°33'20", AN ARC DISTANCE OF 58.33 FEET TO A POINT ON THE EASTERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, THENCE LEAVING THE CENTERLINE OF SHEPHERD AVENUE, SOUTH 0°02'20" EAST, 97.60 FEET ALONG THE EASTERLY LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 21, TO THE POINT OF COMMENCEMENT.

APN: 557-021-21

THE NORTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

TOGETHER WITH AN EASEMENT FOR ROAD PURPOSES OVER AND ACROSS THE EAST 30 FEET OF THE SOUTH HALF OF THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 21, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE RIGHT-OF-WAY DEEDED TO THE CITY OF CLOVIS PER DEED DOCUMENT NUMBER 2022-0112530 RECORDED ON SEPTEMBER 8, 2022.

NOTES:

1. THIS AREA IS SUBJECT TO FLOODZONE X (UNSHADED) AND FLOODZONE AH (SHADED).
2. ALL IMPROVEMENTS SHALL BE AS REQUIRED BY THE CITY OF CLOVIS TO CITY STANDARDS, AND SHALL INCLUDE SANITARY SEWER, DOMESTIC WATER, UNDERGROUND POWER, TELEPHONE, GAS, CONCRETE CURBS, GUTTERS, SIDEWALKS, PERMANENT STREET PAVEMENT, STREET LIGHTS, ETC.
3. THERE SHALL BE NO GRADE DIFFERENTIALS OF GREATER THAN 6" WITHIN 200 FEET OF THE SITE UNLESS APPROVED BY THE CITY OF CLOVIS DEVELOPMENT DEPARTMENT.

EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AL-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.63 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.89 AC (GROSS)
72.37 AC (NET)

NUMBER OF LOTS
605 LOTS & 52 OUTLOTS

DENSITY
7.77 DU/AC

AVERAGE LOT SIZE
3,363 SF

OUTLOT SCHEDULE
- OUTLOTS A, B, & C ARE FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES.
- OUTLOTS D, E, F, G, H, I, J, K, L, M, N, R, T, U, JJ, KK, LL, MM, NN, RR, TT, UU & ZZ ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES.
- OUTLOTS O, Q, S & QQ ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN & PUBLIC UTILITY PURPOSES.
- OUTLOTS V, W, X, Y, AA, BB, CC, DD, EE, FF, HH, OO, QQ, TT, VV, WW, XX, & YY ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES.
- OUTLOTS Y, Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES.
- OUTLOT P IS FOR PIPED DRAINAGE CHANNEL PURPOSES.

TENTATIVE SUBDIVISION

Great Bigland, L.P.

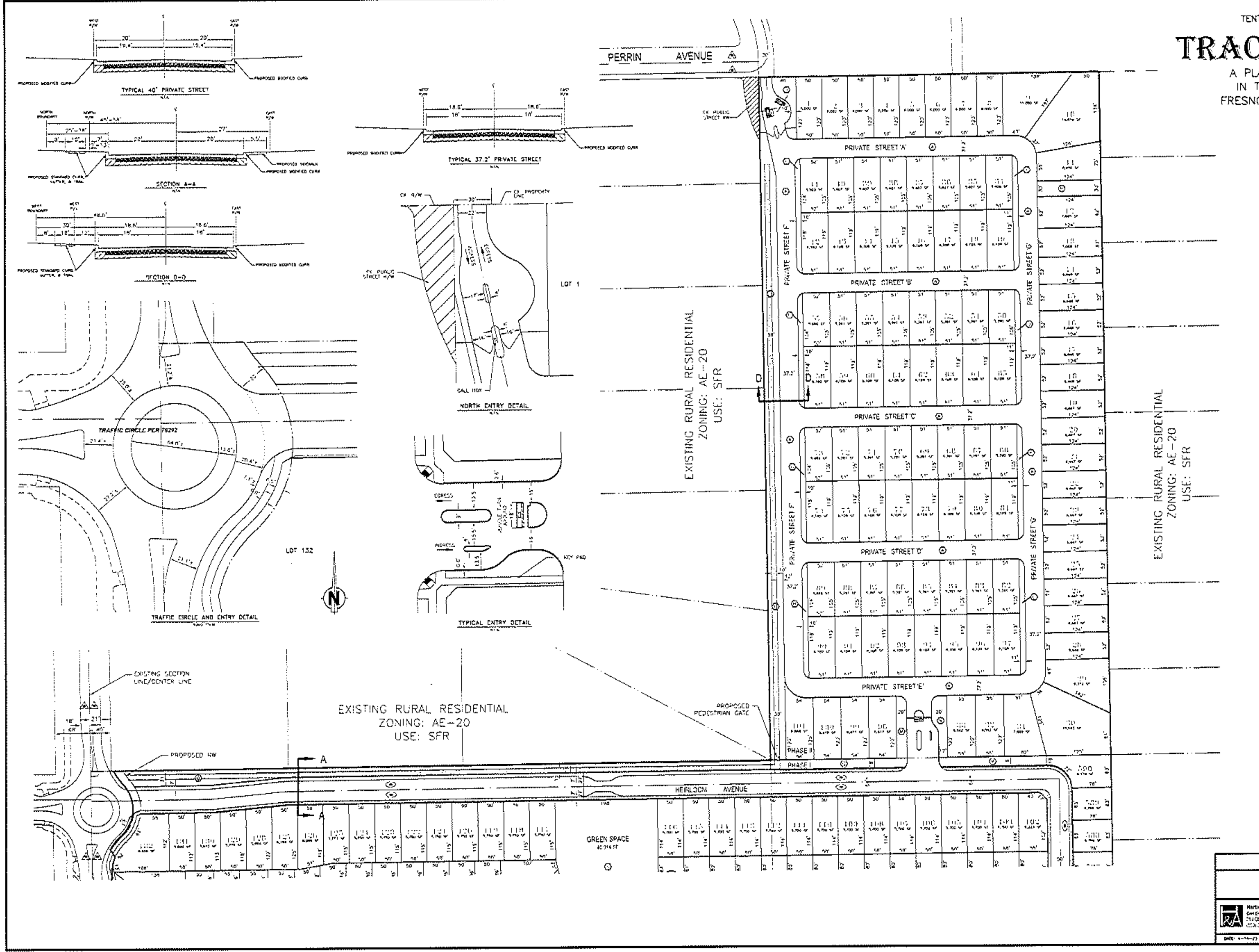
Harbour & Associates
Civil Engineers

DATE: 4-14-23
DRAWN BY: SDM

VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

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EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AE-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

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REQUIRED = 1.53 ACRES
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77.89 AC (GROSS)
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605 LOTS & 52 OUTLOTS

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7.77 DU/AC

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3,353 SF

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- OUTLOTS S, Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES
- OUTLOT P IS FOR FMFCD DRAINAGE CHANNEL PURPOSES

LEGEND:

△	INDICATES STREETS PREVIOUSLY DEDICATED FOR PUBLIC USE
⊖	PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
PUE	PUBLIC UTILITY EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE
Ⓐ	OUTLOT IDENTIFIER
☐	FLOODZONE 'AH'
·	CITY STD. 54' STREET SECTION

TM6205 - NORTH

Great Bigland, L.P.

Harbour & Associates
Civil Engineers

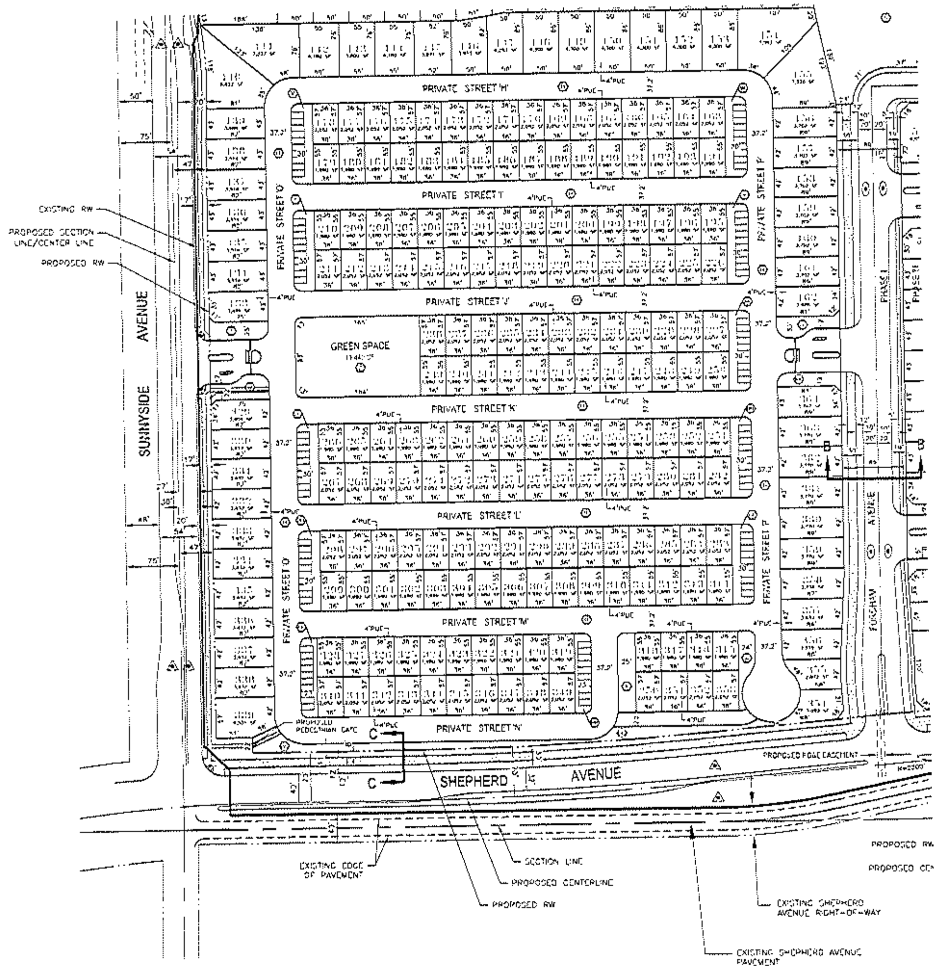
DATE: 4-14-23
SCALE: 1"=80'

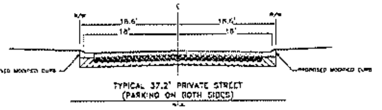
AGENDA ITEM NO. 6.

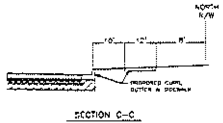
VESTING
TENTATIVE SUBDIVISION MAP
OF

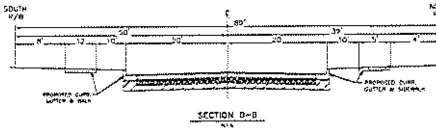
TRACT NO. 6205

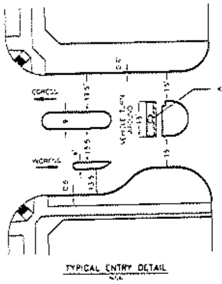
A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA




TYPICAL 37.2' PRIVATE STREET
(PARKING ON BOTH SIDES)
N.T.S.


SECTION C–C
N.T.S.


SECTION B–B
N.T.S.


TYPICAL ENTRY DETAIL
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EXISTING ZONING
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R-1 & R-1-PRD

PROPOSED USE
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CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
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SOURCE OF CABLE T.V.
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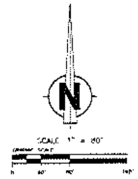


TM6205 - SOUTHWEST

Great Bigland, L.P.

Harbour & Associates
Civil Engineers

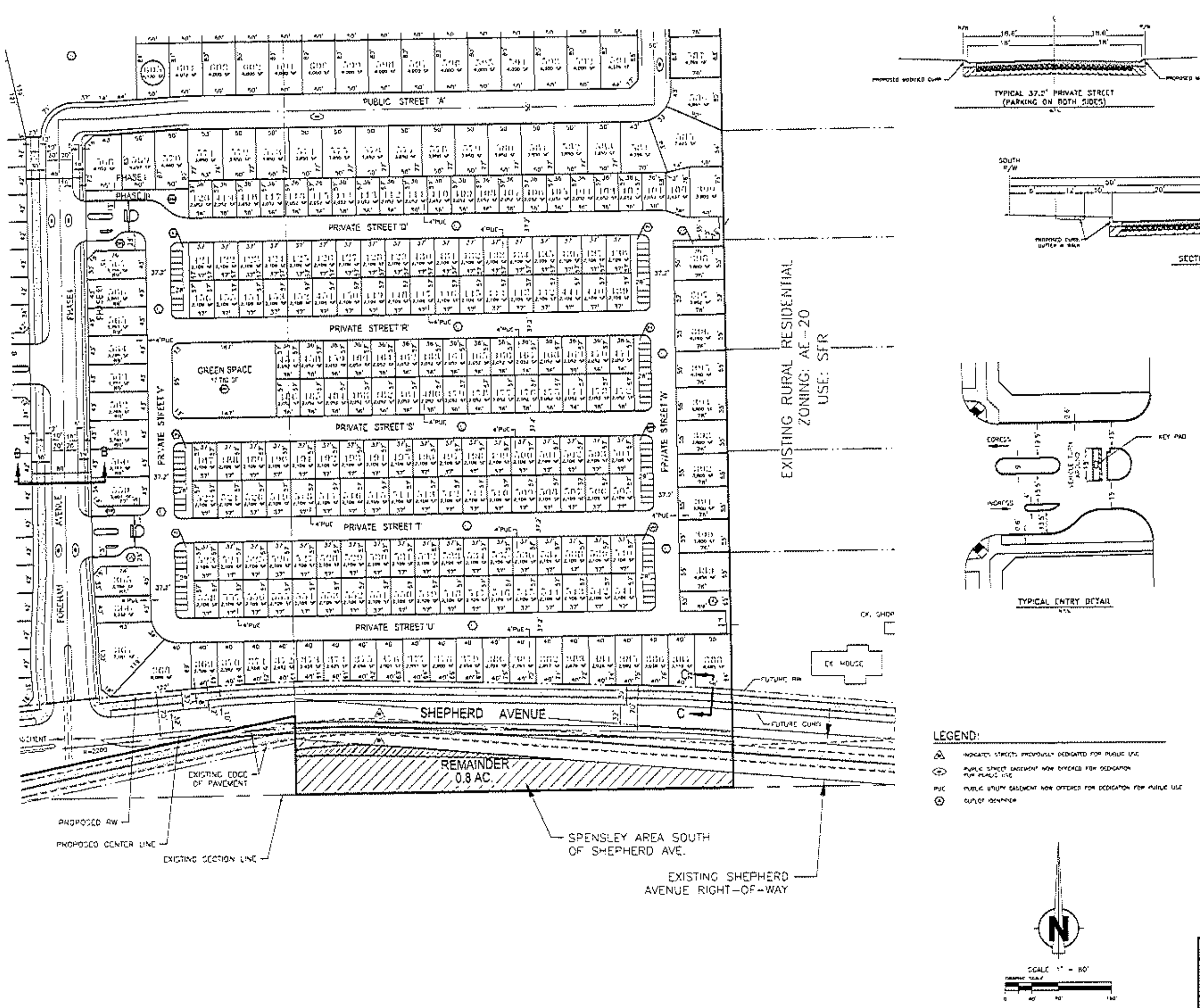
DATE: 4-14-22
SCALE: 1"=80'
DRAWN BY: NM

AGENDA ITEM NO. 6.

VESTING
TENTATIVE SUBDIVISION MAP
OF

TRACT NO. 6205

A PLANNED DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA



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EXISTING BUILDINGS
EXISTING BUILDINGS TO BE REMOVED

EXISTING TREES
EXISTING TREES TO BE REMOVED

EXISTING USE
RURAL RESIDENTIAL AND ORCHARD

EXISTING ZONING
AE-20

PROPOSED ZONING
R-1 & R-1-PRD

PROPOSED USE
SINGLE FAMILY RESIDENTIAL SUBDIVISION

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF WASTE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

OPEN SPACE:
REQUIRED = 1.43 ACRES
PROVIDED = 4.32 ACRES

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
557-021-19, 557-021-20 & 557-021-21

SITE AREA
77.89 AC (GROSS)
72.37 AC (NET)

NUMBER OF LOTS
605 LOTS & 52 OUTLOTS

DENSITY
7.77 DU/AC

AVERAGE LOT SIZE
3,303 SF

OUTLOT SCHEDULE

- OUTLOTS A, B, & C ARE FOR PRIVATE ROAD & PUBLIC UTILITY PURPOSES
- OUTLOTS D, E, F, G, H, [illegible] LL, MM, NN, RR, SS, UU & ZZ ARE FOR PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS O, Q, U, & GG ARE FOR PRIVATE LANDSCAPE, PRIVATE PEDESTRIAN & PUBLIC UTILITY PURPOSES
- OUTLOTS V, W, X, Y, AA, BB, CC, DD, EE, FF, HH, [illegible] ARE FOR PRIVATE PARKING, PRIVATE LANDSCAPE & PUBLIC UTILITY PURPOSES
- OUTLOTS [illegible], Z, & PP ARE FOR PRIVATE POOL & PARK AREA, PRIVATE PARKING, PRIVATE LANDSCAPING & PUBLIC UTILITY PURPOSES
- OUTLOT [illegible] IS FOR FMFCD DRAINAGE CHANNEL PURPOSES

TM6205 - SOUTHEAST

Great Bigland, L.P.

Harbour & Associates
Civil Engineers
[illegible] Clovis, California [illegible]

DATE: [illegible] | SCALE: 1"=80' | DRAWN BY: [illegible]

City of Clovis

Department of Planning and Development Services

CITY HALL - 1033 Fifth Street - Clovis, CA 93612

Distribution Date: **7/25/2023**

PLANNING APPLICATION REQUEST FOR COMMENTS

Project Manager - George Gonzalez, MPA, Senior Planner

PLEASE ROUTE TO:

(In House)

☒ Planning Division
☒ Building Division
☒ Engineering Divisior
☒ Utilities Division
☒ Solid Waste Divisior
☒ Fire Department
☒ Police Department
☒ City Landscape Com
☒ Legal Description Review
☐ Other (Specify)
☐

(Out-of-House)

☒ Fresno Irrigation District
☒ Fresno Metropolitan Flood Control Dist.
☒ Pacific Gas & Electric
☒ AT&T
☒ Clovis Unified School District
☒ Cal Trans
☒ SJV Unified Air Pollution Control Dist.
☒ State of California Department of Fish and Game
☒ LAFCO (when annexation is involved)
☒ County of Fresno Development
☒ Fresno County Environmental Health

Item(s): **R2021-009** Location: **North side of Shepherd Avenue, between N. Sunnyside & N. Fowler Ave.**

APN: **Multiple** Zoning: **County AL20** General Plan: **Clovis Rural Res.** RHNA Site: ____

Name of Applicant: **Great Bigland, LP -Jeff Harris** Phone/Email: (559)224-7550/jharris@wilsondevelopment.com

Applicant Address: **7550 N. Palm Avenue, #102** City: **Fresno** State: **CA** Zip: **93711**

Previously Reviewed Under DRC: **DRC2022-013** Or Other Entitlement: ____

Project Description: **R2021-009; A request to prezone property within the Development Area of the Project site from the Fresno County AL20 Zone District to the Clovis R-1-PRD Zone District. This request is being processed concurrently with SOI Expansion, RO307, GPA2021-005, GPA2021-006, PDP2021-004, and TM6205.**

This item is tentatively scheduled for a public hearing to be consi **City Council.**

The attached information is circulated for your comments. Please attach your comments and recommendations i condition form and return to the project manag **8/15/2023**

Please check one below:

☐ No Comments ☐ Comments e-mailed or saved on: ____

RECOMMENDED CONDITIONS: Please draft conditions in final form that are acceptable to your department They must be legible. Please phrase positively and clearly:

GOOD EXAMPLE: "1. Prior to occupancy, the developer shall install all landscaping as per the approved plans."

POOR EXAMPLE: "1. Install landscaping."

REVIEWED BY (please sign): ____

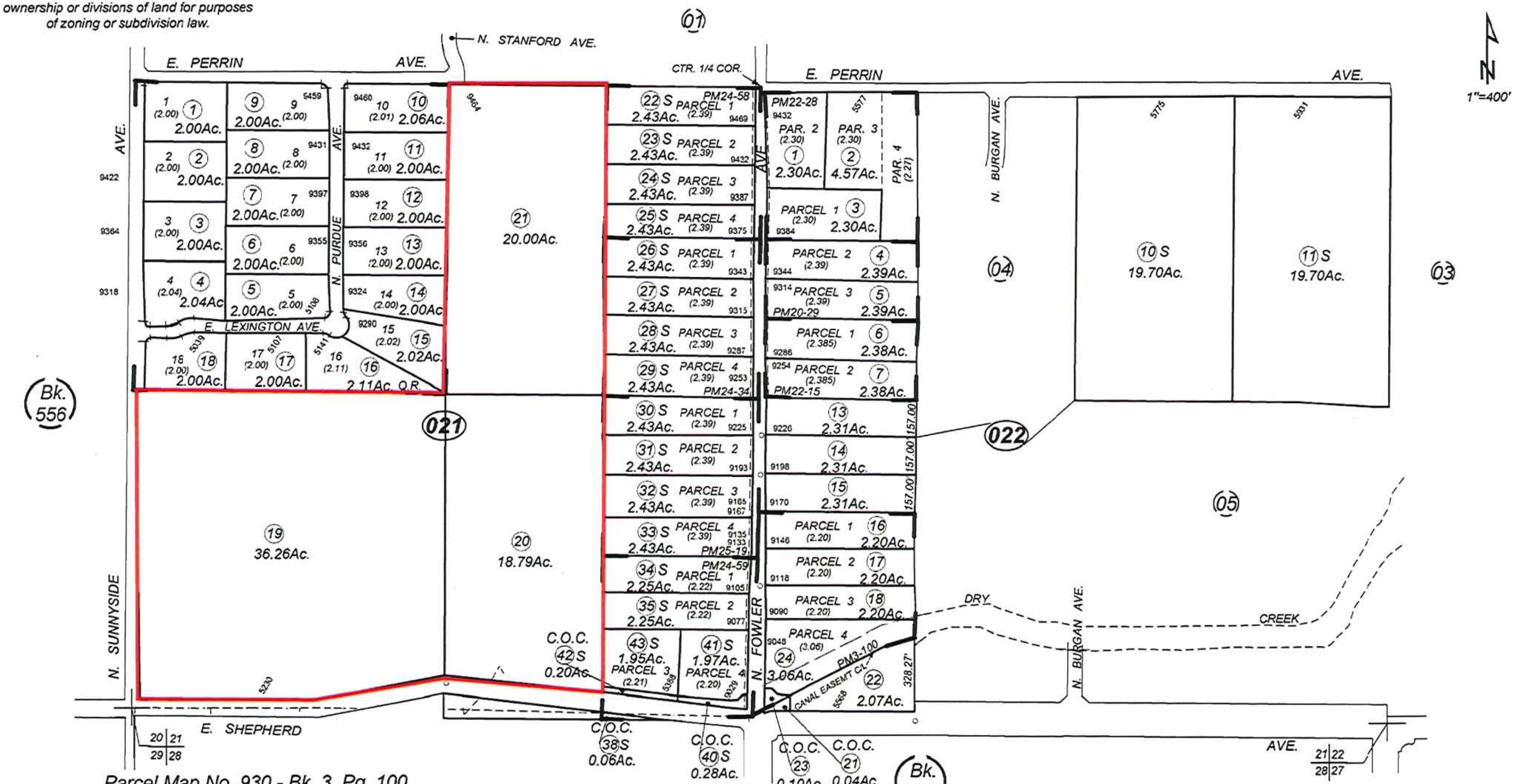
PLEASE RETURN TO:
George Gonzalez, MPA, Senior Planner
Planning and Development Services Dept.
1033 Fifth St., Clovis, CA 93612
Phone: 324-2383 Fax: 324-2866

-NOTE-
This map is for Assessment purposes only.
It is not to be construed as portraying legal
ownership or divisions of land for purposes
of zoning or subdivision law.

SUBDIVIDED LAND IN POR. SEC. 21, T. 12 S., R. 21 E., M.D.B. & M.

Tax Rate Area
76-045

557-02



C.O.C. = CITY OF CLOVIS

Parcel Map No. 930 - Bk. 3, Pg. 100
Parcel Map No. 2849 - Bk. 20, Pg. 29
Parcel Map No. 3373 - Bk. 22, Pg. 15
Parcel Map No. 3372 - Bk. 22, Pg. 28
Parcel Map No. 3654 - Bk. 24, Pg. 34
Parcel Map No. 3650 - Bk. 24, Pg. 58
Parcel Map No. 3637 - Bk. 24, Pg. 59

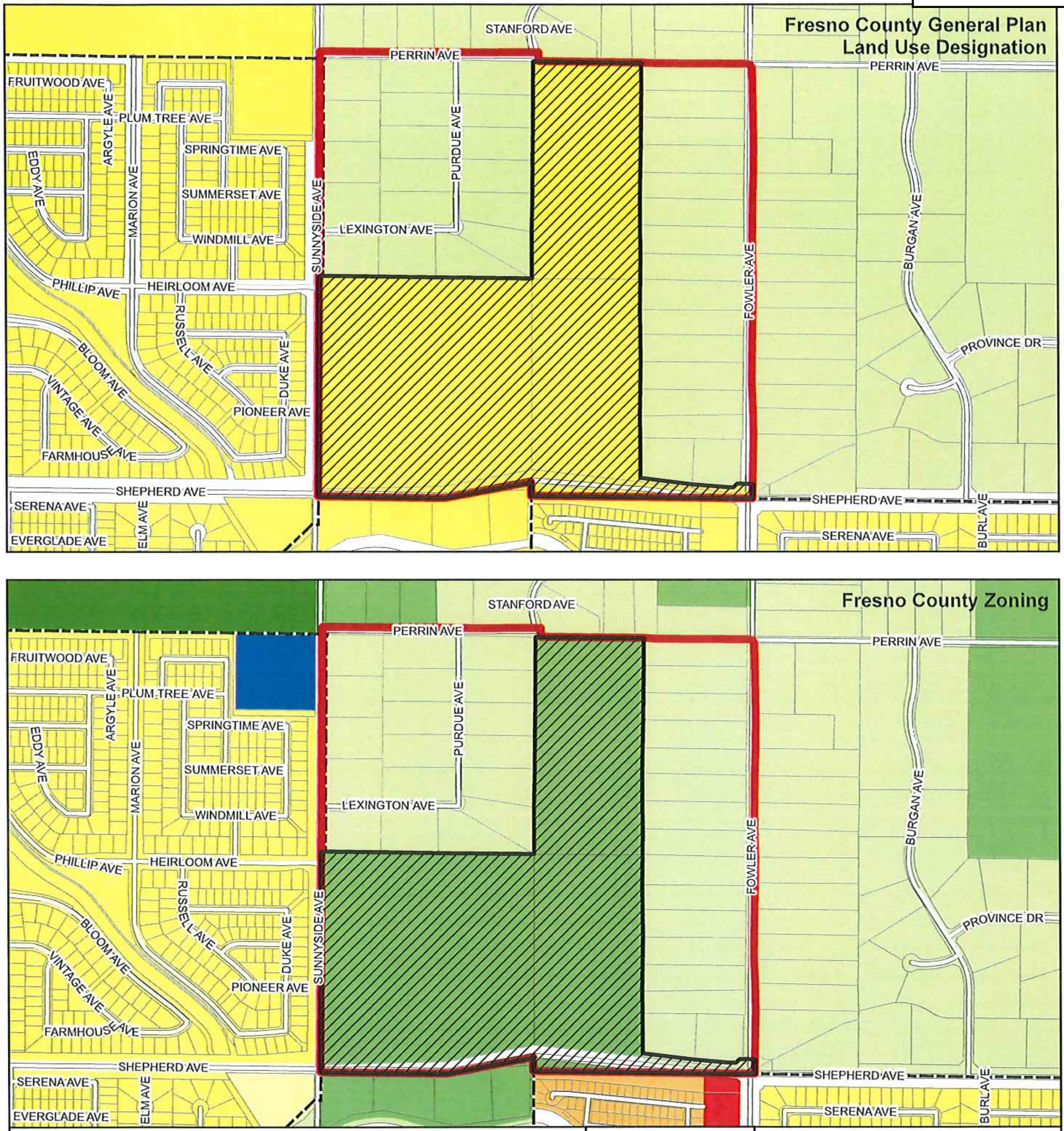
Parcel Map No. 3640 - Bk. 25, Pg. 19
Quail Run - Tract No. 3286 - Plat Bk. 37, Pg. 88

Assessor's Map Bk. 55 02
County of Fresno, Ca

Note - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

AGENDA ITEM NO. 6.

1/31/2019



Fresno County General Plan Land Use Designation

Fresno County Zoning

LEGEND

🟥 Project Boundary

▨ Developement Area

⬚ Clovis City Limits

Fresno County General Plan Land Use

🟩 Rural Residential

🟨 Low Density Residential

Fresno County Zoning

🟩 AE20

🟩 AL20

🟥 C-2

🟦 P-F

🟨 R-1

🟨 R-1-7500

🟨 R-1-PRD

🟧 R-2

🟨 R-A

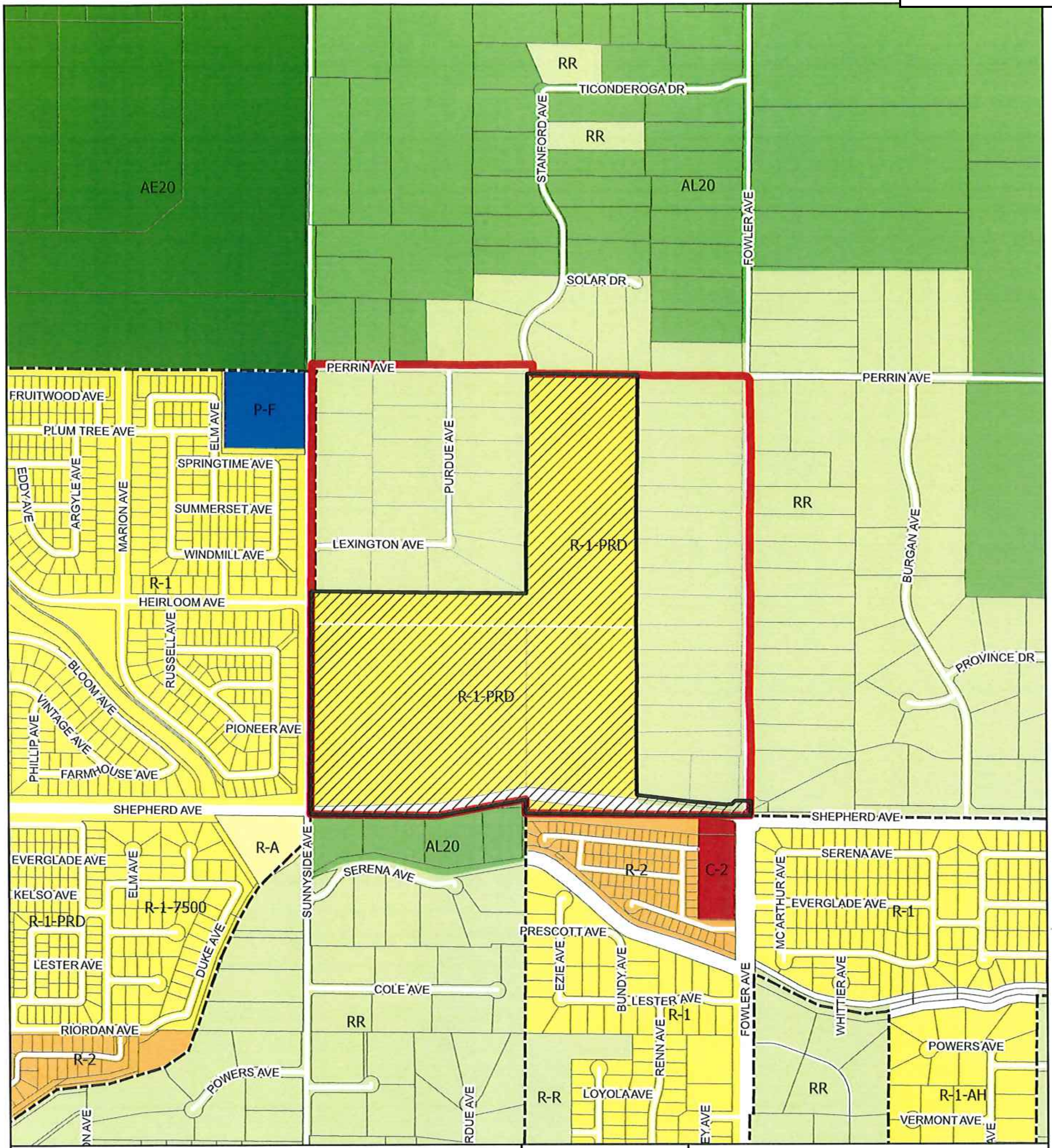
🟩 RR

Sources: Fresno County GIS Map Data. March 2025.

SHEPHERD NORTH PROJECT

Figure 2.0-8. Fresno County General Plan Land Use and Zoning Designations

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm



Source: Fresno County GIS Maps, May 8, 2023.

SHEPHERD NORTH PROJECT

Figure 2.0-10. Proposed Zoning

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

City of Clovis

Department of Planning and Development Services

CITY HALL - 1033 Fifth Street - Clovis, CA 93612

Distribution Date: **7/25/2023**

PLANNING APPLICATION REQUEST FOR COMMENTS

Project Manager - George Gonzalez, MPA, Senior Planner

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- ☒ Police Department
- ☒ City Landscape Com
- ☒ Legal Description Review
- ☐ Other (Specify)
- ☐

(Out-of-House)

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- ☒ State of California Department of Fish and Game
- ☒ LAFCO (when annexation is involved)
- ☒ County of Fresno Development
- ☒ Fresno County Environmental Health

Item(s): **PDP2021-004** Location: **North side of Shepherd Avenue, between N. Sunnyside & N. Fowler Ave.**

APN: **Multiple** Zoning: **County AL20** General Plan: **Clovis Rural Res.** RHNA Site: ____________

Name of Applicant: **Great Bigland, LP -Jeff Harris** Phone/Email: (559)224-7550/jharris@wilsondevelopment.com

Applicant Address: **7550 N. Palm Avenue, #102** City: **Fresno** State: **CA** Zip: **93711**

Previously Reviewed Under DRC: **DRC2022-013** Or Other Entitlement: ____________

Project Description: **PDP2021-004; A planned development permit request for a 605-lot single-family residential development located on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues. This request is being processed concurrently with SOI Expansion, RO307, GPA2021-005, GPA2021-006, R2021-009, and TM6205.**

This item is tentatively scheduled for a public hearing to be consi **City Council.**
The attached information is circulated for your comments. Please attach your comments and recommendations i
condition form and return to the project manag **8/15/2023**

Please check one below:

☐ No Comments ☐ Comments e-mailed or saved on: ____________

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They must be legible. Please phrase positively and clearly:

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POOR EXAMPLE: "1. Install landscaping."

REVIEWED BY (please sign): ____________

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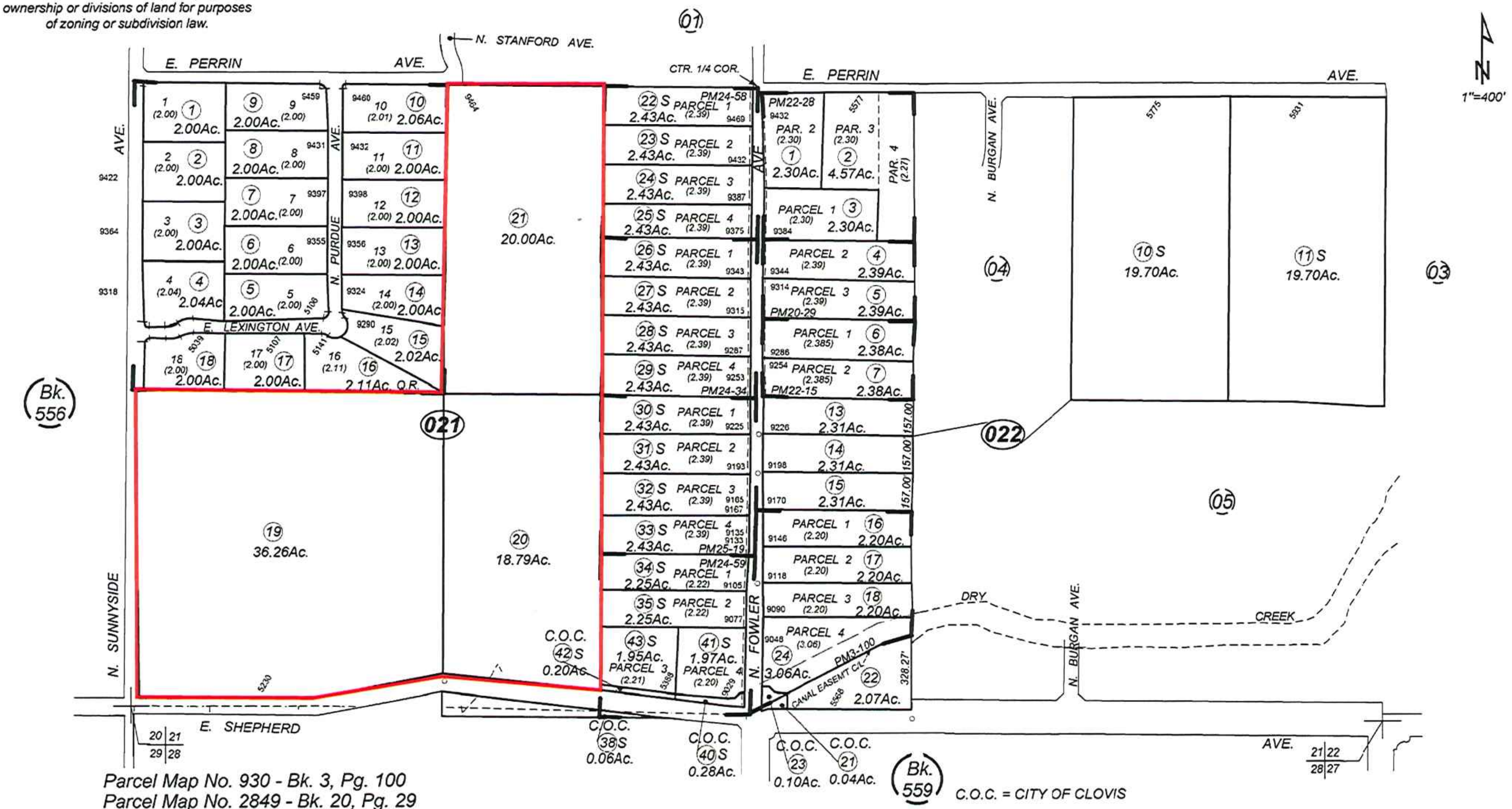

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Quail Run - Tract No. 3286 - Plat Bk. 37, Pg. 88

Assessor's Map Bk. 557 02
County of Fresno, Ca

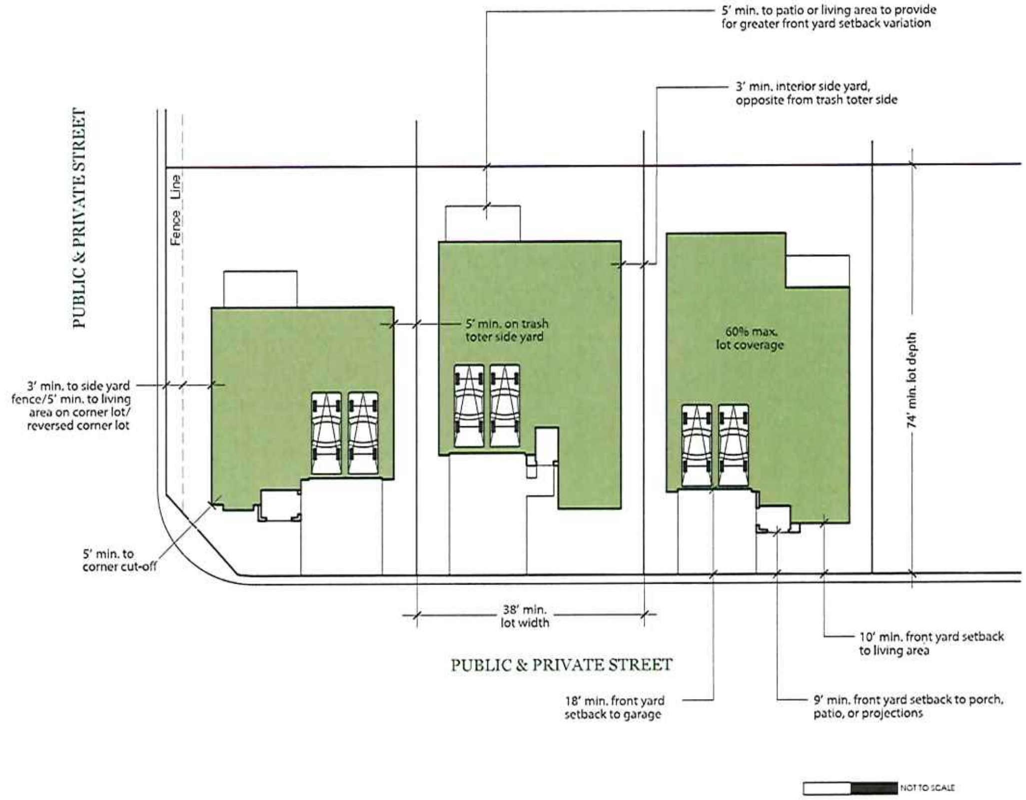
Note - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

1/31/2019

TRACT 6205 - Citrea

Residential Land Use Development Standards

LAND USE	DEVELOPMENT STANDARDS	
SINGLE-FAMILY RESIDENTIAL	**STANDARD**	**NOTES**
DESIGNATION		
Zone District	R-1-PRD	
GP Density Range	7.1 - 15.0 du/ac	Medium-High Density Residential
Dwelling Units	66	
BUILDING INTENSITY		
Minimum Lot Area	3,700 sqft	
Minimum Lot Width	50'	
Minimum Lot Depth	74'	
Maximum Height	35'	
Curved/Cul-de-sac/ Corner Lot	25' min/25' min/53' min	For street frontage
BUILDING SETBACKS		**All setbacks measured from PL.**
Front Yard (Local)	18' min/10' min/9' min	To garage/To living area/To projections and/or porch/patio
Side Yard	5' min/3' min	5' min one side/3' min other side
Corner/Reversed Corner	3' min/5' min	To side yard fence/To living area
Rear Yard	5' min	
Corner Cut-Off	5' min	
GARAGES/STREETS/PARKING		
Garages	2-car	20'x20' min.
	1-car	10'x16' min.
Streets (Private)	36' curb to curb	
On-Street Parking	Yes	
ACCESSORY USES		**General list of requirements and restrictions.**
Walls/Fences	6' min - 8' high max	
Trellises	12' high max	
Pools and Spas	5' min	Water portion to rear and side PLs. Pool and spa may not be located in front yard.
Equipment	HVAC, Pool, spa and fountain equipment allowed in side yard easement and rear setback.	
Covered Structures Accessory Buildings	12' high max	Covered structures and building additions are allowed subject to review by the City of Clovis, provided that lot coverage standards are not exceeded and that a rear yard encroachment permit is obtained if encroachment into rear yard occurs.



The imagery conveys samples of the architectural character intended for these neighborhoods.

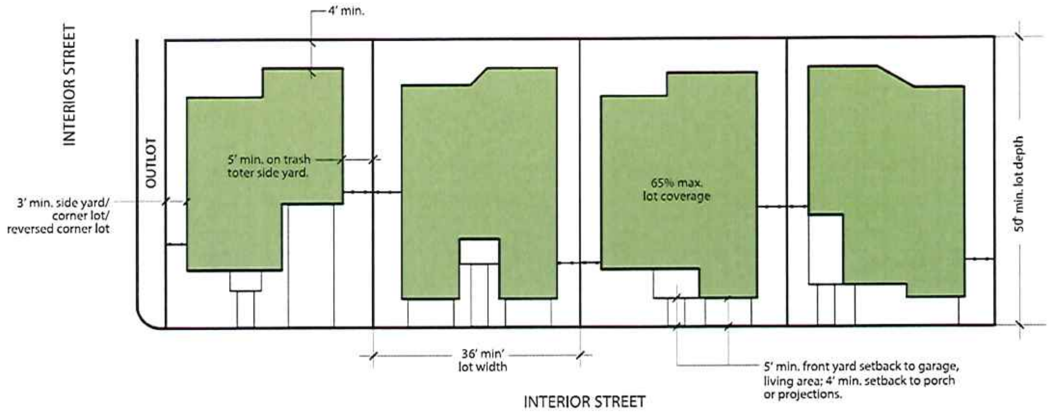
Lots 140-155, 388-399, 568-605 of Tentative Map No. 6205.

TRACT 6205 – NEC SHEPHERD & SUNNYSIDE

TRACT 6205 - Elev8ions

Residential Land Use Development Standards

LAND USE	DEVELOPMENT STANDARDS	
SINGLE-FAMILY RESIDENTIAL	**STANDARD**	**NOTES**
DESIGNATION		
Zone District	R-1-PRD	
GP Density Range	7.1 - 15.0 du/ac	Medium-High Density Residential
Dwelling Units	407	
BUILDING INTENSITY		
Minimum Lot Area	1,980 sq ft	
Minimum Lot Width	36'	
Minimum Lot Depth	50'	
Maximum Coverage	65%	
Maximum Height	35'	
Curved, Cul-de-sac or Corner Lot	36' min/50' min	For street frontage/For lot depth
BUILDING SETBACKS		**All setbacks measured from PL.**
Front Yard	5' min/4' min	To garage, living area/porch or projections
Side Yard	5' min/3' min	5' min garage side/3' min other side
Corner/Reversed Corner	3' min	
Rear Yard	4' min	
GARAGES/STREETS/PARKING		
Garages	1-car 2-car	10'x16' min 20'x20' min or tandem 10'x38' min
Streets (Interior)	36' wide	Curb-to-curb
Parking	1.5 spaces/unit min	1 covered space per unit min
ACCESSORY USES		**General list of requirements and restrictions.**
Walls/Fences	6' min - 8' high max	
Trellises	12' high max	
Pools and Spas	3' min	Water portion to rear and side PLs. Pool and spa may not be located in front yard.
Equipment	Pool, spa and fountain equipment allowed in side yard setback.	
Covered Structures Accessory Buildings	12' high max	Covered structures and building additions are allowed subject to review by HOA committee and permitting by the City of Clovis, provided that lot coverage standards are not exceeded and that a rear yard encroachment permit is obtained if encroachment into rear yard occurs.



NOTE: Construction of more than two of the same plan type in a row or more than three 2-car garage models in a row (excepting tandem garage units) shall be addressed through the Residential Site Plan Review process.

The imagery conveys samples of the architectural character intended for these neighborhoods.

NOT TO SCALE

Lots 133-139, 156-387, 400-567 of Tentative Map No. 6205.

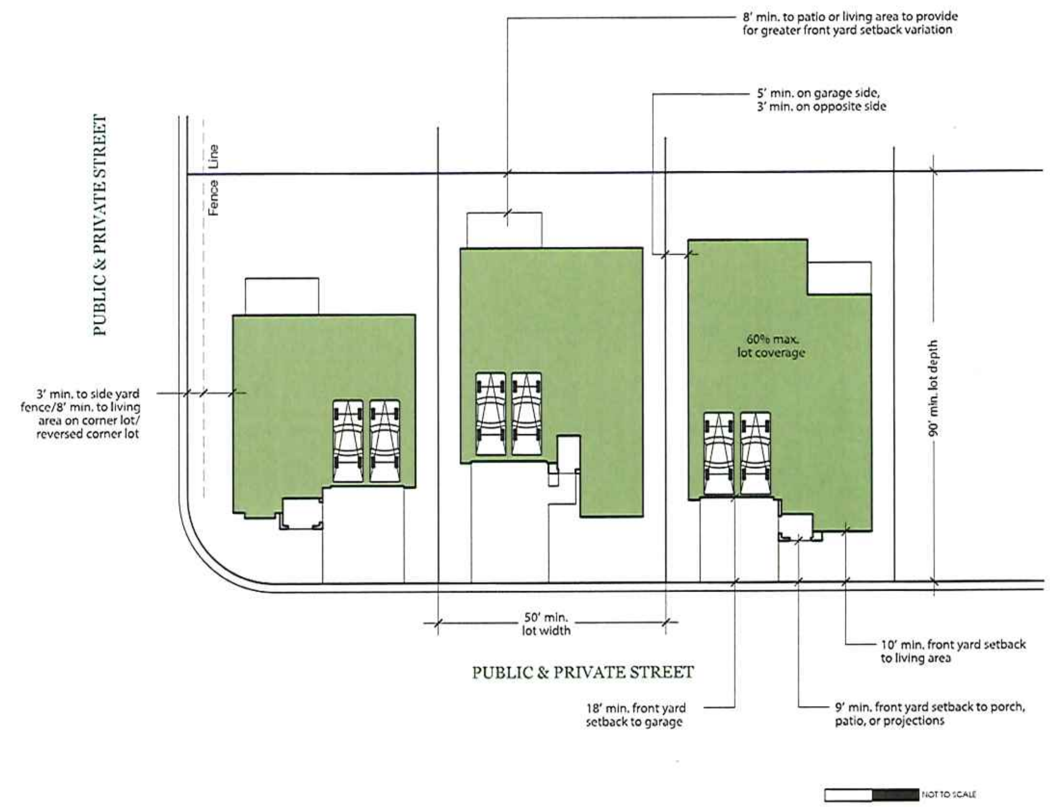
SHEET 1 OF 1 –

TRACT 6205 - Regent Park

Residential Land Use Development Standards

TRACT 6205 – NEC SHEPHERD & SUNNYSIDE

LAND USE	DEVELOPMENT STANDARDS	
SINGLE-FAMILY RESIDENTIAL	**STANDARD**	**NOTES**
DESIGNATION		
Zone District	R-1-PRD	
GP Density Range	7.1 - 15.0 du/ac	Medium-High Density Residential
Dwelling Units	132	Lots @ 50' x 90' min.
BUILDING INTENSITY		
Minimum Lot Area	4,500 sqft	
Minimum Lot Width	50'	
Minimum Lot Depth	90'	
Maximum Height	35'	
Curved/Cul-de-sac	25' min	For street frontage
Corner/ Reversed Corner	53' min	Lot width
BUILDING SETBACKS		**All setbacks measured from PL.**
Front Yard (Local)	18' min/10' min/9' min	To garage/To living area/To projections and/or porch/patio
Side Yard	5' min/3' min	5' min garage side/3' min opposite side
Corner/Reversed Corner	3' min/8' min	To side yard fence/To living area
Rear Yard	8' min	
GARAGES/STREETS/PARKING		
Garages	2-car	20'x20' min
	3-car	20'x20' min w/tandem 9'x15.5' min
Streets (Public)	50'/54' wide	
On-Street Parking	Yes	
ACCESSORY USES		**General list of requirements and restrictions.**
Walls/Fences	6' min - 8' high max	
Trellises	12' high max	
Pools and Spas	5' min	Water portion to rear and side PLs. Pool and spa may not be located in front yard.
Equipment	Pool, spa and fountain equipment allowed in side yard easement.	
Covered Structures Accessory Buildings	12' high max	Covered structures and building additions are allowed subject to review by the City of Clovis, provided that lot coverage standards are not exceeded and that a rear yard encroachment permit is obtained if encroachment into rear yard occurs.



The imagery conveys samples of the architectural character intended for these neighborhoods.

Lots 1-132 of Tentative Map No. 6205.

SHEPHERD NORTH PROJECT
GPA2021-006, GPS2021-005, R2021-009, TM6205, & PDP2021-004

FINDINGS IN SUPPORT OF PROJECT APPROVAL

Each element of the proposed Shepherd North Project meets the findings that must be considered when making a decision on a project, as outlined below.

Findings – General Plan Amendments GPA2021-006 and GPA2021-005

1. The proposed amendment is internally consistent with the goals, policies, and actions of the General Plan.

The proposed general plan amendment is consistent with several goals, and policies of the 2014 Clovis General Plan, including those identified above under the section of this staff report titled "Consistency with General Plan Goals and Policies." Furthermore, as described throughout this staff report, the Project will be consistent with the proposed General Plan land use designation of Medium-High Density Residential.

2. The proposed amendment would not be detrimental to the public interest, health, safety, convenience, or general welfare of the City.

The Project has been reviewed by public safety and utility providers and appropriate conditions have been incorporated to ensure that the applicable standards are adhered to. The proposed amendment will be subject to the Community Facilities District (CFD) funding annexation, which provides additional funding for the provision of public facilities and services for public safety, parks and recreation services, and other important municipal services. Therefore, this finding can be made based on the proposed Project.

3. If applicable, the parcel is physically suitable (including absence of physical constraints, access, compatibility with adjoining land uses, and provision of utilities) for the requested/anticipated project.

The proposed general plan amendment affects approximately 77 acres of land (Development Area), suitable for the development of the 605-lot gated and non-gated single-family planned residential development. Therefore, the project site is physically suitable for the requested land use designation amendment.

Findings - Prezone R2021-009

1. The proposed amendment is consistent with the goals, policies, and actions of the General Plan.

The proposed amendment is consistent with several goals, and policies of the 2014 Clovis General Plan, including those identified above under the section of this staff report titled "Consistency with General Plan Goals and Policies." Furthermore, as described throughout this staff report, the Project will be consistent with the proposed General Plan land use designation of Medium-High Density Residential.

ATTACHMENT 21

2. The proposed amendment would not be detrimental to the public interest, health, safety, convenience, or general welfare of the City.

The Project has been reviewed by public safety and utility providers and appropriate conditions have been incorporated to ensure that the applicable standards are adhered to. The proposed amendment will be subject to the Community Facilities District (CFD) funding annexation, which provides additional funding for the provision of public facilities and services for public safety, parks and recreation services, and other important municipal services. Therefore, this finding can be made based on the proposed Project.

3. The parcel is physically suitable (including absence of physical constraints, access, compatibility with adjoining land uses, and provision of utilities) for the requested zoning designations and anticipated land uses/projects.

The proposed amendment affects approximately 77 acres of land (Development Area), suitable for the development of the 605-lot gated and non-gated single-family planned residential development. Therefore, the project site is physically suitable for the requested zoning designation.

4. The City Council considered the CEQA analysis outlined in the staff report and elsewhere in the Administrative Record and does certify the Revised Final Project Environmental Impact Report for the Shepherd North Project; adopt the CEQA Findings of Fact and a Statement of Overriding Consideration; and adopt a Mitigation Monitoring and Reporting Program.

The City Council has had an opportunity to review and consider the entire Administrative Record relating to the Project, which is on file with the Department, and reviewed and considered those portions of the Administrative Record determined to be necessary to make an informed decision, including, but not necessarily limited to, the staff report, the written materials submitted with the request, and the verbal and written testimony and other evidence presented during the public hearing. The City Council does certify the Revised Final Project Environmental Impact Report for the Shepherd North Project; adopt the CEQA Findings of Fact and a Statement of Overriding Consideration; and adopt a Mitigation Monitoring and Reporting Program.

5. The City Council approval of Prezone 2021-009.

The City Council considered testimony and information received at the public hearing and the oral and written reports from City staff, as well as other documents contained in the record of proceedings ("Administrative Record") relating to Prezone 2021-009. The facts and evidence in the Administrative Record support approval of Prezone 2021-009.

Findings – Vesting Tentative Tract Map TM6205

1. The proposed map, subdivision design, and improvements are consistent with the General Plan and any applicable specific plan.

The proposed map is consistent with several goals, and policies of the 2014 Clovis General Plan, including those identified above under the section of this staff report titled "Consistency with General Plan Goals and Policies." Furthermore, as described throughout this staff report, the Project is consistent with the proposed General Plan land use designation of Medium-High Density Residential.

2. The site is physically suitable for the type and proposed density of development.

The proposed vesting tentative tract map affects approximately 77 acres of land with a density of 7.77 unit per acre. The lot sizes within TM6205 range from 1,980 square feet to 15,943 square feet. Therefore, the site is physically suitable for the proposed density of TM6205.

3. The design of the subdivision and the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

As indicated in the Project EIR, the proposed project and associated improvements would not result in any significant impacts with implementation of mitigation measures prescribed in the Revised Final EIR. Therefore, the Project will not cause substantial environmental damage or injury to fish and wildlife.

4. The design of the subdivision or type of improvements is not likely to cause serious public health or safety problems.

The design of the subdivision will adhere to the Fire Department standards, Clovis Development Code and Building Code regulations for public health and safety compliance.

5. The design of the subdivision or the type of improvements will not conflict with easements acquired by the public at large for access through or use of property within the proposed subdivision. This finding may also be made if the review authority finds that alternate easements for access or use will be provided, and that they will be substantially equivalent to ones previously acquired by the public. This finding shall apply only to easements of record, or to easements established by judgment of a court of competent jurisdiction, and no authority is hereby granted to the review authority to determine that the public at large has acquired easements of access through or use of property within the proposed subdivision.

All easements acquired by the public at large will be identified during the review process of the final map through the City's Engineering Division. If necessary, alternative easements will be provided that will be substantially equivalent to ones previously acquired for access through the proposed TM6205.

6. The discharge of sewage from the proposed subdivision into the community sewer system will not result in violation of existing requirements prescribed by the California Regional Water Quality Control Board.

The City Engineer has concluded that the City has capacity to accommodate the proposed Project. Installation of sewer lines through the proposed subdivision and outside its boundaries will be done in compliance with requirements of the California Regional Water Quality Control Board.

7. The design of the subdivision provides, to the extent feasible, passive or natural heating and cooling opportunities.

The proposed subdivision will comply with the Clovis Development Code and California Building Code requirements as it relates to heating and cooling opportunities within TM6205.

8. The proposed subdivision, its design, density, and type of development and improvements conform to the regulations of this Development Code and the regulations of any public agency having jurisdiction by law.

The proposed subdivision is proposing a density of 7.77 units per acre, which will be consistent with the Clovis General Plan Land Use designation of Medium-High Residential. The proposed subdivision is single-family product type as required by the Clovis General Plan for residential developments.

9. The proposed project has been reviewed in compliance with the provisions of the California Environmental Quality Act (CEQA) and to this end the City Council does certify the Revised Final Project Environmental Impact Report for the Shepherd North Project; adopt the CEQA Findings of Fact and a Statement of Overriding Consideration; and adopt a Mitigation Monitoring and Reporting Program.

The City Council has had an opportunity to review and consider the entire Administrative Record relating to the Project, which is on file with the Department, and reviewed and considered those portions of the Administrative Record determined to be necessary to make an informed decision, including, but not necessarily limited to, the staff report, the written materials submitted with the request, and the verbal and written testimony and other evidence presented during the public hearing. The City Council does certify the Revised Final Project Environmental Impact Report for the Shepherd North Project; adopt the CEQA Findings of Fact and a Statement of Overriding Consideration; and adopt a Mitigation Monitoring and Reporting Program.

10. Without the conditions of approval (**Attachment 5B and Attachment 6A** of this report), the City Council could not make the findings necessary for approval of vesting tentative tract map TM6205 (attached and labeled **Attachment 5A**).

11. The basis for the findings is contained in the March 18, 2024, staff report, which is hereby incorporated by reference, as well as the evidence and comments presented during the Public Hearing.

In light of court decisions, it is appropriate for the City to make findings of consistency between the required dedications and the proposed development. Every dedication condition needs to be evaluated to confirm that there is a rough proportionality, or that a required degree of connection exists between the dedication imposed and the proposed development. The City of Clovis has made a finding that the dedication of property for this project satisfies the development's proportionate contribution to the City's circulation system. The circulation system directly benefits the subject property by providing access and transportation routes that service the site. Further, the circulation system also enhances the property's value.

Findings - Planned Development Permit PDP2021-004

1. The planned development permit would:

a. Be allowed within the subject base zoning district.

The proposed PDP is allowed within the R-1-PRD Zone District proposed in conjunction with the prezoning of the Project site (Development Area).

b. Be consistent with the purpose, intent, goals, policies, actions, and land use designations of the General Plan and any applicable specific plan.

Refer to Findings – Prezone 2021-009.

c. Be generally in compliance with all of the applicable provisions of this Development Code relating to both on- and off-site improvements that are necessary to accommodate flexibility in site planning and property development and to carry out the purpose, intent, and requirements of this chapter and the subject base zoning district, including prescribed development standards and applicable design guidelines.

The Project includes provisions to construct both on and off-site improvements in conformance with City's adopted infrastructure master plans and the standards included in the 2014 General Plan. The design of the improvements support the proposed Project development standards and land use changes identified in the staff report.

d. Ensure compatibility of property uses within the zoning district and general neighborhood of the proposed development.

Refer to Findings – Vesting Tentative Tract Map 6205.

2. The proposed project would produce a comprehensive development of superior quality (e.g., appropriate variety of structure placement and orientation opportunities, appropriate mix of structure sizes, high quality architectural design, increased amounts of landscaping and open space, improved solutions to the design and placement of parking facilities, incorporation of a program of enhanced amenities, etc.) than which might otherwise occur from more traditional development applications.

Examples of the features in Shepherd North Project that achieve this intent include the following:

- *Variation in housing types and densities*
- *Integration of open space, including one neighborhood park*
- *Comprehensively planned trails, including a proposed community trail along the Shepherd Avenue frontage*
- *Providing for a corner gateway feature at the northeast corner of Shepherd and N. Sunnyside Avenues*

3. Proper standards and conditions have been imposed to ensure the protection of the public health, safety, and welfare.

The proposed PDP will adhere to the Fire Department standards, Clovis Development Code and Building Code regulations for public health and safety compliance.

4. Proper on-site traffic circulation and control is designed into the development to ensure protection for fire suppression and police surveillance equal to or better than what would normally be created by compliance with the minimum setback and parcel width standards identified in Division 2 of this title (Zoning Districts, Allowable Land Uses, and Zone-Specific Standards).

The proposed PDP will comply with the Fire Department standards and City Engineer requirements regarding fire suppression and traffic circulation improvements associated with TM6205.

5. The subject parcel is adequate in terms of size, shape, topography, and circumstances to accommodate the proposed development.

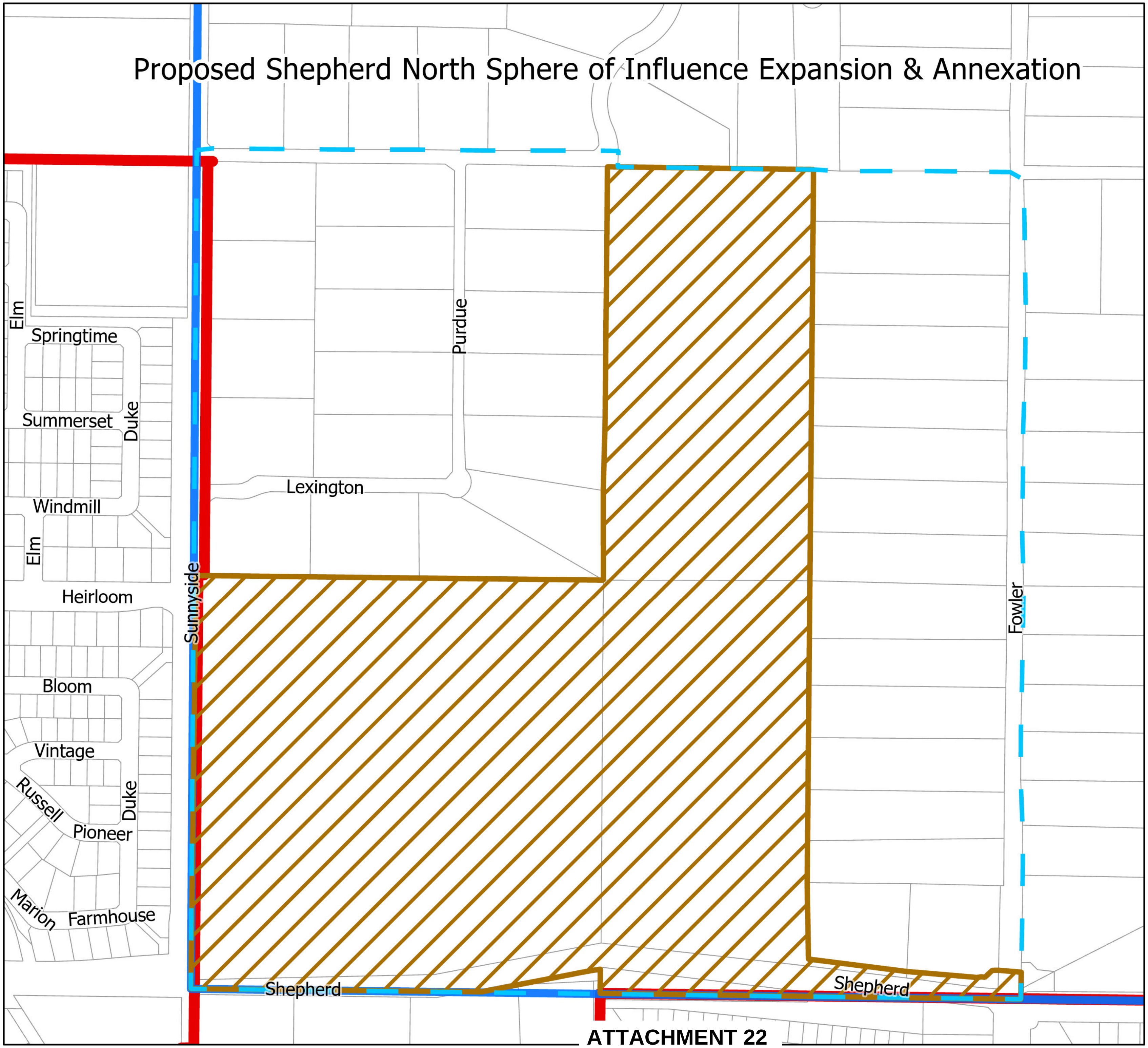
The Project site is not constrained in terms of size, shape, topography or circumstances in a manner that would limit its ability to accommodate the proposed development.

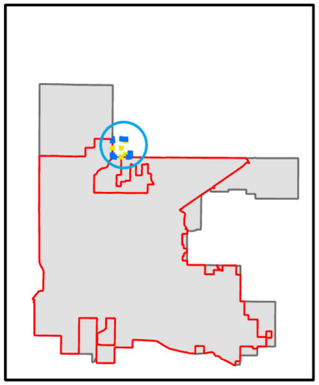
6. The design, location, operating characteristics, and size of the proposed development would be compatible with the existing and future land uses in the vicinity, in terms of aesthetic values, character, scale, and view protection.

Refer to Findings – Vesting Tentative Tract Map 6205.

CI S
PLANNING & DEVELOPMENT

Proposed Shepherd North Sphere of Influence Expansion & Annexation





🟥 City Limits
🟦 Sphere of Influence
Proposed Boundaries
▨ Annexation
Sphere of Influence Expansion

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Tuesday, June 20,

ATTACHMENT 22

CITY of CLOVIS
PLANNING & DEVELOPMENT

1033 FIFTH STREET • CLOVIS, CA 93612

SPECIFIC SERVICE PLAN

SHEPHERD SUNNYSIDE NORTHEAST REORGANIZATION

SOI EXPANSION, GPA2021-006, GPA2021-005, R2021-009, TM6205, PDP2021-004, AND RO307

1.1 INTRODUCTION

A Site Specific Service Plan for providing services and improvements to land being annexed to the City is required by the Fresno Local Agency Formation Commission (LAFCo). The site specific service plan provides assurance to LAFCo that newly annexed land to the City will be properly served as urban territory. The service plan also provides information to property owners, districts and interesting parties who may have projects underway within the vicinity of the proposed annexation.

On November 16, 2023, the Clovis Planning Commission conducted a noticed public hearing and adopted resolutions recommending that the City Council withhold approval of the following applications:

a. Certification of the Final Environmental Impact Report for the Shepherd North Project, not make the CEQA findings of fact, not adopt a statement of overriding considerations, and not adopt a mitigation monitoring and reporting program.

b. General Plan Amendment 2021-006 amending the circulation element to allow an access point on the north side of Shepherd Avenue, between N. Sunnyside and N. Fowler Avenues.

c. General Plan Amendment 2021-005 amending the land use element for approximately 77 acres located at the northeast corner of Shepherd and N. Sunnyside Avenues.

d. Rezone 2021-009, a request to prezone approximately 77 acres from the Fresno County AL20 Zone District to the Clovis R-1-PRD (Single Family Planned Residential Development) Zone District for property located at the northeast corner of Shepherd and N. Sunnyside Avenues.

e. Tract Map 6205, a request for a 605-lot single-family subdivision on approximately 77 acres of property located at the northeast corner of Shepherd and N. Sunnyside Avenues.

f. Planned Development Permit 2021-004, a request to approve a planned development permit for a 605-lot single family residential development.

On February 20, 2024, the Clovis City Council took action to approve each of the applications outlined below:

a. Certification of the Final Environmental Impact Report for the Shepherd North Project, make the CEQA findings of fact, not adopt a statement of overriding considerations, and adopt a mitigation monitoring and reporting program.

b. A Resolution of the Clovis City Council approving a request to expand the City's sphere of influence to include approximately 155 acres of land.

c. General Plan Amendment 2021-006, a request to amend the circulation element to allow an access point on the north side of Shepherd Avenue between N. Sunnyside and N. Fowler Avenues.

d. General Plan Amendment 2021-005, a request to amend the land use element for approximately 77 acres located at the northeast corner of Shepherd and N. Sunnyside Avenues.

e. Rezone 2021-009, a request to prezone approximately 77 acres from the Fresno County AL20 Zone District to the Clovis R-1-PRD (Single Family Planned Residential Development) Zone District for property located at the northeast corner of Shepherd and N. Sunnyside Avenues.

f. Tract Map 6205, a request for a 605-lot single-family subdivision on approximately 77 acres of property located at the northeast corner of Shepherd and N. Sunnyside Avenues.

g. Planned Development Permit 2021-004, a request to approve a planned development permit for a 605-lot single family residential development.

On February 20, 2024, the Clovis City Council adopted a resolution addressing Reorganization RO307, requesting the Fresno Local Agency Formation Commission (LAFCo) take proceedings for the reorganization of the territory known as the Shepherd Sunnyside Northeast Reorganization. Additionally, the Clovis City Council considered the Fourth Amendment to the MOU between the County of Fresno and City of Clovis associated with the 155-acre SOI expansion request and 77-acre annexation boundaries.

1.2 SERVICES EXISTING OR PROPOSED

1. Community Water Service

The Water Master Plan Update, completed in 2017, by Provost & Pritchard Consulting Group, was prepared to support the 2014 Clovis General Plan, and the development plans therein. The plan examined the feasibility of continued growth in the greater Clovis area from a water resource perspective. This included a review of existing and future demands for water from surface, groundwater, and reclaimed water. The study area corresponded with the General Plan planning area. The 2015 Urban Water Management Plan updated the water supply and demand issues identified in the 2017 Master Plan.

The City and Tarpey Village have 37 domestic water wells to provide for the needs of its residents. Some of these have wellhead treatment facilities to treat contaminated groundwater. The wells discharge water into a distribution main grid, based on a minimum of 12-inch mains, spaced at half-mile intervals. The present water storage facilities consist of one elevated tank and three ground level tanks. The total storage capacity is 7 million gallons.

The City began operations of the Surface Water Treatment Facility, located on the Enterprise Canal on the east side of Clovis, in 2004. Kings River water is supplied to the plant via Fresno Irrigation District's (FID) Enterprise Canal. This 15 million gallon-per-day (MGD) plant allows Clovis to serve existing users and new growth areas, while lessening the demand on groundwater. In 2014, treatment capacity at the SWTF was increased to 22.5 MGD.

In 2009, the City began operation of the Water Reuse Facility (WRF) to treat wastewater from a portion of the City's growth areas. In 2012, the City began using recycled water from this facility to irrigate public landscapes. At build-out of the system, this facility will be able to produce 8.4 MGD of recycled water.

The strategy for future water supply is termed "conjunctive use" where multiple elements are used to provide a secure long-term supply. It includes using both groundwater and treated surface water to ensure a secure drought-resistant water supply with the flexibility to use surface and groundwater supplies in a cost and operationally-efficient manner. This strategy is conducive to phased development that is critical to both community approval and existing operational constraints.

Water systems for newly developed areas, such as the project site, will be financed by development fees, assessment districts, and capital facilities funding. Additional surface water supplies for certain growth areas will be financed by the Water Supply development fee.

The following water conditions have been placed on the project:

2. Water

1. The applicant shall identify and abandon all water wells to City standards.

2. The applicant shall install water mains of the sizes and in the locations indicated below and provide an adequately looped and redundant water system prior to occupancy. The water improvements shall be in accordance with the City's master plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and shall be supported by appropriate calculations.
   a. Shepherd Avenue – Relocate the 16" main so the centerline of the entire length between North Sunnyside Avenue and North Fowler Avenue is 33' south of the street centerline.
   b. North Sunnyside Avenue – Install 24" main along the PG&E substation frontage to Perrin Avenue.
   c. Perrin Avenue – Install 24" main between North Sunnyside Avenue and North Marion Avenue.
   d. Interior Streets – Install 8" mains.
   e. Interior Private Streets – Install 8" mains.
   f. Provide appropriately sized off-site water mains for a redundant water system as approved by the City Engineer.

3. The applicant shall provide dedication of 15-foot-wide utility easements for all on-site water mains, hydrants, blow-offs, and water meters not located in otherwise dedicated rights-of-way.

4. The applicant shall install a City standard water service to each lot of the proposed subdivision. Water services shall be grouped at property lines to accommodate automatic meter reading system, including installation of connecting conduit. The water meter shall be placed in the sidewalk and not in planters or driveways.

5. The applicant shall notify all property owners' annexed to the City and along streets where a new water main will be constructed to determine if they wish to be connected to City water. Property owners shall work directly with the applicant regarding costs and location. The applicant shall notify property owners that water connection fees are required if they choose to connect.

6. Prior to recording a final map of any phase, the applicant shall demonstrate to the satisfaction of the City Fire Chief and City Engineer that there is adequate water pressure to serve the units to be constructed. The applicant shall work with the City Engineer to determine the adequacy of water supply/pressure for the proposed development.

7. Applicant acknowledges that water distribution and treatment capacity for the area within which the proposed subdivision is located is extremely limited, and that distribution may not be available to provide service for the proposed subdivision at such time as applicant is ready to seek approval of a final map. Applicant acknowledges, understands, and agrees that if such water distribution and treatment capacity is not available to serve the proposed subdivision, as determined in the sole and absolute discretion of the City of Clovis, the final map may not be approved. Notwithstanding

the foregoing, applicant has freely and voluntarily chosen to proceed with the submittal and processing of the tentative map, intends to expend money, time and effort in connection therewith, and accepts the risks that the final map approval may be delayed until sufficient distribution is available as determined in the sole and absolute discretion of the City of Clovis. Applicant agrees to hold harmless and indemnify the City of Clovis from any and all claims, costs, expenses, and damages incurred or suffered by applicant, its principals, officers, employees, agents, or contractors, caused by, in connection with, or arising out of the unavailability of water distribution or treatment capacity to serve the proposed subdivision, or the City's refusal or failure to approve a final map for the proposed subdivision because of the unavailability of water distribution or treatment capacity.

3. <u>Recycled Water</u>

8. The applicant shall install recycled water mains of the sizes and in the locations indicated below. The recycled water improvements shall be in accordance with the City's master plans and shall match existing improvements. All areas utilizing recycle water for irrigation shall be clearly marked on the improvement plans. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and may require appropriate calculations.
   a. Shepherd Avenue – Install 24" main between North Sunnyside Avenue and North Fowler Avenue.
   b. Paseos, Trails, and Neighborhood Parks – Install mains as necessary to serve the paseos, trails, and the neighborhood parks.

4. <u>Wastewater</u>

The Fresno-Clovis Regional Wastewater Treatment Facility serves the Fresno and Clovis urban area from its location southwest of the two cities. The City of Clovis owns and maintains sewer lines within the City Sphere of Influence, with the exception of the Tarpey Village area, which is maintained by the City of Fresno. The City operates the Water Reuse Facility which treats wastewater from a portion of the City and provides recycled water for use in public landscapes. This facility will be expanded as required to serve portions of the northwest and northeast growth areas. The City does not have sewer collection facilities constructed for the entire current Sphere of Influence at this time, but all areas have been master planned.

The Clovis Wastewater Master Plan Update in 2017 provided the City with a course of action with respect to wastewater service needs through the year 2035, in keeping with the Clovis General Plan.

Wastewater facilities for newly developed areas will be financed by development fees, assessment districts, and capital facilities funding.

The following sewer conditions have been placed on the project:

9. The applicant shall identify and abandon all septic systems to City standards.

10. The applicant shall install sanitary sewer mains of the size and in the locations indicated below, prior to occupancy. The sewer improvements shall be in accordance with the City's master plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and shall be supported by appropriate calculations.
    a. Shepherd Avenue – Install 15" main between North Sunnyside Avenue and North Fowler Avenue.
    b. Shepherd Avenue – Install 16" force main between North Sunnyside Avenue and North Fowler Avenue.
    c. Shepherd Avenue – Install 8" force main between North Sunnyside Avenue and North Fowler Avenue.

d. Interior Streets – Install 8" mains.

11. The applicant shall install one (1) 4" sewer service house branch to each lot within the tentative tract.

12. The applicant shall notify all property owners annexed to the City and along streets where a new sewer main will be constructed to determine if they wish to be connected to City sewer. Property owners shall work directly with the applicant regarding costs and location. The applicant shall notify property owners that sewer connection fees are required if they choose to connect.

13. The City cannot guarantee at this time that sewer capacity will be available for this development when site construction occurs. The applicant, therefore, waives any claim or demand against the City for any delay in availability of sewer capacity for this subdivision.

14. Applicant acknowledges that sewage collection and treatment capacity for the area within which the proposed subdivision is located is extremely limited, and that capacity may not be available to provide service for the proposed subdivision at such time as applicant is ready to seek approval of a final map. Applicant acknowledges, understands, and agrees that if such sewage collection and treatment capacity is not available to serve the proposed subdivision, as determined in the sole and absolute discretion of the City of Clovis, the final map may not be approved. Notwithstanding the foregoing, applicant has freely and voluntarily chosen to proceed with the submittal and processing of the tentative map, intends to expend money, time and effort in connection therewith, and accepts the risks that the final map approval may be delayed until sufficient capacity is available as determined in the sole and absolute discretion of the City of Clovis. Applicant agrees to hold harmless and indemnify the City of Clovis from any and all claims, costs, expenses, and damages incurred or suffered by applicant, its principals, officers, employees, agents, or contractors, caused by, in connection with, or arising out of the unavailability of sewage collection or treatment capacity to serve the proposed subdivision, or the City's refusal or failure to approve a final map for the proposed subdivision because of the unavailability of sewage collection or treatment.

5. Dedications and Street Improvements

The following street conditions have been placed on the project.

15. The applicant shall provide right-of-way acquisition or dedicate free and clear of all encumbrances and/or improve the following streets to City standards. The street improvements shall be in accordance with the City's specific plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the type, location, and grades of existing improvements.
    a. Shepherd Avenue – Along frontage, dedicate to provide right-of-way acquisition for 70' (existing 0' due to a change in the ultimate street centerline alignment) north of centerline and 60' (existing varies) south of centerline, and improve with curb, gutter and sidewalk on both sides of the street, drive approaches, curb return ramps, street lights, fiber optic conduit, median island, median island landscaping and irrigation, landscape strip, 60' (30' north + 30' south) of permanent paving, and transitional paving as needed.
    b. Shepherd Avenue – For orderly development, between the eastern limit of the development and North Fowler Avenue, dedicate to provide right-of-way acquisition for 70' (existing varies) north of centerline and 60' (existing varies) south of centerline, and improve with curb, gutter and sidewalk on both sides of the street, drive approaches, curb return ramps, street lights, fiber optic conduit, median island, median island landscaping and irrigation, landscape strip, 60' (30' north + 30' south) of permanent paving, and transitional paving as needed.
    c. North Sunnyside Avenue – Along frontage, dedicate to provide right-of-way acquisition for 47' (existing varies) east centerline, and improve with sidewalk, curb return ramps and landscape strip.

d. North Sunnyside Avenue Round-A-Bout – At Heirloom Avenue, dedicate and improve to Federal Highway Administration guidelines and approval of the City Engineer.
e. Heirloom Avenue –According to the approved Vesting Tentative Tract Map, dedicate to provide for 72’ to 85’ of right-of-way and improve with curb, gutter, sidewalk on the south side and pathway on the north side, drive approaches, curb return ramps, streetlights, landscaping and irrigation, permanent paving, and all transitional paving as needed.
f. North Fordham Avenue – Between Shepherd Avenue and Public Street "A” according to the approved Vesting Tentative Tract Map, dedicate to provide for 89’ of right-of-way and improve with curb, gutter, sidewalk on the east side and pathway on the west side, curb return ramps, streetlights, landscaping and irrigation, permanent paving, and all transitional paving as needed.
g. Private Street “F” – Between Heirloom Avenue and Perrin Avenue, according to the approved Vesting Tentative Tract Map, dedicate to provide for 67.2’ of right-of-way and improve with curb, gutter, pathway on the east side, curb return ramps, streetlights, landscape strip, permanent paving, and all transitional paving as needed.
h. Gated Developments – Provide ample vehicle stacking area outside the travel lanes of the public street that will allow vehicles to wait as vehicles are accessing the control panel to open the security gates. Design a turn-a-round to allow vehicles that cannot enter the complex to return to the street without backing the vehicle up. Provide the Solid Waste Division with remote controls that will allow access for all solid waste and recycling vehicles.
i. Public Interior Streets – Dedicate to provide for 50’ or 54’ of right-of-way in conformance with the City policy on street widths, and improve with curb, gutter, 5’ sidewalk adjacent to the curb, drive approaches, curb return ramps, streetlights, permanent paving, and all transitional paving as needed.
j. Private Interior Streets – For two-way traffic with no parking on both sides, the minimum travel width shall be 25’ with a clear width of 30’. For two-way traffic with parking on one side, the minimum travel width shall be 32’. For two-way traffic with parking on both sides, the minimum travel width shall be 36’.
k. Entry feature streets with median islands shall have a minimum of 22’ wide travel lanes in each direction with parking or without parking.
l. Cul-De-Sacs - dedicate to provide for 52' radius and improve with curb, gutter, sidewalk, streetlights, 43' permanent paving and all transitional paving as needed.
m. The applicant shall relinquish all vehicular access for all lots backing or siding onto Shepherd and North Sunnyside Avenues.
n. Shepherd Avenue – At the proposed local street, construct a 200-foot eastbound dedicated left-turn pocket and a 100-foot westbound dedicated right-turn lane.

16. The applicant shall provide a dedication for a 10' public utility easement, where applicable, along all frontages or alternate widths approved by the utilities companies.

17. For new onsite ADA paths of travel that connect to the City sidewalk, the applicant shall replace enough sidewalk to provide a compliant landing with appropriate transitions to existing sidewalk grades.

18. The applicant shall remove and repair all damaged or broken concrete improvements. The City Engineer may require the repair of additional improvements if they are damaged prior to occupancy.

19. The applicant shall not install any fences, temporary or permanent in public right-of-way.

20. The applicant shall provide preliminary title report, legal description and drawings for all dedications required which are not on the site. All contact with owners, appraisers, etc. of the adjacent properties where dedication is needed shall be made only by the City. The City will prepare an estimate of acquisition costs including but not limited to appraised value, appraisal costs, negotiation costs, and administrative costs. The applicant shall pay such estimated costs as soon as they are determined by the City.

21. The sideyard side of all corner lots shall have full width sidewalk except where planter strips or meandering sidewalk is proposed.

22. The applicant shall obtain "R Value" tests in quantity sufficient to represent all street areas, and have street structural sections designed by a registered civil engineer based on these "R Value" tests.

23. The applicant shall, at the ends of any permanent pavement abutting undeveloped property, install 2" x 6" redwood header boards that shall be placed prior to the street surfacing.

24. Standard barricades with reflectors shall be installed at ends of streets abutting undeveloped property and any other locations to be specified by the City Engineer.

6. Solid Waste Collection

Refuse Collection collects and disposes of solid waste generated by residential and commercial customers located within the City. Private vendors, under City contract, collect waste from select commercial customers and recyclables and yard wastes from residential customers. For improved cost accounting and control, the Refuse Collection Unit is further organized into four sub-accounts identified as Administration, Residential, Commercial, and Community Cleanup.

Refuse Landfill conducts all operations necessary to landfill City refuse in accordance with county, state, and federal requirements. The Clovis landfill is an active Class III landfill which accepts municipal solid waste that is currently permitted through the year 2053.

Refuse Contracts provides refuse-related services to the community through contracts with private vendors. These include refuse compactor and roll-off services for larger businesses, and residential curbside recycling, and greenwaste programs.

7. Fire Protection

The Fire Department employs two primary measures in determining service for the community and future development. The first measure is distribution. “Distribution” describes station locations that allow for a rapid first-due response deployment to mitigate fire and medical aid emergencies before they result in further life/property loss. Distribution is measured by how much of the jurisdiction is covered by first due units within our adopted response time goal of arrival within 5 minutes or less 90% of the time. The second term, “concentration” is a measure of how many multiple units are within sufficient proximity to provide the necessary tools, equipment and personnel, known as an effective response force, for a large scale incident or when another unit is assigned to a concurrent emergency. An initial effective response force is one that has been determined likely to stop the escalation of a fire emergency and bring it effectively under control.

In addition to these factors, Clovis Fire has conducted several station location studies over the last ten years to ensure efficient and effective operations. Stations have generally been located in between 4.5 to 5 mile squares near major street intersections. Previous studies identified various station configurations that could serve City growth depending on the type of development and infrastructure planned for these areas. Currently, the Clovis Fire Department operates out of five fire stations located throughout the City.

In determining desired levels of resource concentration to maintain existing standards and to provide equal protection to future growth areas, the Clovis Fire Department analyzed the risk assessment, call volume, population, critical task analysis, and industry standards. Depending on the factors previously noted, the number of units needed for an initial effective response force are dispatched as defined in the Critical Task Analysis document.

Consideration for community protection must also take into account utilization of Automatic Aid Agreements that provide the closest available resources, regardless of jurisdiction. Using software programs and data from neighboring jurisdictions, fire staff are able to analyze the concentration of units revealing detailed information regarding the deployment of resources necessary to provide an effective fire fighting force within defined response time goals for a geographic area neighboring other fire protection districts.

The Emergency Services Bureau is responsible for providing the resources needed by Fire Department staff who respond daily to requests for emergency and non-emergency services from the citizens of Clovis through four divisions: Operations, Support Services, Training, and Communications. The Operations Division activities include: responding to fires, first responder medical services, mutual/automatic aid, mapping, apparatus replacement, etc. The Training Division activities include coordination of recruitment, testing and training of new employees, in-service training for all Department employees and coordinated use of the Fire Training Center. Support Services Division activities include: apparatus maintenance, facilities maintenance, station supplies, etc. The Communications Division has responsibility for coordinating dispatch services to the Fire Department. Fire dispatch services are provided via a contract with the Fresno County Emergency Medical Services Division. Dispatch services coordinate the emergency response of all City fire resources and mutual or automatic aid resources. The Department continues to promote sound planning, economic efficiency, and effective use of the City resources while providing essential and valuable services.

The Life Safety and Enforcement Bureau is responsible for providing community risk reduction activities through two divisions: Fire Prevention and Emergency Preparedness. The Fire Prevention Division assists local businesses and building development though activities such as inspections and plan review to ensure safe occupancies comply with fire codes, standards, and local ordinances. Additional risk reduction is performed through public education where citizens learn about actions they can take to reduce their fire risk and learn emergency preparedness skills that are essential during times of crisis. Within the Bureau, the Investigations team has the responsibility to investigate all fires for cause and origin, and enforce minimum standards to safeguard life, health, property, and public welfare.

The Emergency Preparedness Division has the responsibility for preparing and carrying out emergency plans to protect property and the citizens of Clovis in case of actual or threatened conditions of disaster or extreme peril. This includes having an emergency plan in place, maintaining an Emergency Operations Center (EOC), ensuring policies and procedures are compliant with the National Incident Management System (NIMS) guidelines and exercises are conducted to evaluate system effectiveness. Within the Emergency Preparedness section are the Hazardous Materials Response Team and an Urban Search and Rescue Team. These teams are capable of responding to emergency incidents that require specialized tools, equipment, and personnel. Some funding for this division is augmented by state and federal grants.

The Fire Administration Division is responsible for supporting all department operations, administering the Accreditation program, and the development and administration of the Fire Department budget. Fire Administration provides administrative analysis, report preparation, coordination of programs, incident response data management, timekeeping, and other routine duties performed daily that support the delivery of emergency and non-emergency services. Fire Administration also identifies, writes, and manages grants to supplement funding for all Department programs.

The following fire conditions have been placed on the project:

25. *Two Points of Access:* Any development to this parcel will require a minimum of two (2) points of access to be reviewed and approved by the Clovis Fire Department. All required access drives shall remain accessible during all phases of construction which includes paving, concrete work, underground work, landscaping, perimeter walls. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads. 2022 CMC 4.4 Section D107.

26. *Maximum Travel Distance to a Residence on Local Streets from an Expressway, Arterial, or Collector Street:* In order to provide first due emergency response and effective response force (ERF), the Fire Department adopted response times include 4:00 minutes for travel. It takes approximately 3 minutes to drive 1.9 miles based on the average speeds of arterial and collector streets. It then takes an additional 1 minute to drive 2,000 feet on a local street based on reduced speed of 25mph. Once fire department apparatus has entered a local street from an arterial or a collector street, the maximum travel distance to a residence shall be 2,000 feet. This distance is based on travel times for apparatus covering a 2 ½ mile by 2 ½ mile area of the city which is the standard insurance service organization (ISO) individual station response area.

27. *Street Width:* Fire apparatus access width shall be determined by measuring from “base of curb” to “base of curb” for roadways that have curbs. When roadways do not have curbs, the measurements shall be from the edge of the roadway surface (approved all weather surface). Clovis Fire Standard #1.1

28. *Street Width for Single Family Residences:* Minimum Access Road Width of 36 feet for Single Family Residences. Roads 36 feet or wider allow for Parking on both sides of street. Access roads near fire department access gates shall be a minimum of 20’ in width and marked as fire lanes.

29. *Streets with Median Islands*: Streets with median islands shall comply with Clovis Fire Department Standard 1.1. Based on the street width, no trees will be allowed to be planted in the median island.

30. *Fire Lane Marking Requirement for Single Family Residences*: Based on the street width, fire lane markings will be required along the length of the street from the entry point off Shepherd until the street direction changes heading east. Fire lane markings will also be required on both sides of the median along the entire length of the street. The fire lanes shall be posted with signs and/or the curbs shall be painted red as per Clovis Fire Department Standard #1.1 and identified on site plan. Clovis Fire Standard #1.1

31. *Turning Radius:* All access way roads constructed shall be designed with a minimum outside turning radius of forty-five feet (45’) Clovis Fire Standard #1.1

32. *Temporary Street Signs:* The applicant shall install temporary street signs that meet City Temporary Street Sign Standard #1.9 prior to issuance of building permits within a subdivision.

33. *All Weather Access &Water Supply:* The applicant shall provide all weather access to the site during all phases of construction to the satisfaction of the approved Clovis Fire Department Standard #1.2 or #1.3.

34. *Security Gates:* All security gates shall comply with Clovis Fire Department Gates Standard #1.5. Plans shall be submitted for review and permits issued by Fire Department prior to installation. Gates shall be inspected and tested for operation prior to any occupancy.
    a. All vehicle gates for developments containing dwellings or as required by the Fire Chief shall be equipped with an approved “Class II” modulated light detection system capable of receiving a modulated frequency of 14.035 Hz. plus or minus 0.250 Hz. The detection system shall be installed according to the manufacturer’s specifications. The light detection shall be installed to operate from any angle of approach by Clovis Fire Department Emergency Vehicles. Multiple light detection sensors may be required to be installed to allow access from different angles of approach. All light sensors are required to be tested by Clovis Fire Department Emergency Vehicles for approval.
    b. For separate entrance and exit gates when opened, gates shall provide a clear width of not less than 14 feet. A single gate providing entrance and exiting shall provide a clear width of not less than 20 feet.

35. Residential Fire Hydrant: The applicant shall install 4 ½” x 2 ½” approved Residential Type fire hydrant(s) and “Blue Dot” hydrant locators, paint fire hydrant(s) yellow with blue top and caps, and paint the curb red as specified by the adopted Clovis Fire Department Standard #1.4. Plans shall be submitted to the Clovis Fire Department for review and approval prior to installation. The hydrant(s) shall be charged and in operation prior to any framing or combustible material being brought onto the site. Clovis Fire Standard #1.4. The locations shown on the current tract meet Clovis Fire Department Standard #1.4.

36. *Looped Water Main:* The applicant shall install approved looped water main capable of the necessary flow of water for adequate fire protection and approved by the Clovis Fire Department.

37. *Policy 1.5*: Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses). The proposed layout does not provide connectivity from Shepherd to any future development to the north.

38. *Policy 1.6*: Internal circulation. New development shall utilize a grid or modified-grid street pattern. Areas designated for residential and mixed-use village developments should feature short block lengths of 200 to 600 feet. Both Sheet 3 and Sheet 4 have streets in excess of 600’.

39. *Policy 1.8*: Network completion. New development shall complete the extension of stub streets planned to connect to adjacent streets, where appropriate. Fordham should be constructed to extend to the north and provide access for through traffic.

8. Law Enforcement

The responsibility of the Police Department is to provide protection and police-related services to the community. The Department’s mission is to do this in a manner that builds public confidence and improves the quality of life in Clovis. Police headquarters is located at the Clovis Civic Center. Currently, the Police Department is allotted for 112 sworn officers. The current ratio is 0.90 sworn officers per 1,000 residents. In accordance with the recommendations contained in the Police Department Master Service Plan, the Police Department will seek funding to achieve and maintain a ratio of 1.3 officers per 1,000 residents.

Police protection to the unincorporated areas is provided by the Fresno County Sheriff and California Highway Patrol. The City has a mutual aid assistance agreement with both agencies.

The operations of the Police Department, now and as the City grows, will be funded through the General Fund, Community Facilities District (CFD) fund, and grants. It is noted that continued annexation and development without proportionate increase in the funding of safety services will have an effect on the city’s ability to maintain acceptable service levels. If unable to maintain acceptable service levels, the department will have to reduce response to certain calls and possibly eliminate other services altogether. This reduction of services will greatly impact our citizens and the quality of life in our community.

The Department is organized into three major divisions, which are composed of seven budgetary sections.

The following Police Department conditions have been placed on the project:

40. Construction work shall be limited to the hours set forth in the Clovis Municipal Code. (CMC § 5.18.15.)

41. It shall be the responsibility of the property owner to maintain the structures and adjoining fences to the project free of graffiti. All forms of graffiti shall be removed within 72 hours. (CMC §§ 5.18.02(r), 5.18.06 (b).)

42. Emergency phone numbers for responsible parties shall be kept current during the building phase of the project.

43. All construction materials shall be located within a secured area or monitored by security staff during non-construction hours.

9. Parks & Recreation

The Parks Section provides maintenance to City parks, trails and trail lighting, street landscaping, City trees, and numerous recreational facilities, including playgrounds and picnic sites; maintains Old Town streetscape; and provides grounds maintenance at City administrative facilities. Some of these areas are maintained by Parks personnel, while others are maintained through contracts administered by the Parks section. Parks also provides support for civic activities such as hanging banners and decorating for Christmas, Rodeo Weekend, Big Hat Days, and Farmer's Market. The Parks Section administers the Landscape Maintenance District (LMD), which provides funding for maintenance of certain parks, trails, street landscaping, streetlights, and neighborhood architectural enhancement features for areas within the Landscape Maintenance District. All City owned landscaping that is not within the LMD is funded through the General Fund.

Tract Map 6205 proposes to construct one neighborhood park and has been designed with a community trail on the north side of Shepherd Avenue between N. Sunnyside and N. Fowler Avenues. This community trail will provide connectivity to the existing Dry Creek trail within the Lennar development to the west and the Dry Creek Trailhead at the southwest corner of Shepherd and N. Sunnyside Avenues. The Project will also be constructing additional trails and open space within the proposed development. In addition to the neighborhood park and trails the Project will contribute a dollar amount totaling $150,000 to the City for utilization in future open space and/or park improvements in areas of the community that have a need.

10. Transit Services

The Community Services Division administers various senior citizen programs at the Clovis Senior Activity Center. The Division also administers the City's Round-Up demand-response transit program, the fixed-route Stageline transit program, and administers the City's contract with Fresno Area Express (FAX). User fees, and state and federal transit funds and grants support the transit service.

11. Storm Drainage

Storm Drain responds to significant rainfall events by providing sand bags, pumping of flooded areas, monitoring stream channels, placing warning signage, and pumping temporary storm drain basins when needed. It also provides pre-storm cleaning of drain inlets to ensure debris do not hamper proper operation of the storm drain collection system. The project will construct storm drainage facilities in accordance with the standard and requirements of the Fresno Metropolitan Flood Control District.

The following grading and drainage conditions have been placed on the project:

44. The applicant shall contact the Fresno Metropolitan Flood Control District (FMFCD) and address all requirements, pay all applicable fees required, obtain any required NPDES permit, and implement Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology to reduce or eliminate storm water pollution. Plans for these requirements shall be included in the previously required set of construction plans, and shall be submitted to and approved by FMFCD prior to the release of any development permits.

45. Portions of the project appear to lie within a flood zone. The applicant shall comply with the requirements of the City's Municipal Code.

46. In the event permanent storm drainage facilities are not available, the applicant shall provide temporary on-site retention basins for storm water disposal and provide a cash deposit for each basin to offset the City's cost of maintaining the basins. The size and design shall be in accordance with the requirements of the City Engineer and may change based on design calculations and access requirements for maintenance. The temporary pond maintenance deposit shall be based on size, depth, expected maintenance schedule, etc. However, the property owner shall be responsible for periodic cleaning of toxic material. The temporary basin is solely for the convenience of the subdivision.

47. The owner of the property on which the temporary basin(s) are located shall backfilled said basin(s) within ninety (90) days after notice is given by the City that the basin(s) are no longer needed. In the event the owner fails to backfill said basin(s) within said 90 days, the City may cause the basin to be backfilled. A lien to cover the cost of the work will be placed on the property, including the costs to prepare and enforce the lien. A covenant shall be prepared and recorded on the lot on which the basin(s) is/are located.

48. Grade differentials between lots and adjacent properties shall be adequately shown on the grading plan and shall be treated in a manner in conformance with City of Clovis Standard Drawing No. M-4 as modified by the City Council. Any retaining walls required on-site or in public right of way shall be masonry construction. All retaining walls shall be designed by a registered civil engineer.

12. Street Lighting

The City is responsible for maintenance of traffic signals, the cost of energy/repairs/replacements for PG&E-owned streetlights within the City, energy and materials for City-owned streetlights, and maintenance of City-owned streetlights.

The following street lighting condition has been placed on the project:

49. The applicant shall install streetlights per the attached street light exhibit. Streetlights along the major streets shall be installed on metal poles to local utility provider's standards at the locations designated by the City Engineer. Street light locations shall be shown on the utility plans submitted with the final map for approval. Streetlights at future traffic signal locations shall be installed on approved traffic signal poles, including all conduits and pull boxes. Streetlights along the major streets shall be owned and maintained by local utility providers. Proof of local utility provider's approval shall be provided. The applicant may install thematic lighting, as approved by the City Engineer. If the applicant chooses to install thematic lighting, the applicant shall provide a conceptual lighting plan identifying adjacent properties that may be incorporated with thematic lights to create a neighborhood effect. Thematic lighting owned by the City shall be maintained by an additional landscape maintenance assessment.

13. Schools

The City of Clovis and its sphere of influence lies primarily within the Clovis Unified School District (CUSD). The Project boundary is located within the Clovis Unified School District. CUSD is managing growth by financing new facilities through bonds, development fees, and state schools funding. The area of the City serviced by FUSD is fully built-out and future development within the City's sphere of influence will not affect this district.

14. Other Services

Pacific Gas and Electric (PG&E) provides gas and electrical service to the City of Clovis, its sphere of influence, and Fresno County. Electrical service is supplied by underground and overhead lines routed through three substations in the greater Clovis area. The hierarchy of establishing electrical power lines from generation stations to customers is as follows: transmission distribution; sub-transmission; and service. PG&E provides gas to customers through plastic and steel underground lines. Residents not serviced by PG&E use propane fuel.

15. Financing of Services and Facilities

The City Council has established fiscal policies that govern the city's financial administration and are designed to safeguard the City's assets, provide a stable funding base, and ensure that adequate accounting data are compiled. These accounting data allow for the preparation of various accounting reports such as the annual budget and the annual year-end financial report. Following are the financial policies that provide the basis for the financial direction of the city.

- The City's budget policy states that all operating budgets shall be balanced and ongoing costs will not exceed current revenues plus available fund balance that exceeds reserve requirements. The minimum reserve for any operational fund is 10% of the budgeted expenditures with the goal for reserves of 15% of budgeted expenditures unless capital borrowing or extraordinary fiscal conditions require that higher levels of reserves be maintained. As discussed during the five-year forecast, the General Fund target reserve is now set at 25%, the current General Fund reserve is approximately 16.5%. Budgetary and purchasing controls have been instituted that ensure adherence to the adopted budget.

- The Enterprise Funds are to be fully supported by user fees and charges, and the Internal Services Funds are to be funded at appropriate levels to ensure reasonable ability to respond to unforeseen events. Annually, the City has designated a contribution of general funds to the General Government Services Fund (an Internal Service Fund) to address the building space needs for new fire stations, safety training facilities, regional park facilities, business and industrial parks, upgrades and new technology for improved productivity, and major remodeling, repairs, or additions to existing facilities.

- The City will not issue long-term debt to cover current operations. The City will consider the issuance of long-term debt to purchase/build capital assets when those assets will benefit users over several years and it is determined that it is more equitable to spread the capital investment and financing costs of the asset to current and future users of the asset.

- Annually the City will have an independent audit of its financial records prepared by a certified public accountant pursuant to generally accepted auditing practices of the government finance industry and submit an annual financial report to the City Council by December 31 for the previous fiscal year.

- Fees for services will be charged directly to users of the services when appropriate and should cover the full cost of service delivery. Fees are to be reviewed on an annual basis to ensure that the fee is appropriate for the service provided compared to actual cost or an approved cost index.

- Development impact fees will be established to ensure that new growth pays the cost of infrastructure improvements and is not a burden to existing tax payers.

- The City will invest available cash assets in a manner consistent with the safeguards and diversity that a prudent investor would adhere to with primary emphasis on preservation of principal, sufficient liquidity to cover anticipated payment outflows, and high yields consistent with the first two goals. The City's investments will be consistent with Section 53601 of the Government Code of the State of California that identifies which types of investments are eligible for investment of public funds and the maximum percentage of an investment portfolio that is allowed for any one investment.

The City is in compliance with all of its financial policies.

16. California Environmental Quality Act (CEQA) Compliance

The City of Clovis has completed an environmental review (an assessment of the Project's impact on natural and manmade environments) of the proposed project, as required by the State of California. The analysis performed for the Project required the preparation of an environmental impact report (EIR). A Draft EIR was completed in July of 2023 and was made available for review by affected agencies and the public between July 21st and September 5th, 2023. The Final EIR for the proposed Project has been prepared in accordance with the State CEQA Guidelines. Findings to this effect were made by the Council in conjunction with its approval of the project.

AGENDA ITEM NO. 6.

101-6724

17-0512

Agreement No. 17-236

2017 AMENDED AND RESTATED MEMORANDUM OF UNDERSTANDING

COUNTY OF FRESNO AND CITY OF CLOVIS

This Amended and Restated Memorandum of Understanding ("MOU") is made and executed this 6th day of June, 2017 ("Effective Date"), by and between the County of Fresno, a political subdivision of the State of California ("County") and the City of Clovis, a municipal corporation of the State of California ("City"), with respect to the following Recitals, which are a substantive part of this MOU. County and City are each a "party" to this Agreement and are sometimes collectively referred to as "the parties" to this Agreement.

RECITALS

A. On August 21, 1990, the parties entered into a comprehensive agreement covering development, annexations, sales taxes, property taxes, and other matters, commonly referred to as the County/Clovis MOU or Tax Sharing Agreement ("1990 MOU"). The 1990 MOU also included provisions relating to redevelopment and included as a party the former Clovis Community Development Agency. In 2011, the State adopted comprehensive legislation (ABx1 26) dissolving California redevelopment agencies and prohibiting further redevelopment activities under the California Community Redevelopment Law (former Health and Safety Code §§ 33000 et seq.)

B. On June 25, 2002, the parties entered a First Amendment to the 1990 MOU, which made substantive changes to the 1990 MOU.

C. The parties entered into additional amendments and side agreements to the 1990 MOU to address patterns of urban development and specific sphere of influence changes and annexations as follows:

- May 20, 1997, side agreement to address an annexation near Ashlan/Locan Avenues (hereafter "1997 Side Agreement"); and
- June 24, 2002, side letter agreement to address the City's waste water plant (hereafter "2002 Side Letter Agreement"); and
- June 25, 2002, First Amendment to address new growth and special study areas, reciprocal collection of County and City development fees, sales tax equivalent provisions for new

growth areas, and alternative standards for annexation to facilitate industrial and regional commercial development projects (hereafter "First Amendment to 1990 MOU") ; and

- November 8, 2005, Second Amendment to address the annexation of Harlan Ranch and the Locan/Nees Avenue area (hereafter "Second Amendment to 1990 MOU"); and
- March 14, 2012, Third Amendment to address an annexation into the Dry Creek preserve (hereafter "Third Amendment to 1990 MOU"); and
- December 9, 2014, Fourth Amendment to expand the City's sphere of influence (hereafter "Fourth Amendment to 1990 MOU").
- Collectively, the 1990 MOU, the 1997 Side Agreement, the 2002 Side Letter Agreement, the First Amendment to 1990 MOU, the Second Amendment to 1990 MOU, the Third Amendment to 1990 MOU, and the Fourth Amendment to 1990 MOU are hereafter referred to as the "1990 MOU, as amended".

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D. The 1990 MOU, as amended, contains some provisions that are no longer applicable to the parties and the 1990 MOU, as amended is set to expire June 24, 2017. The parties desire to make additional changes to their comprehensive agreement set forth in the 1990 MOU, as amended, and to extend the term of their comprehensive agreement for an additional 10 years with an option for one 5 year extension.

E. Due to the age of the 1990 MOU, as amended, the number of amendments, and a desire to make additional changes, the parties determined that it is in their best interests to enter into this new Restated and Amended MOU, which will replace the 1990 MOU, as amended.

F. The restated purposes for this MOU, as set forth in the 1990 MOU, as amended are as follows:

1. County and City wish to work together to develop a fair and equitable approach to tax sharing and encourage sound economic growth.

2. In order to encourage economic development and environmentally sound land use planning, it is important that any tax sharing among County and City be determined in advance and that such arrangements not be fiscally detrimental to either County or City.

3. County and City recognize the importance of County and City services and are prepared to cooperate in an effort to address County's and City's fiscal problems.

4. Through annexation and appropriate development, City provides the opportunity for economic growth and development to support public services for City and County.

5. Close cooperation between County and City is necessary to maintain the quality of life throughout Fresno County and deliver needed services in the most cost efficient manner to all City and County residents.

6. County recognizes the need for orderly growth within and adjacent to City and for supporting appropriate annexations and promoting the concentration of development within City. In that regard, County General Plan Goal LU-G, provides that County will direct urban growth and development within the City spheres of influence to existing incorporated cities and will ensure that all development in City fringe areas is well planned and adequately served by necessary public facilities and infrastructure and further Countywide economic development goals.

7. Annexation which results in the development of urban uses in response to a clearly demonstrated community demand is appropriate; and well planned and fiscally sound development can be a valuable tool in the physical and economic development of City and County.

8. City recognizes that development within City limits may also have the effect of concentrating revenue generating activities within City rather than in unincorporated areas.

9. The parties recognize that when urban growth and development is directed to cities there is a lost opportunity of development by County in the unincorporated area and the sharing of the local sales and use taxes generated by such development would serve as a tool for the County to participate in receiving a share of that new revenue.

10. It is the interest of the parties to require all new urban development to pay a roughly proportionate share of the cost of urban services and infrastructure created by that development, whether it occurs in the City or in the adjacent unincorporated area of the City's sphere of influence.

11. The parties recognize the need to cooperate to pursue common goals of economic development for citizens of the County and City.

G. The purpose for the 1990 MOU, as amended, as set forth above remain, and the parties

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desire to address the fiscal, economic development, and service needs mentioned above.

H. Nothing in this MOU is intended to change the underlying property and sales tax sharing formulas set forth in the 1990 MOU, as amended, and restated herein.

NOW, THEREFORE, County and City hereby agree as follows:

ARTICLE I

DEFINITIONS

Unless the particular provision or context otherwise requires, the definitions contained in this article and in the Revenue and Taxation Code shall govern the construction, meaning, and application of words used in this MOU.

1.1. "Base property tax revenues" means property tax revenues allocated by tax rate equivalents to all taxing jurisdictions as to the geographic area comprising a given tax rate area annexed in the fiscal year immediately preceding the tax year in which property tax revenues are apportioned pursuant to this MOU, including the amount of State reimbursement for the homeowners' and business inventory exemptions.

1.2. "Property tax increment" means revenue from the annual tax increment, as "annual tax increment" is defined in Section 98 of the Revenue and Taxation Code, attributable to the tax rate area for the respective tax year.

1.3. "Substantial development" or "substantially developed" means real property which, prior to annexation, has an improvement value to land value ratio equal to or greater than 1.25:1, as of the lien date in the fiscal year in which the annexation becomes effective.

1.4. "Property tax revenue" means base property tax revenue, plus the property tax increment for a given tax rate area.

1.5. "Tax apportionment ratio" means the tax apportionment ratio of the parties for a given fiscal year and shall be ascertained by dividing the amount determined for each party pursuant to Revenue and Taxation Code Sections 96(a) or 97(a), whichever is applicable, by that party's gross assessed value, and by then dividing the sum of the resulting tax rate equivalents of both parties into each party's tax rate equivalent to produce the tax apportionment ratio.

1.6. "Tax rate equivalent" means the factor derived for an agency by dividing the property tax levy for the prior fiscal year computed pursuant to Section 97 of the Revenue and Taxation Code by the gross assessed value of the agency for the prior fiscal year.

1.7. "Urban development" or "urban type development" means development not allowed in areas designated Agriculture, Rural Residential or River Influence in County's General Plan or its applicable community plans as of the Effective Date of this MOU.

ARTICLE II

ANNEXATIONS BY CITY

2.1. Any annexations undertaken by City following the date of the execution of this MOU shall be consistent with both the terms of this MOU and the standards (hereinafter "The Standards" or "Standards") as set forth in **Exhibit 1**. This MOU shall not apply to annexations proposed by City which are not in compliance with its terms or which fail to meet The Standards. If a proposed annexation is not in compliance with the terms of this MOU, including, but not limited to, The Standards, then no property tax exchange agreement, as required by Revenue and Taxation Code Section 99, shall exist in regards to that proposed annexation. Any such non-complying annexation shall be handled individually through separate negotiations between City and County.

2.2. In order to encourage the orderly processing of proposed annexations, City shall, at least thirty (30) days prior to filing any annexation proposal with the Fresno County Local Agency Formation Commission (hereinafter "LAFCo"), notify County of its intention to file such proposal and the date upon which City expects such proposal to be filed. Upon County's request, City agrees to meet with County to review whether its proposed annexation complies with The Standards. Within fifteen (15) days after the date County receives notice by City of its annexation proposal, County shall notify City in writing if it has determined that the proposed annexation is inconsistent with The Standards. Upon receipt of such notification, City may either modify the proposal to County's specifications or adopt a resolution finding that the proposed annexation is, in City's determination, consistent with The Standards.

2.3. If City adopts a resolution making the findings described in Section 2.2, then County may challenge such findings by appropriate court action filed within thirty (30) days of receipt of written notice of the adoption of City's resolution. The court shall independently review the evidence and determine whether the proposed annexation is consistent with The Standards.

As an alternative to a judicial challenge by the County, the parties may within the aforesaid thirty (30) day period mutually agree in writing to arbitrate their dispute through proceedings conducted in accordance with the rules established by the American Arbitration Association. The parties upon agreeing to arbitrate will proceed with arbitration in a timely manner. The arbitrator hearing the matter shall independently review the evidence and determine whether the proposed annexation is consistent with The Standards.

Costs incurred by the prevailing party, either in court proceedings or arbitration, shall be paid by the non-prevailing party. The parties agree that the City shall not proceed to LAFCo with the proposed annexation until the dispute is finally resolved either by court or arbitration proceedings. If City attempts to proceed with such proposed annexation prior to the expiration of the period in which County may file its court action or agree to arbitrate, or prior to the final conclusion of such court or arbitration proceedings, then this memorandum shall immediately terminate as to such annexation and in particular no property tax exchange agreement, as required by section 99 of the Revenue and Taxation Code, shall exist between City and County as to that proposed annexation.

Notwithstanding the foregoing, the City may proceed to LAFCo under this MOU if court or arbitration proceedings are not completed within thirty (30) days after the filing thereof provided, however, that LAFCo in its resolution of approval, at the request of the City, conditions the completion of the annexation upon the Executive Officer's prior receipt of a certified copy of the document evidencing the finality of the aforesaid court or arbitration proceedings determining that the proposed annexation is consistent with **Exhibit 1**, or alternatively, receipt of a written stipulation of the City and County agreeing that a master property tax agreement still exists permitting the completion of such proposed annexation. If LAFCo declines to include the aforesaid condition in its approval, or City fails to timely request such condition, no property tax exchange agreement as required by Section 99 of the Revenue and Taxation Code shall exist between City and County as to that proposed annexation. If City nevertheless attempts to proceed with the annexation, such action on the part of the City shall also be deemed good cause for the County at its option to terminate this MOU in its entirety.

2.4. For the purpose of promoting economic development and job creation, an Alternate Standard for Annexation for industrial or regional commercial uses is hereby created. In the place of the

Standards for Annexation set forth in **Exhibit 1**, the Alternate Standard for Annexation shall apply to and govern the review of annexation proposals for industrial or regional commercial uses. Annexation proposals for industrial/regional commercial uses shall include a conceptual development plan, as described herein. The conceptual development plan shall consist of the economic objectives to be achieved, the service and financing strategy and its schedule, and shall include a map of the proposed prezoning. The conceptual development plan's schedule shall include milestones for major project components to measure the progress of the project. Due to the complexity of such projects the development schedule for planning and implementation may reasonably require a period of from five to ten years. The annexation proposal shall be submitted to and reviewed by the County pursuant to Section 2.2. Annexation proposals that comply with the criteria of this Section 2.4 shall be deemed to comply with Section 2.1. The annexation application to be submitted to LAFCo shall be considered complete upon adoption of the prezoning by the City. County and City agree to meet annually to review the progress toward the achievement of the economic development objectives and to identify ways to promote mutual economic development objectives.

2.4.1. Section 2.4 shall be deemed suspended if City rezones an area that was annexed using the Alternate Standard for Annexation to a zone other than Industrial/Regional Commercial without County's consent.

2.5. The following conditions shall apply to the 830-acre Dry Creek Preserve area as shown on **Exhibit 2.**

2.5.1. Prior to approving any Master Plan development standards for the Dry Creek Preserve area, City shall notify and invite County to participate in development of the scope for the Master Plan. After meaningful consultation and taking into consideration County's comments, City may approve the Master Plan. City shall provide draft Master Plan documents to County as part of any environmental review process and in no event less than 30 days prior to City's first public hearing to consider adoption of the Master Plan.

2.5.2. Prior to annexations proposed in the Dry Creek Preserve, City shall demonstrate that it has sufficient capacity to provide urban services to the annexation project area and areas within 1/8 mile of the site in accordance with the Clovis General Plan, Dry Creek Preserve Master Plan, and City adopted master service delivery plans. Clovis commits to studying urban service delivery (at a minimum provision of potable water and collection and treatment of wastewater) to the entire Dry Creek Preserve in the context of its Master Plan Updates and Planning Program.

2.5.3. City shall demonstrate that City's impact fee structure includes, at a minimum, fees for signalization of the following intersections: Sunnyside and Shepherd, Fowler and Shepherd, Teague and Fowler, Nees and Fowler, Sunnyside and Teague, and Armstrong and Nees.

2.5.4. As part of any proposed annexation, City shall require a Traffic Report signal warrant study of the intersections listed above to determine if the proposed annexation at build out would result in any of the six intersections meeting signalization warrants. If so, City shall require the developer to provide said signalization as part of the conditions of approval for the development. County shall assist City in the analysis of the project traffic analysis and traffic signal warrant studies for this area.

2.5.5. City agrees that following annexation and upon request from the Director of the County's Public Works and Planning Department, City shall conduct specific traffic enforcement activities for Fowler Avenue between Shepherd and Nees Avenues, Teague Avenue between Fowler and Armstrong Avenues, and Armstrong Avenue between Nees and Teague Avenues within the confines of the Dry Creek Preserve area.

2.5.6. If intersection safety lighting or additional regulatory or warning signage improvements are determined to be warranted by the County following a study for Fowler Avenue between Shepherd and Nees Avenues, Teague Avenue between Fowler and Armstrong Avenues, and Armstrong Avenue between Nees and Teague Avenues, City shall provide for the installation of the identified facilities at City's expense within 90 days of request by the County.

2.5.7. When development activity requires the construction of municipal utilities in County road rights-of way, City shall obtain an encroachment permit that will, in part, obligate City to timely maintenance of the roadway at City expense for any repairs created by or related to City-installed improvements.

2.5.8. City shall provide for the pick-up and removal of illicitly dumped trash and debris within the public road rights-of-way of Fowler Avenue between Shepherd and Nees, Teague Avenue between Fowler and Armstrong Avenues, and Armstrong Avenue between Nees and Teague Avenues on an as needed basis or as requested by the County.

2.5.9. All storm drainage generated by the proposed annexation and all existing drainage patterns shall be accommodated by existing or project-installed Master Planned Storm Drainage infrastructure and shall not contribute to the surface flows or ponding within the unincorporated areas. All new storm drainage shall conform with the Fresno Metropolitan Flood Control District's Master plan for this area.

2.5.10. City shall provide street sweeping on Armstrong Avenue between Teague and Nees Avenues; on Teague Avenue between Fowler and Armstrong Avenues; and on Fowler Avenue between Shepherd and Nees Avenues, on an as needed basis or as requested by the County.

ARTICLE III

EXCHANGE OF PROPERTY TAX REVENUES TO BE MADE UNDER SECTION 99 OF THE REVENUE AND TAXATION CODE

3.1. The property tax revenues collected in relation to annexations covered by the terms of this MOU shall be apportioned between City and County as set forth in sections 3.2 and 3.3 below. The parties acknowledge that, pursuant to Sections 54902, 54902.1 and 54903 of the Government Code and Sections 97 and 99 of the Revenue and Taxation Code, the distribution of such property tax revenues will not be effective until the revenues are collected in the tax year following the calendar year in which the statement of boundary changes and the map or plat is filed with the County Assessor and the State Board of Equalization.

3.2. In regards to the annexation of real properties which are not considered substantially developed at the time of annexation, County will retain all of its base property tax revenue upon annexation. The amount of the property tax increment for special districts whose services are assumed by City shall be combined with the property tax increment of the County, the sum of which shall be allocated between City and County pursuant to the following ratio:

County:	63%
City:	37%

3.3. In regards to the annexation of real properties which are considered substantially developed at the time of annexation, property tax revenue (base plus increment) will be reallocated as follows: a detaching or dissolving district's property tax revenue (base plus increment) shall be combined with County's and the sum of which shall be allocated between City and County pursuant to the ratio set forth in section 3.2.

ARTICLE IIIA

ANNEXATIONS THAT DO NOT RESULT IN URBAN DEVELOPMENT

County and City have expressed concern with the effect of property being annexed into City for the purposes of urban development but being utilized for new non-urban uses. To address these concerns, County and City agree to the following:

3A.1. City shall develop and implement policies and procedures, including amendments to its General Plan, Specific Plans and zoning ordinances, as City deems appropriate, to ensure that property planned for urban development and annexed into the City based upon that premise pursuant to the terms of this MOU, shall not be developed with new non-urban type development.

3A.2. With regards to property annexed into City for the purposes of urban development, if the entitlements for urban development expire and the land remains undeveloped without new urban type development entitlements for a period of 365 days, or if the property is subsequently used for new non-urban development uses (those not previously in active use at the time of annexation) regardless of the expiration of entitlements, City agrees to do the following:

> Pay County the Cash Equivalent of 150% of the City's incremental allocation of the Countywide one-percent (1%) property tax rate that City collects from the annexation area subject to this Section until said properties receive new entitlements for urban development or are developed with urban type development, whichever occurs first. The first payment of Cash Equivalent shall be due and payable ninety (90) days after 365 days following the expiration of the City issued entitlements or (90) days after the annexed property is developed with new non-urban development, whichever occurs first.

3A.3. The Cash Equivalent payment shall only be due on those portions of the annexation that meet the requirements of Subsection 3A.2.

3A.4. Nothing in this Section shall prevent City from including in its policies and procedures a requirement that the property owner and developer be responsible to City for the Cash Equivalent.

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ARTICLE IV

DEVELOPMENT WITHIN, ADJACENT TO AND NEAR CITY'S SPHERE OF INFLUENCE

4.1. Development within City's sphere of influence.

4.1.1. Within one half (1/2) mile of City's boundary as set forth in **Exhibit 3**, County shall not approve any discretionary development permit for new urban development within the City's sphere of influence unless that development shall have first been referred to City for consideration of possible annexation. If City does not, within sixty (60) days of receipt of notice from County, adopt a resolution of application to initiate annexation proceedings before LAFCo, County may approve development permits for that new urban development. County's approval shall take into consideration City's general plan and be consistent with County's general plan policies, provided that the development is orderly and does not result in the premature conversion of agricultural lands.

4.1.2. Within the City's sphere of influence, County shall require compliance with development standards that are comparable to City's and charge fees reflecting the increased administrative and implementing cost where such City standards are more stringent than County's. These requirements shall apply to discretionary development applications approved by County. For purposes of this Agreement, "discretionary development applications" shall mean General Plan Amendments, Rezoning, Tentative Tract Maps, Tentative Parcel Maps, Conditional Use Permits, Director Review and Approvals, and Variances.

4.1.3. City development fees shall be charged for any discretionary development applications to be approved by the County within City's sphere of influence. To establish or amend City development fees, City shall conduct a public hearing and notify property owners in accordance with State Law. At the conclusion of that hearing, City shall adopt a resolution describing the type, amount, and purpose of City fees to be requested for County adoption.

4.1.4. City shall transmit the adopted resolution to the County for its adoption of the fees. City shall include a draft ordinance for County's adoption with appropriate supporting documentation or findings by the City demonstrating that the fees comply with Section 66000 of the Government Code and other applicable State Law requirements. City fees may also include City's and County's increased administrative costs and inspection charges.

4.1.5. County shall collect the applicable City development fees for infrastructure and facilities at the time of final map approval or issuance of building permits as established by the fee schedule. Or, County shall require the applicant to present a voucher issued by City evidencing the payment of the fees directly to City, or written confirmation by City that fees are inapplicable. If County imposes and collects fees on behalf of City, County shall transfer the fees to City at the earliest time legally permitted.

4.1.6. City shall give County at least thirty (30) days notice before implementing any new fees or an amendment to existing fees. Notwithstanding this Section 4.1.6, or any other provision of this MOU, City shall be solely responsible for determining the amount of the fees and setting them in accordance with law. This Section 4.1.6 shall not be construed as a representation by County as to the propriety of the fees or the procedures used in setting them.

4.1.7. City shall hold harmless, defend and indemnify the County from all claims, demands, litigation of any kind whatsoever arising from disputes relating to the fees, the enactment of the fees or the collection of fees.

4.2. Development adjacent to and near City's sphere of influence.

4.2.1. Within the City's sphere of influence and the area beyond that sphere of influence, as shown in **Exhibit 3**, County and City agree to the following prior to adopting any general plan amendment allowing new urban development or approving a discretionary development permit for new urban development:

A. With respect to general plan amendments, County shall notify City staff of the proposed general plan amendment, and consult with the City at a staff level in such fashion as to provide meaningful participation in County staff's analysis of the proposed general plan amendment, and shall likewise consult on other policy changes which may have an impact on growth or the provision of urban services. In this regard, City shall be given the opportunity to respond to County staff before the proposed general plan amendment is prepared for presentation to County's Planning Commission. Such consultation shall include County's solicitation of comments from City in the preparation of any Initial Study required by the California Environmental Quality Act undertaken as part of County staff's analysis of the proposed general plan amendment. If City determines that urban development which could occur as a result of the proposed general plan amendment may have a significant effect on the environment, County shall require an EIR to be prepared if a fair argument, based on substantial evidence in the record before the County, can be made in support of the City's finding.

B. With respect to discretionary development permits for new urban development, County shall notify City staff of the proposed discretionary development permit, and consult with the City at a staff level in such fashion as to provide meaningful participation in County staff's analysis of the proposed discretionary development permit and consult with City over the potential effects on City services of the proposed development, consistency with City's general plan, and the potential for an expansion of the City's sphere of influence to include the proposed development. Consultation shall commence not less than sixty (60) days prior to the first scheduled action to consider the discretionary permit, and before the completion of environmental studies. After meaningful consultation and taking into consideration City's general plan, County may approve development permits for that new urban development that is consistent with County's general plan policies, provided that the development is orderly and does not result in the premature conversion of agricultural lands.

4.2.2. County shall support urban unification. To this end, County shall oppose the creation of new governmental entities within City's sphere of influence, or within one-half (1/2) mile thereof, except for such entities that may be necessary to address service requirements that cannot be addressed by annexation to City. City and County will support transition agreements with current service providers which recognize the primary role of cities as providers of urban services within urban areas and where current service providers of urban services have participated in service master planning.

4.3. County development fees.

4.3.1. If County adopts County-wide capital facilities fees, City shall require that an applicant for any land use entitlement or permit within City pay all County public facilities fees applicable to the entitlement or permit on behalf of County.

4.3.2. At County 's request, City shall either timely impose or collect all such fees or shall require the applicant to present a voucher issued by County evidencing the payment of the fees directly to County or written confirmation by County that fees are inapplicable.

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7404 N. Spalding Avenue Fresno, CA 93720-3370
Tel 559-431-5600 Fax 559-261-9366

4.3.3. If adopted by County, the fees are to mitigate the impact of development on required County facilities and services including, but not limited to, the criminal justice system, health, social services, parks, transportation and library. If City imposes and collects fees on behalf of County, City shall transfer the fees to County at the earliest time legally permitted. County's fees may also include City's and County's increased costs required for their administration.

4.3.4. County shall give City at least thirty (30) days notice before implementing any new fees or an amendment to existing fees. Notwithstanding this Section 4.3.4, or any other provision of this MOU, County shall be solely responsible for determining the amount of the fees and setting them in accordance with law. This Section 4.3.4 shall not be construed as a representation by City as to the propriety of the fees or the procedures used in setting them.

4.3.5. If County proposes non-County-wide fees dedicated for localized improvements or quality of life issues, City is willing to consider such fee proposals.

4.3.6. County shall hold harmless, defend and indemnify the City from all claims, demands, litigation of any kind whatsoever arising from disputes relating to the fees, the enactment of the fees or the collection of fees.

4.4. Special Study Area.

4.4.1. The area generally bounded by Tollhouse Road (State Route 168) to the north, east of DeWolf Avenue, generally north of the Nees Avenue alignment on the southern boundary, and approximately halfway between McCall and DelRey Avenues to the east as shown in **Exhibit 4**, shall be the subject of a special study area by City and County. City and County agree to discuss further planning and development of the special study area, primarily for job generating uses. Development of the special study area shall require an amendment to this MOU.

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ARTICLE V

IMPLEMENTATION OF SALES TAX

REVENUE COLLECTION

5.1. Pursuant to the Bradley Burns Uniform Local Sales and Use Tax Law, Part 1.5, Division 2, of the Revenue and Taxation Code (commencing with Section 7200), City consistent with the 1990 MOU, amended its local sales and use tax ordinance, first operative as of October 1, 1990, to provide County with an equivalent sales tax revenue sharing proportion. After periodic reallocations, the County's proportion is currently set at five percent (5%) of the City's one percent (1%) sales and use tax revenues City receives from the Statewide sales tax generated within the incorporated areas of the City. The precise amount is reflected in Clovis Municipal Code, § 3.3.310, with the City receiving .950% and the County receiving .050%. The City's local sales and use tax ordinance is on file with the State Board of Equalization ("SBE").

5.2. The City's sales and use tax ordinance enables the County, pursuant to its sales and use tax ordinance, to collect from the SBE that percentage portion of the sales and use tax revenues generated within the incorporated areas of City set forth in Section 5.1.

5.3. Whenever City proposes an annexation of unincorporated territory which generates substantial sales tax revenue for County, City agrees to further amend its local sales and use tax ordinance as set forth in this section. This additional amendment shall become operative no later than the commencement of the next calendar quarter following the date upon which such annexation is certified as complete by the Executive Officer of LAFCo. This additional amendment shall decrease City's sales tax rate to yield an amount equal to the amount of substantial sales tax revenue being collected by County in the area to be annexed, thus enabling County to increase its sales tax rate by a corresponding percentage, which shall continue to accrue to County throughout the term of this MOU. Any such additional amendment made by City pursuant to this section shall likewise preserve intact the existing percentage share set forth in Section 5.1. Further, City agrees that it shall not split or separate areas into smaller annexations for the purpose of, or having the effect of, creating an annexation or annexations which, individually, do not generate substantial sales tax revenue, but which would generate such revenue if combined. For purposes of this Article, the term "substantial sales tax revenue" shall be defined as sales tax revenue derived from taxable sales in the area annexed equal to at least:

5.3.1. If only information, for less than one fiscal year exists, then $100,000 in taxable sales in the most recent quarter for which such information from the State Board of Equalization is available in writing or electronic media, and projected to a full four quarters, at least $400,000 in taxable sales.

5.3.2. If information for one or more years exists, then $400,000 in taxable sales in the most recent year for which such information from the State Board of Equalization is available in writing or electronic media.

5.4. If City fails to amend its sales tax ordinance upon the annexation of unincorporated territory which generates substantial sales tax revenue for County as provided in section 5.3, or if City splits or separates areas into smaller areas as prohibited by section 5.3, then this MOU shall immediately terminate and, in particular, no property tax exchange agreement, as required by Section 99 of the Revenue and Taxation Code, shall exist between City and County.

5.5. City and County further agree that the annual report of the State Board of Equalization and the Department of Finance Annual Population Estimates shall be used as the data source for the purpose of calculating the per capita sales tax revenue pursuant to this MOU.

5.6. The provisions of Section 5.1 shall continue in effect during the entire term of this MOU at the current 5% level. The sharing of sales and use tax revenues shall include only those amounts collected pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law, and not any amounts collected as the result of any voter approved override to the local allocation to City. The provisions of Section 5.1, allowing the County to collect a portion of sales and use tax revenues generated within the incorporated area of City, shall continue to apply to all incorporated areas of City, regardless of the time of annexation.

5.7. In addition to local sales and use tax sharing pursuant to Sections 5.1 through 5.6 of this Article, City shall share with and pay County the cash equivalent of an additional percentage of City's portion of local sales and use taxes generated, as set forth in Section 5.8 (hereinafter "Cash Equivalent"). The sharing and payment of the cash equivalent of sales and use tax revenues shall include only those equivalent amounts collected pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law, and not any amounts collected as the result of any voter approved override to the local allocation to City. Such Cash Equivalent payment shall represent only such local sales and use tax as shall be collected within City limits within the Expanded Sphere of Influence, as shown on **Exhibit 5** (hereinafter "Expanded Area").

No Cash Equivalent payment shall be required for that area shown as the 1983 Sphere of Influence in **Exhibit 5**. Cash Equivalent payments shall be made by City warrant to County. Such payments shall not be made by distribution by the SBE from sales and use tax collected, but shall be paid separately by City to County in an amount equal to the percentage set forth in Section 5.8.

5.8. The Cash Equivalent shall be three percent (3%) of City's portion of local sales and use tax collection in City by the SBE.

5.9. The first payment of Cash Equivalent shall be due and payable ninety (90) days after the first quarter in which the final SBE data becomes available to City showing collection by City of sales and use tax revenue within the incorporated areas of the City annexed from the Expanded Area. Within one hundred eighty (180) days after each payment is made, City shall provide supporting documentation, including situs reports, on the calculation of the first payments. The requirements of this section shall apply to each of the first four quarterly payments made based on actual data available.

5.10. After the first four quarterly payments of the first year provided under section 5.9, City shall make quarterly payments based on estimates of the Cash Equivalent using the applicable percentage rate provided in Section 5.8 (hereinafter "Estimated. Payment"). The Estimated Payment shall be computed and paid quarterly by City to County at the end of each calendar quarter based on the most recent SBE data available, no later than 30 calendar days from the end of the quarter the sales and use tax revenue is collected by City, each quarter ending as follows: March 31, June 30, September 30, and December 31. Within 180 days after each quarter for which an Estimated Payment is made, City shall provide supporting documentation, including situs reports, on the calculation of the amount of each Estimated Payment, as well as the actual amount of the Cash Equivalent based upon final data for the applicable quarter. If an Estimated Payment is less than the actual amount, City shall pay such difference to the County within 30 days of such calculation, but no later than 180 days after the subject quarter. If an Estimated Payment is in excess of the actual amount, such excess shall be deducted from the Estimated Payment for the subsequent calendar quarter. To the extent permitted or required by law, all supporting documentation provided by City regarding the sources of local sales and use tax revenue to County shall be deemed confidential and not made public. This restriction shall not apply to aggregate information regarding totals of revenue from the entire area.

5.11. Payments will be considered delinquent if City fails to make payments of Cash Equivalent within 30 days of the quarterly payment dates listed in Section 5.10. If one or more payments become delinquent, County shall notify City of such deficiency specifying the dates said payments were due. If City does not make current all past due payments within 30 calendar days of said notice, County will notify City of its intent to terminate the property tax exchange agreement for the Expanded Area within 30 calendar days of the date of the notice if full payment is not received. If City fails to make payment during the time provided by the termination notice, no property tax exchange agreement, as required by Section 99 of the Revenue and Taxation Code, shall exist between City and County for the Expanded Area.

ARTICLE VI

MANAGED GROWTH URBAN CENTERS

6.1. City agrees to manage growth and development in the new urban centers in the following manner. City agrees not to proceed with development in City's Northwest Urban Center as depicted in **Exhibit 6**, until 60% of the developable area in the Southeast Urban Center ("Loma Vista") as depicted in **Exhibit 6** is committed to development. Such limitation shall not apply to public facilities to be located in the Northwest Urban Center. For purposes of this section, "committed to development" shall mean a parcel that is constructed upon, has an approved Tentative Tract Map, or has an approved Site Plan Review and is either annexed to the City or the City has a pending application of annexation before LAFCo. "Committed to development" shall also mean a parcel on which development activity has occurred under jurisdiction of the County including 2.5 acre or smaller parcels with a developed single family residence. For purposes of this section "developable area" shall mean all land designated for use as follows: very low, low, medium, medium high, and high density residential; commercial; office; mixed use; industrial/employment center; or village center all as designated on the Clovis General Plan. Special studies or amendments to the City general plan for specific plans for the Northwest Urban Center conducted in advance of reaching the 60% development limitation in Southeast Urban Center shall not be considered a violation of this section.

ARTICLE VII

COUNTY AND CITY ASSURANCES ON USE OF REVENUE

7.1 County recognizes that certain revenue reallocated to it by this MOU would otherwise have been appropriated by City to meet demands for services. Therefore, County agrees to use this new revenue in order to maintain levels of County services that are supportive of City services, unless the federal or state governments materially reduce the level of funding for such services. Examples of such County services include: criminal justice system, public health, and other similar services. This section shall not be construed as establishing minimum levels of County services that are supportive of City services.

7.2 City agrees to continue enforcement of laws which result in the collection of fines and forfeitures.

ARTICLE VIIA

ADMINISTRATIVE PROCESSING FEE

7.3 City agrees to pay to County, as additional consideration for entering into this MOU, a one-time fee of $75,000. Payment shall be made within 60 days of the Effective Date of this MOU. This fee is to cover County's costs of developing, administering, and implementing this MOU throughout its term.

ARTICLE VIII

COOPERATIVE EFFORTS AT LEGISLATIVE REFORM

8.1 City and County agree to work jointly for state legislation and appropriations that would improve the fiscal condition of City and County.

ARTICLE IX

TERM OF MOU AND TERMINATION

9.1. <u>Term of MOU</u>.

This MOU shall commence as of the date of execution by County and City and shall remain in effect through June 30, 2027 ("Initial Term"). This MOU shall be automatically extended for one additional five (5) year period, through June 30, 2032 ("Extension Term"), unless either party provides written notice not less than one hundred eighty (180) days prior to expiration of the Initial Term, of its desire to not extend this MOU. This MOU may also be terminated at any time by mutual agreement of the parties.

9.2. <u>Termination</u>.

Should all or any portion of this MOU be declared invalid or inoperative by a court of competent jurisdiction, or should any party to this MOU fail to perform any of its. obligations hereunder, or should any party to this MOU take any action to frustrate the intentions of the parties as expressed in this MOU, then in such event, this entire MOU, as well as any ancillary documents entered into by the parties in order to fulfill the intent of this MOU, shall immediately be of no force and effect and, in particular no property tax exchange agreement, as required by Section 99 of the Revenue and Taxation Code, shall exist between the City and County as to unincorporated property, and City shall not be required to further amend its sales tax ordinance.

9.3. Renegotiation Following Court Action.

If this Agreement is terminated by reason of court action, the parties agree to negotiate in good faith to achieve new agreement consistent with fundamental objectives of this MOU.

9.4. Penalty for County's Arbitrary Termination.

Other than termination for a reason specified in this MOU, if the County terminates this Agreement arbitrarily and without good cause, the City shall be entitled to increase its sales tax by one-half of one percent (.005) above its tax in place at the time of County's breach, beginning the next calendar quarter following the expiration of thirty (30) days written notice of breach to County.

9.5. Penalty for City's Arbitrary Termination.

Other than termination for a reason specified in this Agreement, if the City terminates this. Agreement arbitrarily and without good cause, the County shall be entitled to increase its sales tax by one-half of one percent (.005) above its tax in place at the time of City's breach, beginning the next calendar quarter following the expiration of thirty (30) days written notice of breach to City.

9.6. Implementation of Penalties.

The parties covenant to make necessary changes in their respective sales tax ordinances to effectuate the intent hereof notwithstanding termination of this MOU.

9.7. Termination Due to Changes in Law.

The purpose of this MOU is to alleviate in part the revenue shortfall experienced by County which may result from City's annexation of revenue-producing or potentially revenue producing properties located within the unincorporated area of County. The purpose of this MOU is also to enable City to proceed with territorial expansion and economic growth consistent with the terms of existing law as mutually understood by the parties as well as to maximize each party's ability to deliver essential governmental services. In entering into this MOU, the parties mutually assume the continuation of the existing statutory scheme for the distribution of available tax revenues to local government and that assumption is a basic tenet of this MOU. Accordingly, it is mutually understood and agreed that this MOU may, by mutual agreement be terminated should changes occur in statutory law, court decisions or state administrative interpretations which negate the basic tenets of this MOU.

9.8. Termination Due to Breach or Default.

Except as provided in Article II, prior to this MOU being terminated for breach or default by City, County shall provide notice to City of such breach, and City shall comply with the terms and conditions of this MOU within thirty (30) days of receipt of notice. If City fails to timely comply, this MOU shall terminate as provided herein. During the thirty (30) day notice period and until City certifies in writing that it is in compliance and County agrees in writing, no property tax exchange agreement, as required by Section 99 of the Revenue and Taxation Code, shall exist between County and City with respect to any pending annexations.

In like manner the City shall give County thirty (30) days written notice and opportunity to cure any alleged breach of this MOU on the part of the County.

ARTICLE X

GENERAL PROVISIONS

10.1. Exhibits.

Exhibits 1, 2, 3, 4, 5, and 6 are incorporated into and made a part of this MOU.

10.2. Modification.

This MOU and all of the covenants and conditions set forth herein may be modified or amended only by writing a duly authorized and executed by County and City.

10.3. Enforcement.

County and City each acknowledge that this instrument cannot bind or limit themselves or each other or their future governing bodies in the exercise of their discretionary legislative power. However, each binds itself that it will insofar as is legally possible fully carry out the intent and purposes hereof, if necessary by administrative action independent of ordinances, and that this MOU may be enforced by

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Tel 559-431-5600 Fax 559-261-9366

injunction to the extent allowed by law.

10.4. Entire MOU; Supersession.

With respect to the subject matter hereof, this MOU supersedes any and all previous negotiations, proposals, commitments, writings, and understandings of any nature whatsoever between County and City except as otherwise provided herein. In addition, this MOU supersedes the 1990 MOU, as amended. This MOU does not supersede the "Joint Resolution on Metropolitan Planning" except where that resolution is inconsistent with this MOU; in such a case, this MOU supersedes the resolution.

10.5. Notice.

All notices, requests, certifications or other correspondence required to be provided by the parties to this MOU shall be in writing and shall be delivered by first class mail or an equal or better form of delivery to the respective parties at the following addresses:

COUNTY
County Administrative Officer
County of Fresno
Hall of Records, Room 300
2281 Tulare Street
Fresno, CA 93721

CITY
City Manager
City of Clovis
City Hall
1033 Fifth Street
Clovis, CA 93612

10.6. Most Favored Nation Clause; Renegotiation.

If County enters into an MOU with another City that has terms and conditions more favorable in the aggregate to that City than those terms and conditions contained herein, County agrees that it will negotiate such terms and conditions upon written request from City, with the intent of offering a more favorable agreement. Negotiations shall conclude thirty (30) days from the date of receipt of notice by County and, if agreement is tentatively reached during that period, the legislative bodies of the parties shall approve any such amendment within thirty (30) days following the date of the tentative agreement. County and City are not required to reach agreement.

10.7. Other Remedies.

Except as otherwise provided in this MOU for a breach of its terms and conditions, the parties may enforce this MOU in any other manner authorized by law.

IN WITNESS WHEREOF, the parties hereto have executed this MOU in the County of Fresno, State of California, effective on the dates set forth above.

COUNTY OF FRESNO, a Political Subdivision of the State of California ("County")

By: ____________________
Brian Pacheco, Chairman
Board of Supervisors

ATTEST:

BERNICE E. SEIDEL
Clerk to the Board of Supervisors

By: ____________________
Deputy

REVIEWED AND RECOMMENDED FOR APPROVAL:

JEAN ROUSSEAU
County Administrative Officer

By: ____________________
Jean Rousseau for
County Administrative Officer

APPROVED AS TO LEGAL FORM:

DANIEL CEDERBORG
Fresno County Counsel

By: ____________________
Deputy

APPROVED AS TO ACCOUNTING FORM:

OSCAR J. GARCIA, CPA
Auditor-Controller/Treasurer-Tax Collector

By: ____________________
Deputy

CITY OF CLOVIS, a Municipal Corporation of the State of California ("City")

By: ____________________
Bob Whalen, Mayor
City of Clovis

ATTEST:

JOHN HOLT
City Clerk, City of Clovis

By: ____________________
John Holt, City Clerk

REVIEWED AND RECOMMENDED FOR APPROVAL:

LUKE SERPA
City Manager, City of Clovis

By: ____________________
Luke Serpa, City Manager

APPROVED AS TO LEGAL FORM:

DAVID J. WOLFE, City Attorney, City of Clovis

By: ____________________
David J. Wolfe, City Attorney

EXHIBIT 1

STANDARDS FOR ANNEXATION

- The proposal must be consistent with adopted sphere of influence of the city and not conflict with the goals and policies of the Cortese-Knox-Hertzberg Act.
- The proposal must be consistent with city general and specific plans, including adopted goals and policies.
- Pursuant to CEQA, the proposal must mitigate any significant adverse effect on continuing agricultural operations on adjacent properties, to the extent reasonable and consistent with the applicable general and specific plan.
- A proposal for annexation is acceptable if one of the following conditions exist:
  1. There is existing substantial development provided the City confines its area requested to that area needed to include the substantial development and create logical boundaries.
  2. Development exists that requires urban services which can be provided by the City.
  3. If no development exists, at least 50% of the area proposed for annexation has:
     - (i) Approved tentative subdivision map(s) (S.F. residential)
     - (ii) Approved site plan (for other uses)
- The proposal would not create islands. Boundaries must ultimately minimize creation of peninsulas and corridors, or other distortion of boundaries. For any of the following circumstances a proposal for annexation is presumed to comply with all standards for annexation:
- The request for annexation is by a city for annexation of its own publicly-owned property for public use.
- The request for annexation is by a city in order to facilitate construction of public improvements or public facilities which otherwise could not be constructed.
- The request for annexation is to remove an unincorporated island or substantially surrounded area.
- The request for annexation is for an industrial or regional commercial project for which a development application has been made and no significant adverse environmental impact will result that cannot be mitigated or overridden by a necessary public purpose. Condition(s) assuring the financing or completion of necessary development infrastructure before completion of annexation

shall be made a part of the proposal.

- The annexation is intended to mitigate or otherwise comply with standards/conditions required by another agency with respect to another development/annexation.

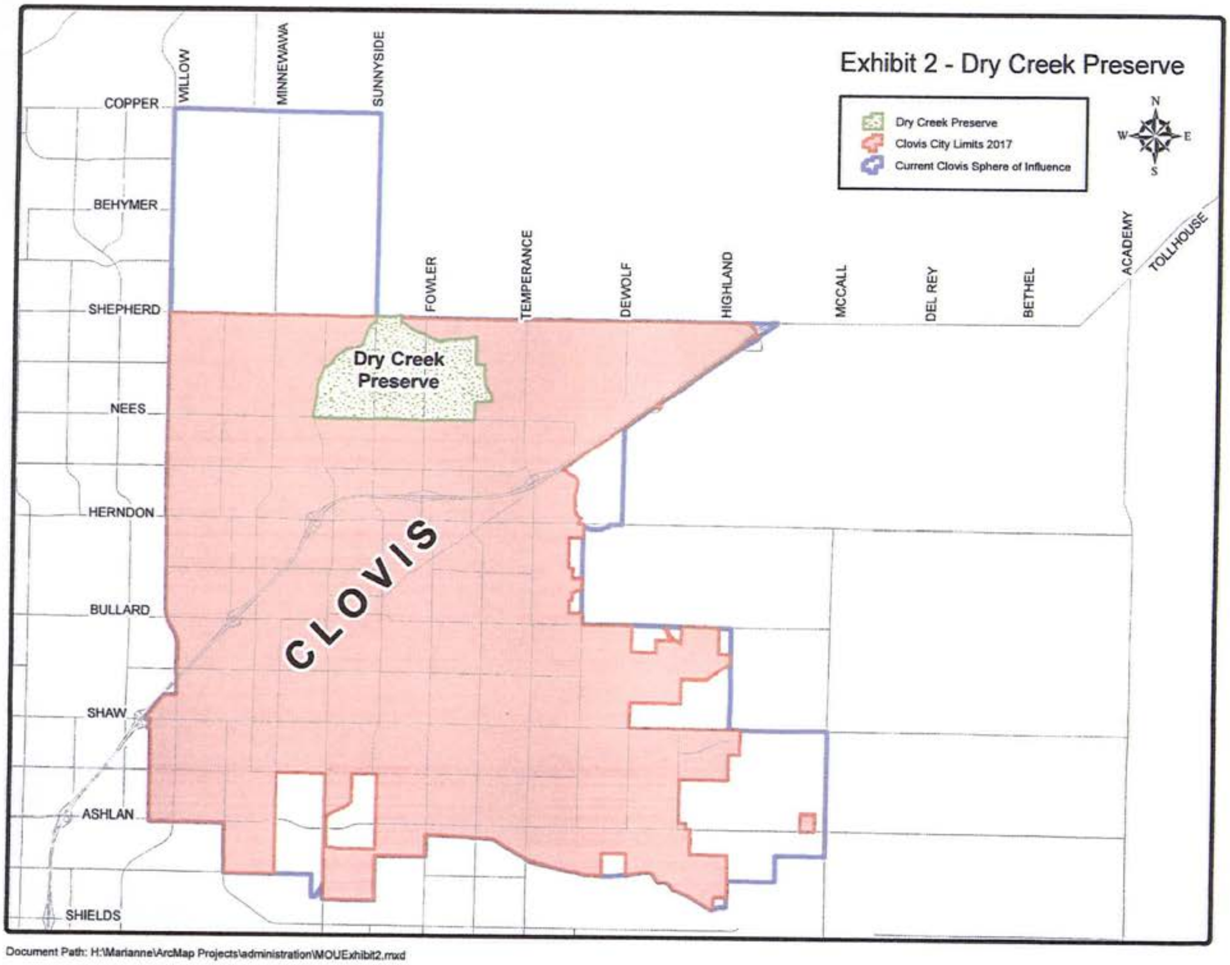

Exhibit 2 - Dry Creek Preserve

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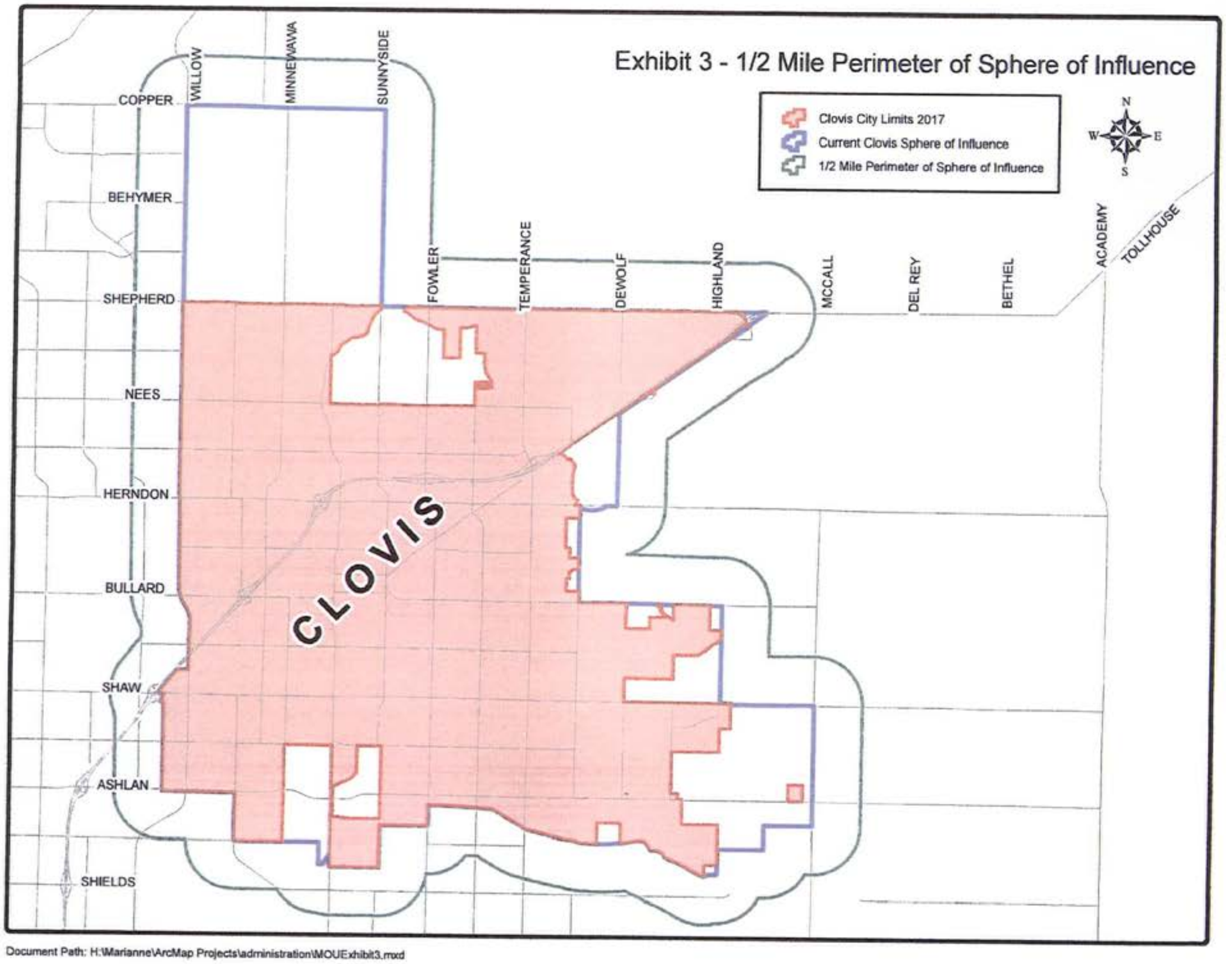

Exhibit 3 - 1/2 Mile Perimeter of Sphere of Influence

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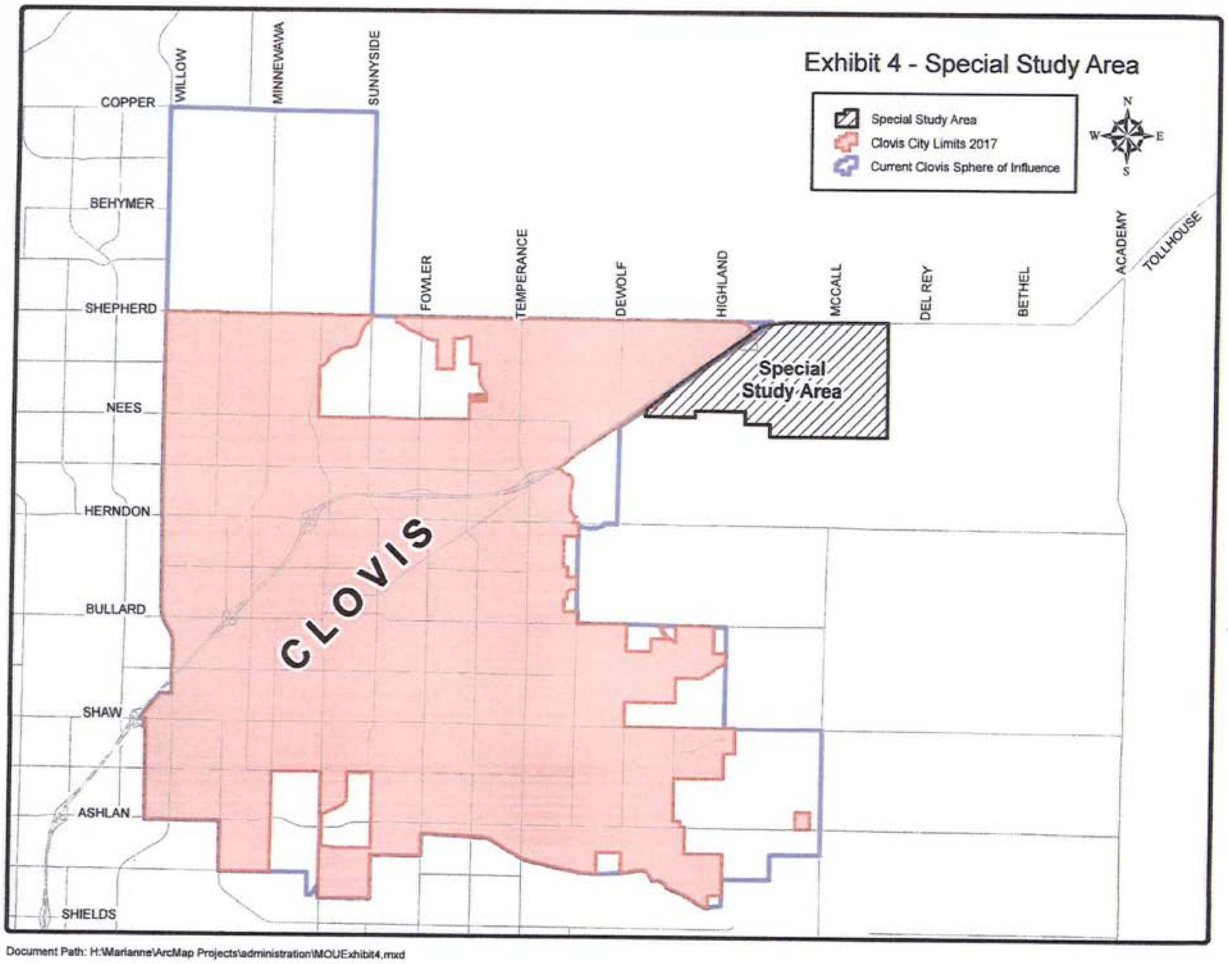

Exhibit 4 - Special Study Area

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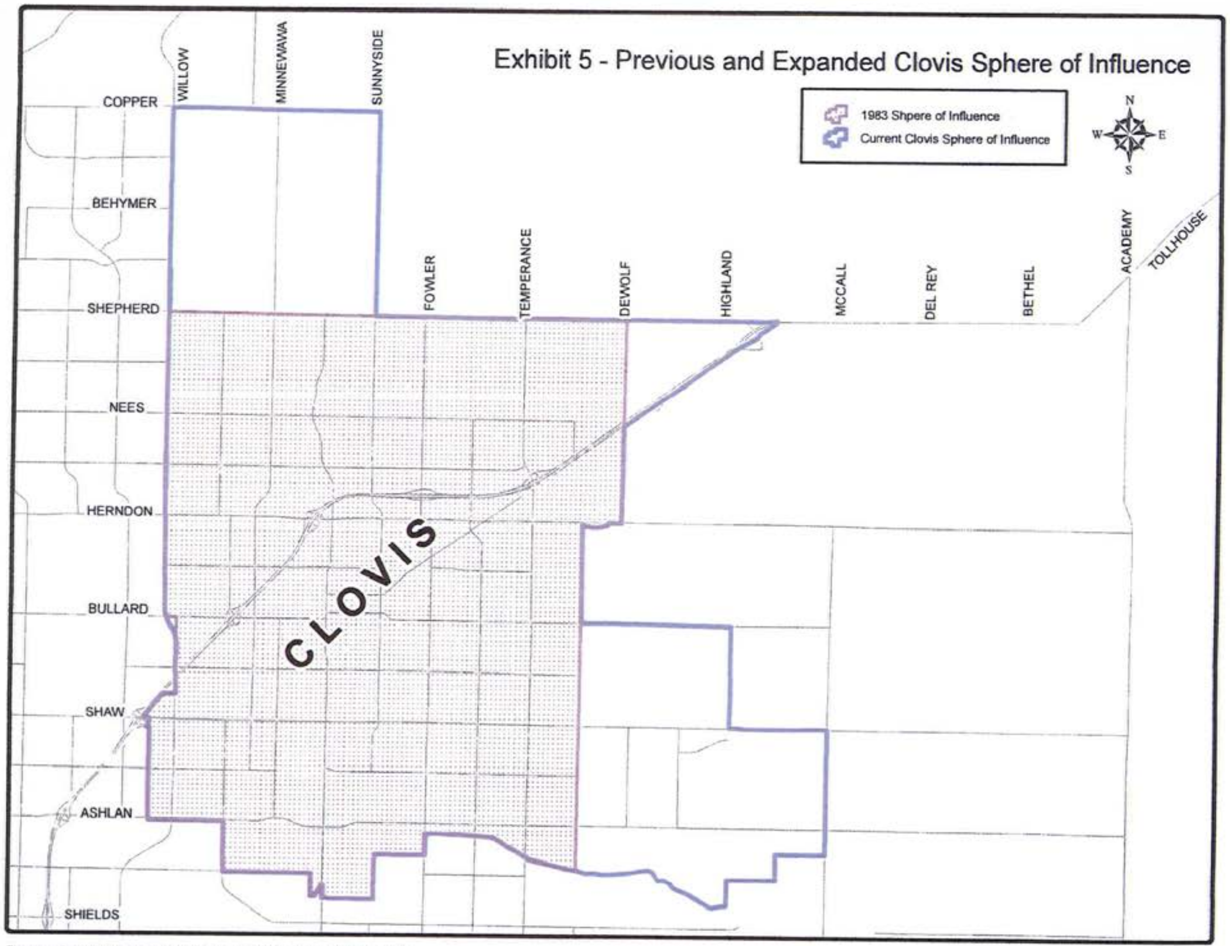

Exhibit 5 - Previous and Expanded Clovis Sphere of Influence

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AGENDA ITEM NO. 6.

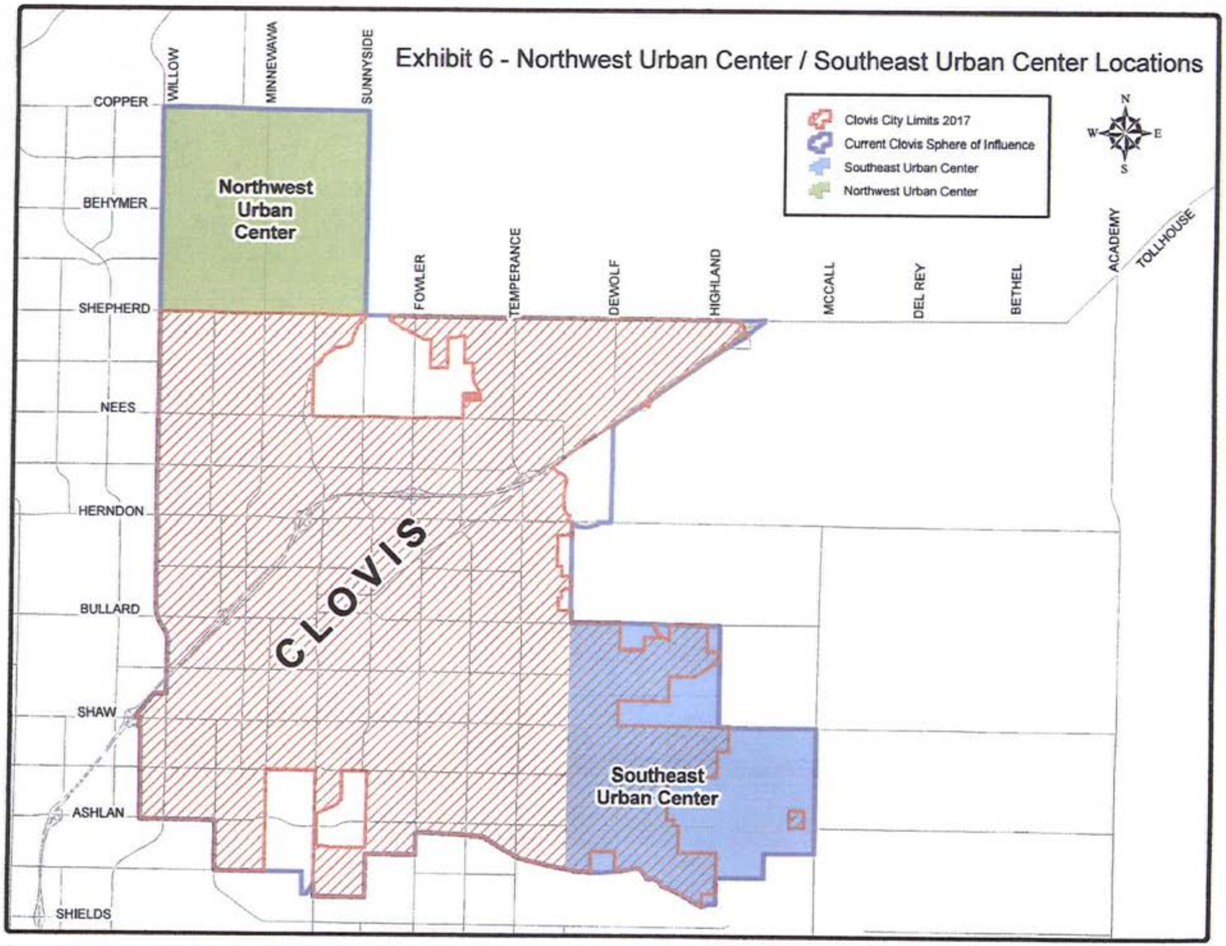
Exhibit 6 - Northwest Urban Center / Southeast Urban Center Locations

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From: Martine A. Borges <maborges1959@aol.com>
Sent: Friday, February 2, 2024 11:28 AM
To: George Gonzalez
Subject: [External] Shephard north project 605 units

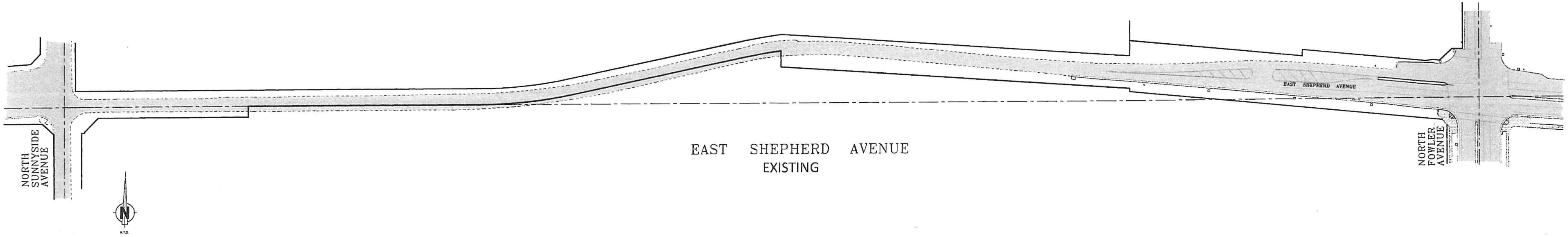
Follow Up Flag: Follow up
Flag Status: Completed

George
I am a homeowner in Shenandoah Farms since 1999. Just east of this project. I am also fortunate to own a home in Harlan Ranch. Which has been a rental and
used by our children as they grew to adults. We have experienced too many terrible experiences (in Harlan) with parking issues here, with our home located directly across from the Elev8ions project on Dara ave. The design flaw simply does not produce ample parking anywhere in the area of this location. And my understanding is that Wilson is has designed this Elev8ion format for the said project. I along with many others in the area are against this condensed housing without ample parking. Garages are to small, driveways too short, and not near enough offsite community parking. Yes its all good for the developers bottom line and it creates more doors to meet the city's quotas, But it is a nightmare for people moving forward that have to live with this problem into the future. This can be verified by anyone living in Harlan Ranch. We are also completely against any further development to the north, stating that there are countless undeveloped acres that are currently already in the sphere of the Clovis city limits.
thankyou for your time.

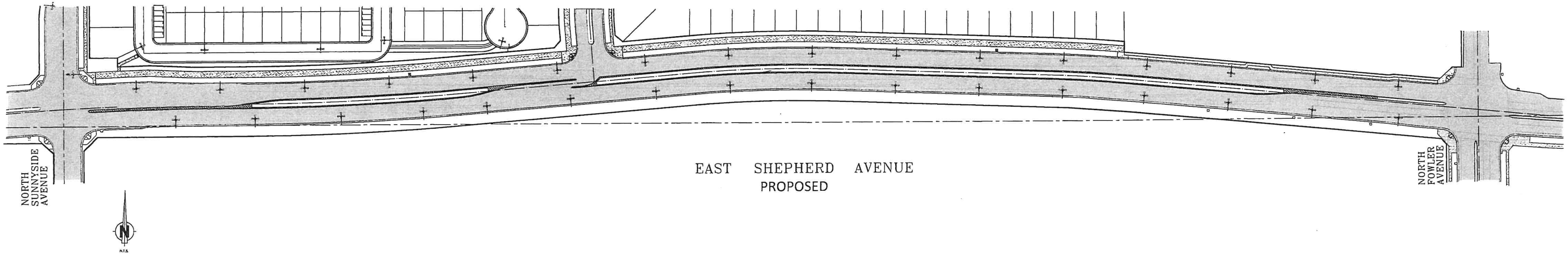
Sincerely

Martine A. Borges/Pres
BorgesBrosInc
dba: All American Const
5804 E. Brown ave
Fresno, Ca. 93727
#814291 active
#469241 retired
O: 559-291-7006
fx: 559-291-3914
https://link.edgepilot.com/s/d545c362/ITX7H-t0Skax_RRDgwoDww?u=http://www.allamericanconstruction.org/

Have a pleasant day!



EAST SHEPHERD AVENUE
EXISTING



EAST SHEPHERD AVENUE
PROPOSED

ATTACHMENT 26

Harbour & Associates
Civil Engineers
389 Clovis Avenue, Suite 300 • Clovis, California 93612
(559) 325-7676 • Fax (559) 325-7699 • e-mail lorrens@harbour-engi

AGENDA ITEM NO. 7.

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO:	Mayor and City Council
FROM:	Planning and Development Services
DATE:	March 18, 2024
SUBJECT:	Consider Approval - Res. 24-___, A resolution accepting and authorizing the submission of the 2023 General Plan Annual Progress Report, including the 2023 Housing Element Annual Progress Report to the Governor's Office of Planning and Research and the California Department of Housing and Community Development. **Staff:** Dave Merchen, City Planner/ Lily Cha, Senior Planner **Recommendation:** Approve
ATTACHMENTS:	1. Draft Resolution 24-___ 2. 2023 General Plan Annual Progress Report 3. Assumptions on Affordability

CONFLICT OF INTEREST

Councilmembers should consider recusal if a campaign contribution exceeding $250 has been received from the project proponent (developer, applicant, agent, and/or participants) within the preceding 12 months (Government Code 84308).

RECOMMENDATION

Staff recommends that the City Council consider approval of a resolution (**Attachment 1)** to accept the 2023 General Plan Annual Progress Report (**Attachment 2)**, including the Housing Element Annual Progress Report (APR) (**Appendix A to Attachment 2**), and provide authorization to submit the report to the Governor's Office of Planning and Research (OPR) and the California Department of Housing and Community Development (HCD).

EXECUTIVE SUMMARY

Each year the City is required to submit an APR reflecting its progress in implementing the General Plan (California Government Code Section 65400). The key component of the APR is the Housing Element portion, which must include specific data in a format defined by HCD. This Housing Element APR documents the progress made by the City in implementing policies adopted as part of the 2015-2023 Housing Element (Fifth Cycle).

The State requires jurisdictions to consider the APR at a public meeting of the City Council and to accept written and oral comments prior to submitting its APR.

BACKGROUND

The 2014 Clovis General Plan (General Plan) was adopted by the Clovis City Council on August 25, 2014, along with certification of a Program Environmental Impact Report (PEIR). A comprehensive update to the Development Code was adopted at the same time. The General Plan includes the following elements:

- Land Use;
- Economic Development;
- Circulation;
- Housing;
- Public Facilities and Services;
- Environmental Safety;
- Open Space and Conservation; and
- Air Quality

The Housing Element is a mandated element of the City's General Plan that must be updated every 8 years. There is no specific requirement in state or local law that the rest of the General Plan be updated on a certain timeline.

The City's 2015-2023 Housing Element was adopted on March 7, 2016, and was certified by HCD on July 22, 2016. The purpose of a Housing Element is to identify and analyze the housing needs of a jurisdiction in order to maintain, improve, and create housing for all economic segments of the population. As required by law, each year the City must prepare and approve an APR and submit it to HCD and OPR by April 1st.

General Plan APR Summary

The General Plan APR affords OPR the opportunity to identify trends in land use decisions and how these decisions relate to statewide planning and land use goals. On a broader scale, these trends can also serve to inform modifications to the State's General Plan Guidelines and to track progress of a jurisdiction's General Plan implementation.

The purpose of the General Plan APR is to:

- Provide local legislative bodies and the public with information regarding implementation of their jurisdiction's General Plan;
- Inform the public of the progress in meeting community goals;
- Demonstrate how land use decisions relate to adopted goals, policies, and measures of the General Plan; and
- Provide sufficient information to identify necessary adjustments or modifications to the General Plan to improve implementation.

With the exception of the report on the Housing Element, there are few requirements for specific data to be provided or formats to be utilized in the General Plan APR. The City's 2023 APR is organized into the following sections:

- Section I - Introduction: Briefly describes the requirement for the APR and its purpose.
- Section II - General Plan Implementation Summary: Reports on City's experience with implementing the General Plan in 2023
- Section III - General Plan Background: Provides a summary of the adoption of the City's General Plan, its structure, and the role of Urban Centers and Specific Plans
- Section IV - General Plan Amendments: Identifies and describes the general plan amendments approved by the City in 2023 and their relationship to General Plan goals and policies
- Section V – Housing Element and General Plan Update: Describes the Housing Element progress and the General Plan Update
- Section VI – Major Projects Pending: Identifies and describes several major projects that include general plan amendments that will be presented to the Planning Commission and City Council in 2024 and 2025
- Section VII - Housing Development Update: Provides a brief summary of housing activity in 2023
- Appendix A - Housing Element Annual Progress Report: Describes the requirement for the Housing Element APR and points readers to the full Housing Element APR in **Attachment 2**

OPR encourages each jurisdiction to determine what local relevant issues are important to include in the General Plan APR. As staff and the Council identify new or additional issues that are relevant to the APR's purpose, they can be added to the report in subsequent years.

Housing Element APR

Ascent Environmental, Inc. has served as the City's consultant to assist with the preparation of the Sixth Cycle Housing Element including preparation of the Housing Element APRs. The APR is generally comprised of several data tables incorporating activities that occurred in 2023 related to housing development applications, building activity (new construction, entitlements, permits, and completed units), permits issued by affordability, any addition to the current RHNA inventory by rezone entitlement, and program implementation. The 2023 Housing Element APR is included in this report as **Appendix A to Attachment 1**.

<u>RHNA Progress for 2023</u>

The State of California periodically provides population growth and housing estimates to each regional Council of Governments. The Fresno County Council of Governments (Fresno COG) distributes the regional housing needs to jurisdictions in the region with each jurisdiction's allocation categorized by income. The purpose of the RHNA process is to ensure that jurisdictions' General Plans are designed to accommodate the projected housing needs across all income levels.

The City's current RHNA period runs from January 1, 2013 to December 31, 2023. In 2023, Clovis issued building permits for 691 housing units (16 low and very low income, 9 moderate income, and 666 above moderate income units). These figures reflect new units that are affordable to renters and buyers within each category based on their actual income levels, as opposed to assumed affordability based on the density of the housing product. The consultant's methodology to determine the affordability of housing is included as **Attachment 3**. In 2023, the following income and affordability factors applied to the Clovis housing market:

Table 1: 2023 Income and Affordability Criteria

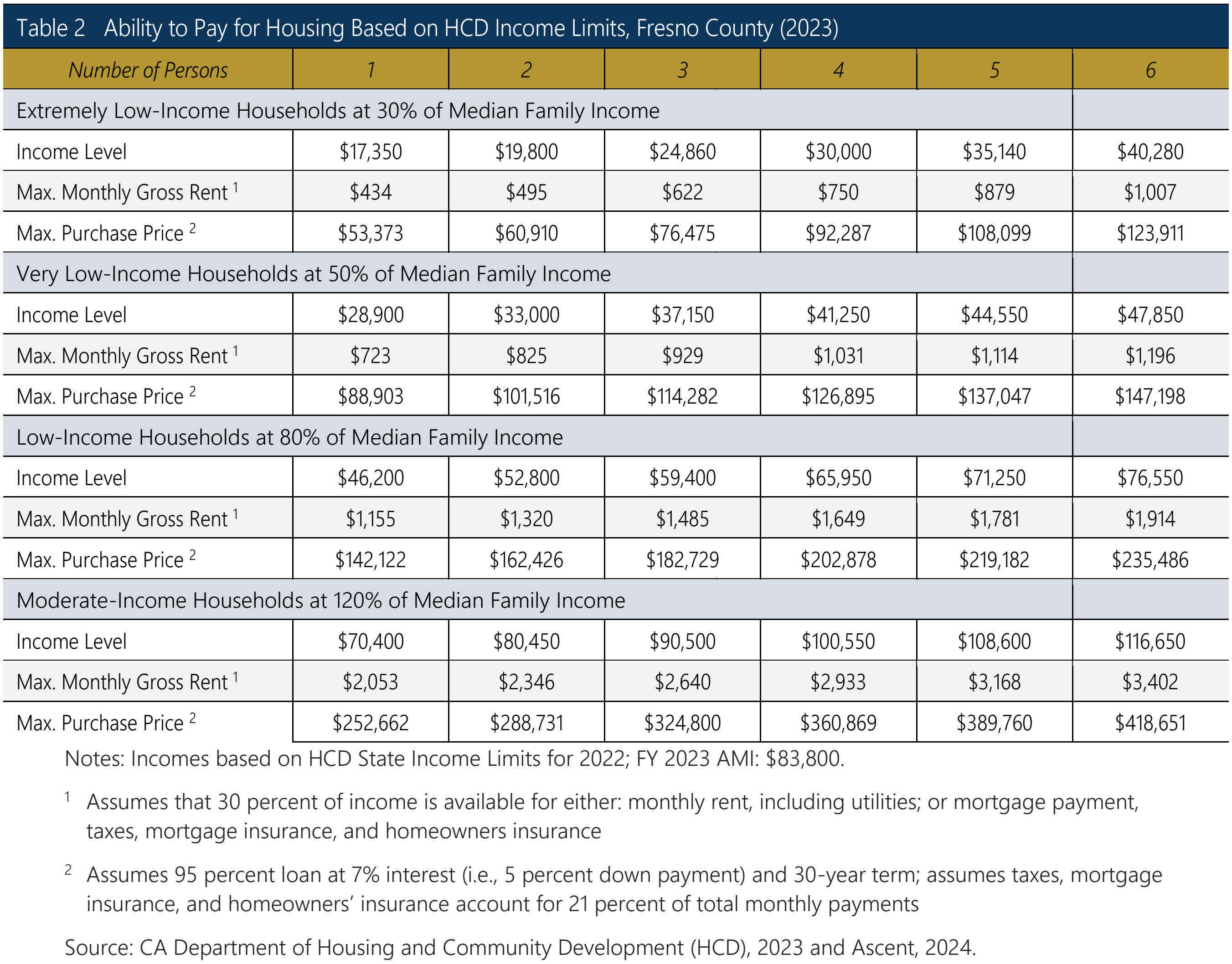


Table 2 Ability to Pay for Housing Based on HCD Income Limits, Fresno County (2023)

Number of Persons	*1*	*2*	*3*	*4*	*5*	*6*
Extremely Low-Income Households at 30% of Median Family Income						
Income Level	$17,350	$19,800	$24,860	$30,000	$35,140	$40,280
Max. Monthly Gross Rent [1]	$434	$495	$622	$750	$879	$1,007
Max. Purchase Price [2]	$53,373	$60,910	$76,475	$92,287	$108,099	$123,911
Very Low-Income Households at 50% of Median Family Income						
Income Level	$28,900	$33,000	$37,150	$41,250	$44,550	$47,850
Max. Monthly Gross Rent [1]	$723	$825	$929	$1,031	$1,114	$1,196
Max. Purchase Price [2]	$88,903	$101,516	$114,282	$126,895	$137,047	$147,198
Low-Income Households at 80% of Median Family Income						
Income Level	$46,200	$52,800	$59,400	$65,950	$71,250	$76,550
Max. Monthly Gross Rent [1]	$1,155	$1,320	$1,485	$1,649	$1,781	$1,914
Max. Purchase Price [2]	$142,122	$162,426	$182,729	$202,878	$219,182	$235,486
Moderate-Income Households at 120% of Median Family Income						
Income Level	$70,400	$80,450	$90,500	$100,550	$108,600	$116,650
Max. Monthly Gross Rent [1]	$2,053	$2,346	$2,640	$2,933	$3,168	$3,402
Max. Purchase Price [2]	$252,662	$288,731	$324,800	$360,869	$389,760	$418,651

Notes: Incomes based on HCD State Income Limits for 2022; FY 2023 AMI: $83,800.

[1] Assumes that 30 percent of income is available for either: monthly rent, including utilities; or mortgage payment, taxes, mortgage insurance, and homeowners insurance

[2] Assumes 95 percent loan at 7% interest (i.e., 5 percent down payment) and 30-year term; assumes taxes, mortgage insurance, and homeowners' insurance account for 21 percent of total monthly payments

Source: CA Department of Housing and Community Development (HCD), 2023 and Ascent, 2024.

Table 2 summarizes the progress the City has made toward meeting the 2013-2023 RHNA. The City was issued a RHNA of 6,328 units (2,321 very low, 1,145 low, 1,018 moderate, and 1,844 above moderate-income units). Since 2013, the City has issued permits for 9,681 units (15 very low, 175 low, 3,551 moderate, and 5,940 above moderate-income units). The City has already met its RHNA projection for moderate and above moderate-income units, and has a remaining unfulfilled RHNA of 2,306 very low and 970 low-income units.

Table 2: 2015-2023 RHNA Progress as of 2023

Income Level		RHNA by Income Level	Permitted Units by Affordability									Total Units to Date	Total Remaining RHNA by Income Level
			2013-2015	2016	2017	2018	2019	2020	2021	2022	2023		
Very Low	Deed Restricted	2,321	-	-	-	-	-	-	-	-	-	15	2,306
	Non-Deed Restricted		-	-	-	-	-	-	-	7	8		
Low	Deed Restricted	1,145	-	5	20	2	60	-	73	-	-	175	970
	Non-Deed Restricted		-	-	-	-	-	-	-	7	8		
Moderate	Deed Restricted	1,018	-	-	-	-	-	-	-	-	-	3,551	0
	Non-Deed Restricted		456	395	480	411	507	479	432	382	9		
Above Moderate		1,844	1,296	689	542	694	526	645	424	458	666	5,940	0
Total RHNA		**6,328**											
Total Units			**1,752**	**1,089**	**1,042**	**1,107**	**1,093**	**1,124**	**929**	**854**	**691**	**9,681**	**3,276**

Relationship between RHNA Progress and Existing Housing Stock

The City's progress towards meeting its RHNA allocation may only consider new construction as evidenced by the issuance of building permits. Though existing housing stock routinely becomes available on the resale or rental market, and those units can potentially be available at affordable rates, by definition RHNA only considers new housing production. The Housing Element does include a general evaluation of the local real estate market and how it relates to affordability. However, the re-sale or rental of individual units is not tracked.

Housing Program Progress

While only newly constructed units are counted toward the RHNA, the City's current housing programs are essential to encouraging housing development, preserving the existing supply of affordable housing and ensuring low-income residents have access to safe living environments. Program updates can be found in Table D of **Appendix A of Attachment 2**. The following are updates of some affordable housing incentives provided through programs:

- Affordable Housing Incentives: In 2023, staff published a Request for Proposals to award $1.4 Million in Permanent Local Allocation Program funds. Project selection occurred in 2023 with City Council approval pending in early 2024.

- Housing Rehabilitation Program: In 2023, the City provided home repair grants to 7 low-income households to correct critical health and safety-related deficiencies in the home. Approximately $345,210 in CDBG funds for the program was expended towards the repairs over three years.

  - The City has programmed $222,881 in CDBG funds in 2023-2024 fiscal year and has plans to fund up to 20 home repair grants. A total of 6 home repair projects have been completed and 14 are underway.
  - In 2023, the City completed rehabilitation of 6 homes utilizing 2020 CalHome Loan Program funds. An additional 11 home repair projects are currently underway.
  - Staff applied for $5,000,000 in State of California CalHome Program funds for First Time Homebuyer Assistance and Owner-Occupied Housing Rehabilitation Program funds.
- First-Time Homebuyer Assistance Program: The City has funded 3 First Time Homebuyer loans for low-income buyers in the 2022-2023 program year with available funding.

FISCAL IMPACT

None.

REASON FOR RECOMMENDATION

To comply with California Housing Law and Clovis' adopted Housing Element, staff recommends that the City Council accept the General Plan Annual Progress Report for calendar year 2023 and authorize staff to submit the report to OPR and HCD.

ACTIONS FOLLOWING APPROVAL

Staff will submit the 2023 General Plan Annual Progress Report to the Governor's Office of Planning and Research and the California Department of Housing and Community Development.

Prepared by: Lily Cha, Senior Planner

Reviewed by: City Manager JH

RESOLUTION 24-___

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS ACCEPTING THE 2023 GENERAL PLAN ANNUAL PROGRESS REPORT, INCLUDING THE HOUSING ELEMENT ANNUAL PROGRESS REPORT, AND AUTHORIZING SUBMISSION TO THE CALIFORNIA OFFICE OF PLANNING AND RESEARCH AND DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

WHEREAS, California Government Code 65400 requires the City to prepare an annual report on the status of the General Plan and progress in implementing the General Plan, and the report must include a portion addressing Housing Element program progress; and

WHEREAS, the City Council has reviewed and considered the 2023 General Plan Annual Progress Report for the City (which is incorporated herein by this reference) during the regularly scheduled City Council meeting on March 18, 2024; and

WHEREAS, a report titled 2023 General Plan Annual Progress Report was prepared by City staff and the City's Housing Element consultant in accordance with the requirements of Government Code section 65400, and the Report includes the necessary portion addressing the progress in implementing the Housing Element program.

NOW, THEREFORE, BE IT RESOLVED, that the City of Clovis hereby accepts the 2023 General Plan Annual Progress Report and authorizes staff to submit the report to the California Department of Housing and Community Development and the Governor's Office of Planning and Research as required by applicable law.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: March 18, 2024

Mayor	City Clerk

Attachment 1

AGENDA ITEM NO. 7.

GENERAL PLAN
ANNUAL PROGRESS REPORT
2023

Prepared by:

Clovis Planning Division
Department of Planning & Development Services
Lilyc@cityofclovis.com
(559) 324-2335

Attachment 2

CITY of CLOVIS

PLANNING & DEVELOPMENT

1033 FIFTH STREET • CLOVIS, CA 93612

To Office and Planning Research,

This APR is intended to report on the status of the 2014 Clovis General Plan, including information and summaries related to any general plan amendments occurring during the year 2023, as well as the overall status of implementation of the Clovis General Plan.

The Clovis City Council considered and approved the 2023 General Plan Annual Progress Report (APR) at its regularly scheduled meeting on Monday, March 18, 2024 at 6:00 p.m. at the Clovis City Hall located at 1033 Fifth Street, Clovis, CA 93612.

This APR was prepared by the Planning Division of the Clovis Department of Planning and Development Services. For any questions or comments related to the contents of this APR, please contact Dave Merchen, City Planner, at davidm@cityofclovis.com or (559) 324-2346.

Sincerely,

David Merchen
City Planner

RESOLUTION 24-___

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS ACCEPTING THE 2023 GENERAL PLAN ANNUAL PROGRESS REPORT, INCLUDING THE HOUSING ELEMENT ANNUAL PROGRESS REPORT, AND AUTHORIZING SUBMISSION TO THE CALIFORNIA OFFICE OF PLANNING AND RESEARCH AND DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

WHEREAS, California Government Code 65400 requires the City to prepare an annual report on the status of the General Plan and progress in implementing the General Plan, and the report must include a portion addressing Housing Element program progress; and

WHEREAS, the City Council has reviewed and considered the 2023 General Plan Annual Progress Report for the City (which is incorporated herein by this reference) during the regularly scheduled City Council meeting on March 18, 2024; and

WHEREAS, a report titled 2023 General Plan Annual Progress Report was prepared by City staff and the City's Housing Element consultant in accordance with the requirements of Government Code section 65400, and the Report includes the necessary portion addressing the progress in implementing the Housing Element program.

NOW, THEREFORE, BE IT RESOLVED, that the City of Clovis hereby accepts the 2023 General Plan Annual Progress Report and authorizes staff to submit the report to the California Department of Housing and Community Development and the Governor's Office of Planning and Research as required by applicable law.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on March 18, 2024, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: March 18, 2024

Mayor	City Clerk

Table of Contents

Annual Progress Report

SECTION I - INTRODUCTION

California Government Code Section 65400 requires that all jurisdictions provide the California Office of Planning and Research (OPR) and the California Department of Housing and Community Development (HCD) an Annual Progress Report (APR) outlining the status of the General Plan and progress in its implementation over the previous year's 12-month reporting period.

The APR affords OPR the opportunity to identify trends in land use decisions and how these decisions relate to statewide planning and land-use goals. On a broader scale, these trends can also serve to inform modifications to the State's General Plan Guidelines, and to track progress of a jurisdiction's General Plan implementation.

The purposes of the General Plan APR are to:

1. Provide local legislative bodies and the public with information regarding implementation of their jurisdiction's General Plan;
2. Inform the public of the progress in meeting community goals;
3. Demonstrate how land use decisions relate to adopted goals, policies, and measures of the General Plan; and
4. Provide sufficient information to identify necessary adjustments or modifications to the General Plan to improve implementation.

SECTION II - GENERAL PLAN IMPLEMENTATION SUMMARY

2023 General Plan Amendment Applications

In 2023, the City accepted applications for six (6) new general plan amendments. One application (GPA2023-003) was processed to completion, resulting in approval. This application was a City of Clovis initiated application to change the maximum density allowance of the High-Density Residential designation from 25 to 30 dwelling units per acre. The remaining (5) applications are in process. General plan amendment applications are further described in Section IV of this APR.

Ongoing Processing of 2021 General Plan Amendment Applications

Four (4) general plan amendments originally filed 2021 are still ongoing. Three applications were filed by Wilson Premier Homes in support of development projects. The fourth request is an application by the City of Clovis to modify the general plan language related to the R-T Park to remove inconsistencies with other planning documents. General plan amendment applications are further described in Section IV of this APR.

Ongoing Processing of 2022 General Plan Amendment Applications

One (1) general plan amendment originally filed in 2022 was approved on May 1, 2023. The application was filed by Stallion Development to re-designate the subject property from the L (Low Density Residential - 2.1 to 4.0 DU/Ac) designation to the MH (Medium High Density Residential - 7.1 to 15.0 DU/Ac) designation. General plan amendment applications are further described in Section IV of this APR.

2023 Progress on Housing Element Update and Comprehensive General Plan Update

In 2022, work commenced on the preparation of the Sixth Cycle Housing Element, which will be a comprehensive update to the Fifth Cycle Element adopted by the City in 2016. The Council also instructed the initiation of a review and assessment of the General Plan in 2022, marking the initial phase in considering a potential update to the plan. This process ultimately led the Council to decide on a complete and thorough revision of the General Plan. The Housing Element Update and Comprehensive General Plan Update are further described in Section V of this APR.

Ongoing Processing of Large Projects

In 2023, progress was made on several large projects that are expected to be presented to the Planning Commission and Council in 2024. These projects include two sphere of influence expansion projects, a specific plan, a master development plan, and several large residential tract maps. Large projects are summarized in Section VI of this APR.

SECTION III - GENERAL PLAN BACKGROUND

The 2014 Clovis General Plan (General Plan) was adopted by the Clovis City Council on August 25, 2014[1], along with certification of the Environmental Impact Report[2,3] (EIR). A comprehensive update to the Development Code was adopted at the same time. The General Plan includes the following elements:

- Land Use;
- Economic Development;
- Circulation;
- Housing;
- Public Facilities and Services;
- Environmental Safety;
- Open Space and Conservation; and
- Air Quality

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[1] City of Clovis Resolution 14-82 for the adoption of the 2014 Clovis General Plan

[2] City of Clovis Resolution 14-81 for the certification of the 2014 Clovis General Plan EIR

[3] 2014 Clovis General Plan EIR State Clearinghouse Number 2012061069

The stated vision is *"a City that is committed to the Clovis Community Family, their needs, their values, and a quality way of life for all; reflecting that commitment in how it develops and in the activities it undertakes."*

The General Plan focuses on the preservation and enhancement of the existing Clovis community while allowing the continued development of three Urban Centers to ensure the long-term viability of Clovis. The Urban Centers—key components that are carried forward from the 1993 General Plan—are unique sub-communities of Clovis that enable the City to grow while maintaining authentic, small town character and overall livability. Each Urban Center can be implemented by either a specific plan or a master development plan, either of which requires coordinated land use and infrastructure planning. The three Urban Centers are Loma Vista, Northwest (renamed to Heritage Grove), and Northeast. A summary of each Urban Center is provided below.

Loma Vista Urban Center

The Loma Vista Urban Center is implemented by the Loma Vista Specific Plan, adopted by the City in 2003. This Specific Plan outlines guiding principles and a comprehensive land use plan to promote a high quality residential community focused around two community centers, a business campus, and the Reagan Educational Center.

Northwest Urban Center (Heritage Grove)

The General Plan provides fairly specific land use planning for the Northwest Urban Center, with policies that require a comprehensive design document to provide additional development and land use guidance.

The General Plan also envisions that the comprehensive design document for the Northwest Urban Center will:

- Use San Joaquin Valley-appropriate plantings
- Capitalize on views of Owens Mountain and the Sierra Nevada
- Achieve compact development patterns that integrate a variety of housing types, sizes, and densities at the neighborhood and community level
- Eliminate as feasible the use of sound walls separating neighborhoods from roads
- Develop a well-connected grid system of roads
- Prohibit retail land uses within a quarter mile of any Clovis Unified School District campus

Northeast Urban Center

The General Plan provides fairly specific land use planning for the Northeast Urban Center, with policies that require a comprehensive design document to provide additional development and land use guidance.

The General Plan envisions that the comprehensive design document (such as a master plan or specific plan), for the Northeast Urban Center will:

- Create a series of urban villages that are distinct but that, taken together, contribute to a common public identity for the Northeast Urban Center
- Develop major arterials that are not on a grid pattern; rather, the major arterials flow with the land and capitalize on vistas of the Sierra Nevada and pristine local viewsheds
- Provide other streets in a well-connected grid system
- Connect neighborhoods, community centers, parks, schools, and commercial districts with a robust non-vehicular circulation system

General Plan Focus Areas

In addition to the General Plan concentration of development patterns within the three Urban Centers, there are also fourteen (14) Focus Areas throughout the City. Focus areas are intend to the complement the General Pan land use designations and, in some cases, expand permissible uses, introduce policy requirements, augment development standards, or may call attention to a complex property.

SECTION IV - GENERAL PLAN AMENDMENTS

The following is a list general plan amendments processed in 2023, followed by a brief summary of each.

GPA NUMBER	PROJECT NAME	PLANNING COMMISSION	CITY COUNCIL	STATUS	RESOLUTION NUMBERS
2021-003	Wilson Premier Homes	TBD*	TBD*	TBD*	TBD*
2021-005	Wilson Premier Homes	11/16/2023	TBD*	TBD*	23-24 (PC)
					TBD*
2021-006	Wilson Premier Homes	11/16/2023	TBD**	TBD*	23-23
					TBD*
2021-007	R-T Park "Clean Up"	TBD*	TBD*	TBD*	TBD*
2022-001	Stallion Development	1/26/2023	5/1/2023	Approved	23-03 (PC)
					23-31 (CC)
2023-001	Heritage Grove Specific Plan	TBD*	TBD*	TBD*	TBD*
2023-002	Ashlan-Dewolf Multifamily	1/25/2024	TBD*	TBD*	TBD*
2023-003	Text Change - Density	8/24/2023	9/18/2023	Approved	23-16 (PC)
					23-93 (CC)
2023-004	Vista Ranch	TBD*	TBD*	TBD*	TBD*
2023-005	Vista Ranch	TBD*	TBD*	TBD*	TBD*
2023-006	Vista Ranch	TBD*	TBD*	TBD*	TBD*
*TBD - To be determined - indicates the project has not yet gone for consideration, thus no action has been taken.					

GPA2021-003, Wilson Premier Homes (TM 6343)

General Plan Amendment 2021-003 has not yet been fully processed and therefore has not been considered by the Planning Commission or City Council at the time this report was prepared.

GPA2021-003 is a request to amend the General Plan land use designation from M (Medium Density Residential - 4.1 to 7.0 DU/Ac) to MH (Medium-High Density Residential - 7.1 to 15.0 DU/Ac) on approximately 71 acres of land in conjunction with a proposed residential tract map. This general plan amendment is part of a larger that project includes other entitlements, including an annexation, pre-zone, tract map, and planned development permit. Additional project detail is included in Section VI of this report below.

GPA2021-005 and GPA2021-006, Wilson Premier Homes (Shepherd North SOI/TM6205)
General Plan Amendments 2021-005 and 2021-006 are in the process of public hearing. The Planning Commission considered the applications on November 16, 2023, and voted to recommend that the City Council withhold approval of the general plan amendment requests. The applications will be considered by the City Council in March of 2024.

GPA2021-005 is a request to amend the General Plan land use designation from RR (Rural Residential - 1.0 DU/2 Ac) to MH (Medium-High Density Residential - 7.1 to 15.0 DU/Ac) on approximately 75 acres of land in conjunction with a residential tract map. GPA2021-006 is being processed concurrently as part of the project and proposes to modify the Circulation Element of the General Plan to allow an access point to Shepherd Avenue – which is currently designated as a limited access expressway. These general plan amendments are part of a larger project that includes other entitlements, including a sphere of influence amendment, annexation, pre-zone, tract map, and planned development permit. Additional project detail is included in Section VI of this report below.

GPA2021-007, City of Clovis (Research & Technology [R-T] Park "Clean Up")
General Plan Amendment GPA2021-007 has not yet been fully processed and therefore has not been considered by the Planning Commission or City Council at the time this report was prepared.

On January 4, 2021, the Clovis City Council approved a resolution initiating amendments to the 2014 Clovis General Plan, Zoning Map, and the Development Code to remove existing inconsistencies between these documents as they relate to the City's R-T Park area. These efforts will include a General Plan Amendment (GPA2021-007), Rezone (R2021-010), and Ordinance Amendment (OA2021-004). A component of these proposed changes will be to include student and faculty housing in defined areas of the R-T Park associated with the California Health Sciences University (CHSU) campus.

GPA2022-001, Stallion Development
General Plan Amendment 2022-001 was denied without prejudice by the City Council at its March 6, 2023 meeting. Council reconsidered and approved GPA2022-001 on May 1, 2023.

GPA2022-001 was a request to amend the General Plan to re-designate the subject property from the L (Low Density Residential - 2.1 to 4.0 DU/Ac) designation to the MH (Medium High Density Residential - 7.1 to 15.0 DU/Ac) designation. This general plan amendment was proposed in conjunction with a rezoning to maintain consistency between the land use designation and zone district and was intended to facilitate a 12 unit multi-family project.

GPA2023-001, The Villages Specific Plan
General Plan Amendment 2023-01 has not yet been fully processed and therefore has not been considered by the Planning Commission or City Council at the time this report was prepared.

GPA2023-01 is a request to amend the General Plan land use diagram for several areas within a proposed 900-acre specific plan boundary. The amendment includes: the redistribution of park areas, increase commercial acreage areas, and an increase in residential density for some areas. This general plan amendment is a part of a larger project that includes a specific plan, annexation, prezoning, residential tract map, planned development permit, and site plan review. Additional project details are included in Section VI of this report below.

GPA2023-002, Ashlan-Dewolf Multifamily
General Plan Amendment 2023-002 is in the process of public hearings. The Planning Commission considered the application on January 25, 2024, and voted to recommend that the City Council approve the general plan amendment request. The application is set to be heard by the City Council for final decision in May of 2024.

GPA2023-002 is a request to amend the General Plan land use designation for approximately 1.62 acres of land from L (Low Density Residential - 2.1-4.0 DU/Ac) and O (Open Space) to the H (High Density Residential - 15.1-30.0 DU/Ac) designation. This general plan amendment is proposed in conjunction with a rezoning application to the maintain consistency between land use designation and zone district and is intended to facilitate a 26 unit multi-family project.

GPA2023-003, Text Change – Density
General Plan Amendment 2023-003 was approved by the City Council at its September 18, 2023, meeting. This general plan amendment was initiated by the City to amend the text in the general plan adjusting the density range for the H (High Density Residential) designation. The amendment adjusted the maximum density from 25.0 dwelling units per acre to 30 units per acre. The amendment was proposed in conjunction with a rezoning to maintain consistency between the ordinance and general plan density allowance. The rezoning also adjusted the height for the R-3 Zone District to accommodate the higher density. The amendments realigned the City’s land use and zoning designations to correspond to the density specifications applicable to the City’s Sixth Cycle Regional Housing Needs Allocation (RHNA).

GPA2023-004, GPA2023-005, GPA2023-006, Vista Ranch Master Plan
General Plan Amendment 2023-004, 2023-005, and 2023-006 have not yet been fully processed and therefore have not been considered by the Planning Commission or City Council at the time this report was prepared. These applications are associated with a larger master plan overlay project that is comprised of multiple entitlements including a sphere of influence amendment, annexation, pre-zone, and tract map. Additional project details are included in Section VI of this report below.

GPA2023-004 is a request to amend the General Plan to adjust land uses within the master plan area. GPA2023-005 is a request to modify Focus Area 13 and create Focus Area 13a. GPA2023-006 is a request to modify the circulation element, including adding a Shepherd Avenue access.

SECTION V – HOUSING ELEMENT & GENERAL PLAN UPDATE

Sixth Cycle Housing Element - City of Clovis

A comprehensive update to the Housing Element of the General Plan has been prepared by the City and its consulting team. This update constitutes the mandatory "sixth-cycle" housing element required by the State of California. HCD's approval of the document is required, and multiple reviews are often necessary. The initial HCD review period is 90 days and subsequent reviews, if required, are 60 days. The City released the initial draft for public review on March 13, 2023, and forwarded it, along with received comments, to HCD on May 16, 2023. A subsequent draft was submitted to HCD on December 5, 2024. Currently, the City is actively addressing HCD's feedback in a third draft. Approval of the Housing Element is expected by mid-2024.

Comprehensive General Plan Update

The City hired a planning firm (DeNovo Planning Group) in May of 2022 to perform an initial review of the current General Plan before establishing a work plan and scope for a subsequent update. The purpose of this review is to evaluate the current General Plan against new legislative requirements as well as local goals and objectives and then develop a set of options, strategies, and recommendations to inform the Council. The Planning Commission and City Council also provided feedback on key topics, issues, and local priorities that should be addressed should a new general plan update be initiated. This information was assembled with feedback from other stakeholders and the consultant's legislative analysis of the current General Plan.

A General Plan Update Strategy Report was presented to the Council on August 21, 2023, at which time the Council provided direction to initiate a comprehensive update to the General Plan. The City is in the process of drafting a request for proposals (RFP) to invite experienced planning firms to vie for a partnership with the City in the update of the General Plan. It is anticipated that the City will finalize its selection of a consulting firm and enter into a professional services agreement by the summer of 2024.

SECTION VI – MAJOR PROJECTS PENDING

Several major projects are underway that will include or require the approval of a general plan amendment. These projects are described below along with a projected timeline for consideration by the Planning Commission and Council.

Shepherd North Sphere of Influence Expansion, Annexation and Tract Map - Wilson

The Project site is north of the City of Clovis limit line at the northeast corner of N. Sunnyside Avenue and E. Shepherd Avenue. The Project site is approximately 155 acres and includes the approximate 77-acre Development Area and the approximate 78-acre Non-Development Area. The Development Area includes the parcels that are proposed to be entitled and annexed to allow the subdivision and development of up to 605 residential units, parkland, and public and private infrastructure. The applications include a request for a sphere of influence expansion, pre-zone, annexation, tentative map, planned development permit, and residential site plan review. A general plan amendment (GPA 2021-005) is proposed to change the existing land use designation of the Development Area from RR (Rural Residential) to MH (Medium High Density Residential) designation. A second general plan amendment (GPA2021-006) is proposed to allow an access point along a portion of Shepherd Avenue designated as a limited access expressway. The Non-Development Area includes the parcels being included in the Sphere of Influence (SOI) expansion that will not be entitled for subdivision or development. The project is projected to be presented for consideration by the City Council in March 2024.

Tract Map 6343 and Annexation - Wilson

The proposed project consists of the annexation of 246 acres and the development of 590 residential lots within a 71 acre project site. The proposed lots, averaging 3,329 square feet, would be developed into single-family residences over time. No development is proposed within the remaining 174 acre annexation area surrounding the project site, which includes a combination of drainage basin property, existing rural residential properties, and undeveloped property. Project entitlements include an annexation, prezoning, subdivision tract map, planned development permit, and residential site plan review. A general plan amendment (GPA2021-003) is proposed to change the existing M (Medium Density Residential) designation to the MH (Medium-High Density Residential) designation. The project is projected to be presented for consideration to the Planning Commission and City Council by April and May 2024.

Vista Ranch Sphere of Influence - Wilson

The Vista Ranch Project is located directly northeast of the City, bounded on the north by East Behymer Avenue, on the east by Big Dry Creek Reservoir, on the south by East Shepherd and East Perrin Avenues, and on the west by North Fowler and North Sunnyside Avenues. The Project site is approximately 923 acres and includes a City of Clovis Sphere of Influence (SOI) Expansion. Within the Project area, the Vista Ranch Master Plan area will encompass approximately 509 acres, and that area is proposed to be annexed into the City of Clovis. Project entitlements include a sphere of influence expansion, annexation, pre-zoning, master plan, and subdivision tract map. A general plan amendment (GPA2023-004) is proposed to amend the existing land use pattern to reflect the modified land use pattern proposed in conjunction with the master plan. GPA2023-005 is a request to modify General Plan Focus Area

13 and create Focus Area 13a. GPA2023-006 is a request to modify the circulation element, including adding a Shepherd Avenue access. The project is projected to be presented for consideration by the Planning Commission and City Council by the end of 2024.

The Villages Specific Plan, Annexation and Tract Map – Heritage Development Company

A specific plan is proposed for an area encompassing approximately 790 acres located north of Shepherd Avenue and east of Willow Avenue. The project area is currently outside the City limits but within the City's sphere of influence (SOI). The proposed Specific Plan would be constructed in three phases.

- **Phase 1.** Phase 1 would include the construction of residential, retail and commercial uses within the Specific Plan Area between East Shepherd Avenue and East Perrin Avenue. At complete buildout, Phase 1 would include the development of approximately 3,587 dwelling units, 711,167 square-feet of retail uses, and 296,458 square-feet of commercial uses built over 343 acres.

- **Phase 2.** Phase 2 would include the construction of residential, retail and commercial uses within the Specific Plan Area between East Shepherd Avenue and East Behymer Avenue. At complete buildout, Phase 2 would include the development of approximately 1,875 dwelling units, 97,247 square-feet of retail uses, and 338,012 square-feet of commercial uses built over 280 acres.

- **Phase 3.** Phase 3 would include the construction of residential uses within the Specific Plan Area north of East Behymer Avenue. At complete buildout, Phase 3 would include the development of approximately 1,039 dwelling units built over 167 acres.

Entitlements included with the proposed project include a specific plan, annexation, prezoning, residential tract map, planned development permit, and site plan review. A general plan amendment is proposed to adjust the land use pattern for small portion of the total project area in conjunction with the completion of the specific plan. The general plan amendment for the Villages Specific Plan is not referenced in Section IV of this report because the formal application has not yet been filed. The project is projected to be presented to the Planning Commission and City Council for consideration in calendar year 2025.

SECTION VII - HOUSING DEVELOPMENT UPDATE

In 2023, the City of Clovis issued 617 residential permits, consisting of 589 single-family homes, 0 multi-family units, and 28 accessory dwelling units (ADUs).

Appendix A - Housing Element Annual Progress Report

As a component of the General Plan Annual Progress Report, the City must provide and report on specific information relative to its Housing Element in a Housing Element Annual Progress Report. Utilizing a standard form provided by HCD, data is gathered and input to demonstrate the City's progress towards housing production across affordability levels, development applications received, and updates on housing program implementation for the year 2023. The purpose of the APR is to provide the City Council and the State with the City's progress on its Housing Element implementation and status towards meeting its allocated share of regional housing needs (RHNA). The Housing Element Annual Progress Report is included as Appendix A.

Please Start Here

General Information	
Jurisidiction Name	Clovis
Reporting Calendar Year	2023
Contact Information	
First Name	Dave
Last Name	Merchen
Title	City Planner
Email	davidm@ci.clovis.ca.us
Phone	5593242346
Mailing Address	
Street Address	1033 Fifth Street
City	Clovis
Zipcode	93612

Optional: Click here to import last year's data. This is best used when the workbook is new and empty. You will be prompted to pick an old workbook to import from. Project and program data will be copied exactly how it was entered in last year's form and must be updated. If a project is no longer has any reportable activity, you may delete the project by selecting a cell in the row and typing ctrl + d.

Click here to download APR Instructions

Click here to add rows to a table. If you add too many rows, you may select a cell in the row you wish to remove and type ctrl + d.

Appendix A

Annual Progress Report

Jurisdiction	Clovis	
Reporting Year	2023	(Jan. 1 - Dec. 31)
Housing Element Planning Period	5th Cycle	12/31/2015 - 12/31/2023

Building Permits Issued by Affordability Summary

Income Level		**Current Year**
Very Low	Deed Restricted	0
	Non-Deed Restricted	8
Low	Deed Restricted	0
	Non-Deed Restricted	8
Moderate	Deed Restricted	0
	Non-Deed Restricted	9
Above Moderate		666
Total Units		**691**

Note: Units serving extremely low-income households are included in the very low-income permitted units totals

Units by Structure Type	**Entitled**	**Permitted**	**Completed**
Single-family Attached	0	0	0
Single-family Detached	4	663	398
2 to 4 units per structure	0	0	0
5+ units per structure	12	0	99
Accessory Dwelling Unit	0	28	15
Mobile/Manufactured Home	0	0	0
Total	**16**	**691**	**512**

Infill Housing Developments and Infill Units Permitted	**# of Projects**	**Units**
Indicated as Infill	32	32
Not Indicated as Infill	659	659

Housing Applications Summary	
Total Housing Applications Submitted:	217
Number of Proposed Units in All Applications Received:	3,194
Total Housing Units Approved:	227
Total Housing Units Disapproved:	0

Use of SB 35 Streamlining Provisions - Applications	
Number of SB 35 Streamlining Applications	0
Number of SB 35 Streamlining Applications Approved	0

Units Constructed - SB 35 Streamlining Permits			
Income	**Rental**	**Ownership**	**Total**
Very Low	0	0	0
Low	0	0	0
Moderate	0	0	0
Above Moderate	0	0	0
Total	**0**	**0**	**0**

Streamlining Provisions Used - Permitted Units	# of Projects	Units
SB 9 (2021) - Duplex in SF Zone	0	0
SB 9 (2021) - Residential Lot Split	0	0
AB 2011 (2022)	0	0
SB 6 (2022)	0	0
SB 35 (2017)	0	0

Ministerial and Discretionary Applications	# of Applications	Units
Ministerial	213	227
Discretionary	4	2967

Density Bonus Applications and Units Permitted	
Number of Applications Submitted Requesting a Density Bonus	0
Number of Units in Applications Submitted Requesting a Density Bonus	0
Number of Projects Permitted with a Density Bonus	0
Number of Units in Projects Permitted with a Density Bonus	0

Housing Element Programs Implemented and Sites Rezoned	Count
Programs Implemented	20
Sites Rezoned to Accommodate the RHNA	0

Jurisdiction	Clovis	
Reporting Year	2023	(Jan. 1 - Dec. 31)
Planning Period	5th Cycle	12/31/2015 - 12/31/2023

ANNUAL ELEMENT PROGRESS REPORT
Housing Element Implementation

Note: "+" indicates an optional field

Cells in grey contain auto-calculation formulas

Table A
Housing Development Applications Submitted

Project Identifier					Unit Types		Date Application Submitted	Proposed Units - Affordability by Household Incomes								Total Approved Units by Project	Total Disapproved Units by Project	Streamlining	Density Bonus Law Applications		Application Status	Project Type	Notes
1					2	3	4	5							6	7	8	9	10		11	12	13
Prior APN+	**Current APN**	**Street Address**	**Project Name+**	**Local Jurisdiction Tracking ID**	**Unit Category** (SFA,SFD,2 to 4,5+,ADU,MH)	**Tenure** R=Renter O=Owner	**Date Application Submitted (see instructions)**	**Very Low-Income Deed Restricted**	**Very Low-Income Non Deed Restricted**	**Low-Income Deed Restricted**	**Low-Income Non Deed Restricted**	**Moderate-Income Deed Restricted**	**Moderate-Income Non Deed Restricted**	**Above Moderate-Income**	**Total PROPOSED Units by Project**	**Total APPROVED Units by project**	**Total DISAPPROVED Units by Project**	**Please select streamlining provision/s the application was submitted pursuant to.**	**Did the housing development application seek incentives or concessions pursuant to Government Code section 65915?**	**Were incentives or concessions reqested pursuant to Government Code section 65915 approved?**	**Please indicate the status of the application.**	**Is the project considered a ministerial project or discretionary project?**	**Notes+**
Summary Row: Start Data Entry Below								**0**	**7**	**0**	**4**	**0**	**16**	**3167**	**3194**	**227**	**0**						
	556-040-23	NEC Baron & Perrin Avenues	TM 6452	TM 6452	SFD	O	9/6/2023							153	153			NONE	No	No	Pending	Discretionary	TM 6452 is a planned residential development being processed with PDP2023-001 which needs approval from Council. Application is still considered incomplete.
	556-050-01s, 556-050-35s, 556-030-10s, 556-030-12s	North of Shepherd between Minnewawa and Clovis Avenues	TM 6375	TM 6375	SFD	O	9/8/2023							385	385			NONE	No	No	Pending	Discretionary	TM 6375 is a planned residential development being processed with PDP2023-002. A prezone and annexation is also being processed concurrently with TM 6375. Application is still considered incomplete.
	556-010-12, 556-010-28, 556-010-29	Southeast corner of Behymer and peach Avenues	TM XXXX	TM XXXX	SFD	O	10/3/2023							257	257			NONE	No	No	Pending	Discretionary	TM XXXX is an incomplete application submittal. A prezone and annexation will be processed concurrent with the tract map.
	558-010-25, 557-012-02, 557-012-28, 557-012-29, 557-022-11, 557-031-05, 557-031-23, 557-031-24, 557-031-25, 557-031-27, 557-031-35, 557-031-37,	Shpeherd, Sunnyside, Byhymer, and Big Dry Creek Reservior	TM 6438	TM 6438	SFD	O	10/11/2023							2172	2172			NONE	No	No	Pending	Discretionary	TM 63438 is an incomplete application submittal. The tract map is being processed concurrently with general plan amendments, prezones, and master plan development
	492-122-15	253 Minnewawa	PM2023-003	PM2023-003	SFD	O	6/2/2023						4		4	4		SB 9 (2021) - Residential Lot Split	No	No	Approved	Ministerial	SB9 lot split and 2 residences on each lot
	563-142-53	1491 Alluvial	MFRDR2023-001	MFRDR2023-001	5+	R	5/4/2023						12		12	12		NONE	No	No	Approved	Ministerial	Market rate apartments as
	55311205	2652 Fremont Ave		BD-CMBR-23-00737	ADU	R	2/28/2023				1				1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	49937314	2531 Bundy Ave		BD-CMBR-23-02458	ADU	R	5/24/2023		1						1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	41037201	109 N Cindy Ave B		BD-CMBR-23-02542	ADU	R	6/1/2023				1				1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	49211214	261 Minnewawa Ave B		BD-CMBR-23-00605	ADU	R	2/23/2023				1				1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	30946103	4658 Bellaire Ave	TM 6161	BD-CMBR-23-03540	ADU	R	8/21/2023		1						1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	55943107S	1484 N Purdue Ave B	TM 6284	BD-CMBR-23-04766	ADU	R	12/20/2023		1						1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	56408024	1187 N Holly Ave B	TM 6367	BD-CMBR-23-04796	ADU	R	12/26/2023		1						1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	56408018	1196 N Holly Ave B	TM 6367	BD-CMBR-23-04798	ADU	R	12/26/2023		1						1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	49113103	80 N Woodworth Ave B	NO PROJECT	BD-CMBR-23-00333	ADU	R	1/31/2023							1	1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	43030251	514 W Pico Ave B	NO PROJECT	BD-CMBR-23-01417	ADU	R	4/3/2023		1						1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	49119223	1514 Gibson Ave B	NO PROJECT	BD-CMBR-23-01418	ADU	R	4/3/2023				1				1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	49209615	148 Acacia Ave B	NO PROJECT	BD-CMBR-23-03654	ADU	R	9/1/2023		1						1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
	49209820	156 Sunnyside Ave		BD-CMBR-23-02736	SFD	O	6/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	

	55942002S	1677 Teague Ave	TM 6154	BD-CMBR-23-00179	SFD	O	1/17/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463201	4187 Poe Ave	TM 6123	BD-CMBR-23-01723	SFD	O	4/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463202	4177 Poe Ave	TM 6123	BD-CMBR-23-01724	SFD	O	4/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463203	4167 Poe Ave	TM 6123	BD-CMBR-23-01727	SFD	O	4/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463204	4157 Poe Ave	TM 6123	BD-CMBR-23-01731	SFD	O	4/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463205	4147 Poe Ave	TM 6123	BD-CMBR-23-01732	SFD	O	4/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S06	4111 Flint AVE	TM 6208	BD-CMBR-23-01990	SFD	O	5/1/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S08	3522 San Marino Ave	TM 6208	BD-CMBR-23-02117	SFD	O	5/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S31	3533 San Marino Ave	TM 6208	BD-CMBR-23-02118	SFD	O	5/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S10	3542 San Marino Ave	TM 6208	BD-CMBR-23-02119	SFD	O	5/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S11	3552 San Marino Ave	TM 6208	BD-CMBR-23-02120	SFD	O	5/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S30	3543 San Marino Ave	TM 6208	BD-CMBR-23-02121	SFD	O	5/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S09	3532 San Marino Ave	TM 6208	BD-CMBR-23-02122	SFD	O	5/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S32	3523 San Marino Ave	TM 6208	BD-CMBR-23-02123	SFD	O	5/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252002	4755 Buckingham Ave	TM 6161	BD-CMBR-23-02201	SFD	O	5/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252003	4745 Buckingham Ave	TM 6161	BD-CMBR-23-02202	SFD	O	5/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252004	4735 Buckingham Ave	TM 6161	BD-CMBR-23-02203	SFD	O	5/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252005	4725 Buckingham Ave	TM 6161	BD-CMBR-23-02204	SFD	O	5/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252012	4734 Buckingham Ave	TM 6161	BD-CMBR-23-02205	SFD	O	5/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252013	4744 Buckingham Ave	TM 6161	BD-CMBR-23-02206	SFD	O	5/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252014	4754 Buckingham Ave	TM 6161	BD-CMBR-23-02207	SFD	O	5/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463301	4056 Poe Ave	TM 6123	BD-CMBR-23-02287	SFD	O	5/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463307	4136 Poe Ave	TM 6123	BD-CMBR-23-02288	SFD	O	5/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463308	4146 Poe Ave	TM 6123	BD-CMBR-23-02289	SFD	O	5/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463309	4156 Poe Ave	TM 6123	BD-CMBR-23-02290	SFD	O	5/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S22	3585 Las Rosas Ave	TM 6208	BD-CMBR-23-02299	SFD	O	5/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S18	4144 Lansing Ave	TM 6208	BD-CMBR-23-02300	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S20	4164 Lansing Ave	TM 6208	BD-CMBR-23-02308	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S23	3575 Las Rosas Ave	TM 6208	BD-CMBR-23-02309	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S24	3565 Las Rosas Ave	TM 6208	BD-CMBR-23-02310	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S25	4155 Lansing Ave	TM 6208	BD-CMBR-23-02311	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S26	4145 Lansing Ave	TM 6208	BD-CMBR-23-02312	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S27	4135 Lansing Ave	TM 6208	BD-CMBR-23-02313	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S17	4134 Lansing Ave	TM 6208	BD-CMBR-23-02314	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S21	4174 Lansing Ave	TM 6208	BD-CMBR-23-02315	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S19	4154 Lansing Ave	TM 6208	BD-CMBR-23-02330	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S12	3562 San Marino Ave	TM 6208	BD-CMBR-23-02331	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S13	3572 San Marino Ave	TM 6208	BD-CMBR-23-02333	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S15	3592 San Marino Ave	TM 6208	BD-CMBR-23-02336	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S28	3563 San Marino Ave	TM 6208	BD-CMBR-23-02338	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S29	3553 San Marino Ave	TM 6208	BD-CMBR-23-02339	SFD	O	5/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252006	4715 Buckingham Ave	TM 6161	BD-CMBR-23-02348	SFD	O	5/17/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252007	4705 Buckingham Ave	TM 6161	BD-CMBR-23-02349	SFD	O	5/17/2023							1	1	1		NONE	No	No	Approved	Ministerial	

	30902252008	3202 Simental Ave	TM 6161	BD-CMBR-23-02350	SFD	O	5/17/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252009	3212 Simental Ave	TM 6161	BD-CMBR-23-02351	SFD	O	5/17/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252104	4602 Sussex Ave	TM 6161	BD-CMBR-23-02368	SFD	O	5/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252105	4610 Sussex Ave	TM 6161	BD-CMBR-23-02369	SFD	O	5/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252106	4618 Sussex Ave	TM 6161	BD-CMBR-23-02370	SFD	O	5/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252107	4626 Sussex Ave	TM 6161	BD-CMBR-23-02371	SFD	O	5/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252097	4651 Sussex Ave	TM 6161	BD-CMBR-23-02380	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252098	4643 Sussex Ave	TM 6161	BD-CMBR-23-02381	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252099	4635 Sussex Ave	TM 6161	BD-CMBR-23-02382	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252108	4634 Sussex Ave	TM 6161	BD-CMBR-23-02383	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252109	4642 Sussex Ave	TM 6161	BD-CMBR-23-02384	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252110	4650 Sussex Ave	TM 6161	BD-CMBR-23-02385	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252010	3222 Simental Ave	TM 6161	BD-CMBR-23-02390	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252011	4724 Buckingham Ave	TM 6161	BD-CMBR-23-02391	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252020	4727 Hampton Way	TM 6161	BD-CMBR-23-02392	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252021	3232 Simental Ave	TM 6161	BD-CMBR-23-02393	SFD	O	5/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413010000	4011 Scott Ave	TM 6413	BD-CMBR-23-02602	SFD	O	6/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413030000	4002 Scott Ave		BD-CMBR-23-02604	SFD	O	6/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413040000	4012 Scott Ave	TM 6413	BD-CMBR-23-02605	SFD	O	6/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413050000	4022 Scott Ave	TM 6413	BD-CMBR-23-02607	SFD	O	6/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413060000	4032 Scott Ave	TM 6413	BD-CMBR-23-02608	SFD	O	6/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413120000	1650 La Canada Ave	TM 6413	BD-CMBR-23-02609	SFD	O	6/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413260000	1653 Hermosa Ave	TM 6413	BD-CMBR-23-02610	SFD	O	6/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413330000	4143 Keats Ave	TM 6413	BD-CMBR-23-02611	SFD	O	6/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413560000	4186 Twain Ave	TM 6413	BD-CMBR-23-02612	SFD	O	6/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252017	4757 Hampton Way	TM 6161	BD-CMBR-23-02628	SFD	O	6/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252019	4737 Hampton Way	TM 6161	BD-CMBR-23-02630	SFD	O	6/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252026	4736 Hampton Way		BD-CMBR-23-02631	SFD	O	6/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252027	4746 Hampton Way	TM 6161	BD-CMBR-23-02632	SFD	O	6/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252028	4756 Hampton Way	TM 6161	BD-CMBR-23-02644	SFD	O	6/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55465206	1428 Junipero Ave	TM 6304	BD-CMBR-23-02690	SFD	O	6/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467026	1375 Junipero Ave	TM 6404	BD-CMBR-23-02703	SFD	O	6/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252023	3252 Simental Ave	TM 6161	BD-CMBR-23-02855	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252024	3262 Simental Ave		BD-CMBR-23-02856	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252025	4726 Hampton Way	TM 6161	BD-CMBR-23-02857	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252034	4719 Bellaire Ave	TM 6161	BD-CMBR-23-02858	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252035	3272 Simental Ave	TM 6161	BD-CMBR-23-02860	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252036	3282 Simental Ave	TM 6161	BD-CMBR-23-02861	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252093	4683 Sussex Ave	TM 6161	BD-CMBR-23-02862	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252094	4675 Sussex Ave	TM 6161	BD-CMBR-23-02864	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252095	4667 Sussex Ave	TM 6161	BD-CMBR-23-02865	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252096	4659 Sussex Ave	TM 6161	BD-CMBR-23-02867	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252111	4658 Sussex Ave	TM 6161	BD-CMBR-23-02868	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252112	4666 Sussex Ave	TM 6161	BD-CMBR-23-02878	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252113	4674 Sussex Ave	TM 6161	BD-CMBR-23-02881	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252114	4682 Sussex Ave	TM 6161	BD-CMBR-23-02882	SFD	O	6/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	56017030	1237 N Cindy Ave	TM 6348	BD-CMBR-23-02925	SFD	O	6/29/2023							1	1	1		NONE	No	No	Approved	Ministerial	

	30902252092	3308 Escalante Ave	TM 6161	BD-CMBR-23-03006	SFD	O	7/6/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252091	3318 Escalante Ave	TM 6161	BD-CMBR-23-03007	SFD	O	7/6/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252090	3328 Escalante Ave	TM 6161	BD-CMBR-23-03010	SFD	O	7/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252089	3338 Escalante Ave	TM 6161	BD-CMBR-23-03012	SFD	O	7/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252088	3348 Escalante Ave	TM 6161	BD-CMBR-23-03013	SFD	O	7/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252068	4638 Bellaire Ave	TM 6161	BD-CMBR-23-03014	SFD	O	7/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252069	4631 Joaquin Ave	TM 6161	BD-CMBR-23-03015	SFD	O	7/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	56017032	584 W Kenosha Ave	TM 6348	BD-CMBR-23-03054	SFD	O	7/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252022	3242 Simental Ave	TM 6161	BD-CMBR-23-03125	SFD	O	7/18/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413110000	1670 La Canada Ave	TM 6413	BD-CMBR-23-03153	SFD	O	7/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413270000	1673 Hermosa Ave	TM 6413	BD-CMBR-23-03158	SFD	O	7/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413320000	4133 Keats Ave	TM 6413	BD-CMBR-23-03159	SFD	O	7/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413570000	4176 Twain Ave	TM 6413	BD-CMBR-23-03160	SFD	O	7/19/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413580000	4166 Twain Ave	TM 6413	BD-CMBR-23-03186	SFD	O	7/20/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413590000	4156 Twain Ave	TM 6413	BD-CMBR-23-03187	SFD	O	7/20/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413610000	4136 Twain Ave	TM 6413	BD-CMBR-23-03188	SFD	O	7/20/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413620000	4126 Twain Ave	TM 6413	BD-CMBR-23-03189	SFD	O	7/20/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413630000	4116 Twain Ave	TM 6413	BD-CMBR-23-03190	SFD	O	7/20/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413600000	4146 Twain Ave	TM 6413	BD-CMBR-23-03195	SFD	O	7/21/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	31030016S14	3582 San Marino Ave	TM 6208	BD-CMBR-23-03275	SFD	O	7/28/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252070	4641 Joaquin Ave	TM 6161	BD-CMBR-23-03354	SFD	O	8/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252071	4651 Joaquin Ave	TM 6161	BD-CMBR-23-03355	SFD	O	8/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252081	4670 Joaquin Ave	TM 6161	BD-CMBR-23-03356	SFD	O	8/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252082	4660 Joaquin Ave	TM 6161	BD-CMBR-23-03357	SFD	O	8/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252083	4650 Joaquin Ave	TM 6161	BD-CMBR-23-03358	SFD	O	8/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252084	4640 Joaquin Ave	TM 6161	BD-CMBR-23-03360	SFD	O	8/7/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252031	4749 Bellaire Ave	TM 6161	BD-CMBR-23-03446	SFD	O	8/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252033	4729 Bellaire Ave	TM 6161	BD-CMBR-23-03448	SFD	O	8/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252040	4728 Bellaire Ave	TM 6161	BD-CMBR-23-03449	SFD	O	8/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252041	4738 Bellaire Ave	TM 6161	BD-CMBR-23-03450	SFD	O	8/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252042	4748 Bellaire Ave	TM 6161	BD-CMBR-23-03451	SFD	O	8/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252037	3302 Simental Ave	TM 6161	BD-CMBR-23-03452	SFD	O	8/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252038	3312 Simental Ave		BD-CMBR-23-03453	SFD	O	8/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252039	4718 Bellaire Ave	TM 6161	BD-CMBR-23-03454	SFD	O	8/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252048	4721 Joaquin Ave	TM 6161	BD-CMBR-23-03455	SFD	O	8/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252072	4661 Joaquin Ave	TM 6161	BD-CMBR-23-03474	SFD	O	8/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30946211	3339 Escobedo Ave	TM 6161	BD-CMBR-23-03476	SFD	O	8/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252078	3349 Escobedo Ave	TM 6161	BD-CMBR-23-03486	SFD	O	8/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252080	4680 Joaquin Ave	TM 6161	BD-CMBR-23-03487	SFD	O	8/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252079	4690 Joaquin Ave	TM 6161	BD-CMBR-23-03493	SFD	O	8/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252064	4678 Bellaire Ave	TM 6161	BD-CMBR-23-03538	SFD	O	8/21/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30946102	4668 Bellaire Ave		BD-CMBR-23-03539	SFD	O	8/21/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252067	4648 Bellaire Ave	TM 6161	BD-CMBR-23-03541	SFD	O	8/21/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413070000	4063 Keats Ave	TM 6413	BD-CMBR-23-03605	SFD	O	8/25/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413090000	1710 La Canada Ave	TM 6413	BD-CMBR-23-03607	SFD	O	8/25/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413290000	1713 Hermosa Ave	TM 6413	BD-CMBR-23-03609	SFD	O	8/25/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413300000	1733 Hermosa Ave	TM 6413	BD-CMBR-23-03610	SFD	O	8/25/2023							1	1	1		NONE	No	No	Approved	Ministerial	

	6413280000	1693 Hermosa Ave	TM 6413	BD-CMBR-23-03611	SFD	O	8/25/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252073	4671 Joaquin Ave	TM 6161	BD-CMBR-23-03679	SFD	O	9/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252018	4747 Hampton Way	TM 6161	BD-CMBR-23-03681	SFD	O	9/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413080000	1730 La Canada Ave	TM 6413	BD-CMBR-23-03688	SFD	O	9/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413100000	1690 La Canada Ave	TM 6123	BD-CMBR-23-03689	SFD	O	9/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252138	3245 Lourdes Ave	TM 6161	BD-CMBR-23-03698	SFD	O	9/6/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413020000	4001 Scott Ave	TM 6413	BD-CMBR-23-03701	SFD	O	9/6/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413130000	1651 La Canada Ave	TM 6413	BD-CMBR-23-03729	SFD	O	9/8/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413150000	1691 La Canada Ave	TM 6413	BD-CMBR-23-03730	SFD	O	9/8/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413170000	1731 La Canada Ave	TM 6413	BD-CMBR-23-03731	SFD	O	9/8/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413180000	4083 Keats Ave	TM 6413	BD-CMBR-23-03732	SFD	O	9/8/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413190000	4093 Keats Ave	TM 6413	BD-CMBR-23-03733	SFD	O	9/8/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413200000	4103 Keats Ave	TM 6413	BD-CMBR-23-03734	SFD	O	9/8/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55943402S	1384 N Purdue Ave	TM 6284	BD-CMBR-23-03774	SFD	O	9/12/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467008	4183 Hoblitt Ave	TM 6404	BD-CMBR-23-03787	SFD	O	9/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467009	4193 Hoblitt Ave	TM 6404	BD-CMBR-23-03788	SFD	O	9/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467010	1407 Las Rosas Ave	TM 6404	BD-CMBR-23-03790	SFD	O	9/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467011	1417 Las Rosas Ave	TM 6404	BD-CMBR-23-03791	SFD	O	9/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467012	1427 Las Rosas Ave	TM 6404	BD-CMBR-23-03792	SFD	O	9/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467013	1437 Las Rosas Ave	TM 6404	BD-CMBR-23-03793	SFD	O	9/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413310000	4123 Keats Ave	TM 6413	BD-CMBR-23-03795	SFD	O	9/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413160000	1711 La Canada Ave	TM 6413	BD-CMBR-23-03929	SFD	O	9/25/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413220000	1712 Hermosa Ave	TM 6413	BD-CMBR-23-03930	SFD	O	9/25/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413230000	1692 Hermosa Ave	TM 6413	BD-CMBR-23-03932	SFD	O	9/25/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413250000	1652 Hermosa Ave	TM 6413	BD-CMBR-23-03933	SFD	O	9/25/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467039	4113 Hoblitt Ave	TM 6404	BD-CMBR-23-04138	SFD	O	10/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413140000	1671 La Canada Ave	TM 6413	BD-CMBR-23-04148	SFD	O	10/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413210000	1732 Hermosa Ave	TM 6413	BD-CMBR-23-04149	SFD	O	10/16/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413240000	1672 Hermosa Ave	TM 6413	BD-CMBR-23-04150	SFD	O	10/17/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55943403S	1520 Enterprise Ave	TM 6284	BD-CMBR-23-04287	SFD	O	10/31/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55464101	1801 Agua Dulce Ave	TM 6182	BD-CMBR-23-04315	SFD	O	11/2/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55464102	1811 Agua Dulce Ave	TM 6182	BD-CMBR-23-04316	SFD	O	11/2/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463101	1831 Agua Dulce Ave	TM 6182	BD-CMBR-23-04317	SFD	O	11/2/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463102	1841 Agua Dulce Ave	TM 6182	BD-CMBR-23-04318	SFD	O	11/2/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463104	1871 Agua Dulce Ave	TM 6182	BD-CMBR-23-04320	SFD	O	11/2/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463105	1881 Agua Dulce Ave	TM 6182	BD-CMBR-23-04322	SFD	O	11/2/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467051	4102 Mitchell Ave	TM 6182	BD-CMBR-23-04323	SFD	O	11/2/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252046	4741 Joaquin Ave	TM 6161	BD-CMBR-23-04377	SFD	O	11/8/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30902252056	4750 Joaquin Ave	TM 6161	BD-CMBR-23-04378	SFD	O	11/8/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463209	4107 Poe Ave	TM 6123	BD-CMBR-23-04391	SFD	O	11/9/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	6413640000	4106 Twain Ave	TM 6413	BD-CMBR-23-04392	SFD	O	11/9/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467047	4142 Mitchell Ave	TM 6404	BD-CMBR-23-04393	SFD	O	11/9/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467037	4093 Hoblitt Ave	TM 6404	BD-CMBR-23-04540	SFD	O	11/29/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30943216	4252 Bellaire Ave	TM 6023	BD-CMBR-23-04562	SFD	O	12/1/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30943211	4212 Bellaire Ave	TM 6023	BD-CMBR-23-04563	SFD	O	12/1/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30943218	4268 Bellaire Ave	TM 6023	BD-CMBR-23-04564	SFD	O	12/1/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30943214	4236 Bellaire Ave	TM 6023	BD-CMBR-23-04565	SFD	O	12/1/2023							1	1	1		NONE	No	No	Approved	Ministerial	

	30943212	4220 Bellaire Ave	TM 6023	BD-CMBR-23-04566	SFD	O	12/1/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30943215	4244 Bellaire Ave	TM 6023	BD-CMBR-23-04585	SFD	O	12/5/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30943220	4284 Bellaire Ave	TM 6023	BD-CMBR-23-04600	SFD	O	12/6/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30943219	4276 Bellaire Ave	TM 6023	BD-CMBR-23-04601	SFD	O	12/6/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30943213	4228 Bellaire Ave	TM 6023	BD-CMBR-23-04604	SFD	O	12/6/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55463103	1851 Agua Dulce Ave	TM 6182	BD-CMBR-23-04605	SFD	O	12/6/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30943217	4260 Bellaire Ave	TM 6023	BD-CMBR-23-04606	SFD	O	12/6/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467040	4123 Hoblitt Ave	TM 6404	BD-CMBR-23-04640	SFD	O	12/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467046	4152 Mitchell Ave	TM 6404	BD-CMBR-23-04641	SFD	O	12/11/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	30946203	3322 Simental Ave	TM 6161	BD-CMBR-23-04701	SFD	O	12/14/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	55467050	4112 Mitchell Ave	TM 6404	BD-CMBR-23-04731	SFD	O	12/15/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	56408024	1187 N Holly Ave	TM 6367	BD-CMBR-23-04794	SFD	O	12/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	56408018	1196 N Holly Ave	TM 6367	BD-CMBR-23-04797	SFD	O	12/26/2023							1	1	1		NONE	No	No	Approved	Ministerial	
	56108111	957 N Citadel Ave B		BD-CMBR-23-00486	ADU	R	2/13/2023							1	1	1		NONE	No	No	Approved	Ministerial	ADUs: 30% VL, 30% L, 30% M, 10% AM
															0								

Table A2

Annual Building Activity Report Summary - New Construction, Entitled, Permits and Completed Units

Project Identifier					Unit Types		Affordability by Household Incomes - Completed Entitlement								
1					2	3	4							5	6
Prior APN⁺	**Current APN**	**Street Address**	**Project Name⁺**	**Local Jurisdiction Tracking ID**	**Unit Category** (SFA,SFD,2 to 4,5+,ADU,MH)	**Tenure** R=Renter O=Owner	**Very Low-Income Deed Restricted**	**Very Low-Income Non Deed Restricted**	**Low- Income Deed Restricted**	**Low- Income Non Deed Restricted**	**Moderate-Income Deed Restricted**	**Moderate-Income Non Deed Restricted**	**Above Moderate-Income**	**Entitlement Date Approved**	**# of Units issued Entitlements**
Summary Row: Start Data Entry Below							0	0	0	0	0	12	4		16
	55503144	3700 Loma Vista Pkwy Bld 34	SPR 2018-011	BD-CMBM-21-00148	5+	R									0
	55503144	3700 Loma Vista Pkwy 3601	SPR 2018-011	BD-CMBM-21-00149	5+	R									0
	55503144	3700 Loma Vista Pkwy 3501	SPR 2018-011	BD-CMBM-21-00150	5+	R									0
	43060101	784 W Holland Ave	RHNA 2019-001	BD-CMBM-21-00181	5+	R									0
	55503144	3700 Loma Vista Pkwy	SPR 2018-011	BD-CMBM-21-01483	5+	R									0
	55534322	3072 De Wolf Ave		BD-CMBR-21-05390	SFD	O									0
	55926019S	1808 N Carson Ave	TM 5122	BD-CMBR-21-05540	SFD	O									0
	55926011S	1807 N Coventry Ave	TM 5122	BD-CMBR-21-05544	SFD	O									0
	49207202	120 Woodworth Ave		BD-CMBR-22-00045	SFD	O									0
	55851007	3076 Lester Ave	PM 2018-011	BD-CMBR-22-00722	SFD	O									0
	49215215	356 Oxford Ave	PM 2022-003	BD-CMBR-22-01454	SFD	O									0
	49215215	360 Oxford Ave	PM 2022-003	BD-CMBR-22-01455	SFD	O									0
	49209820	156 Sunnyside Ave		BD-CMBR-23-02736	SFD	O									0
	5612601740	421 W Mahogany Ln	TM 6262	BD-CMBR-21-00953	SFD	O									0
	5612601751	436 W Balsam Ln	TM 6262	BD-CMBR-21-01074	SFD	O									0
	5612601059	563 N Citadel Ln	TM 6262	BD-CMBR-21-01169	SFD	O									0
	56129044	472 W Balsam Ln	TM 6262	BD-CMBR-21-01184	SFD	O									0
	56129043	468 W Balsam Ln	TM 6262	BD-CMBR-21-01186	SFD	O									0
	56129042	464 W Balsam Ln	TM 6262	BD-CMBR-21-01193	SFD	O									0
	56129041	460 W Balsam Ln	TM 6262	BD-CMBR-21-01197	SFD	O									0
	5612601755	456 W Balsam Ln	TM 6262	BD-CMBR-21-01198	SFD	O									0
	5612601051	557 N Terry Ln	TM 6262	BD-CMBR-21-01204	SFD	O									0
	56129045	476 W Balsam Ln	TM 6262	BD-CMBR-21-01205	SFD	O									0
	5612601754	452 W Balsam Ln	TM 6262	BD-CMBR-21-01206	SFD	O									0
	5612601753	448 W Balsam Ln	TM 6262	BD-CMBR-21-01208	SFD	O									0
	5612601752	440 W Balsam Ln	TM 6262	BD-CMBR-21-01210	SFD	O									0
	56129064	561 N Terry Ln	TM 6262	BD-CMBR-21-01354	SFD	O									0
	56129063	565 N Terry Ln	TM 6262	BD-CMBR-21-01360	SFD	O									0
	56129062	569 N Terry Ln	TM 6262	BD-CMBR-21-01362	SFD	O									0
	56129061	573 N Terry Ln	TM 6262	BD-CMBR-21-01365	SFD	O									0
	56129060	574 N Terry Ln	TM 6262	BD-CMBR-21-01371	SFD	O									0
	56129059	570 N Terry Ln	TM 6262	BD-CMBR-21-01373	SFD	O									0
	56129058	566 N Terry Ln	TM 6262	BD-CMBR-21-01385	SFD	O									0
	56129057	562 N Terry Ln	TM 6262	BD-CMBR-21-01392	SFD	O									0
	56129056	558 N Terry Ln	TM 6262	BD-CMBR-21-01395	SFD	O									0
	56129055	559 N Cindy Ln	TM 6262	BD-CMBR-21-01400	SFD	O									0
	56129054	563 N Cindy Ln	TM 6262	BD-CMBR-21-01407	SFD	O									0
	56129053	567 N Cindy Ln	TM 6262	BD-CMBR-21-01408	SFD	O									0
	56128065	576 N Cindy Ln	TM 6262	BD-CMBR-21-01419	SFD	O									0
	56129052	571 N Cindy Ln	TM 6262	BD-CMBR-21-01420	SFD	O									0
	56129050	496 W Balsam Ln	TM 6262	BD-CMBR-21-01427	SFD	O									0
	56129049	492 W Balsam Ln	TM 6262	BD-CMBR-21-01432	SFD	O									0
	56129048	488 W Balsam Ln	TM 6262	BD-CMBR-21-01433	SFD	O									0
	56128064	572 N Cindy Ln	TM 6262	BD-CMBR-21-01435	SFD	O									0
	56129047	484 W Balsam Ln	TM 6262	BD-CMBR-21-01436	SFD	O									0
	56129046	480 W Balsam Ln	TM 6262	BD-CMBR-21-01438	SFD	O									0
	56129051	575 N Cindy Ln	TM 6262	BD-CMBR-21-01466	SFD	O									0
	56128061	560 N Cindy Ln	TM 6262	BD-CMBR-21-01467	SFD	O									0
	56128062	564 N Cindy Ln	TM 6262	BD-CMBR-21-01468	SFD	O									0
	56128063	568 N Cindy Ln	TM 6262	BD-CMBR-21-01744	SFD	O									0
	56128060	561 N Sylmar Ln	TM 6262	BD-CMBR-21-02326	SFD	O									0
	56128057	573 N Sylmar Ln	TM 6262	BD-CMBR-21-02330	SFD	O									0
	56128059	565 N Sylmar Ln	TM 6262	BD-CMBR-21-02341	SFD	O									0
	56128056	577 N Sylmar Ln	TM 6262	BD-CMBR-21-02343	SFD	O									0
	56128058	569 N Sylmar Ln	TM 6262	BD-CMBR-21-02344	SFD	O									0
	56128020	516 W Balsam Ln	TM 6262	BD-CMBR-21-02345	SFD	O									0
	56128019	512 W Balsam Ln	TM 6262	BD-CMBR-21-02346	SFD	O									0
	56128018	508 W Balsam Ln	TM 6262	BD-CMBR-21-02348	SFD	O									0
	56128017	504 W Balsam Ln	TM 6262	BD-CMBR-21-02349	SFD	O									0
	56128016	500 W Balsam Ln	TM 6262	BD-CMBR-21-02350	SFD	O									0
	55609012	607 Heirloom Ln	TM 6050	BD-CMBR-21-02591	SFD	O									0
	56128024	532 W Balsam Ln	TM 6262	BD-CMBR-21-02727	SFD	O									0
	56128025	536 W Balsam Ln	TM 6262	BD-CMBR-21-02759	SFD	O									0
	56128055	578 N Sylmar Ln	TM 6262	BD-CMBR-21-02761	SFD	O									0
	56128054	574 N Sylmar Ln	TM 6262	BD-CMBR-21-02762	SFD	O									0
	56128053	570 N Sylmar Ln	TM 6262	BD-CMBR-21-02763	SFD	O									0
	56128052	566 N Sylmar Ln	TM 6262	BD-CMBR-21-02773	SFD	O									0
	56128051	562 N Sylmar Ln	TM 6262	BD-CMBR-21-02774	SFD	O									0
	56128021	520 W Balsam Ln	TM 6262	BD-CMBR-21-02775	SFD	O									0

	56128023	528 W Balsam Ln	TM 6262	BD-CMBR-21-02776	SFD	O									0
	56128022	524 W Balsam Ln	TM 6262	BD-CMBR-21-02777	SFD	O									0
	56128010	510 W Mahogany Ln	TM 6262	BD-CMBR-21-02778	SFD	O									0
	56128009	514 W Mahogany Ln	TM 6262	BD-CMBR-21-02779	SFD	O									0
	56128008	518 W Mahogany Ln	TM 6262	BD-CMBR-21-02780	SFD	O									0
	55609050	545 Bloom Ln	TM 6050	BD-CMBR-21-02801	SFD	O									0
	56128007	522 W Mahogany Ln	TM 6262	BD-CMBR-21-02805	SFD	O									0
	556128006	526 W Mahogany Ln	TM 6262	BD-CMBR-21-02811	SFD	O									0
	56127035	598 W Mahogany Ln	TM 6262	BD-CMBR-21-02951	SFD	O									0
	56127034	602 W Mahogany Ln	TM 6262	BD-CMBR-21-02960	SFD	O									0
	56127028	626 W Mahogany Ln	TM 6262	BD-CMBR-21-02961	SFD	O									0
	56127033	606 W Mahogany Ln	TM 6262	BD-CMBR-21-02962	SFD	O									0
	56127032	610 W Mahogany Ln	TM 6262	BD-CMBR-21-02963	SFD	O									0
	56127031	614 W Mahogany Ln	TM 6262	BD-CMBR-21-03022	SFD	O									0
	56127030	618 W Mahogany Ln	TM 6262	BD-CMBR-21-03035	SFD	O									0
	56127027	630 W Mahogany Ln	TM 6262	BD-CMBR-21-03036	SFD	O									0
	56127029	622 W Mahogany Ln	TM 6262	BD-CMBR-21-03037	SFD	O									0
	56127026	634 W Mahogany Ln	TM 6262	BD-CMBR-21-03038	SFD	O									0
	56127025	638 W Mahogany Ln	TM 6262	BD-CMBR-21-03039	SFD	O									0
	56127024	642 W Mahogany Ln	TM 6262	BD-CMBR-21-03040	SFD	O									0
	56127023	646 W Mahogany Ln	TM 6262	BD-CMBR-21-03041	SFD	O									0
	56127022	652 W Mahogany Ln	TM 6262	BD-CMBR-21-03042	SFD	O									0
	56127021	656 W Mahogany Ln	TM 6262	BD-CMBR-21-03043	SFD	O									0
	5590517613	2773 Vermont Ave	TM 6301	BD-CMBR-21-03162	SFD	O									0
	55609009	667 Heirloom Ln	TM 6050	BD-CMBR-21-03315	SFD	O									0
	55609057	405 Bloom Ln	TM 6050	BD-CMBR-21-03316	SFD	O									0
	56127006	568 N Adler Ln	TM 6262	BD-CMBR-21-03432	SFD	O									0
	56127007	572 N Adler Ln	TM 6262	BD-CMBR-21-03433	SFD	O									0
	56127008	576 N Adler Ln	TM 6262	BD-CMBR-21-03434	SFD	O									0
	56127009	580 N Adler Ln	TM 6262	BD-CMBR-21-03435	SFD	O									0
	56127010	584 N Adler Ln	TM 6262	BD-CMBR-21-03436	SFD	O									0
	56127011	583 N Adler Ln	TM 6262	BD-CMBR-21-03446	SFD	O									0
	56127012	579 N Adler Ln	TM 6262	BD-CMBR-21-03447	SFD	O									0
	56127013	575 N Adler Ln	TM 6262	BD-CMBR-21-03448	SFD	O									0
	56127014	571 N Adler Ln	TM 6262	BD-CMBR-21-03449	SFD	O									0
	56127015	567 N Adler Ln	TM 6262	BD-CMBR-21-03451	SFD	O									0
	56127036	590 W Mahogany Ln	TM 6262	BD-CMBR-21-03467	SFD	O									0
	56127037	586 W Mahogany Ln	TM 6262	BD-CMBR-21-03468	SFD	O									0
	56127038	582 W Mahogany Ln	TM 6262	BD-CMBR-21-03469	SFD	O									0
	56127039	578 W Mahogany Ln	TM 6262	BD-CMBR-21-03470	SFD	O									0
	56127040	574 W Mahogany Ln	TM 6262	BD-CMBR-21-03472	SFD	O									0
	56127016	566 N Helm Ln	TM 6262	BD-CMBR-21-03473	SFD	O									0
	56127017	570 N Helm Ln	TM 6262	BD-CMBR-21-03474	SFD	O									0
	56127018	574 N Helm Ln	TM 6262	BD-CMBR-21-03475	SFD	O									0
	56127019	578 N Helm Ln	TM 6262	BD-CMBR-21-03476	SFD	O									0
	56127020	582 N Helm Ln	TM 6262	BD-CMBR-21-03477	SFD	O									0
	55609054	465 Bloom Ln	TM 6050	BD-CMBR-21-03487	SFD	O									0
	56127005	596 W Balsam Ln	TM 6262	BD-CMBR-21-04013	SFD	O									0
	56127004	592 W Balsam Ln	TM 6262	BD-CMBR-21-04014	SFD	O									0
	56127003	588 W Balsam Ln	TM 6262	BD-CMBR-21-04015	SFD	O									0
	56127002	584 W Balsam Ln	TM 6262	BD-CMBR-21-04029	SFD	O									0
	56127001	580 W Balsam Ln	TM 6262	BD-CMBR-21-04030	SFD	O									0
	56128001	546 W Mahogany Ln	TM 6262	BD-CMBR-21-04031	SFD	O									0
	56128002	542 W Mahogany Ln	TM 6262	BD-CMBR-21-04033	SFD	O									0
	56128003	538 W Mahogany Ln	TM 6262	BD-CMBR-21-04034	SFD	O									0
	56128005	530 W Mahogany Ln	TM 6262	BD-CMBR-21-04082	SFD	O									0
	56128050	563 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04083	SFD	O									0
	56128049	567 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04084	SFD	O									0
	56128048	571 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04085	SFD	O									0
	56128047	575 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04086	SFD	O									0
	56128046	579 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04090	SFD	O									0
	56128026	540 W Balsam Ln	TM 6262	BD-CMBR-21-04091	SFD	O									0
	56128027	544 W Balsam Ln	TM 6262	BD-CMBR-21-04092	SFD	O									0
	56128028	548 W Balsam Ln	TM 6262	BD-CMBR-21-04093	SFD	O									0
	56128029	552 W Balsam Ln	TM 6262	BD-CMBR-21-04094	SFD	O									0
	56128030	556 W Balsam Ln	TM 6262	BD-CMBR-21-04095	SFD	O									0
	56128040	565 N Helm Ln	TM 6262	BD-CMBR-21-04312	SFD	O									0
	56128039	569 N Helm Ln	TM 6262	BD-CMBR-21-04313	SFD	O									0
	56128038	573 N Helm Ln	TM 6262	BD-CMBR-21-04319	SFD	O									0
	56128037	577 N Helm Ln	TM 6262	BD-CMBR-21-04320	SFD	O									0
	56128036	581 N Helm Ln	TM 6262	BD-CMBR-21-04321	SFD	O									0
	56128041	564 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04322	SFD	O									0
	56128042	568 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04325	SFD	O									0
	56128043	572 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04326	SFD	O									0
	56128044	576 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04327	SFD	O									0
	56128045	580 N Chapel Hill Ln	TM 6262	BD-CMBR-21-04328	SFD	O									0
	56128031	560 W Balsam Ln	TM 6262	BD-CMBR-21-04415	SFD	O									0
	56128032	564 W Balsam Ln	TM 6262	BD-CMBR-21-04416	SFD	O									0
	56128033	568 W Balsam Ln	TM 6262	BD-CMBR-21-04417	SFD	O									0
	56128034	572 W Balsam Ln	TM 6262	BD-CMBR-21-04419	SFD	O									0
	56128035	576 W Balsam Ln	TM 6262	BD-CMBR-21-04420	SFD	O									0
	56128070	554 W Mahogany Ln	TM 6262	BD-CMBR-21-04427	SFD	O									0
	56128069	558 W Mahogany Ln	TM 6262	BD-CMBR-21-04428	SFD	O									0
	56128068	562 W Mahogany Ln	TM 6262	BD-CMBR-21-04431	SFD	O									0
	56128067	566 W Mahogany Ln	TM 6262	BD-CMBR-21-04442	SFD	O									0
	56128066	570 W Mahogany Ln	TM 6262	BD-CMBR-21-04443	SFD	O									0
	55609087	401 Vintage Ln	TM 6050	BD-CMBR-21-04880	SFD	O									0
	5590504141	2939 Teague Ave	TM 6339	BD-CMBR-21-05358	SFD	O									0

	5590517619	1745 N Park Ave	TM 6301	BD-CMBR-21-05385	SFD	O									0
	5590517620	1735 N Park Ave	TM 6301	BD-CMBR-21-05386	SFD	O									0
	5590517654	2741 Loyola Ave	TM 6301	BD-CMBR-21-05387	SFD	O									0
	5590517655	2751 Loyola Ave	TM 6301	BD-CMBR-21-05388	SFD	O									0
	5590517624	2704 Moody Ave	TM 6301	BD-CMBR-22-00070	SFD	O									0
	5590504131	2997 Trenton Ave	TM 6339	BD-CMBR-22-00413	SFD	O									0
	5590504115	1677 N Megan Ave	TM 6339	BD-CMBR-22-00414	SFD	O									0
	5590504112	2965 Vermont Ave	TM 6339	BD-CMBR-22-00415	SFD	O									0
	5590504113	2975 Vermont Ave	TM 6339	BD-CMBR-22-00416	SFD	O									0
	5590504111	2955 Vermont Ave	TM 6339	BD-CMBR-22-00417	SFD	O									0
	5590504114	1687 N Megan Ave	TM 6339	BD-CMBR-22-00418	SFD	O									0
	5540402010	3075 Keats Ave	TM 6349	BD-CMBR-22-00435	SFD	O									0
	5590504109	2935 Vermont Ave	TM 6339	BD-CMBR-22-00772	SFD	O									0
	5590504108	2925 Vermont Ave	TM 6339	BD-CMBR-22-00773	SFD	O									0
	5590504110	2945 Vermont Ave	TM 6339	BD-CMBR-22-00774	SFD	O									0
	56052050S	984 Everglade Ave	TM 6263	BD-CMBR-22-00812	SFD	O									0
	56052049S	976 Everglade Ave	TM 6263	BD-CMBR-22-00813	SFD	O									0
	56052033S	985 Everglade Ave	TM 6263	BD-CMBR-22-00814	SFD	O									0
	56052034S	977 Everglade Ave	TM 6263	BD-CMBR-22-00816	SFD	O									0
	56052048S	968 Everglade Ave	TM 6263	BD-CMBR-22-00817	SFD	O									0
	56052047S	960 Everglade Ave	TM 6263	BD-CMBR-22-00820	SFD	O									0
	56052035S	969 Everglade Ave	TM 6263	BD-CMBR-22-00821	SFD	O									0
	56052036S	961 Everglade Ave	TM 6263	BD-CMBR-22-00822	SFD	O									0
	56052046S	952 Everglade Ave	TM 6263	BD-CMBR-22-00823	SFD	O									0
	55612013	501 Farmhouse Ln	TM 6329	BD-CMBR-22-00837	SFD	O									0
	55612012	513 Farmhouse Ln	TM 6329	BD-CMBR-22-00838	SFD	O									0
	55612011	525 Farmhouse Ln	TM 6329	BD-CMBR-22-00839	SFD	O									0
	55612010	537 Farmhouse Ln	TM 6329	BD-CMBR-22-00840	SFD	O									0
	55612009	549 Farmhouse Ln	TM 6329	BD-CMBR-22-00841	SFD	O									0
	55612008	561 Farmhouse Ln	TM 6329	BD-CMBR-22-00875	SFD	O									0
	55612007	603 Farmhouse Ln	TM 6329	BD-CMBR-22-00876	SFD	O									0
	55612006	615 Farmhouse Ln	TM 6329	BD-CMBR-22-00877	SFD	O									0
	55612005	627 Farmhouse Ln	TM 6329	BD-CMBR-22-00878	SFD	O									0
	55612004	639 Farmhouse Ln	TM 6329	BD-CMBR-22-00879	SFD	O									0
	55612003	651 Farmhouse Ln	TM 6329	BD-CMBR-22-00880	SFD	O									0
	55612002	663 Farmhouse Ln	TM 6329	BD-CMBR-22-00882	SFD	O									0
	55942038S	1684 N Shirley Ave	TM 6154	BD-CMBR-22-00890	SFD	O									0
	55609017	507 Heirloom Ln	TM 6050	BD-CMBR-22-00911	SFD	O									0
	55609013	587 Heirloom Ln	TM 6050	BD-CMBR-22-00913	SFD	O									0
	55609016	527 Heirloom Ln	TM 6050	BD-CMBR-22-00914	SFD	O									0
	55609015	547 Heirloom Ln	TM 6050	BD-CMBR-22-00916	SFD	O									0
	55609014	567 Heirloom Ln	TM 6050	BD-CMBR-22-00917	SFD	O									0
	5590504107	2915 Vermont Ave	TM 6339	BD-CMBR-22-00930	SFD	O									0
	5590504106	2905 Vermont Ave	TM 6339	BD-CMBR-22-00934	SFD	O									0
	5590504105	1694 N Greenfield Ave	TM 6339	BD-CMBR-22-00935	SFD	O									0
	5590504103	1674 N Greenfield Ave	TM 6339	BD-CMBR-22-00937	SFD	O									0
	55609026	2120 N Perry Ln	TM 6050	BD-CMBR-22-01000	SFD	O									0
	55609027	2110 N Perry Ln	TM 6050	BD-CMBR-22-01001	SFD	O									0
	55609028	2100 N Perry Ln	TM 6050	BD-CMBR-22-01004	SFD	O									0
	55609029	2090 N Perry Ln	TM 6050	BD-CMBR-22-01006	SFD	O									0
	55609030	2080 N Perry Ln	TM 6050	BD-CMBR-22-01007	SFD	O									0
	55609025	2130 N Perry Ln	TM 6050	BD-CMBR-22-01019	SFD	O									0
	55609024	2140 N Perry Ln	TM 6050	BD-CMBR-22-01020	SFD	O									0
	55609023	2150 N Perry Ln	TM 6050	BD-CMBR-22-01021	SFD	O									0
	55609022	407 Heirloom Ln	TM 6050	BD-CMBR-22-01022	SFD	O									0
	55609021	427 Heirloom Ln	TM 6050	BD-CMBR-22-01023	SFD	O									0
	55609020	447 Heirloom Ln	TM 6050	BD-CMBR-22-01024	SFD	O									0
	55609019	467 Heirloom Ln	TM 6050	BD-CMBR-22-01026	SFD	O									0
	55609018	487 Heirloom Ln	TM 6050	BD-CMBR-22-01027	SFD	O									0
	55939119	1725 N Park Ave	TM 6301	BD-CMBR-22-01060	SFD	O									0
	55939308	1744 N Park Ave	TM 6301	BD-CMBR-22-01072	SFD	O									0
	55464302	1676 Las Rosas Ave	TM 6123	BD-CMBR-22-01113	SFD	O									0
	56052042S	920 Everglade Ave	TM 6263	BD-CMBR-22-01156	SFD	O									0
	56052044S	936 Everglade Ave	TM 6263	BD-CMBR-22-01158	SFD	O									0
	56052040S	929 Everglade Ave	TM 6263	BD-CMBR-22-01160	SFD	O									0
	56052032S	988 Serena Ave	TM 6263	BD-CMBR-22-01161	SFD	O									0
	56052025S	932 Serena Ave	TM 6263	BD-CMBR-22-01162	SFD	O									0
	56052029S	964 Serena Ave	TM 6263	BD-CMBR-22-01163	SFD	O									0
	56052031S	980 Serena Ave	TM 6263	BD-CMBR-22-01164	SFD	O									0
	56052028S	956 Serena Ave	TM 6263	BD-CMBR-22-01165	SFD	O									0
	56052024S	924 Serena Ave	TM 6263	BD-CMBR-22-01166	SFD	O									0
	56052026S	940 Serena Ave	TM 6263	BD-CMBR-22-01167	SFD	O									0
	56052043s	928 Everglade Ave	TM 6263	BD-CMBR-22-01209	SFD	O									0
	56052045S	944 Everglade Ave	TM 6263	BD-CMBR-22-01272	SFD	O									0
	56052037S	953 Everglade Ave	TM 6263	BD-CMBR-22-01273	SFD	O									0
	56052039S	937 Everglade Ave	TM 6263	BD-CMBR-22-01274	SFD	O									0
	56052030S	972 Serena Ave	TM 6263	BD-CMBR-22-01275	SFD	O									0
	56052027S	948 Serena Ave	TM 6263	BD-CMBR-22-01276	SFD	O									0
	56052041S	921 Everglade Ave	TM 6263	BD-CMBR-22-01277	SFD	O									0
	56052038S	945 Everglade Ave	TM 6263	BD-CMBR-22-01278	SFD	O									0
	55940012S	1735 Lester Ave	TM 6154	BD-CMBR-22-01302	SFD	O									0
	55940015S	1765 Lester Ave	TM 6154	BD-CMBR-22-01309	SFD	O									0
	55942004S	1787 Teague Ave	TM 6154	BD-CMBR-22-01310	SFD	O									0

	55942018S	1730 Trenton Ave	TM 6154	BD-CMBR-22-01312	SFD	O									0
	55465718	4176 Dennis Ave	TM 6304	BD-CMBR-22-01327	SFD	O									0
	56408019	1186 N Holly Ave	TM 6367	BD-CMBR-22-01407	SFD	O									0
	56017029	1247 N Cindy Ave	TM 6348	BD-CMBR-22-01409	SFD	O									0
	55465303	4085 Dennis Ave	TM 6304	BD-CMBR-22-01701	SFD	O									0
	55465304	4095 Dennis Ave	TM 6304	BD-CMBR-22-01705	SFD	O									0
	55465306	4115 Dennis Ave	TM 6304	BD-CMBR-22-01707	SFD	O									0
	55465308	4135 Dennis Ave	TM 6304	BD-CMBR-22-01710	SFD	O									0
	55465309	4145 Dennis Ave	TM 6304	BD-CMBR-22-01711	SFD	O									0
	55465310	4155 Dennis Ave	TM 6304	BD-CMBR-22-01713	SFD	O									0
	55465311	4165 Dennis Ave	TM 6304	BD-CMBR-22-01716	SFD	O									0
	55465312	4175 Dennis Ave	TM 6304	BD-CMBR-22-01717	SFD	O									0
	55465314	4195 Dennis Ave	TM 6304	BD-CMBR-22-01719	SFD	O									0
	55938201	2613 Vermont Ave	TM 6209	BD-CMBR-22-01832	SFD	O									0
	55941020S	1744 Lester Ave	TM 6154	BD-CMBR-22-01936	SFD	O									0
	55941007S	1766 N Renn Ave	TM 6154	BD-CMBR-22-02019	SFD	O									0
	56408020	1176 N Holly Ave	TM 6367	BD-CMBR-22-02045	SFD	O									0
	56408025	1197 N Holly Ave	TM 6367	BD-CMBR-22-02046	SFD	O									0
	55464502	4161 Scott Ave	TM 6123	BD-CMBR-22-02060	SFD	O									0
	55464503	4151 Scott Ave	TM 6123	BD-CMBR-22-02062	SFD	O									0
	55464504	4141 Scott Ave	TM 6123	BD-CMBR-22-02063	SFD	O									0
	55464505	4131 Scott Ave	TM 6123	BD-CMBR-22-02064	SFD	O									0
	55464506	4121 Scott Ave	TM 6123	BD-CMBR-22-02065	SFD	O									0
	55464507	4111 Scott Ave	TM 6123	BD-CMBR-22-02066	SFD	O									0
	55464508	4101 Scott Ave	TM 6123	BD-CMBR-22-02067	SFD	O									0
	55464509	4091 Scott Ave	TM 6123	BD-CMBR-22-02068	SFD	O									0
	55464510	4081 Scott Ave	TM 6123	BD-CMBR-22-02069	SFD	O									0
	55536236	2101 Descanso Ave	TM 6377	BD-CMBR-22-02076	SFD	O									0
	55536250	2160 Descanso Ave	TM 6377	BD-CMBR-22-02077	SFD	O									0
	55536238	2061 Descanso Ave	TM 6377	BD-CMBR-22-02161	SFD	O									0
	55536234	2141 Descanso Ave	TM 6377	BD-CMBR-22-02162	SFD	O									0
	5582900601	1697 N Twinberry Ave	TM 6389	BD-CMBR-22-02297	SFD	O									0
	55612033	2006 N Inverness Ln	TM 6329	BD-CMBR-22-02306	SFD	O									0
	55612032	2012 N Inverness Ln	TM 6329	BD-CMBR-22-02310	SFD	O									0
	55612031	2018 N Inverness Ln	TM 6329	BD-CMBR-22-02326	SFD	O									0
	55612030	2024 N Inverness Ln	TM 6329	BD-CMBR-22-02331	SFD	O									0
	31030016S37	3555 Las Rosas Ave	TM 6208	BD-CMBR-22-02361	SFD	O									0
	31030016S38	3545 Las Rosas Ave	TM 6208	BD-CMBR-22-02362	SFD	O									0
	31030016S39	3535 Las Rosas Ave	TM 6208	BD-CMBR-22-02363	SFD	O									0
	31030016S40	3525 Las Rosas Ave	TM 6208	BD-CMBR-22-02366	SFD	O									0
	31030016S41	3515 Las Rosas Ave	TM 6208	BD-CMBR-22-02367	SFD	O									0
	31030016S43	3505 Las Rosas Ave	TM 6208	BD-CMBR-22-02368	SFD	O									0
	56017028	1257 N Cindy Ave	TM 6348	BD-CMBR-22-02375	SFD	O									0
	55612034	2005 N Inverness Ln	TM 6329	BD-CMBR-22-02438	SFD	O									0
	55612035	2011 N Inverness Ln	TM 6329	BD-CMBR-22-02441	SFD	O									0
	55612036	2017 N Inverness Ln	TM 6329	BD-CMBR-22-02448	SFD	O									0
	55612037	2023 N Inverness Ln	TM 6329	BD-CMBR-22-02451	SFD	O									0
	55464511	4071 Scott Ave	TM 6123	BD-CMBR-22-02540	SFD	O									0
	55464512	4061 Scott Ave	TM 6123	BD-CMBR-22-02541	SFD	O									0
	55464513	4051 Scott Ave	TM 6123	BD-CMBR-22-02542	SFD	O									0
	55464514	4041 Scott Ave	TM 6123	BD-CMBR-22-02543	SFD	O									0
	55464515	4031 Scott Ave	TM 6123	BD-CMBR-22-02551	SFD	O									0
	55464516	4021 Scott Ave	TM 6123	BD-CMBR-22-02552	SFD	O									0
	55609075	641 Vintage Ln	TM 6050	BD-CMBR-22-02723	SFD	O									0
	55609074	661 Vintage Ln	TM 6050	BD-CMBR-22-02741	SFD	O									0
	55609073	681 Vintage Ln	TM 6050	BD-CMBR-22-02742	SFD	O									0
	55609072	682 Bloom Ln	TM 6050	BD-CMBR-22-02744	SFD	O									0
	55609071	662 Bloom Ln	TM 6050	BD-CMBR-22-02748	SFD	O									0
	55609070	642 Bloom Ln	TM 6050	BD-CMBR-22-02749	SFD	O									0
	55536245	2060 Descanso Ave	TM 6377	BD-CMBR-22-02772	SFD	O									0
	55536231	2067 Amanecer Ave	TM 6025	BD-CMBR-22-02872	SFD	O									0
	55536202	2087 Amanecer Ave	TM 6025	BD-CMBR-22-02874	SFD	O									0
	55536203	3801 Fairmont Ave	TM 6025	BD-CMBR-22-02875	SFD	O									0
	55536204	3809 Fairmont Ave	TM 6025	BD-CMBR-22-02876	SFD	O									0
	55536205	3817 Fairmont Ave	TM 6025	BD-CMBR-22-02879	SFD	O									0
	55611034	500 Pioneer Ln	TM 6329	BD-CMBR-22-02936	SFD	O									0
	55464201	1797 Las Rosas Ave	TM 6123	BD-CMBR-22-03074	SFD	O									0
	55464202	1777 Las Rosas Ave	TM 6123	BD-CMBR-22-03075	SFD	O									0
	55464203	1757 Las Rosas Ave	TM 6123	BD-CMBR-22-03078	SFD	O									0
	55464204	1737 Las Rosas Ave	TM 6123	BD-CMBR-22-03081	SFD	O									0
	55464205	1717 Las Rosas Ave	TM 6123	BD-CMBR-22-03091	SFD	O									0
	55465401	1447 Las Rosas Ave	TM 6304	BD-CMBR-22-03092	SFD	O									0
	55465402	1457 Las Rosas Ave	TM 6304	BD-CMBR-22-03093	SFD	O									0
	55465403	1467 Las Rosas Ave	TM 6304	BD-CMBR-22-03094	SFD	O									0
	55465404	1477 Las Rosas Ave	TM 6304	BD-CMBR-22-03095	SFD	O									0
	55465405	1487 Las Rosas Ave	TM 6304	BD-CMBR-22-03096	SFD	O									0
	55465406	1497 Las Rosas Ave	TM 6304	BD-CMBR-22-03097	SFD	O									0
	55611037	536 Pioneer Ln	TM 6329	BD-CMBR-22-03136	SFD	O									0
	55611036	524 Pioneer Ln	TM 6329	BD-CMBR-22-03142	SFD	O									0
	55611035	512 Pioneer Ln	TM 6329	BD-CMBR-22-03144	SFD	O									0
	55611038	548 Pioneer Ln	TM 6329	BD-CMBR-22-03189	SFD	O									0
	55611039	560 Pioneer Ln	TM 6329	BD-CMBR-22-03190	SFD	O									0

	55611040	602 Pioneer Ln	TM 6329	BD-CMBR-22-03191	SFD	O									0
	55611041	614 Pioneer Ln	TM 6329	BD-CMBR-22-03193	SFD	O									0
	55536237	2081 Descanso Ave	TM 6377	BD-CMBR-22-03307	SFD	O									0
	55536240	2021 Descanso Ave	TM 6377	BD-CMBR-22-03374	SFD	O									0
	55536239	2041 Descanso Ave	TM 6377	BD-CMBR-22-03385	SFD	O									0
	5540402003	3026 Keats Ave	TM 6349	BD-CMBR-22-03530	SFD	O									0
	55536241	2001 Descanso Ave	TM 6377	BD-CMBR-22-03895	SFD	O									0
	55611042	626 Pioneer Ln	TM 6329	BD-CMBR-22-04160	SFD	O									0
	55611043	638 Pioneer Ln	TM 6329	BD-CMBR-22-04161	SFD	O									0
	55611044	650 Pioneer Ln	TM 6329	BD-CMBR-22-04162	SFD	O									0
	55611045	662 Pioneer Ln	TM 6329	BD-CMBR-22-04163	SFD	O									0
	5590210330	1522 Richmond Ave	TM 6284	BD-CMBR-22-04183	SFD	O									0
	5590210305	1513 Richmond Ave	TM 6284	BD-CMBR-22-04184	SFD	O									0
	5590210332	1562 Richmond Ave	TM 6284	BD-CMBR-22-04219	SFD	O									0
	55611031	2058 N Ralph Ln	TM 6329	BD-CMBR-22-04303	SFD	O									0
	55611032	2052 N Ralph Ln	TM 6329	BD-CMBR-22-04304	SFD	O									0
	55611029	2065 N Ralph Ln	TM 6329	BD-CMBR-22-04306	SFD	O									0
	55611028	2059 N Ralph Ln	TM 6329	BD-CMBR-22-04308	SFD	O									0
	55611026	2047 N Ralph Ln	TM 6329	BD-CMBR-22-04310	SFD	O									0
	55611033	2046 N Ralph Ln	TM 6329	BD-CMBR-22-04311	SFD	O									0
	55611030	2064 N Ralph Ln	TM 6329	BD-CMBR-22-04312	SFD	O									0
	5590210333	1528 N Stanford Ave	TM 6284	BD-CMBR-22-04372	SFD	O									0
	55942037S	1694 N Shirley Ave	TM 6154	BD-CMBR-22-04374	SFD	O									0
	55611027	2053 N Ralph Ln	TM 6329	BD-CMBR-22-04386	SFD	O									0
	55536244	2040 Descanso Ave	TM 6377	BD-CMBR-22-04387	SFD	O									0
	55536243	2020 Descanso Ave	TM 6377	BD-CMBR-22-04389	SFD	O									0
	55536233	2161 Descanso Ave	TM 6377	BD-CMBR-22-04390	SFD	O									0
	5590210322	1583 Richmond Ave	TM 6284	BD-CMBR-22-04392	SFD	O									0
	55464306	4183 Keats Ave	TM 6123	BD-CMBR-22-04439	SFD	O									0
	55464307	4173 Keats Ave	TM 6123	BD-CMBR-22-04440	SFD	O									0
	55464308	4163 Keats Ave	TM 6123	BD-CMBR-22-04442	SFD	O									0
	55611022	2058 N Hammel Ln	TM 6329	BD-CMBR-22-04603	SFD	O									0
	55611023	2052 N Hammel Ln	TM 6329	BD-CMBR-22-04604	SFD	O									0
	55611024	2046 N Hammel Ln	TM 6329	BD-CMBR-22-04605	SFD	O									0
	55943209S	1529 N Stanford Ave	TM 6284	BD-CMBR-22-04624	SFD	O									0
	55943211S	1509 N Stanford Ave	TM 6284	BD-CMBR-22-04626	SFD	O									0
	55611018	2041 N Hammel Ln	TM 6329	BD-CMBR-22-04735	SFD	O									0
	55611019	2047 N Hammel Ln	TM 6329	BD-CMBR-22-04736	SFD	O									0
	55611020	2053 N Hammel Ln	TM 6329	BD-CMBR-22-04751	SFD	O									0
	55611021	2059 N Hammel Ln	TM 6329	BD-CMBR-22-04752	SFD	O									0
	55464309	1745 San Marino Ave	TM 6123	BD-CMBR-22-04848	SFD	O									0
	55464310	1725 San Marino Ave	TM 6123	BD-CMBR-22-04849	SFD	O									0
	55464311	1695 San Marino Ave	TM 6123	BD-CMBR-22-04850	SFD	O									0
	55464312	1675 San Marino Ave	TM 6123	BD-CMBR-22-04851	SFD	O									0
	55464313	1655 San Marino Ave	TM 6123	BD-CMBR-22-04852	SFD	O									0
	55465205	1438 Junipero Ave	TM 6304	BD-CMBR-22-04864	SFD	O									0
	55611025	2040 N Hammel Ln	TM 6329	BD-CMBR-22-04924	SFD	O									0
	55461014S	3808 Portals Ave	TM 6254	BD-CMBR-22-04944	SFD	O									0
	55461015S	3849 Portals Ave	TM 6254	BD-CMBR-22-04945	SFD	O									0
	55943206S	1573 Richmond Ave	TM 6284	BD-CMBR-22-04947	SFD	O									0
	55943208S	1593 Richmond Ave	TM 6284	BD-CMBR-22-04951	SFD	O									0
	55465101	1598 Junipero Ave	TM 6304	BD-CMBR-22-05026	SFD	O									0
	55465102	1578 Junipero Ave	TM 6304	BD-CMBR-22-05027	SFD	O									0
	55465103	1550 Agua Dulce Ave	TM 6304	BD-CMBR-22-05028	SFD	O									0
	55465104	1530 Agua Dulce Ave	TM 6304	BD-CMBR-22-05029	SFD	O									0
	55465201	1478 Junipero Ave	TM 6304	BD-CMBR-22-05030	SFD	O									0
	55465202	1468 Junipero Ave	TM 6304	BD-CMBR-22-05031	SFD	O									0
	55465204	1448 Junipero Ave	TM 6304	BD-CMBR-22-05033	SFD	O									0
	55465207	1418 Junipero Ave	TM 6304	BD-CMBR-22-05040	SFD	O									0
	5560504166	2220 N Eddy Ave	TM 6292	BD-CMBR-22-05041	SFD	O									0
	55465407	4198 Beverly Ave	TM 6304	BD-CMBR-22-05042	SFD	O									0
	5560504181	2283 N Argyle Ave	TM 6292	BD-CMBR-22-05043	SFD	O									0
	5560504172	2211 N Argyle Ave	TM 6292	BD-CMBR-22-05044	SFD	O									0
	55465408	4188 Beverly Ave	TM 6304	BD-CMBR-22-05045	SFD	O									0
	5560504170	1076 Windmill Ave	TM 6292	BD-CMBR-22-05046	SFD	O									0
	5560504173	2219 N Argyle Ave	TM 6292	BD-CMBR-22-05047	SFD	O									0
	5560504179	2267 N Argyle Ave	TM 6292	BD-CMBR-22-05048	SFD	O									0
	5560504163	2280 N Eddy Ave	TM 6292	BD-CMBR-22-05049	SFD	O									0
	55465409	4178 Beverly Ave	TM 6304	BD-CMBR-22-05050	SFD	O									0
	5560504167	2200 N Eddy Ave	TM 6292	BD-CMBR-22-05052	SFD	O									0
	55465410	4179 San Jose Ave	TM 6304	BD-CMBR-22-05053	SFD	O									0
	55465411	4189 San Jose Ave	TM 6304	BD-CMBR-22-05054	SFD	O									0
	5560504176	2243 N Argyle Ave	TM 6292	BD-CMBR-22-05055	SFD	O									0
	55465412	4199 San Jose Ave	TM 6304	BD-CMBR-22-05056	SFD	O									0
	55605042050	1216 Windmill Ave	TM 6344	BD-CMBR-22-05059	SFD	O									0
	55465413	1567 Las Rosas Ave	TM 6304	BD-CMBR-22-05061	SFD	O									0
	55605042045	2232 N Russell Ave	TM 6344	BD-CMBR-22-05063	SFD	O									0
	55605042058	2203 N Duke Ave	TM 6344	BD-CMBR-22-05064	SFD	O									0
	55605042062	2235 N Duke Ave	TM 6344	BD-CMBR-22-05065	SFD	O									0
	55465414	1577 Las Rosas Ave	TM 6304	BD-CMBR-22-05066	SFD	O									0
	55465415	1587 Las Rosas Ave	TM 6304	BD-CMBR-22-05067	SFD	O									0
	55605042052	1256 Windmill Ave	TM 6344	BD-CMBR-22-05068	SFD	O									0

	55605042056	1346 Windmill Ave	TM 6344	BD-CMBR-22-05081	SFD	O									0
	55943203S	1548 Teague Ave	TM 6284	BD-CMBR-22-05094	SFD	O									0
	55605042041	2264 N Russell Ave	TM 6344	BD-CMBR-22-05095	SFD	O									0
	55605042067	2275 N Duke Ave	TM 6344	BD-CMBR-22-05096	SFD	O									0
	55605042038	2288 N Russell Ave	TM 6344	BD-CMBR-22-05097	SFD	O									0
	55605042044	2240 N Russell Ave	TM 6344	BD-CMBR-22-05098	SFD	O									0
	55605042064	2251 N Duke Ave	TM 6344	BD-CMBR-22-05099	SFD	O									0
	55605042039	2280 N Russell Ave	TM 6344	BD-CMBR-22-05100	SFD	O									0
	55605042048	2208 N Russell Ave	TM 6344	BD-CMBR-22-05101	SFD	O									0
	55605042055	1326 Windmill Ave	TM 6344	BD-CMBR-22-05102	SFD	O									0
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	55605041137	1052 Springtime Ave	TM 6292	BD-CMBR-22-05104	SFD	O									0
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	5560504175	2235 N Argyle Ave	TM 6292	BD-CMBR-22-05107	SFD	O									0
	5560504169	1066 Windmill Ave	TM 6292	BD-CMBR-22-05108	SFD	O									0
	5560504182	2291 N Argyle Ave	TM 6292	BD-CMBR-22-05109	SFD	O									0
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	5560504171	2203 N Argyle Ave	TM 6292	BD-CMBR-22-05112	SFD	O									0
	5560504174	2227 N Argyle Ave	TM 6292	BD-CMBR-22-05113	SFD	O									0
	5560504177	2251 N Argyle Ave	TM 6292	BD-CMBR-22-05114	SFD	O									0
	5560504180	2275 N Argyle Ave	TM 6292	BD-CMBR-22-05115	SFD	O									0
	5560504185	2375 N Argyle Ave	TM 6292	BD-CMBR-22-05116	SFD	O									0
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	5560504191	1055 Fruitwood Ave	TM 6292	BD-CMBR-22-05119	SFD	O									0
	5560504197	1019 Fruitwood Ave	TM 6292	BD-CMBR-22-05120	SFD	O									0
	55605041104	2364 N Phillip Ave	TM 6292	BD-CMBR-22-05121	SFD	O									0
	55605041148	1016 Plum Tree Ave	TM 6292	BD-CMBR-22-05122	SFD	O									0
	5560504188	1073 Fruitwood Ave	TM 6292	BD-CMBR-22-05123	SFD	O									0
	5560504195	1031 Fruitwood Ave	TM 6292	BD-CMBR-22-05124	SFD	O									0
	55605041100	2396 N Phillip Ave	TM 6292	BD-CMBR-22-05127	SFD	O									0
	55605041164	1021 Plum Tree Ave	TM 6292	BD-CMBR-22-05129	SFD	O									0
	55605041172	1048 Fruitwood Ave	TM 6292	BD-CMBR-22-05130	SFD	O									0
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	5560504184	2345 N Argyle Ave	TM 6292	BD-CMBR-22-05145	SFD	O									0
	5560504199	1007 Fruitwood Ave	TM 6292	BD-CMBR-22-05149	SFD	O									0
	55605041139	1053 Springtime Ave	TM 6292	BD-CMBR-22-05151	SFD	O									0
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	55605041177	1078 Fruitwood Ave	TM 6292	BD-CMBR-22-05153	SFD	O									0
	5560504186	1085 Fruitwood Ave	TM 6292	BD-CMBR-22-05154	SFD	O									0
	5560504193	1043 Fruitwood Ave	TM 6292	BD-CMBR-22-05155	SFD	O									0
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	55605041102	2380 N Phillip Ave	TM 6292	BD-CMBR-22-05162	SFD	O									0
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	55605041173	1054 Fruitwood Ave	TM 6292	BD-CMBR-22-05168	SFD	O									0
	5560504192	1049 Fruitwood Ave	TM 6292	BD-CMBR-22-05169	SFD	O									0
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	55605041103	2372 N Phillip Ave	TM 6292	BD-CMBR-22-05171	SFD	O									0
	55605041149	1022 Plum Tree Ave	TM 6292	BD-CMBR-22-05173	SFD	O									0
	55605041168	1024 Fruitwood Ave	TM 6292	BD-CMBR-22-05175	SFD	O									0
	55605041176	1072 Fruitwood Ave	TM 6292	BD-CMBR-22-05176	SFD	O									0
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	5560504194	1037 Fruitwood Ave	TM 6292	BD-CMBR-22-05178	SFD	O									0
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	55605041174	1060 Fruitwood Ave	TM 6292	BD-CMBR-22-05181	SFD	O									0
	5560504183	2315 N Argyle Ave	TM 6292	BD-CMBR-22-05183	SFD	O									0
	5560504190	1061 Fruitwood Ave	TM 6292	BD-CMBR-22-05184	SFD	O									0
	5560504178	2259 N Argyle Ave	TM 6292	BD-CMBR-22-05185	SFD	O									0
	5560504198	1013 Fruitwood Ave	TM 6292	BD-CMBR-22-05186	SFD	O									0
	55605041138	1059 Springtime Ave	TM 6292	BD-CMBR-22-05187	SFD	O									0
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	55605041170	1036 Fruitwood Ave	TM 6292	BD-CMBR-22-05190	SFD	O									0
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	57124310S	4280 San Gabriel Ave	TM 6166	BD-CMBR-22-05196	SFD	O									0
	57124213S	4341 San Gabriel Ave	TM 6166	BD-CMBR-22-05197	SFD	O									0
	57124403S	2649 La Mirada Ave	TM 6166	BD-CMBR-22-05198	SFD	O									0
	57124109S	2622 Highland Ave	TM 6166	BD-CMBR-22-05201	SFD	O									0
	55605042094	2233 N Russell Ave	TM 6344	BD-CMBR-22-05202	SFD	O									0
	57124203S	4241 San Gabriel Ave	TM 6166	BD-CMBR-22-05203	SFD	O									0
	57124209S	4301 San Gabriel Ave	TM 6166	BD-CMBR-22-05204	SFD	O									0
	57124306S	4320 San Gabriel Ave	TM 6166	BD-CMBR-22-05205	SFD	O									0
	57124302S	4360 San Gabriel Ave	TM 6166	BD-CMBR-22-05207	SFD	O									0
	57124108S	2642 Highland Ave	TM 6166	BD-CMBR-22-05208	SFD	O									0
	57124315S	4230 San Gabriel Ave	TM 6166	BD-CMBR-22-05209	SFD	O									0
	57124204S	4251 San Gabriel Ave	TM 6166	BD-CMBR-22-05210	SFD	O									0
	49137002	18 N Villa Ave		BD-CMBR-22-05214	SFD	O									0

	49137001	22 N Villa Ave		BD-CMBR-22-05217	SFD	O									0
	57124208S	4291 San Gabriel Ave	TM 6166	BD-CMBR-22-05221	SFD	O									0
	57124307S	4310 San Gabriel Ave	TM 6166	BD-CMBR-22-05222	SFD	O									0
	57124104S	2722 Highland Ave	TM 6166	BD-CMBR-22-05224	SFD	O									0
	57124311S	4270 San Gabriel Ave	TM 6166	BD-CMBR-22-05225	SFD	O									0
	57124212S	4331 San Gabriel Ave	TM 6166	BD-CMBR-22-05226	SFD	O									0
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	57124312S	4260 San Gabriel Ave	TM 6166	BD-CMBR-22-05237	SFD	O									0
	57124207S	4281 San Gabriel Ave	TM 6166	BD-CMBR-22-05239	SFD	O									0
	57124313S	4250 San Gabriel Ave	TM 6166	BD-CMBR-22-05240	SFD	O									0
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	55943306S	1508 N Stanford Ave	TM 6284	BD-CMBR-22-05243	SFD	O									0
	57124405S	2689 La Mirada Ave	TM 6166	BD-CMBR-22-05244	SFD	O									0
	57124105S	2702 Highland Ave	TM 6166	BD-CMBR-22-05245	SFD	O									0
	57124316S	4220 San Gabriel Ave	TM 6166	BD-CMBR-22-05246	SFD	O									0
	57124205S	4261 San Gabriel Ave	TM 6166	BD-CMBR-22-05247	SFD	O									0
	57124308S	4300 San Gabriel Ave	TM 6166	BD-CMBR-22-05248	SFD	O									0
	57124214S	4351 San Gabriel Ave	TM 6166	BD-CMBR-22-05250	SFD	O									0
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	57124401S	2609 La Mirada Ave	TM 6166	BD-CMBR-22-05252	SFD	O									0
	57124103S	2742 Highland Ave	TM 6166	BD-CMBR-22-05253	SFD	O									0
	57124202S	4231 San Gabriel Ave	TM 6166	BD-CMBR-22-05254	SFD	O									0
	57124215S	4361 San Gabriel Ave	TM 6166	BD-CMBR-22-05256	SFD	O									0
	57124304S	4340 San Gabriel Ave	TM 6166	BD-CMBR-22-05257	SFD	O									0
	57124107S	2662 Highland Ave	TM 6166	BD-CMBR-22-05258	SFD	O									0
	57124314S	4240 San Gabriel Ave	TM 6166	BD-CMBR-22-05259	SFD	O									0
	57124206S	4271 San Gabriel Ave	TM 6166	BD-CMBR-22-05260	SFD	O									0
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	57124211S	4321 San Gabriel Ave	TM 6166	BD-CMBR-22-05262	SFD	O									0
	57124402S	2629 La Mirada Ave	TM 6166	BD-CMBR-22-05263	SFD	O									0
	55605042005	1217 Fruitwood Ave	TM 6344	BD-CMBR-22-05264	SFD	O									0
	55605042074	2258 N Duke Ave	TM 6344	BD-CMBR-22-05265	SFD	O									0
	55605042077	1319 Summerset Ave	TM 6344	BD-CMBR-22-05266	SFD	O									0
	55605042082	2220 N Duke Ave	TM 6344	BD-CMBR-22-05267	SFD	O									0
	55605042095	1234 Summerset Ave	TM 6344	BD-CMBR-22-05268	SFD	O									0
	55605042087	1305 Windmill Ave	TM 6344	BD-CMBR-22-05269	SFD	O									0
	55605042009	1257 Fruitwood Ave	TM 6344	BD-CMBR-22-05270	SFD	O									0
	55605042033	2273 N Russell Ave	TM 6344	BD-CMBR-22-05271	SFD	O									0
	55605042027	2274 N Elm Ave	TM 6344	BD-CMBR-22-05272	SFD	O									0
	55605042070	1318 Springtime Ave	TM 6344	BD-CMBR-22-05273	SFD	O									0
	55605042101	1328 Summerset Ave	TM 6344	BD-CMBR-22-05274	SFD	O									0
	55611001	2041 N Rogers Ln	TM 6329	BD-CMBR-22-05276	SFD	O									0
	55611002	2045 N Rogers Ln	TM 6329	BD-CMBR-22-05277	SFD	O									0
	55611003	2049 N Rogers Ln	TM 6329	BD-CMBR-22-05278	SFD	O									0
	55611004	2053 N Rogers Ln	TM 6329	BD-CMBR-22-05279	SFD	O									0
	55611005	2057 N Rogers Ln	TM 6329	BD-CMBR-22-05280	SFD	O									0
	55611006	2056 N Rogers Ln	TM 6329	BD-CMBR-22-05281	SFD	O									0
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	55611008	2048 N Rogers Ln	TM 6329	BD-CMBR-22-05283	SFD	O									0
	55611009	2044 N Rogers Ln	TM 6329	BD-CMBR-22-05284	SFD	O									0
	55611010	2043 N Inverness Ln	TM 6329	BD-CMBR-22-05285	SFD	O									0
	55611011	2049 N Inverness Ln	TM 6329	BD-CMBR-22-05286	SFD	O									0
	55611012	2055 N Inverness Ln	TM 6329	BD-CMBR-22-05287	SFD	O									0
	55611013	2061 N Inverness Ln	TM 6329	BD-CMBR-22-05288	SFD	O									0
	55611014	2060 N Inverness Ln	TM 6329	BD-CMBR-22-05289	SFD	O									0
	55611015	2054 N Inverness Ln	TM 6329	BD-CMBR-22-05290	SFD	O									0
	55611016	2048 N Inverness Ln	TM 6329	BD-CMBR-22-05291	SFD	O									0
	55611017	2042 N Inverness Ln	TM 6329	BD-CMBR-22-05292	SFD	O									0
	55611046	712 Pioneer Ln	TM 6329	BD-CMBR-22-05293	SFD	O									0
	55612001	713 Farmhouse Ln	TM 6329	BD-CMBR-22-05294	SFD	O									0
	55612038	2020 N Rogers Ln	TM 6329	BD-CMBR-22-05295	SFD	O									0
	55612039	2016 N Rogers Ln	TM 6329	BD-CMBR-22-05296	SFD	O									0
	55612040	2012 N Rogers Ln	TM 6329	BD-CMBR-22-05297	SFD	O									0
	55612041	2008 N Rogers Ln	TM 6329	BD-CMBR-22-05298	SFD	O									0
	55943201S	1578 Teague Ave	TM 6284	BD-CMBR-22-05299	SFD	O									0
	55612042	2009 N Rogers Ln	TM 6329	BD-CMBR-22-05301	SFD	O									0
	55605042093	2225 N Russell Ave	TM 6344	BD-CMBR-22-05302	SFD	O									0
	55612043	2013 N Rogers Ln	TM 6329	BD-CMBR-22-05303	SFD	O									0
	55612044	2017 N Rogers Ln	TM 6329	BD-CMBR-22-05304	SFD	O									0
	55612045	2021 N Rogers Ln	TM 6329	BD-CMBR-22-05305	SFD	O									0
	55612046	2025 N Rogers Ln	TM 6329	BD-CMBR-22-05306	SFD	O									0
	55605042084	1329 Windmill Ave	TM 6344	BD-CMBR-22-05307	SFD	O									0
	55612047	2029 N Rogers Ln	TM 6329	BD-CMBR-22-05308	SFD	O									0
	55605042012	1287 Fruitwood Ave	TM 6344	BD-CMBR-22-05310	SFD	O									0
	55605042034	2281 N Russell Ave	TM 6344	BD-CMBR-22-05311	SFD	O									0
	55605042026	2282 N Elm Ave	TM 6344	BD-CMBR-22-05312	SFD	O									0

	55605042069	1310 Springtime Ave	TM 6344	BD-CMBR-22-05313	SFD	O									0
	55605042100	1320 Summerset Ave	TM 6344	BD-CMBR-22-05315	SFD	O									0
	55605042085	1321 Windmill Ave	TM 6344	BD-CMBR-22-05317	SFD	O									0
	55605042088	1271 Windmill Ave	TM 6344	BD-CMBR-22-05318	SFD	O									0
	55605042008	1247 Fruitwood Ave	TM 6344	BD-CMBR-22-05319	SFD	O									0
	55611048	2033 N Rogers Ln	TM 6329	BD-CMBR-22-05320	SFD	O									0
	55611047	2037 N Rogers Ln	TM 6329	BD-CMBR-22-05321	SFD	O									0
	55605042031	2257 N Russell Ave	TM 6344	BD-CMBR-22-05322	SFD	O									0
	55605042078	1311 Summerset Ave	TM 6344	BD-CMBR-22-05324	SFD	O									0
	30942417	3270 La Mirada Ave	TM 6023	BD-CMBR-22-05325	SFD	O									0
	55605042090	1235 Windmill Ave	TM 6344	BD-CMBR-22-05326	SFD	O									0
	55605042025	2290 N Elm Ave	TM 6344	BD-CMBR-22-05329	SFD	O									0
	55605042072	2272 N Duke Ave	TM 6344	BD-CMBR-22-05330	SFD	O									0
	55605042080	2236 N Duke Ave	TM 6344	BD-CMBR-22-05331	SFD	O									0
	55605042089	1253 Windmill Ave	TM 6344	BD-CMBR-22-05332	SFD	O									0
	55605042006	1227 Fruitwood Ave	TM 6344	BD-CMBR-22-05333	SFD	O									0
	55605042036	2297 N Russell Ave	TM 6344	BD-CMBR-22-05335	SFD	O									0
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	55605042079	1303 Summerset Ave	TM 6344	BD-CMBR-22-05339	SFD	O									0
	55605042099	1312 Summerset Ave	TM 6344	BD-CMBR-22-05340	SFD	O									0
	55605042091	2209 N Russell Ave	TM 6344	BD-CMBR-22-05342	SFD	O									0
	55605042010	1267 Fruitwood Ave	TM 6344	BD-CMBR-22-05343	SFD	O									0
	55605042076	1327 Summerset Ave	TM 6344	BD-CMBR-22-05345	SFD	O									0
	55605042097	1270 Summerset Ave	TM 6344	BD-CMBR-22-05346	SFD	O									0
	55605042004	1207 Fruitwood Ave	TM 6344	BD-CMBR-22-05347	SFD	O									0
	55605042035	2289 N Russell Ave	TM 6344	BD-CMBR-22-05348	SFD	O									0
	31030016S02	4151 Flint AVE	TM 6208	BD-CMBR-22-05349	SFD	O									0
	55605042030	2250 N Elm Ave	TM 6344	BD-CMBR-22-05350	SFD	O									0
	55605042068	1302 Springtime Ave	TM 6344	BD-CMBR-22-05351	SFD	O									0
	55605042075	2250 N Duke Ave	TM 6344	BD-CMBR-22-05352	SFD	O									0
	31030016S33	4132 Flint Ave	TM 6208	BD-CMBR-22-05354	SFD	O									0
	55605042083	2212 N Duke Ave	TM 6344	BD-CMBR-22-05355	SFD	O									0
	31030016S34	4142 Flint Ave	TM 6208	BD-CMBR-22-05356	SFD	O									0
	55605042007	1237 Fruitwood Ave	TM 6344	BD-CMBR-22-05357	SFD	O									0
	55605042032	2265 N Russell Ave	TM 6344	BD-CMBR-22-05359	SFD	O									0
	55463401	4176 Poe Ave	TM 6123	BD-CMBR-22-05360	SFD	O									0
	55605042029	2258 N Elm Ave	TM 6344	BD-CMBR-22-05361	SFD	O									0
	55605042071	1326 Springtime Ave	TM 6344	BD-CMBR-22-05362	SFD	O									0
	55605042092	2217 N Russell Ave	TM 6344	BD-CMBR-22-05363	SFD	O									0
	55605042011	1277 Fruitwood Ave	TM 6344	BD-CMBR-22-05364	SFD	O									0
	55605042073	2266 N Duke Ave	TM 6344	BD-CMBR-22-05366	SFD	O									0
	55463402	4186 Poe Ave	TM 6123	BD-CMBR-22-05367	SFD	O									0
	55605042081	2228 N Duke Ave	TM 6344	BD-CMBR-22-05368	SFD	O									0
	55854002	3252 Vermont Ave	TM 6389	BD-CMBR-22-05369	SFD	O									0
	55605042098	1304 Summerset Ave	TM 6344	BD-CMBR-22-05370	SFD	O									0
	55605042086	1313 Windmill Ave	TM 6344	BD-CMBR-22-05371	SFD	O									0
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	55605042042	2256 N Russell Ave	TM 6344	BD-CMBR-22-05373	SFD	O									0
	55605042053	1276 Windmill Ave	TM 6344	BD-CMBR-22-05374	SFD	O									0
	55605042061	2227 N Duke Ave	TM 6344	BD-CMBR-22-05376	SFD	O									0
	55605042037	2296 N Russell Ave	TM 6344	BD-CMBR-22-05377	SFD	O									0
	55605042051	1236 Windmill Ave	TM 6344	BD-CMBR-22-05379	SFD	O									0
	55605042057	1366 Windmill Ave	TM 6344	BD-CMBR-22-05380	SFD	O									0
	30943414	3320 La Mirada Ave	TM 6023	BD-CMBR-22-05381	SFD	O									0
	55605042065	2259 N Duke Ave	TM 6344	BD-CMBR-22-05382	SFD	O									0
	55605042063	2243 N Duke Ave	TM 6344	BD-CMBR-22-05383	SFD	O									0
	55463403	1977 Las Rosas Ave	TM 6123	BD-CMBR-22-05384	SFD	O									0
	55605042040	2272 N Russell Ave	TM 6344	BD-CMBR-22-05385	SFD	O									0
	55463404	1957 Las Rosas Ave	TM 6123	BD-CMBR-22-05386	SFD	O									0
	55463405	1937 Las Rosas Ave	TM 6123	BD-CMBR-22-05387	SFD	O									0
	55463406	1917 Las Rosas Ave	TM 6123	BD-CMBR-22-05388	SFD	O									0
	31030016S35	4152 Flint Ave	TM 6208	BD-CMBR-22-05389	SFD	O									0
	55463407	1887 Las Rosas Ave	TM 6123	BD-CMBR-22-05393	SFD	O									0
	31030016S36	4162 Flint Ave	TM 6208	BD-CMBR-22-05394	SFD	O									0
	55463408	1867 Las Rosas Ave	TM 6123	BD-CMBR-22-05395	SFD	O									0
	31030016S04	4131 Flint AVE	TM 6208	BD-CMBR-22-05396	SFD	O									0
	55463409	1847 Las Rosas Ave	TM 6123	BD-CMBR-22-05397	SFD	O									0
	55605042047	2216 N Russell Ave	TM 6344	BD-CMBR-22-05401	SFD	O									0
	55605042059	2211 N Duke Ave	TM 6344	BD-CMBR-22-05402	SFD	O									0
	55605042043	2248 N Russell Ave	TM 6344	BD-CMBR-22-05403	SFD	O									0
	55605042049	1206 Windmill Ave	TM 6344	BD-CMBR-22-05404	SFD	O									0
	30942210	4288 Buckingham Ave	TM 6023	BD-CMBR-22-05408	SFD	O									0
	55605042054	1306 Windmill Ave	TM 6344	BD-CMBR-22-05410	SFD	O									0
	30942109	4263 Buckingham Ave	TM 6023	BD-CMBR-22-05411	SFD	O									0
	30942205	4248 Buckingham Ave	TM 6023	BD-CMBR-22-05412	SFD	O									0
	30942114	4223 Buckingham Ave	TM 6023	BD-CMBR-22-05413	SFD	O									0
	55605042066	2267 N Duke Ave	TM 6344	BD-CMBR-22-05414	SFD	O									0
	55605041171	1042 Fruitwood Ave	TM 6292	BD-CMBR-22-05415	SFD	O									0
	30942118	3210 Frontera Ave	TM 6023	BD-CMBR-22-05416	SFD	O									0
	30942126	3290 Frontera Ave	TM 6023	BD-CMBR-22-05417	SFD	O									0
	30942211	4217 Hampton Way	TM 6023	BD-CMBR-22-05418	SFD	O									0
	30942306	4258 Hampton Way	TM 6023	BD-CMBR-22-05419	SFD	O									0

	30942107	4279 Buckingham Ave	TM 6023	BD-CMBR-22-05420	SFD	O									0
	30942208	4272 Buckingham Ave	TM 6023	BD-CMBR-22-05422	SFD	O									0
	30942112	4239 Buckingham Ave	TM 6023	BD-CMBR-22-05423	SFD	O									0
	30942201	4216 Buckingham Ave	TM 6023	BD-CMBR-22-05424	SFD	O									0
	30942120	3230 Frontera Ave	TM 6023	BD-CMBR-22-05425	SFD	O									0
	30942123	3260 Frontera Ave	TM 6023	BD-CMBR-22-05427	SFD	O									0
	30942303	4234 Hampton Way	TM 6023	BD-CMBR-22-05428	SFD	O									0
	30942214	4241 Hampton Way	TM 6023	BD-CMBR-22-05429	SFD	O									0
	30942217	4265 Hampton Way	TM 6023	BD-CMBR-22-05431	SFD	O									0
	55605042002	2338 N Russell Ave	TM 6344	BD-CMBR-22-05432	SFD	O									0
	30942108	4271 Buckingham Ave	TM 6023	BD-CMBR-22-05433	SFD	O									0
	30942111	4247 Buckingham Ave	TM 6023	BD-CMBR-22-05434	SFD	O									0
	30942202	4224 Buckingham Ave	TM 6023	BD-CMBR-22-05435	SFD	O									0
	30942122	3250 Frontera Ave	TM 6023	BD-CMBR-22-05437	SFD	O									0
	30942124	3270 Frontera Ave	TM 6023	BD-CMBR-22-05438	SFD	O									0
	30942302	4226 Hampton Way	TM 6023	BD-CMBR-22-05439	SFD	O									0
	30942216	4257 Hampton Way	TM 6023	BD-CMBR-22-05440	SFD	O									0
	55605042017	1228 Fruitwood Ave	TM 6344	BD-CMBR-22-05441	SFD	O									0
	30942209	4280 Buckingham Ave	TM 6023	BD-CMBR-22-05442	SFD	O									0
	30942206	4256 Buckingham Ave	TM 6023	BD-CMBR-22-05443	SFD	O									0
	30942116	4207 Buckingham Ave	TM 6023	BD-CMBR-22-05444	SFD	O									0
	30942119	3220 Frontera Ave	TM 6023	BD-CMBR-22-05445	SFD	O									0
	30942213	4233 Hampton Way	TM 6023	BD-CMBR-22-05446	SFD	O									0
	55605042014	1258 Fruitwood Ave	TM 6344	BD-CMBR-22-05447	SFD	O									0
	30942305	4250 Hampton Way	TM 6023	BD-CMBR-22-05448	SFD	O									0
	30942218	4273 Hampton Way	TM 6023	BD-CMBR-22-05449	SFD	O									0
	30942106	4287 Buckingham Ave	TM 6023	BD-CMBR-22-05450	SFD	O									0
	30942207	4264 Buckingham Ave	TM 6023	BD-CMBR-22-05451	SFD	O									0
	30942113	4231 Buckingham Ave	TM 6023	BD-CMBR-22-05452	SFD	O									0
	30942121	3240 Frontera Ave	TM 6023	BD-CMBR-22-05453	SFD	O									0
	55605042020	1229 Plum Tree Ave	TM 6344	BD-CMBR-22-05454	SFD	O									0
	30942215	4249 Hampton Way	TM 6023	BD-CMBR-22-05455	SFD	O									0
	30942304	4242 Hampton Way	TM 6023	BD-CMBR-22-05456	SFD	O									0
	30942110	4255 Buckingham Ave	TM 6023	BD-CMBR-22-05457	SFD	O									0
	30942204	4240 Buckingham Ave	TM 6023	BD-CMBR-22-05458	SFD	O									0
	30942115	4215 Buckingham Ave	TM 6023	BD-CMBR-22-05459	SFD	O									0
	30942117	3200 Frontera Ave	TM 6023	BD-CMBR-22-05460	SFD	O									0
	30942125	3280 Frontera Ave	TM 6023	BD-CMBR-22-05461	SFD	O									0
	30942212	4225 Hampton Way	TM 6023	BD-CMBR-22-05462	SFD	O									0
	30942301	4218 Hampton Way	TM 6023	BD-CMBR-22-05463	SFD	O									0
	55605042022	1249 Plum Tree Ave	TM 6344	BD-CMBR-22-05467	SFD	O									0
	55605042013	1268 Fruitwood Ave	TM 6344	BD-CMBR-22-05468	SFD	O									0
	55605042019	1219 Plum Tree Ave	TM 6344	BD-CMBR-22-05469	SFD	O									0
	55605042003	2368 N Russell Ave	TM 6344	BD-CMBR-22-05470	SFD	O									0
	55605042016	1238 Fruitwood Ave	TM 6344	BD-CMBR-22-05471	SFD	O									0
	55463410	1827 Las Rosas Ave	TM 6123	BD-CMBR-22-05472	SFD	O									0
	55605042023	1259 Plum Tree Ave	TM 6344	BD-CMBR-22-05473	SFD	O									0
	55605042015	1248 Fruitwood Ave	TM 6344	BD-CMBR-22-05474	SFD	O									0
	55463411	1807 Las Rosas Ave	TM 6123	BD-CMBR-22-05475	SFD	O									0
	55605042024	1269 Plum Tree Ave	TM 6344	BD-CMBR-22-05476	SFD	O									0
	55464401	1654 San Marino Ave	TM 6123	BD-CMBR-22-05477	SFD	O									0
	55605042001	2308 N Russell Ave	TM 6344	BD-CMBR-22-05478	SFD	O									0
	55605042018	1218 Fruitwood Ave	TM 6344	BD-CMBR-22-05479	SFD	O									0
	31030016S05	4121 Flint AVE	TM 6208	BD-CMBR-22-05480	SFD	O									0
	55605042021	1239 Plum Tree Ave	TM 6344	BD-CMBR-22-05481	SFD	O									0
	55464402	1674 San Marino Ave	TM 6123	BD-CMBR-22-05482	SFD	O									0
	55464403	1694 San Marino Ave	TM 6123	BD-CMBR-22-05486	SFD	O									0
	55464404	1724 San Marino Ave	TM 6123	BD-CMBR-22-05487	SFD	O									0
	55464405	1744 San Marino Ave	TM 6123	BD-CMBR-22-05488	SFD	O									0
	31030016S07	3512 San Marino Ave	TM 6208	BD-CMBR-22-05490	SFD	O									0
	30942507	3271 La Mirada Ave	TM 6023	BD-CMBR-22-05491	SFD	O									0
	55943106S	1494 N Purdue Ave	TM 6284	BD-CMBR-22-05493	SFD	O									0
	30944206	3351 La Mirada Ave	TM 6023	BD-CMBR-22-05494	SFD	O									0
	55943107S	1484 N Purdue Ave	TM 6284	BD-CMBR-22-05495	SFD	O									0
	30944103	4423 Mecca Ave	TM 6023	BD-CMBR-22-05496	SFD	O									0
	30944226	4446 Mecca Ave	TM 6023	BD-CMBR-22-05497	SFD	O									0
	30943411	3350 La Mirada Ave	TM 6023	BD-CMBR-22-05498	SFD	O									0
	30944231	4416 Mecca Ave	TM 6023	BD-CMBR-22-05499	SFD	O									0
	30942414	3250 La Mirada Ave	TM 6023	BD-CMBR-22-05500	SFD	O									0
	30944203	3321 La Mirada Ave	TM 6023	BD-CMBR-22-05501	SFD	O									0
	30943408	4337 Sussex Ave	TM 6023	BD-CMBR-22-05502	SFD	O									0
	30944228	4434 Mecca Ave	TM 6023	BD-CMBR-22-05503	SFD	O									0
	30944106	4441 Mecca Ave	TM 6023	BD-CMBR-22-05504	SFD	O									0
	30943412	3340 La Mirada Ave	TM 6023	BD-CMBR-22-05505	SFD	O									0
	30944105	4435 Mecca Ave	TM 6023	BD-CMBR-22-05506	SFD	O									0
	55610072	2002 N Perry Ln	TM 6328	BD-CMBR-22-05509	SFD	O									0
	55610073	2008 N Perry Ln	TM 6328	BD-CMBR-22-05510	SFD	O									0
	55610074	2014 N Perry Ln	TM 6328	BD-CMBR-22-05511	SFD	O									0
	55610075	2020 N Perry Ln	TM 6328	BD-CMBR-22-05512	SFD	O									0
	55610076	2026 N Perry Ln	TM 6328	BD-CMBR-22-05513	SFD	O									0
	55943109S	1464 N Purdue Ave	TM 6284	BD-CMBR-22-05515	SFD	O									0
	55943110S	1454 N Purdue Ave	TM 6284	BD-CMBR-22-05516	SFD	O									0

	30944225	4452 Mecca Ave	TM 6023	BD-CMBR-22-05517	SFD	O									0
	30942508	3281 La Mirada Ave	TM 6023	BD-CMBR-22-05518	SFD	O									0
	30942418	3290 La Mirada Ave	TM 6023	BD-CMBR-22-05519	SFD	O									0
	55943323S	1455 N Purdue Ave	TM 6284	BD-CMBR-22-05520	SFD	O									0
	30944202	3311 La Mirada Ave	TM 6023	BD-CMBR-22-05521	SFD	O									0
	55943324S	1465 N Purdue Ave	TM 6284	BD-CMBR-22-05522	SFD	O									0
	30944233	3322 Amistad Ave	TM 6023	BD-CMBR-22-05523	SFD	O									0
	30942506	3261 La Mirada Ave	TM 6023	BD-CMBR-22-05524	SFD	O									0
	55605042096	1252 Summerset Ave	TM 6344	BD-CMBR-22-05525	SFD	O									0
	30943415	3310 La Mirada Ave	TM 6023	BD-CMBR-22-05526	SFD	O									0
	30944205	3341 La Mirada Ave	TM 6023	BD-CMBR-22-05529	SFD	O									0
	30943409	4357 Sussex Ave	TM 6023	BD-CMBR-22-05530	SFD	O									0
	55467014	4184 Hoblitt Ave	TM 6404	BD-CMBR-22-05531	SFD	O									0
	30944235	3302 Amistad Ave	TM 6023	BD-CMBR-22-05532	SFD	O									0
	30944229	4428 Mecca Ave	TM 6023	BD-CMBR-22-05534	SFD	O									0
	30942416	3260 La Mirada Ave	TM 6023	BD-CMBR-22-05535	SFD	O									0
	30944201	3301 La Mirada Ave	TM 6023	BD-CMBR-22-05537	SFD	O									0
	55467017	4154 Hoblitt Ave	TM 6404	BD-CMBR-22-05538	SFD	O									0
	30944230	4422 Mecca Ave	TM 6023	BD-CMBR-22-05539	SFD	O									0
	55467018	4144 Hoblitt Ave	TM 6404	BD-CMBR-22-05540	SFD	O									0
	30944107	4447 Mecca Ave	TM 6023	BD-CMBR-22-05541	SFD	O									0
	30942505	3251 La Mirada Ave	TM 6023	BD-CMBR-22-05543	SFD	O									0
	55467020	4124 Hoblitt Ave	TM 6404	BD-CMBR-22-05544	SFD	O									0
	30943413	3330 La Mirada Ave	TM 6023	BD-CMBR-22-05545	SFD	O									0
	30944207	3361 La Mirada Ave	TM 6023	BD-CMBR-22-05546	SFD	O									0
	30943407	4317 Sussex Ave	TM 6023	BD-CMBR-22-05547	SFD	O									0
	55467021	4114 Hoblitt Ave	TM 6404	BD-CMBR-22-05548	SFD	O									0
	30944102	4417 Mecca Ave	TM 6023	BD-CMBR-22-05549	SFD	O									0
	55467023	4094 Hoblitt Ave	TM 6404	BD-CMBR-22-05551	SFD	O									0
	55467024	4084 Hoblitt Ave	TM 6404	BD-CMBR-22-05552	SFD	O									0
	30944227	4440 Mecca Ave	TM 6023	BD-CMBR-22-05553	SFD	O									0
	30942509	3291 La Mirada Ave	TM 6023	BD-CMBR-22-05555	SFD	O									0
	55467025	1385 Junipero Ave	TM 6404	BD-CMBR-22-05556	SFD	O									0
	30942417	3280 La Mirada Ave	TM 6023	BD-CMBR-22-05557	SFD	O									0
	30944204	3331 La Mirada Ave	TM 6023	BD-CMBR-22-05558	SFD	O									0
	30943410	3360 La Mirada Ave	TM 6023	BD-CMBR-22-05559	SFD	O									0
	30944234	3312 Amistad Ave	TM 6023	BD-CMBR-22-05560	SFD	O									0
	30944232	4410 Mecca Ave	TM 6023	BD-CMBR-22-05561	SFD	O									0
	30944101	4411 Mecca Ave	TM 6023	BD-CMBR-22-05562	SFD	O									0
	30944104	4429 Mecca Ave	TM 6023	BD-CMBR-22-05563	SFD	O									0
	30944224	4458 Mecca Ave	TM 6023	BD-CMBR-22-05564	SFD	O									0
	55942003S	1697 Teague Ave	TM 6154	BD-CMBR-22-05591	SFD	O									0
	55941024S	1775 N Renn Ave	TM 6154	BD-CMBR-22-05594	SFD	O									0
	55941022S	1795 N Renn Ave	TM 6154	BD-CMBR-22-05596	SFD	O									0
	55942020S	1661 N Shirley Ave	TM 6154	BD-CMBR-22-05599	SFD	O									0
	55943101S	1508 Teague Ave	TM 6284	BD-CMBR-22-05600	SFD	O									0
	55609007	2131 N Rogers Ln	TM 6050	BD-CMBR-22-05605	SFD	O									0
	55536235	2121 Descanso Ave	TM 6377	BD-CMBR-22-05613	SFD	O									0
	55536242	2000 Descanso Ave	TM 6377	BD-CMBR-22-05614	SFD	O									0
	55536246	2080 Descanso Ave	TM 6377	BD-CMBR-22-05615	SFD	O									0
	55536247	2100 Descanso Ave	TM 6377	BD-CMBR-22-05616	SFD	O									0
	55536248	2120 Descanso Ave	TM 6377	BD-CMBR-22-05617	SFD	O									0
	55536249	2140 Descanso Ave	TM 6377	BD-CMBR-22-05618	SFD	O									0
	55944032	2976 Trenton Ave	TM 6339	BD-CMBR-22-05619	SFD	O									0
	55944033	2966 Trenton Ave	TM 6339	BD-CMBR-22-05620	SFD	O									0
	55944034	2956 Trenton Ave	TM 6339	BD-CMBR-22-05621	SFD	O									0
	55944035	2946 Trenton Ave	TM 6339	BD-CMBR-22-05622	SFD	O									0
	55944036	2936 Trenton Ave	TM 6339	BD-CMBR-22-05623	SFD	O									0
	55944037	2926 Trenton Ave	TM 6339	BD-CMBR-22-05624	SFD	O									0
	55944038	2916 Trenton Ave	TM 6339	BD-CMBR-22-05625	SFD	O									0
	55944043	2959 Teague Ave	TM 6339	BD-CMBR-22-05626	SFD	O									0
	55944044	2969 Teague Ave	TM 6339	BD-CMBR-22-05627	SFD	O									0
	55944045	2979 Teague Ave	TM 6339	BD-CMBR-22-05628	SFD	O									0
	55944046	1607 N Megan Ave	TM 6339	BD-CMBR-22-05629	SFD	O									0
	55944047	1617 N Megan Ave	TM 6339	BD-CMBR-22-05630	SFD	O									0
	55944048	1627 N Megan Ave	TM 6339	BD-CMBR-22-05631	SFD	O									0
	55944049	1637 N Megan Ave	TM 6339	BD-CMBR-22-05632	SFD	O									0
	55944050	1647 N Megan Ave	TM 6339	BD-CMBR-22-05633	SFD	O									0
	55855002	1687 N Twinberry Ave	TM 6389	BD-CMBR-22-05634	SFD	O									0
	55855003	1677 N Twinberry Ave	TM 6389	BD-CMBR-22-05636	SFD	O									0
	55855004	1667 N Twinberry Ave	TM 6389	BD-CMBR-22-05637	SFD	O									0
	55855005	1657 N Twinberry Ave	TM 6389	BD-CMBR-22-05638	SFD	O									0
	55854001	1647 N Twinberry Ave	TM 6389	BD-CMBR-22-05639	SFD	O									0
	55854003	3242 Vermont Ave	TM 6389	BD-CMBR-22-05640	SFD	O									0
	55854004	1669 N Blackwood Ave	TM 6389	BD-CMBR-22-05641	SFD	O									0
	55854005	1663 N Blackwood Ave	TM 6389	BD-CMBR-22-05642	SFD	O									0
	55854006	1657 N Blackwood Ave	TM 6389	BD-CMBR-22-05643	SFD	O									0
	55854007	1651 N Blackwood Ave	TM 6389	BD-CMBR-22-05644	SFD	O									0
	55854008	1645 N Blackwood Ave	TM 6389	BD-CMBR-22-05645	SFD	O									0
	55854009	1639 N Blackwood Ave	TM 6389	BD-CMBR-22-05646	SFD	O									0
	55854010	1633 N Blackwood Ave	TM 6389	BD-CMBR-22-05647	SFD	O									0
	55854011	1632 N Blackwood Ave	TM 6389	BD-CMBR-22-05648	SFD	O									0

	55854012	1638 N Blackwood Ave	TM 6389	BD-CMBR-22-05649	SFD	O									0
	55854013	1644 N Blackwood Ave	TM 6389	BD-CMBR-22-05650	SFD	O									0
	55854014	1650 N Blackwood Ave	TM 6389	BD-CMBR-22-05651	SFD	O									0
	55854015	1656 N Blackwood Ave	TM 6389	BD-CMBR-22-05652	SFD	O									0
	55854016	1662 N Blackwood Ave	TM 6389	BD-CMBR-22-05653	SFD	O									0
	55855019	1668 N Blackwood Ave	TM 6389	BD-CMBR-22-05654	SFD	O									0
	55855018	1674 N Blackwood Ave	TM 6389	BD-CMBR-22-05655	SFD	O									0
	55855017	1680 N Blackwood Ave	TM 6389	BD-CMBR-22-05656	SFD	O									0
	55855016	1686 N Blackwood Ave	TM 6389	BD-CMBR-22-05657	SFD	O									0
	55855015	1692 N Blackwood Ave	TM 6389	BD-CMBR-23-00002	SFD	O									0
	55855014	1698 N Blackwood Ave	TM 6389	BD-CMBR-23-00004	SFD	O									0
	55855020	1699 N Blackwood Ave	TM 6389	BD-CMBR-23-00005	SFD	O									0
	55855021	1693 N Blackwood Ave	TM 6389	BD-CMBR-23-00006	SFD	O									0
	55855022	1687 N Blackwood Ave	TM 6389	BD-CMBR-23-00007	SFD	O									0
	55855023	1681 N Blackwood Ave	TM 6389	BD-CMBR-23-00009	SFD	O									0
	55855024	1675 N Blackwood Ave	TM 6389	BD-CMBR-23-00010	SFD	O									0
	55855006	1658 N Twinberry Ave	TM 6389	BD-CMBR-23-00011	SFD	O									0
	55855007	1668 N Twinberry Ave	TM 6389	BD-CMBR-23-00012	SFD	O									0
	55855008	1678 N Twinberry Ave	TM 6389	BD-CMBR-23-00013	SFD	O									0
	55855009	1688 N Twinberry Ave	TM 6389	BD-CMBR-23-00014	SFD	O									0
	55855010	1698 N Twinberry Ave	TM 6389	BD-CMBR-23-00015	SFD	O									0
	55855011	3230 Loyola Ave	TM 6389	BD-CMBR-23-00016	SFD	O									0
	55855012	3220 Loyola Ave	TM 6389	BD-CMBR-23-00017	SFD	O									0
	55936306	1643 N Ryan Ave	TM 6109	BD-CMBR-23-00018	SFD	O									0
	55939123	2694 Moody Ave	TM 6301	BD-CMBR-23-00019	SFD	O									0
	55939124	2674 Moody Ave	TM 6301	BD-CMBR-23-00020	SFD	O									0
	55939125	2654 Moody Ave	TM 6301	BD-CMBR-23-00021	SFD	O									0
	55939126	1722 N Applegate Ave	TM 6301	BD-CMBR-23-00022	SFD	O									0
	55939127	1732 N Applegate Ave	TM 6301	BD-CMBR-23-00027	SFD	O									0
	55939128	1742 N Applegate Ave	TM 6301	BD-CMBR-23-00028	SFD	O									0
	55939130	1731 N Hanson Ave	TM 6301	BD-CMBR-23-00031	SFD	O									0
	55939131	1721 N Hanson Ave	TM 6301	BD-CMBR-23-00032	SFD	O									0
	55939132	1711 N Hanson Ave	TM 6301	BD-CMBR-23-00033	SFD	O									0
	55939133	1701 N Hanson Ave	TM 6301	BD-CMBR-23-00034	SFD	O									0
	55939201	1700 N Hanson Ave	TM 6301	BD-CMBR-23-00035	SFD	O									0
	55939202	1710 N Hanson Ave	TM 6301	BD-CMBR-23-00036	SFD	O									0
	55939203	1720 N Hanson Ave	TM 6301	BD-CMBR-23-00037	SFD	O									0
	55939204	1730 N Hanson Ave	TM 6301	BD-CMBR-23-00038	SFD	O									0
	55939205	1740 N Hanson Ave	TM 6301	BD-CMBR-23-00039	SFD	O									0
	55939206	1750 N Hanson Ave	TM 6301	BD-CMBR-23-00040	SFD	O									0
	55939207	2611 Loyola Ave	TM 6301	BD-CMBR-23-00041	SFD	O									0
	55939208	2621 Loyola Ave	TM 6301	BD-CMBR-23-00042	SFD	O									0
	55939301	2641 Loyola Ave	TM 6301	BD-CMBR-23-00043	SFD	O									0
	55939302	2661 Loyola Ave	TM 6301	BD-CMBR-23-00044	SFD	O									0
	55939303	2681 Loyola Ave	TM 6301	BD-CMBR-23-00045	SFD	O									0
	55939304	1753 N Applegate Ave	TM 6301	BD-CMBR-23-00046	SFD	O									0
	55939305	1743 N Applegate Ave	TM 6301	BD-CMBR-23-00047	SFD	O									0
	55939306	1733 N Applegate Ave	TM 6301	BD-CMBR-23-00048	SFD	O									0
	55939309	1754 N Park Ave	TM 6301	BD-CMBR-23-00049	SFD	O									0
	55942002S	1677 Teague Ave	TM 6154	BD-CMBR-23-00179	SFD	O									0
	30902252142	3205 Lourdes Ave	TM 6161	BD-CMBR-23-00690	SFD	O									0
	30902252141	3215 Lourdes Ave	TM 6161	BD-CMBR-23-00691	SFD	O									0
	55943202S	1568 Teague Ave	TM 6284	BD-CMBR-23-01002	SFD	O									0
	55943205S	1563 Richmond Ave	TM 6284	BD-CMBR-23-01004	SFD	O									0
	55943210S	1519 N Stanford Ave	TM 6284	BD-CMBR-23-01049	SFD	O									0
	55943104S	1523 Richmond Ave	TM 6284	BD-CMBR-23-01052	SFD	O									0
	55939310	2731 Loyola Ave	TM 6301	BD-CMBR-23-01222	SFD	O									0
	55463201	4187 Poe Ave	TM 6123	BD-CMBR-23-01723	SFD	O									0
	55463202	4177 Poe Ave	TM 6123	BD-CMBR-23-01724	SFD	O									0
	55463203	4167 Poe Ave	TM 6123	BD-CMBR-23-01727	SFD	O									0
	55463204	4157 Poe Ave	TM 6123	BD-CMBR-23-01731	SFD	O									0
	55463205	4147 Poe Ave	TM 6123	BD-CMBR-23-01732	SFD	O									0
	55939129	1741 N Hanson Ave	TM 6301	BD-CMBR-23-01967	SFD	O									0
	31030016S06	4111 Flint AVE	TM 6208	BD-CMBR-23-01990	SFD	O									0
	31030016S08	3522 San Marino Ave	TM 6208	BD-CMBR-23-02117	SFD	O									0
	31030016S31	3533 San Marino Ave	TM 6208	BD-CMBR-23-02118	SFD	O									0
	31030016S10	3542 San Marino Ave	TM 6208	BD-CMBR-23-02119	SFD	O									0
	31030016S11	3552 San Marino Ave	TM 6208	BD-CMBR-23-02120	SFD	O									0
	31030016S30	3543 San Marino Ave	TM 6208	BD-CMBR-23-02121	SFD	O									0
	31030016S09	3532 San Marino Ave	TM 6208	BD-CMBR-23-02122	SFD	O									0
	31030016S32	3523 San Marino Ave	TM 6208	BD-CMBR-23-02123	SFD	O									0
	30902252002	4755 Buckingham Ave	TM 6161	BD-CMBR-23-02201	SFD	O									0
	30902252003	4745 Buckingham Ave	TM 6161	BD-CMBR-23-02202	SFD	O									0
	30902252004	4735 Buckingham Ave	TM 6161	BD-CMBR-23-02203	SFD	O									0
	30902252005	4725 Buckingham Ave	TM 6161	BD-CMBR-23-02204	SFD	O									0
	30902252012	4734 Buckingham Ave	TM 6161	BD-CMBR-23-02205	SFD	O									0
	30902252013	4744 Buckingham Ave	TM 6161	BD-CMBR-23-02206	SFD	O									0
	30902252014	4754 Buckingham Ave	TM 6161	BD-CMBR-23-02207	SFD	O									0
	55463301	4056 Poe Ave	TM 6123	BD-CMBR-23-02287	SFD	O									0
	55463307	4136 Poe Ave	TM 6123	BD-CMBR-23-02288	SFD	O									0
	55463308	4146 Poe Ave	TM 6123	BD-CMBR-23-02289	SFD	O									0
	55463309	4156 Poe Ave	TM 6123	BD-CMBR-23-02290	SFD	O									0

	31030016S22	3585 Las Rosas Ave	TM 6208	BD-CMBR-23-02299	SFD	O									0
	31030016S18	4144 Lansing Ave	TM 6208	BD-CMBR-23-02300	SFD	O									0
	31030016S20	4164 Lansing Ave	TM 6208	BD-CMBR-23-02308	SFD	O									0
	31030016S23	3575 Las Rosas Ave	TM 6208	BD-CMBR-23-02309	SFD	O									0
	31030016S24	3565 Las Rosas Ave	TM 6208	BD-CMBR-23-02310	SFD	O									0
	31030016S25	4155 Lansing Ave	TM 6208	BD-CMBR-23-02311	SFD	O									0
	31030016S26	4145 Lansing Ave	TM 6208	BD-CMBR-23-02312	SFD	O									0
	31030016S27	4135 Lansing Ave	TM 6208	BD-CMBR-23-02313	SFD	O									0
	31030016S17	4134 Lansing Ave	TM 6208	BD-CMBR-23-02314	SFD	O									0
	31030016S21	4174 Lansing Ave	TM 6208	BD-CMBR-23-02315	SFD	O									0
	31030016S19	4154 Lansing Ave	TM 6208	BD-CMBR-23-02330	SFD	O									0
	31030016S12	3562 San Marino Ave	TM 6208	BD-CMBR-23-02331	SFD	O									0
	31030016S13	3572 San Marino Ave	TM 6208	BD-CMBR-23-02333	SFD	O									0
	31030016S15	3592 San Marino Ave	TM 6208	BD-CMBR-23-02336	SFD	O									0
	31030016S28	3563 San Marino Ave	TM 6208	BD-CMBR-23-02338	SFD	O									0
	31030016S29	3553 San Marino Ave	TM 6208	BD-CMBR-23-02339	SFD	O									0
	30902252006	4715 Buckingham Ave	TM 6161	BD-CMBR-23-02348	SFD	O									0
	30902252007	4705 Buckingham Ave	TM 6161	BD-CMBR-23-02349	SFD	O									0
	30902252008	3202 Simental Ave	TM 6161	BD-CMBR-23-02350	SFD	O									0
	30902252009	3212 Simental Ave	TM 6161	BD-CMBR-23-02351	SFD	O									0
	30902252104	4602 Sussex Ave	TM 6161	BD-CMBR-23-02368	SFD	O									0
	30902252105	4610 Sussex Ave	TM 6161	BD-CMBR-23-02369	SFD	O									0
	30902252106	4618 Sussex Ave	TM 6161	BD-CMBR-23-02370	SFD	O									0
	30902252107	4626 Sussex Ave	TM 6161	BD-CMBR-23-02371	SFD	O									0
	30902252097	4651 Sussex Ave	TM 6161	BD-CMBR-23-02380	SFD	O									0
	30902252098	4643 Sussex Ave	TM 6161	BD-CMBR-23-02381	SFD	O									0
	30902252099	4635 Sussex Ave	TM 6161	BD-CMBR-23-02382	SFD	O									0
	30902252108	4634 Sussex Ave	TM 6161	BD-CMBR-23-02383	SFD	O									0
	30902252109	4642 Sussex Ave	TM 6161	BD-CMBR-23-02384	SFD	O									0
	30902252110	4650 Sussex Ave	TM 6161	BD-CMBR-23-02385	SFD	O									0
	30902252010	3222 Simental Ave	TM 6161	BD-CMBR-23-02390	SFD	O									0
	30902252011	4724 Buckingham Ave	TM 6161	BD-CMBR-23-02391	SFD	O									0
	30902252020	4727 Hampton Way	TM 6161	BD-CMBR-23-02392	SFD	O									0
	30902252021	3232 Simental Ave	TM 6161	BD-CMBR-23-02393	SFD	O									0
	6413010000	4011 Scott Ave	TM 6413	BD-CMBR-23-02602	SFD	O									0
	6413030000	4002 Scott Ave		BD-CMBR-23-02604	SFD	O									0
	6413040000	4012 Scott Ave	TM 6413	BD-CMBR-23-02605	SFD	O									0
	6413050000	4022 Scott Ave	TM 6413	BD-CMBR-23-02607	SFD	O									0
	6413060000	4032 Scott Ave	TM 6413	BD-CMBR-23-02608	SFD	O									0
	6413120000	1650 La Canada Ave	TM 6413	BD-CMBR-23-02609	SFD	O									0
	6413260000	1653 Hermosa Ave	TM 6413	BD-CMBR-23-02610	SFD	O									0
	6413330000	4143 Keats Ave	TM 6413	BD-CMBR-23-02611	SFD	O									0
	6413560000	4186 Twain Ave	TM 6413	BD-CMBR-23-02612	SFD	O									0
	30902252017	4757 Hampton Way	TM 6161	BD-CMBR-23-02628	SFD	O									0
	30902252019	4737 Hampton Way	TM 6161	BD-CMBR-23-02630	SFD	O									0
	30902252026	4736 Hampton Way		BD-CMBR-23-02631	SFD	O									0
	30902252027	4746 Hampton Way	TM 6161	BD-CMBR-23-02632	SFD	O									0
	30902252028	4756 Hampton Way	TM 6161	BD-CMBR-23-02644	SFD	O									0
	55465203	1458 Junipero Ave	TM 6304	BD-CMBR-23-02688	SFD	O									0
	55465206	1428 Junipero Ave	TM 6304	BD-CMBR-23-02690	SFD	O									0
	55467022	4104 Hoblitt Ave	TM 6404	BD-CMBR-23-02695	SFD	O									0
	55467026	1375 Junipero Ave	TM 6404	BD-CMBR-23-02703	SFD	O									0
	30902252023	3252 Simental Ave	TM 6161	BD-CMBR-23-02855	SFD	O									0
	30902252024	3262 Simental Ave		BD-CMBR-23-02856	SFD	O									0
	30902252025	4726 Hampton Way	TM 6161	BD-CMBR-23-02857	SFD	O									0
	30902252034	4719 Bellaire Ave	TM 6161	BD-CMBR-23-02858	SFD	O									0
	30902252035	3272 Simental Ave	TM 6161	BD-CMBR-23-02860	SFD	O									0
	30902252036	3282 Simental Ave	TM 6161	BD-CMBR-23-02861	SFD	O									0
	30902252093	4683 Sussex Ave	TM 6161	BD-CMBR-23-02862	SFD	O									0
	30902252094	4675 Sussex Ave	TM 6161	BD-CMBR-23-02864	SFD	O									0
	30902252095	4667 Sussex Ave	TM 6161	BD-CMBR-23-02865	SFD	O									0
	30902252096	4659 Sussex Ave	TM 6161	BD-CMBR-23-02867	SFD	O									0
	30902252111	4658 Sussex Ave	TM 6161	BD-CMBR-23-02868	SFD	O									0
	30902252112	4666 Sussex Ave	TM 6161	BD-CMBR-23-02878	SFD	O									0
	30902252113	4674 Sussex Ave	TM 6161	BD-CMBR-23-02881	SFD	O									0
	30902252114	4682 Sussex Ave	TM 6161	BD-CMBR-23-02882	SFD	O									0
	56017030	1237 N Cindy Ave	TM 6348	BD-CMBR-23-02925	SFD	O									0
	30902252092	3308 Escalante Ave	TM 6161	BD-CMBR-23-03006	SFD	O									0
	30902252091	3318 Escalante Ave	TM 6161	BD-CMBR-23-03007	SFD	O									0
	30902252090	3328 Escalante Ave	TM 6161	BD-CMBR-23-03010	SFD	O									0
	30902252089	3338 Escalante Ave	TM 6161	BD-CMBR-23-03012	SFD	O									0
	30902252088	3348 Escalante Ave	TM 6161	BD-CMBR-23-03013	SFD	O									0
	30902252068	4638 Bellaire Ave	TM 6161	BD-CMBR-23-03014	SFD	O									0
	30902252069	4631 Joaquin Ave	TM 6161	BD-CMBR-23-03015	SFD	O									0
	56017032	584 W Kenosha Ave	TM 6348	BD-CMBR-23-03054	SFD	O									0
	30902252022	3242 Simental Ave	TM 6161	BD-CMBR-23-03125	SFD	O									0
	6413110000	1670 La Canada Ave	TM 6413	BD-CMBR-23-03153	SFD	O									0
	6413270000	1673 Hermosa Ave	TM 6413	BD-CMBR-23-03158	SFD	O									0
	6413320000	4133 Keats Ave	TM 6413	BD-CMBR-23-03159	SFD	O									0
	6413570000	4176 Twain Ave	TM 6413	BD-CMBR-23-03160	SFD	O									0
	6413580000	4166 Twain Ave	TM 6413	BD-CMBR-23-03186	SFD	O									0
	6413590000	4156 Twain Ave	TM 6413	BD-CMBR-23-03187	SFD	O									0

	6413610000	4136 Twain Ave	TM 6413	BD-CMBR-23-03188	SFD	O									0
	6413620000	4126 Twain Ave	TM 6413	BD-CMBR-23-03189	SFD	O									0
	6413630000	4116 Twain Ave	TM 6413	BD-CMBR-23-03190	SFD	O									0
	6413600000	4146 Twain Ave	TM 6413	BD-CMBR-23-03195	SFD	O									0
	31030016S14	3582 San Marino Ave	TM 6208	BD-CMBR-23-03275	SFD	O									0
	30902252070	4641 Joaquin Ave	TM 6161	BD-CMBR-23-03354	SFD	O									0
	30902252071	4651 Joaquin Ave	TM 6161	BD-CMBR-23-03355	SFD	O									0
	30902252081	4670 Joaquin Ave	TM 6161	BD-CMBR-23-03356	SFD	O									0
	30902252082	4660 Joaquin Ave	TM 6161	BD-CMBR-23-03357	SFD	O									0
	30902252083	4650 Joaquin Ave	TM 6161	BD-CMBR-23-03358	SFD	O									0
	30902252084	4640 Joaquin Ave	TM 6161	BD-CMBR-23-03360	SFD	O									0
	30902252031	4749 Bellaire Ave	TM 6161	BD-CMBR-23-03446	SFD	O									0
	30902252033	4729 Bellaire Ave	TM 6161	BD-CMBR-23-03448	SFD	O									0
	30902252040	4728 Bellaire Ave	TM 6161	BD-CMBR-23-03449	SFD	O									0
	30902252041	4738 Bellaire Ave	TM 6161	BD-CMBR-23-03450	SFD	O									0
	30902252042	4748 Bellaire Ave	TM 6161	BD-CMBR-23-03451	SFD	O									0
	30902252037	3302 Simental Ave	TM 6161	BD-CMBR-23-03452	SFD	O									0
	30902252038	3312 Simental Ave	TM 6161	BD-CMBR-23-03453	SFD	O									0
	30902252039	4718 Bellaire Ave	TM 6161	BD-CMBR-23-03454	SFD	O									0
	30902252048	4721 Joaquin Ave	TM 6161	BD-CMBR-23-03455	SFD	O									0
	30902252072	4661 Joaquin Ave	TM 6161	BD-CMBR-23-03474	SFD	O									0
	30946211	3339 Escobedo Ave	TM 6161	BD-CMBR-23-03476	SFD	O									0
	30902252078	3349 Escobedo Ave	TM 6161	BD-CMBR-23-03486	SFD	O									0
	30902252080	4680 Joaquin Ave	TM 6161	BD-CMBR-23-03487	SFD	O									0
	30902252079	4690 Joaquin Ave	TM 6161	BD-CMBR-23-03493	SFD	O									0
	30902252064	4678 Bellaire Ave	TM 6161	BD-CMBR-23-03538	SFD	O									0
	30946102	4668 Bellaire Ave	TM 6161	BD-CMBR-23-03539	SFD	O									0
	30902252067	4648 Bellaire Ave	TM 6161	BD-CMBR-23-03541	SFD	O									0
	6413070000	4063 Keats Ave	TM 6413	BD-CMBR-23-03605	SFD	O									0
	6413090000	1710 La Canada Ave	TM 6413	BD-CMBR-23-03607	SFD	O									0
	6413290000	1713 Hermosa Ave	TM 6413	BD-CMBR-23-03609	SFD	O									0
	6413300000	1733 Hermosa Ave	TM 6413	BD-CMBR-23-03610	SFD	O									0
	6413280000	1693 Hermosa Ave	TM 6413	BD-CMBR-23-03611	SFD	O									0
	30902252073	4671 Joaquin Ave	TM 6161	BD-CMBR-23-03679	SFD	O									0
	30902252018	4747 Hampton Way	TM 6161	BD-CMBR-23-03681	SFD	O									0
	6413080000	1730 La Canada Ave	TM 6413	BD-CMBR-23-03688	SFD	O									0
	6413100000	1690 La Canada Ave	TM 6123	BD-CMBR-23-03689	SFD	O									0
	30902252138	3245 Lourdes Ave	TM 6161	BD-CMBR-23-03698	SFD	O									0
	6413020000	4001 Scott Ave	TM 6413	BD-CMBR-23-03701	SFD	O									0
	6413130000	1651 La Canada Ave	TM 6413	BD-CMBR-23-03729	SFD	O									0
	6413150000	1691 La Canada Ave	TM 6413	BD-CMBR-23-03730	SFD	O									0
	6413170000	1731 La Canada Ave	TM 6413	BD-CMBR-23-03731	SFD	O									0
	6413180000	4083 Keats Ave	TM 6413	BD-CMBR-23-03732	SFD	O									0
	6413190000	4093 Keats Ave	TM 6413	BD-CMBR-23-03733	SFD	O									0
	6413200000	4103 Keats Ave	TM 6413	BD-CMBR-23-03734	SFD	O									0
	55943402S	1384 N Purdue Ave	TM 6284	BD-CMBR-23-03774	SFD	O									0
	55467008	4183 Hoblitt Ave	TM 6404	BD-CMBR-23-03787	SFD	O									0
	55467009	4193 Hoblitt Ave	TM 6404	BD-CMBR-23-03788	SFD	O									0
	55467010	1407 Las Rosas Ave	TM 6404	BD-CMBR-23-03790	SFD	O									0
	55467011	1417 Las Rosas Ave	TM 6404	BD-CMBR-23-03791	SFD	O									0
	55467012	1427 Las Rosas Ave	TM 6404	BD-CMBR-23-03792	SFD	O									0
	55467013	1437 Las Rosas Ave	TM 6404	BD-CMBR-23-03793	SFD	O									0
	6413310000	4123 Keats Ave	TM 6413	BD-CMBR-23-03795	SFD	O									0
	6413160000	1711 La Canada Ave	TM 6413	BD-CMBR-23-03929	SFD	O									0
	6413220000	1712 Hermosa Ave	TM 6413	BD-CMBR-23-03930	SFD	O									0
	6413230000	1692 Hermosa Ave	TM 6413	BD-CMBR-23-03932	SFD	O									0
	6413250000	1652 Hermosa Ave	TM 6413	BD-CMBR-23-03933	SFD	O									0
	55467039	4113 Hoblitt Ave	TM 6404	BD-CMBR-23-04138	SFD	O									0
	6413140000	1671 La Canada Ave	TM 6413	BD-CMBR-23-04148	SFD	O									0
	6413210000	1732 Hermosa Ave	TM 6413	BD-CMBR-23-04149	SFD	O									0
	6413240000	1672 Hermosa Ave	TM 6413	BD-CMBR-23-04150	SFD	O									0
	55943403S	1520 Enterprise Ave	TM 6284	BD-CMBR-23-04287	SFD	O									0
	55464101	1801 Agua Dulce Ave	TM 6182	BD-CMBR-23-04315	SFD	O									0
	55464102	1811 Agua Dulce Ave	TM 6182	BD-CMBR-23-04316	SFD	O									0
	55463101	1831 Agua Dulce Ave	TM 6182	BD-CMBR-23-04317	SFD	O									0
	55463102	1841 Agua Dulce Ave	TM 6182	BD-CMBR-23-04318	SFD	O									0
	55463104	1871 Agua Dulce Ave	TM 6182	BD-CMBR-23-04320	SFD	O									0
	55463105	1881 Agua Dulce Ave	TM 6182	BD-CMBR-23-04322	SFD	O									0
	55467051	4102 Mitchell Ave	TM 6182	BD-CMBR-23-04323	SFD	O									0
	30902252046	4741 Joaquin Ave	TM 6161	BD-CMBR-23-04377	SFD	O									0
	30902252056	4750 Joaquin Ave	TM 6161	BD-CMBR-23-04378	SFD	O									0
	55463209	4107 Poe Ave	TM 6123	BD-CMBR-23-04391	SFD	O									0
	6413640000	4106 Twain Ave	TM 6413	BD-CMBR-23-04392	SFD	O									0
	55467047	4142 Mitchell Ave	TM 6404	BD-CMBR-23-04393	SFD	O									0
	55467037	4093 Hoblitt Ave	TM 6404	BD-CMBR-23-04540	SFD	O									0
	30943216	4252 Bellaire Ave	TM 6023	BD-CMBR-23-04562	SFD	O									0
	30943211	4212 Bellaire Ave	TM 6023	BD-CMBR-23-04563	SFD	O									0
	30943218	4268 Bellaire Ave	TM 6023	BD-CMBR-23-04564	SFD	O									0
	30943214	4236 Bellaire Ave	TM 6023	BD-CMBR-23-04565	SFD	O									0
	30943212	4220 Bellaire Ave	TM 6023	BD-CMBR-23-04566	SFD	O									0
	30943215	4244 Bellaire Ave	TM 6023	BD-CMBR-23-04585	SFD	O									0
	30943220	4284 Bellaire Ave	TM 6023	BD-CMBR-23-04600	SFD	O									0

	30943219	4276 Bellaire Ave	TM 6023	BD-CMBR-23-04601	SFD	O									0
	30943213	4228 Bellaire Ave	TM 6023	BD-CMBR-23-04604	SFD	O									0
	55463103	1851 Agua Dulce Ave	TM 6182	BD-CMBR-23-04605	SFD	O									0
	30943217	4260 Bellaire Ave	TM 6023	BD-CMBR-23-04606	SFD	O									0
	55467040	4123 Hoblitt Ave	TM 6404	BD-CMBR-23-04640	SFD	O									0
	55467046	4152 Mitchell Ave	TM 6404	BD-CMBR-23-04641	SFD	O									0
	30946203	3322 Simental Ave	TM 6161	BD-CMBR-23-04701	SFD	O									0
	55467050	4112 Mitchell Ave	TM 6404	BD-CMBR-23-04731	SFD	O									0
	56408024	1187 N Holly Ave	TM 6367	BD-CMBR-23-04794	SFD	O									0
	56408018	1196 N Holly Ave	TM 6367	BD-CMBR-23-04797	SFD	O									0
	5590110865	1754 Lester Ave	TM 6154	CMBR-001403-2020	SFD	O									0
	5560503803	2091 N Rogers Ln	TM 6050	CMBR-005473-2020	SFD	O									0
	57124404S	2669 La Mirada Ave	TM 6166	BD-CMBR-22-05228	SFD	O									0
	55943302S	1542 Richmond Ave	TM 6284	BD-CMBR-22-05232	SFD	O									0
	57124305S	4330 San Gabriel Ave	TM 6166	BD-CMBR-22-05233	SFD	O									0
	57124216S	4371 San Gabriel Ave	TM 6166	BD-CMBR-22-05234	SFD	O									0
	57124110S	2602 Highland Ave	TM 6166	BD-CMBR-22-05235	SFD	O									0
	55943107S	1484 N Purdue Ave B	TM 6284	BD-CMBR-23-04766	ADU	R									0
	56408024	1187 N Holly Ave B	TM 6367	BD-CMBR-23-04796	ADU	R									0
	56408018	1196 N Holly Ave B	TM 6367	BD-CMBR-23-04798	ADU	R									0
	49209615	148 Acacia Ave B	NO PROJECT	BD-CMBR-23-03654	ADU	R									0
	49937314	2531 Bundy Ave		BD-CMBR-23-02458	ADU	R									0
	43030251	514 W Pico Ave B	NO PROJECT	BD-CMBR-23-01417	ADU	R									0
	55844025	1291 N Whitmore Ave B	TM 5472	BD-CMBR-22-01987	ADU	R									0
	30946103	4658 Bellaire Ave	TM 6161	BD-CMBR-23-03540	ADU	R									0
	41037201	109 N Cindy Ave B		BD-CMBR-23-02542	ADU	R									0
	41031302	73 N Willow Ave	NO PROJECT	BD-CMBR-22-03703	ADU	R									0
	49211214	261 Minnewawa Ave B		BD-CMBR-23-00605	ADU	R									0
	55311205	2652 Fremont Ave		BD-CMBR-23-00737	ADU	R									0
	56108111	957 N Citadel Ave B		BD-CMBR-23-00486	ADU	R									0
	49119223	1514 Gibson Ave B	NO PROJECT	BD-CMBR-23-01418	ADU	R									0
	49207202	120 Woodworth Ave B	NO PROJECT	BD-CMBR-22-04256	ADU	R									0
	49106171	227 W Sierra Ave B		BD-CMBR-22-05164	ADU	R									0
	49106171	227 W Sierra Ave C		BD-CMBR-22-05167	ADU	R									0
	49106171	237 Sierra Ave B		BD-CMBR-22-05172	ADU	R									0
	49106171	237 Sierra Ave C		BD-CMBR-22-05174	ADU	R									0
	41053104	281 N Terry Ave B		BD-CMBR-22-05070	ADU	R									0
	56010008	1783 N Bush Ave	TM 4912	BD-CMBR-22-03783	ADU	R									0
	49137001	22 N Villa Ave B		BD-CMBR-22-05218	ADU	R									0
	49137001	22 N Villa Ave C		BD-CMBR-22-05219	ADU	R									0
	49137002	18 N Villa Ave B		BD-CMBR-22-05215	ADU	R									0
	49137002	18 N Villa Ave C		BD-CMBR-22-05216	ADU	R									0
	49113103	80 N Woodworth Ave B	NO PROJECT	BD-CMBR-23-00333	ADU	R									0
	49118422	1743 Bullard Ave B	NO PROJECT	BD-CMBR-22-04422	ADU	R									0
	49118416	1729 Bullard Ave B	NO PROJECT	BD-CMBR-22-04420	ADU	R									0
	55943105S	1513 Richmond Ave B	TM 6284	BD-CMBR-22-05220	ADU	R									0
	55941020S	1744 Lester Ave B	TM 6154	BD-CMBR-22-01937	ADU	R									0
	49117107	1470 Fourth St B	NO PROJECT	BD-CMBR-22-00871	ADU	R									0
	49117122	1476 Fourth St B	NO PROJECT	BD-CMBR-22-00873	ADU	R									0
	55940012S	1735 Lester Ave	TM 6154	BD-CMBR-22-01307	ADU	R									0
	49821334	1113 Carey Ave	NO PROJECT	BD-CMBR-21-05355	ADU	R									0
	49906021	329 W Rialto Ave B	NO PROJECT	BD-CMBR-21-05616	ADU	R									0
	55933016	2017 Teague Ave	TM 5550	BD-CMBR-21-04378	ADU	R									0
	55940007S	1940 N Ezie Ave	TM 6154	BD-CMBR-21-01118	ADU	R									0
	55941018S	1762 Lester Ave	TM 6154	BD-CMBR-21-00861	ADU	R									0
	55941006S	1765 N Bundy Ave	TM 6154	BD-CMBR-21-00477	ADU	R									0
	55940008S	1919 N Ezie Ave	TM 6154	BD-CMBR-21-00475	ADU	R									0
	49212215	253 Minnewawa	PM2023-003	PM2023-003	SFD	O							4	7/21/2023	4
	56314253	1491 Alluvial	MFRDR2023-001	MFRDR2023-001	5+	R						12		8/10/2023	12
															0
															0
															0
															0

Table A2

Annual Building Activity Report Summary - New Construction, Entitled, Permits and Completed Units

Project Identifier			Affordability by Household Incomes - Building Permits								
			7							8	9
Current APN	Street Address	Project Name$^+$	Very Low-Income Deed Restricted	Very Low-Income Non Deed Restricted	Low- Income Deed Restricted	Low- Income Non Deed Restricted	Moderate-Income Deed Restricted	Moderate-Income Non Deed Restricted	Above Moderate-Income	Building Permits Date Issued	# of Units Issued Building Permits
			0	8	0	8	0	9	592		617
55503144	3700 Loma Vista Pkwy Bld 34	SPR 2018-011									0
55503144	3700 Loma Vista Pkwy 3601	SPR 2018-011									0
55503144	3700 Loma Vista Pkwy 3501	SPR 2018-011									0
43060101	784 W Holland Ave	RHNA 2019-001									0
55503144	3700 Loma Vista Pkwy	SPR 2018-011									0
55534322	3072 De Wolf Ave										0
55926019S	1808 N Carson Ave	TM 5122									0
55926011S	1807 N Coventry Ave	TM 5122									0
49207202	120 Woodworth Ave										0
55851007	3076 Lester Ave	PM 2018-011									0
49215215	356 Oxford Ave	PM 2022-003									0
49215215	360 Oxford Ave	PM 2022-003									0
49209820	156 Sunnyside Ave								1	9/13/2023	1
5612601740	421 W Mahogany Ln	TM 6262									0
5612601751	436 W Balsam Ln	TM 6262									0
5612601059	563 N Citadel Ln	TM 6262									0
56129044	472 W Balsam Ln	TM 6262									0
56129043	468 W Balsam Ln	TM 6262									0
56129042	464 W Balsam Ln	TM 6262									0
56129041	460 W Balsam Ln	TM 6262									0
5612601755	456 W Balsam Ln	TM 6262									0
5612601051	557 N Terry Ln	TM 6262									0
56129045	476 W Balsam Ln	TM 6262									0
5612601754	452 W Balsam Ln	TM 6262									0
5612601753	448 W Balsam Ln	TM 6262									0
5612601752	440 W Balsam Ln	TM 6262									0
56129064	561 N Terry Ln	TM 6262									0
56129063	565 N Terry Ln	TM 6262									0
56129062	569 N Terry Ln	TM 6262									0
56129061	573 N Terry Ln	TM 6262									0
56129060	574 N Terry Ln	TM 6262									0
56129059	570 N Terry Ln	TM 6262									0
56129058	566 N Terry Ln	TM 6262									0
56129057	562 N Terry Ln	TM 6262									0
56129056	558 N Terry Ln	TM 6262									0
56129055	559 N Cindy Ln	TM 6262									0
56129054	563 N Cindy Ln	TM 6262									0
56129053	567 N Cindy Ln	TM 6262									0
56128065	576 N Cindy Ln	TM 6262									0
56129052	571 N Cindy Ln	TM 6262									0
56129050	496 W Balsam Ln	TM 6262									0
56129049	492 W Balsam Ln	TM 6262									0
56129048	488 W Balsam Ln	TM 6262									0
56128064	572 N Cindy Ln	TM 6262									0
56129047	484 W Balsam Ln	TM 6262									0
56129046	480 W Balsam Ln	TM 6262									0
56129051	575 N Cindy Ln	TM 6262									0
56128061	560 N Cindy Ln	TM 6262									0
56128062	564 N Cindy Ln	TM 6262									0
56128063	568 N Cindy Ln	TM 6262									0
56128060	561 N Sylmar Ln	TM 6262									0

56128057	573 N Sylmar Ln	TM 6262									0
56128059	565 N Sylmar Ln	TM 6262									0
56128056	577 N Sylmar Ln	TM 6262									0
56128058	569 N Sylmar Ln	TM 6262									0
56128020	516 W Balsam Ln	TM 6262									0
56128019	512 W Balsam Ln	TM 6262									0
56128018	508 W Balsam Ln	TM 6262									0
56128017	504 W Balsam Ln	TM 6262									0
56128016	500 W Balsam Ln	TM 6262									0
55609012	607 Heirloom Ln	TM 6050									0
56128024	532 W Balsam Ln	TM 6262									0
56128025	536 W Balsam Ln	TM 6262									0
56128055	578 N Sylmar Ln	TM 6262									0
56128054	574 N Sylmar Ln	TM 6262									0
56128053	570 N Sylmar Ln	TM 6262									0
56128052	566 N Sylmar Ln	TM 6262									0
56128051	562 N Sylmar Ln	TM 6262									0
56128021	520 W Balsam Ln	TM 6262									0
56128023	528 W Balsam Ln	TM 6262									0
56128022	524 W Balsam Ln	TM 6262									0
56128010	510 W Mahogany Ln	TM 6262									0
56128009	514 W Mahogany Ln	TM 6262									0
56128008	518 W Mahogany Ln	TM 6262									0
55609050	545 Bloom Ln	TM 6050									0
56128007	522 W Mahogany Ln	TM 6262									0
556128006	526 W Mahogany Ln	TM 6262									0
56127035	598 W Mahogany Ln	TM 6262									0
56127034	602 W Mahogany Ln	TM 6262									0
56127028	626 W Mahogany Ln	TM 6262									0
56127033	606 W Mahogany Ln	TM 6262									0
56127032	610 W Mahogany Ln	TM 6262									0
56127031	614 W Mahogany Ln	TM 6262									0
56127030	618 W Mahogany Ln	TM 6262									0
56127027	630 W Mahogany Ln	TM 6262									0
56127029	622 W Mahogany Ln	TM 6262									0
56127026	634 W Mahogany Ln	TM 6262									0
56127025	638 W Mahogany Ln	TM 6262									0
56127024	642 W Mahogany Ln	TM 6262									0
56127023	646 W Mahogany Ln	TM 6262									0
56127022	652 W Mahogany Ln	TM 6262									0
56127021	656 W Mahogany Ln	TM 6262									0
5590517613	2773 Vermont Ave	TM 6301									0
55609009	667 Heirloom Ln	TM 6050									0
55609057	405 Bloom Ln	TM 6050									0
56127006	568 N Adler Ln	TM 6262									0
56127007	572 N Adler Ln	TM 6262									0
56127008	576 N Adler Ln	TM 6262									0
56127009	580 N Adler Ln	TM 6262									0
56127010	584 N Adler Ln	TM 6262									0
56127011	583 N Adler Ln	TM 6262									0
56127012	579 N Adler Ln	TM 6262									0
56127013	575 N Adler Ln	TM 6262									0
56127014	571 N Adler Ln	TM 6262									0
56127015	567 N Adler Ln	TM 6262									0
56127036	590 W Mahogany Ln	TM 6262									0
56127037	586 W Mahogany Ln	TM 6262									0
56127038	582 W Mahogany Ln	TM 6262									0
56127039	578 W Mahogany Ln	TM 6262									0
56127040	574 W Mahogany Ln	TM 6262									0
56127016	566 N Helm Ln	TM 6262									0
56127017	570 N Helm Ln	TM 6262									0
56127018	574 N Helm Ln	TM 6262									0
56127019	578 N Helm Ln	TM 6262									0
56127020	582 N Helm Ln	TM 6262									0
55609054	465 Bloom Ln	TM 6050									0
56127005	596 W Balsam Ln	TM 6262									0
56127004	592 W Balsam Ln	TM 6262									0
56127003	588 W Balsam Ln	TM 6262									0
56127002	584 W Balsam Ln	TM 6262									0
56127001	580 W Balsam Ln	TM 6262									0

56128001	546 W Mahogany Ln	TM 6262									0
56128002	542 W Mahogany Ln	TM 6262									0
56128003	538 W Mahogany Ln	TM 6262									0
56128005	530 W Mahogany Ln	TM 6262									0
56128050	563 N Chapel Hill Ln	TM 6262									0
56128049	567 N Chapel Hill Ln	TM 6262									0
56128048	571 N Chapel Hill Ln	TM 6262									0
56128047	575 N Chapel Hill Ln	TM 6262									0
56128046	579 N Chapel Hill Ln	TM 6262									0
56128026	540 W Balsam Ln	TM 6262									0
56128027	544 W Balsam Ln	TM 6262									0
56128028	548 W Balsam Ln	TM 6262									0
56128029	552 W Balsam Ln	TM 6262									0
56128030	556 W Balsam Ln	TM 6262									0
56128040	565 N Helm Ln	TM 6262									0
56128039	569 N Helm Ln	TM 6262									0
56128038	573 N Helm Ln	TM 6262									0
56128037	577 N Helm Ln	TM 6262									0
56128036	581 N Helm Ln	TM 6262									0
56128041	564 N Chapel Hill Ln	TM 6262									0
56128042	568 N Chapel Hill Ln	TM 6262									0
56128043	572 N Chapel Hill Ln	TM 6262									0
56128044	576 N Chapel Hill Ln	TM 6262									0
56128045	580 N Chapel Hill Ln	TM 6262									0
56128031	560 W Balsam Ln	TM 6262									0
56128032	564 W Balsam Ln	TM 6262									0
56128033	568 W Balsam Ln	TM 6262									0
56128034	572 W Balsam Ln	TM 6262									0
56128035	576 W Balsam Ln	TM 6262									0
56128070	554 W Mahogany Ln	TM 6262									0
56128069	558 W Mahogany Ln	TM 6262									0
56128068	562 W Mahogany Ln	TM 6262									0
56128067	566 W Mahogany Ln	TM 6262									0
56128066	570 W Mahogany Ln	TM 6262									0
55609087	401 Vintage Ln	TM 6050									0
5590504141	2939 Teague Ave	TM 6339									0
5590517619	1745 N Park Ave	TM 6301									0
5590517620	1735 N Park Ave	TM 6301									0
5590517654	2741 Loyola Ave	TM 6301									0
5590517655	2751 Loyola Ave	TM 6301									0
5590517624	2704 Moody Ave	TM 6301									0
5590504131	2997 Trenton Ave	TM 6339									0
5590504115	1677 N Megan Ave	TM 6339									0
5590504112	2965 Vermont Ave	TM 6339									0
5590504113	2975 Vermont Ave	TM 6339									0
5590504111	2955 Vermont Ave	TM 6339									0
5590504114	1687 N Megan Ave	TM 6339									0
5540402010	3075 Keats Ave	TM 6349									0
5590504109	2935 Vermont Ave	TM 6339									0
5590504108	2925 Vermont Ave	TM 6339									0
5590504110	2945 Vermont Ave	TM 6339									0
56052050S	984 Everglade Ave	TM 6263									0
56052049S	976 Everglade Ave	TM 6263									0
56052033S	985 Everglade Ave	TM 6263									0
56052034S	977 Everglade Ave	TM 6263									0
56052048S	968 Everglade Ave	TM 6263									0
56052047S	960 Everglade Ave	TM 6263									0
56052035S	969 Everglade Ave	TM 6263									0
56052036S	961 Everglade Ave	TM 6263									0
56052046S	952 Everglade Ave	TM 6263									0
55612013	501 Farmhouse Ln	TM 6329									0
55612012	513 Farmhouse Ln	TM 6329									0
55612011	525 Farmhouse Ln	TM 6329									0
55612010	537 Farmhouse Ln	TM 6329									0
55612009	549 Farmhouse Ln	TM 6329									0

55612008	561 Farmhouse Ln	TM 6329									0
55612007	603 Farmhouse Ln	TM 6329									0
55612006	615 Farmhouse Ln	TM 6329									0
55612005	627 Farmhouse Ln	TM 6329									0
55612004	639 Farmhouse Ln	TM 6329									0
55612003	651 Farmhouse Ln	TM 6329									0
55612002	663 Farmhouse Ln	TM 6329									0
55942038S	1684 N Shirley Ave	TM 6154									0
55609017	507 Heirloom Ln	TM 6050									0
55609013	587 Heirloom Ln	TM 6050									0
55609016	527 Heirloom Ln	TM 6050									0
55609015	547 Heirloom Ln	TM 6050									0
55609014	567 Heirloom Ln	TM 6050									0
5590504107	2915 Vermont Ave	TM 6339									0
5590504106	2905 Vermont Ave	TM 6339									0
5590504105	1694 N Greenfield Ave	TM 6339									0
5590504103	1674 N Greenfield Ave	TM 6339									0
55609026	2120 N Perry Ln	TM 6050									0
55609027	2110 N Perry Ln	TM 6050									0
55609028	2100 N Perry Ln	TM 6050									0
55609029	2090 N Perry Ln	TM 6050						1	6/5/2023		1
55609030	2080 N Perry Ln	TM 6050									0
55609025	2130 N Perry Ln	TM 6050									0
55609024	2140 N Perry Ln	TM 6050									0
55609023	2150 N Perry Ln	TM 6050									0
55609022	407 Heirloom Ln	TM 6050									0
55609021	427 Heirloom Ln	TM 6050									0
55609020	447 Heirloom Ln	TM 6050									0
55609019	467 Heirloom Ln	TM 6050									0
55609018	487 Heirloom Ln	TM 6050									0
55939119	1725 N Park Ave	TM 6301									0
55939308	1744 N Park Ave	TM 6301									0
55464302	1676 Las Rosas Ave	TM 6123									0
56052042S	920 Everglade Ave	TM 6263									0
56052044S	936 Everglade Ave	TM 6263									0
56052040S	929 Everglade Ave	TM 6263									0
56052032S	988 Serena Ave	TM 6263									0
56052025S	932 Serena Ave	TM 6263									0
56052029S	964 Serena Ave	TM 6263									0
56052031S	980 Serena Ave	TM 6263									0
56052028S	956 Serena Ave	TM 6263									0
56052024S	924 Serena Ave	TM 6263									0
56052026S	940 Serena Ave	TM 6263									0
56052043s	928 Everglade Ave	TM 6263									0
56052045S	944 Everglade Ave	TM 6263									0
56052037S	953 Everglade Ave	TM 6263									0
56052039S	937 Everglade Ave	TM 6263									0
56052030S	972 Serena Ave	TM 6263									0
56052027S	948 Serena Ave	TM 6263									0
56052041S	921 Everglade Ave	TM 6263									0
56052038S	945 Everglade Ave	TM 6263									0
55940012S	1735 Lester Ave	TM 6154									0
55940015S	1765 Lester Ave	TM 6154									0
55942004S	1787 Teague Ave	TM 6154									0
55942018S	1730 Trenton Ave	TM 6154									0
55465718	4176 Dennis Ave	TM 6304									0
56408019	1186 N Holly Ave	TM 6367									0
56017029	1247 N Cindy Ave	TM 6348									0
55465303	4085 Dennis Ave	TM 6304									0
55465304	4095 Dennis Ave	TM 6304									0
55465306	4115 Dennis Ave	TM 6304									0
55465308	4135 Dennis Ave	TM 6304									0
55465309	4145 Dennis Ave	TM 6304									0
55465310	4155 Dennis Ave	TM 6304									0

55465311	4165 Dennis Ave	TM 6304									0
55465312	4175 Dennis Ave	TM 6304									0
55465314	4195 Dennis Ave	TM 6304									0
55938201	2613 Vermont Ave	TM 6209									0
55941020S	1744 Lester Ave	TM 6154									0
55941007S	1766 N Renn Ave	TM 6154									0
56408020	1176 N Holly Ave	TM 6367									0
56408025	1197 N Holly Ave	TM 6367									0
55464502	4161 Scott Ave	TM 6123									0
55464503	4151 Scott Ave	TM 6123									0
55464504	4141 Scott Ave	TM 6123									0
55464505	4131 Scott Ave	TM 6123									0
55464506	4121 Scott Ave	TM 6123									0
55464507	4111 Scott Ave	TM 6123									0
55464508	4101 Scott Ave	TM 6123									0
55464509	4091 Scott Ave	TM 6123									0
55464510	4081 Scott Ave	TM 6123									0
55536236	2101 Descanso Ave	TM 6377									0
55536250	2160 Descanso Ave	TM 6377									0
55536238	2061 Descanso Ave	TM 6377									0
55536234	2141 Descanso Ave	TM 6377									0
5582900601	1697 N Twinberry Ave	TM 6389									0
55612033	2006 N Inverness Ln	TM 6329									0
55612032	2012 N Inverness Ln	TM 6329									0
55612031	2018 N Inverness Ln	TM 6329									0
55612030	2024 N Inverness Ln	TM 6329									0
31030016S37	3555 Las Rosas Ave	TM 6208									0
31030016S38	3545 Las Rosas Ave	TM 6208									0
31030016S39	3535 Las Rosas Ave	TM 6208									0
31030016S40	3525 Las Rosas Ave	TM 6208									0
31030016S41	3515 Las Rosas Ave	TM 6208									0
31030016S43	3505 Las Rosas Ave	TM 6208									0
56017028	1257 N Cindy Ave	TM 6348									0
55612034	2005 N Inverness Ln	TM 6329									0
55612035	2011 N Inverness Ln	TM 6329									0
55612036	2017 N Inverness Ln	TM 6329									0
55612037	2023 N Inverness Ln	TM 6329									0
55464511	4071 Scott Ave	TM 6123									0
55464512	4061 Scott Ave	TM 6123									0
55464513	4051 Scott Ave	TM 6123									0
55464514	4041 Scott Ave	TM 6123									0
55464515	4031 Scott Ave	TM 6123									0
55464516	4021 Scott Ave	TM 6123									0
55609075	641 Vintage Ln	TM 6050									0
55609074	661 Vintage Ln	TM 6050									0
55609073	681 Vintage Ln	TM 6050									0
55609072	682 Bloom Ln	TM 6050									0
55609071	662 Bloom Ln	TM 6050									0
55609070	642 Bloom Ln	TM 6050									0
55536245	2060 Descanso Ave	TM 6377									0
55536231	2067 Amanecer Ave	TM 6025									0
55536202	2087 Amanecer Ave	TM 6025									0
55536203	3801 Fairmont Ave	TM 6025									0
55536204	3809 Fairmont Ave	TM 6025									0
55536205	3817 Fairmont Ave	TM 6025									0
55611034	500 Pioneer Ln	TM 6329									0
55464201	1797 Las Rosas Ave	TM 6123									0
55464202	1777 Las Rosas Ave	TM 6123									0
55464203	1757 Las Rosas Ave	TM 6123									0
55464204	1737 Las Rosas Ave	TM 6123									0
55464205	1717 Las Rosas Ave	TM 6123									0
55465401	1447 Las Rosas Ave	TM 6304									0
55465402	1457 Las Rosas Ave	TM 6304									0

55465403	1467 Las Rosas Ave	TM 6304									0
55465404	1477 Las Rosas Ave	TM 6304									0
55465405	1487 Las Rosas Ave	TM 6304									0
55465406	1497 Las Rosas Ave	TM 6304									0
55611037	536 Pioneer Ln	TM 6329									0
55611036	524 Pioneer Ln	TM 6329									0
55611035	512 Pioneer Ln	TM 6329									0
55611038	548 Pioneer Ln	TM 6329									0
55611039	560 Pioneer Ln	TM 6329									0
55611040	602 Pioneer Ln	TM 6329									0
55611041	614 Pioneer Ln	TM 6329									0
55536237	2081 Descanso Ave	TM 6377									0
55536240	2021 Descanso Ave	TM 6377									0
55536239	2041 Descanso Ave	TM 6377									0
5540402003	3026 Keats Ave	TM 6349									0
55536241	2001 Descanso Ave	TM 6377									0
55611042	626 Pioneer Ln	TM 6329									0
55611043	638 Pioneer Ln	TM 6329									0
55611044	650 Pioneer Ln	TM 6329									0
55611045	662 Pioneer Ln	TM 6329									0
5590210330	1522 Richmond Ave	TM 6284									0
5590210305	1513 Richmond Ave	TM 6284									0
5590210332	1562 Richmond Ave	TM 6284									0
55611031	2058 N Ralph Ln	TM 6329									0
55611032	2052 N Ralph Ln	TM 6329									0
55611029	2065 N Ralph Ln	TM 6329									0
55611028	2059 N Ralph Ln	TM 6329									0
55611026	2047 N Ralph Ln	TM 6329									0
55611033	2046 N Ralph Ln	TM 6329									0
55611030	2064 N Ralph Ln	TM 6329									0
5590210333	1528 N Stanford Ave	TM 6284									0
55942037S	1694 N Shirley Ave	TM 6154									0
55611027	2053 N Ralph Ln	TM 6329									0
55536244	2040 Descanso Ave	TM 6377									0
55536243	2020 Descanso Ave	TM 6377									0
55536233	2161 Descanso Ave	TM 6377									0
5590210322	1583 Richmond Ave	TM 6284									0
55464306	4183 Keats Ave	TM 6123									0
55464307	4173 Keats Ave	TM 6123									0
55464308	4163 Keats Ave	TM 6123									0
55611022	2058 N Hammel Ln	TM 6329									0
55611023	2052 N Hammel Ln	TM 6329									0
55611024	2046 N Hammel Ln	TM 6329									0
55943209S	1529 N Stanford Ave	TM 6284									0
55943211S	1509 N Stanford Ave	TM 6284									0
55611018	2041 N Hammel Ln	TM 6329									0
55611019	2047 N Hammel Ln	TM 6329									0
55611020	2053 N Hammel Ln	TM 6329									0
55611021	2059 N Hammel Ln	TM 6329									0
55464309	1745 San Marino Ave	TM 6123									0
55464310	1725 San Marino Ave	TM 6123									0
55464311	1695 San Marino Ave	TM 6123									0
55464312	1675 San Marino Ave	TM 6123									0
55464313	1655 San Marino Ave	TM 6123									0
55465205	1438 Junipero Ave	TM 6304									0
55611025	2040 N Hammel Ln	TM 6329									0
55461014S	3808 Portals Ave	TM 6254									0
55461015S	3849 Portals Ave	TM 6254									0
55943206S	1573 Richmond Ave	TM 6284									0
55943208S	1593 Richmond Ave	TM 6284									0
55465101	1598 Junipero Ave	TM 6304									0
55465102	1578 Junipero Ave	TM 6304									0
55465103	1550 Agua Dulce Ave	TM 6304									0

55465104	1530 Agua Dulce Ave	TM 6304									0
55465201	1478 Junipero Ave	TM 6304									0
55465202	1468 Junipero Ave	TM 6304									0
55465204	1448 Junipero Ave	TM 6304									0
55465207	1418 Junipero Ave	TM 6304									0
5560504166	2220 N Eddy Ave	TM 6292							1	6/19/2023	1
55465407	4198 Beverly Ave	TM 6304									0
5560504181	2283 N Argyle Ave	TM 6292							1	4/21/2023	1
5560504172	2211 N Argyle Ave	TM 6292							1	6/19/2023	1
55465408	4188 Beverly Ave	TM 6304									0
5560504170	1076 Windmill Ave	TM 6292							1	6/19/2023	1
5560504173	2219 N Argyle Ave	TM 6292							1	6/19/2023	1
5560504179	2267 N Argyle Ave	TM 6292							1	6/20/2023	1
5560504163	2280 N Eddy Ave	TM 6292							1	6/19/2023	1
55465409	4178 Beverly Ave	TM 6304									0
5560504167	2200 N Eddy Ave	TM 6292							1	6/19/2023	1
55465410	4179 San Jose Ave	TM 6304									0
55465411	4189 San Jose Ave	TM 6304									0
5560504176	2243 N Argyle Ave	TM 6292							1	6/20/2023	1
55465412	4199 San Jose Ave	TM 6304									0
55605042050	1216 Windmill Ave	TM 6344							1	5/15/2023	1
55465413	1567 Las Rosas Ave	TM 6304									0
55605042045	2232 N Russell Ave	TM 6344							1	5/11/2023	1
55605042058	2203 N Duke Ave	TM 6344							1	6/8/2023	1
55605042062	2235 N Duke Ave	TM 6344							1	6/8/2023	1
55465414	1577 Las Rosas Ave	TM 6304									0
55465415	1587 Las Rosas Ave	TM 6304									0
55605042052	1256 Windmill Ave	TM 6344							1	5/15/2023	1
55605042056	1346 Windmill Ave	TM 6344							1	5/30/2023	1
55943203S	1548 Teague Ave	TM 6284							1	12/29/2023	1
55605042041	2264 N Russell Ave	TM 6344							1	5/11/2023	1
55605042067	2275 N Duke Ave	TM 6344							1	6/13/2023	1
55605042038	2288 N Russell Ave	TM 6344							1	4/13/2023	1
55605042044	2240 N Russell Ave	TM 6344							1	5/11/2023	1
55605042064	2251 N Duke Ave	TM 6344							1	6/12/2023	1
55605042039	2280 N Russell Ave	TM 6344							1	4/20/2023	1
55605042048	2208 N Russell Ave	TM 6344							1	5/15/2023	1
55605042055	1326 Windmill Ave	TM 6344							1	5/30/2023	1
55605042060	2219 N Duke Ave	TM 6344							1	6/8/2023	1
55605041137	1052 Springtime Ave	TM 6292							1	4/21/2023	1
55605041136	1046 Springtime Ave	TM 6292							1	4/21/2023	1
5560504164	2260 N Eddy Ave	TM 6292							1	6/19/2023	1
5560504175	2235 N Argyle Ave	TM 6292							1	6/16/2023	1
5560504169	1066 Windmill Ave	TM 6292							1	6/16/2023	1
5560504182	2291 N Argyle Ave	TM 6292							1	4/21/2023	1
5560504168	1056 Windmill Ave	TM 6292							1	6/19/2023	1
5560504165	2240 N Eddy Ave	TM 6292							1	6/16/2023	1
5560504171	2203 N Argyle Ave	TM 6292							1	6/16/2023	1
5560504174	2227 N Argyle Ave	TM 6292							1	6/20/2023	1
5560504177	2251 N Argyle Ave	TM 6292							1	6/20/2023	1
5560504180	2275 N Argyle Ave	TM 6292							1	6/20/2023	1
5560504185	2375 N Argyle Ave	TM 6292							1	5/15/2023	1
55605041169	1030 Fruitwood Ave	TM 6292							1	6/19/2023	1
55605041175	1066 Fruitwood Ave	TM 6292							1	5/15/2023	1
5560504191	1055 Fruitwood Ave	TM 6292							1	5/15/2023	1
5560504197	1019 Fruitwood Ave	TM 6292							1	6/16/2023	1
55605041104	2364 N Phillip Ave	TM 6292							1	6/19/2023	1
55605041148	1016 Plum Tree Ave	TM 6292							1	6/19/2023	1
5560504188	1073 Fruitwood Ave	TM 6292							1	5/15/2023	1
5560504195	1031 Fruitwood Ave	TM 6292							1	6/29/2023	1
55605041100	2396 N Phillip Ave	TM 6292							1	6/19/2023	1
55605041164	1021 Plum Tree Ave	TM 6292							1	6/19/2023	1
55605041172	1048 Fruitwood Ave	TM 6292							1	6/19/2023	1

5560504189	1067 Fruitwood Ave	TM 6292							1	6/2/2023	1
5560504196	1025 Fruitwood Ave	TM 6292								6/15/2023	0
55605041165	1015 Plum Tree Ave	TM 6292								6/15/2023	0
5560504184	2345 N Argyle Ave	TM 6292								5/15/2023	0
5560504199	1007 Fruitwood Ave	TM 6292								6/13/2023	0
55605041139	1053 Springtime Ave	TM 6292								4/21/2023	0
30942203	4232 Buckingham Ave	TM 6023								5/15/2023	0
55605041177	1078 Fruitwood Ave	TM 6292								5/15/2023	0
5560504186	1085 Fruitwood Ave	TM 6292								5/15/2023	0
5560504193	1043 Fruitwood Ave	TM 6292								5/15/2023	0
49106171	227 W Sierra Ave									3/29/2023	0
55605041102	2380 N Phillip Ave	TM 6292								6/13/2023	0
55605041105	2356 N Phillip Ave	TM 6292								6/13/2023	0
55605041147	1010 Plum Tree Ave	TM 6292								6/13/2023	0
55605041167	1018 Fruitwood Ave	TM 6292								6/16/2023	0
55605041173	1054 Fruitwood Ave	TM 6292								5/15/2023	0
5560504192	1049 Fruitwood Ave	TM 6292								5/15/2023	0
49106171	237 W Sierra Ave	PM 2022-002								3/29/2023	0
55605041103	2372 N Phillip Ave	TM 6292								6/15/2023	0
55605041149	1022 Plum Tree Ave	TM 6292								6/15/2023	0
55605041168	1024 Fruitwood Ave	TM 6292								6/16/2023	0
55605041176	1072 Fruitwood Ave	TM 6292								5/15/2023	0
5560504187	1079 Fruitwood Ave	TM 6292								6/2/2023	0
5560504194	1037 Fruitwood Ave	TM 6292								6/15/2023	0
55605041101	2388 N Phillip Ave	TM 6292								6/19/2023	0
55605041174	1060 Fruitwood Ave	TM 6292								5/15/2023	0
5560504183	2315 N Argyle Ave	TM 6292								5/15/2023	0
5560504190	1061 Fruitwood Ave	TM 6292								5/25/2023	0
5560504178	2259 N Argyle Ave	TM 6292								6/20/2023	0
5560504198	1013 Fruitwood Ave	TM 6292								6/16/2023	0
55605041138	1059 Springtime Ave	TM 6292								4/21/2023	0
55605041166	1009 Plum Tree Ave	TM 6292								6/19/2023	0
55605041170	1036 Fruitwood Ave	TM 6292								6/19/2023	0
57124106S	2682 Highland Ave	TM 6166								4/27/2023	0
57124310S	4280 San Gabriel Ave	TM 6166								5/25/2023	0
57124213S	4341 San Gabriel Ave	TM 6166								6/2/2023	0
57124403S	2649 La Mirada Ave	TM 6166								6/2/2023	0
57124109S	2622 Highland Ave	TM 6166								3/30/2023	0
55605042094	2233 N Russell Ave	TM 6344								6/13/2023	0
57124203S	4241 San Gabriel Ave	TM 6166								5/11/2023	0
57124209S	4301 San Gabriel Ave	TM 6166								5/25/2023	0
57124306S	4320 San Gabriel Ave	TM 6166								6/5/2023	0
57124302S	4360 San Gabriel Ave	TM 6166								6/5/2023	0
57124108S	2642 Highland Ave	TM 6166								4/25/2023	0
57124315S	4230 San Gabriel Ave	TM 6166								4/27/2023	0
57124204S	4251 San Gabriel Ave	TM 6166								5/11/2023	0
49137002	18 N Villa Ave									2/7/2023	0
49137001	22 N Villa Ave									2/7/2023	0
57124208S	4291 San Gabriel Ave	TM 6166								5/25/2023	0
57124307S	4310 San Gabriel Ave	TM 6166									0
57124104S	2722 Highland Ave	TM 6166									0
57124311S	4270 San Gabriel Ave	TM 6166									0
57124212S	4331 San Gabriel Ave	TM 6166									0
57124303S	4350 San Gabriel Ave	TM 6166							1	6/1/2023	1
											0
											0
											0
											0
											0
57124201S	4221 San Gabriel Ave	TM 6166									0
57124312S	4260 San Gabriel Ave	TM 6166									0
57124207S	4281 San Gabriel Ave	TM 6166									0
57124313S	4250 San Gabriel Ave	TM 6166									0

57124210S	4311 San Gabriel Ave	TM 6166									0
55943306S	1508 N Stanford Ave	TM 6284							1	11/3/2023	1
57124405S	2689 La Mirada Ave	TM 6166							1	5/30/2023	1
57124105S	2702 Highland Ave	TM 6166									0
57124316S	4220 San Gabriel Ave	TM 6166									0
57124205S	4261 San Gabriel Ave	TM 6166									0
57124308S	4300 San Gabriel Ave	TM 6166							1	5/30/2023	1
57124214S	4351 San Gabriel Ave	TM 6166							1	5/30/2023	1
57124301S	4370 San Gabriel Ave	TM 6166							1	6/2/2023	1
57124401S	2609 La Mirada Ave	TM 6166							1	6/2/2023	1
57124103S	2742 Highland Ave	TM 6166							1	4/25/2023	1
57124202S	4231 San Gabriel Ave	TM 6166							1	3/30/2023	1
57124215S	4361 San Gabriel Ave	TM 6166							1	6/2/2023	1
57124304S	4340 San Gabriel Ave	TM 6166							1	6/2/2023	1
57124107S	2662 Highland Ave	TM 6166							1	4/25/2023	1
57124314S	4240 San Gabriel Ave	TM 6166							1	4/25/2023	1
57124206S	4271 San Gabriel Ave	TM 6166							1	5/15/2023	1
57124309S	4290 San Gabriel Ave	TM 6166							1	5/30/2023	1
57124211S	4321 San Gabriel Ave	TM 6166							1	5/30/2023	1
57124402S	2629 La Mirada Ave	TM 6166							1	6/5/2023	1
55605042005	1217 Fruitwood Ave	TM 6344							1	4/24/2023	1
55605042074	2258 N Duke Ave	TM 6344							1	5/30/2023	1
55605042077	1319 Summerset Ave	TM 6344							1	6/6/2023	1
55605042082	2220 N Duke Ave	TM 6344							1	6/6/2023	1
55605042095	1234 Summerset Ave	TM 6344							1	6/8/2023	1
55605042087	1305 Windmill Ave	TM 6344							1	6/6/2023	1
55605042009	1257 Fruitwood Ave	TM 6344							1	5/11/2023	1
55605042033	2273 N Russell Ave	TM 6344							1	5/11/2023	1
55605042027	2274 N Elm Ave	TM 6344							1	5/15/2023	1
55605042070	1318 Springtime Ave	TM 6344							1	5/30/2023	1
55605042101	1328 Summerset Ave	TM 6344							1	6/6/2023	1
55611001	2041 N Rogers Ln	TM 6329							1	5/9/2023	1
55611002	2045 N Rogers Ln	TM 6329							1	5/9/2023	1
55611003	2049 N Rogers Ln	TM 6329							1	5/9/2023	1
55611004	2053 N Rogers Ln	TM 6329							1	5/9/2023	1
55611005	2057 N Rogers Ln	TM 6329							1	5/9/2023	1
55611006	2056 N Rogers Ln	TM 6329							1	5/16/2023	1
55611007	2052 N Rogers Ln	TM 6329							1	5/16/2023	1
55611008	2048 N Rogers Ln	TM 6329							1	5/16/2023	1
55611009	2044 N Rogers Ln	TM 6329							1	5/16/2023	1
55611010	2043 N Inverness Ln	TM 6329							1	3/9/2023	1
55611011	2049 N Inverness Ln	TM 6329							1	3/9/2023	1
55611012	2055 N Inverness Ln	TM 6329							1	3/9/2023	1
55611013	2061 N Inverness Ln	TM 6329							1	3/9/2023	1
55611014	2060 N Inverness Ln	TM 6329							1	2/17/2023	1
55611015	2054 N Inverness Ln	TM 6329							1	2/17/2023	1
55611016	2048 N Inverness Ln	TM 6329							1	2/17/2023	1
55611017	2042 N Inverness Ln	TM 6329							1	2/17/2023	1
55611046	712 Pioneer Ln	TM 6329							1	5/16/2023	1
55612001	713 Farmhouse Ln	TM 6329							1	5/16/2023	1
55612038	2020 N Rogers Ln	TM 6329							1	3/23/2023	1
55612039	2016 N Rogers Ln	TM 6329							1	3/23/2023	1
55612040	2012 N Rogers Ln	TM 6329							1	3/23/2023	1
55612041	2008 N Rogers Ln	TM 6329							1	3/23/2023	1
55943201S	1578 Teague Ave	TM 6284							1	11/3/2023	1
55612042	2009 N Rogers Ln	TM 6329							1	4/12/2023	1
55605042093	2225 N Russell Ave	TM 6344							1	6/6/2023	1
55612043	2013 N Rogers Ln	TM 6329							1	4/12/2023	1
55612044	2017 N Rogers Ln	TM 6329							1	4/12/2023	1
55612045	2021 N Rogers Ln	TM 6329							1	4/12/2023	1
55612046	2025 N Rogers Ln	TM 6329							1	5/1/2023	1
55605042084	1329 Windmill Ave	TM 6344							1	6/6/2023	1
55612047	2029 N Rogers Ln	TM 6329							1	5/1/2023	1

55605042012	1287 Fruitwood Ave	TM 6344							1	5/11/2023	1
55605042034	2281 N Russell Ave	TM 6344							1	5/11/2023	1
55605042026	2282 N Elm Ave	TM 6344							1	5/15/2023	1
55605042069	1310 Springtime Ave	TM 6344							1	5/30/2023	1
55605042100	1320 Summerset Ave	TM 6344							1	6/6/2023	1
55605042085	1321 Windmill Ave	TM 6344							1	6/6/2023	1
55605042088	1271 Windmill Ave	TM 6344							1	6/13/2023	1
55605042008	1247 Fruitwood Ave	TM 6344							1	4/20/2023	1
55611048	2033 N Rogers Ln	TM 6329							1	5/1/2023	1
55611047	2037 N Rogers Ln	TM 6329							1	5/1/2023	1
55605042031	2257 N Russell Ave	TM 6344							1	5/11/2023	1
55605042078	1311 Summerset Ave	TM 6344							1	6/6/2023	1
30942417	3270 La Mirada Ave	TM 6023							1	4/20/2023	1
55605042090	1235 Windmill Ave	TM 6344							1	6/6/2023	1
55605042025	2290 N Elm Ave	TM 6344							1	5/15/2023	1
55605042072	2272 N Duke Ave	TM 6344							1	5/30/2023	1
55605042080	2236 N Duke Ave	TM 6344							1	6/6/2023	1
55605042089	1253 Windmill Ave	TM 6344							1	6/6/2023	1
55605042006	1227 Fruitwood Ave	TM 6344							1	4/24/2023	1
55605042036	2297 N Russell Ave	TM 6344							1	5/11/2023	1
55605042028	2266 N Elm Ave	TM 6344							1	5/15/2023	1
55605042079	1303 Summerset Ave	TM 6344							1	6/6/2023	1
55605042099	1312 Summerset Ave	TM 6344							1	6/8/2023	1
55605042091	2209 N Russell Ave	TM 6344							1	6/6/2023	1
55605042010	1267 Fruitwood Ave	TM 6344							1	5/11/2023	1
55605042076	1327 Summerset Ave	TM 6344							1	6/6/2023	1
55605042097	1270 Summerset Ave	TM 6344							1	6/6/2023	1
55605042004	1207 Fruitwood Ave	TM 6344							1	4/24/2023	1
55605042035	2289 N Russell Ave	TM 6344							1	5/11/2023	1
31030016S02	4151 Flint AVE	TM 6208									0
55605042030	2250 N Elm Ave	TM 6344							1	5/15/2023	1
55605042068	1302 Springtime Ave	TM 6344							1	5/15/2023	1
55605042075	2250 N Duke Ave	TM 6344							1	6/6/2023	1
31030016S33	4132 Flint Ave	TM 6208									0
55605042083	2212 N Duke Ave	TM 6344							1	6/13/2023	1
31030016S34	4142 Flint Ave	TM 6208									0
55605042007	1237 Fruitwood Ave	TM 6344							1	4/24/2023	1
55605042032	2265 N Russell Ave	TM 6344							1	5/11/2023	1
55463401	4176 Poe Ave	TM 6123									0
55605042029	2258 N Elm Ave	TM 6344							1	5/15/2023	1
55605042071	1326 Springtime Ave	TM 6344							1	5/30/2023	1
55605042092	2217 N Russell Ave	TM 6344							1	6/13/2023	1
55605042011	1277 Fruitwood Ave	TM 6344							1	5/11/2023	1
55605042073	2266 N Duke Ave	TM 6344							1	5/30/2023	1
55463402	4186 Poe Ave	TM 6123									0
55605042081	2228 N Duke Ave	TM 6344							1	6/13/2023	1
55854002	3252 Vermont Ave	TM 6389							1	10/12/2023	1
55605042098	1304 Summerset Ave	TM 6344							1	6/13/2023	1
55605042086	1313 Windmill Ave	TM 6344							1	6/13/2023	1
55605042046	2224 N Russell Ave	TM 6344							1	5/11/2023	1
55605042042	2256 N Russell Ave	TM 6344							1	5/11/2023	1
55605042053	1276 Windmill Ave	TM 6344							1	5/30/2023	1
55605042061	2227 N Duke Ave	TM 6344							1	6/8/2023	1
55605042037	2296 N Russell Ave	TM 6344							1	4/13/2023	1
55605042051	1236 Windmill Ave	TM 6344							1	5/15/2023	1
55605042057	1366 Windmill Ave	TM 6344							1	6/8/2023	1
30943414	3320 La Mirada Ave	TM 6023							1	6/20/2023	1
55605042065	2259 N Duke Ave	TM 6344							1	6/8/2023	1
55605042063	2243 N Duke Ave	TM 6344							1	6/8/2023	1
55463403	1977 Las Rosas Ave	TM 6123									0
55605042040	2272 N Russell Ave	TM 6344							1	4/20/2023	1
55463404	1957 Las Rosas Ave	TM 6123									0
55463405	1937 Las Rosas Ave	TM 6123									0

55463406	1917 Las Rosas Ave	TM 6123									0
31030016S35	4152 Flint Ave	TM 6208									0
55463407	1887 Las Rosas Ave	TM 6123									0
31030016S36	4162 Flint Ave	TM 6208									0
55463408	1867 Las Rosas Ave	TM 6123									0
31030016S04	4131 Flint AVE	TM 6208									0
55463409	1847 Las Rosas Ave	TM 6123									0
55605042047	2216 N Russell Ave	TM 6344							1	5/11/2023	1
55605042059	2211 N Duke Ave	TM 6344							1	6/8/2023	1
55605042043	2248 N Russell Ave	TM 6344							1	5/11/2023	1
55605042049	1206 Windmill Ave	TM 6344							1	5/15/2023	1
30942210	4288 Buckingham Ave	TM 6023							1	4/21/2023	1
55605042054	1306 Windmill Ave	TM 6344							1	5/30/2023	1
30942109	4263 Buckingham Ave	TM 6023							1	5/11/2023	1
30942205	4248 Buckingham Ave	TM 6023							1	5/11/2023	1
30942114	4223 Buckingham Ave	TM 6023							1	5/11/2023	1
55605042066	2267 N Duke Ave	TM 6344							1	6/8/2023	1
55605041171	1042 Fruitwood Ave	TM 6292							1	6/16/2023	1
30942118	3210 Frontera Ave	TM 6023							1	6/2/2023	1
30942126	3290 Frontera Ave	TM 6023							1	5/30/2023	1
30942211	4217 Hampton Way	TM 6023							1	5/30/2023	1
30942306	4258 Hampton Way	TM 6023							1	6/5/2023	1
30942107	4279 Buckingham Ave	TM 6023							1	4/20/2023	1
30942208	4272 Buckingham Ave	TM 6023							1	4/21/2023	1
30942112	4239 Buckingham Ave	TM 6023							1	5/11/2023	1
30942201	4216 Buckingham Ave	TM 6023							1	5/15/2023	1
30942120	3230 Frontera Ave	TM 6023							1	5/30/2023	1
30942123	3260 Frontera Ave	TM 6023							1	5/30/2023	1
30942303	4234 Hampton Way	TM 6023							1	6/6/2023	1
30942214	4241 Hampton Way	TM 6023							1	6/6/2023	1
30942217	4265 Hampton Way	TM 6023							1	6/6/2023	1
55605042002	2338 N Russell Ave	TM 6344							1	4/21/2023	1
30942108	4271 Buckingham Ave	TM 6023							1	4/20/2023	1
30942111	4247 Buckingham Ave	TM 6023							1	4/20/2023	1
30942202	4224 Buckingham Ave	TM 6023							1	5/15/2023	1
30942122	3250 Frontera Ave	TM 6023							1	5/30/2023	1
30942124	3270 Frontera Ave	TM 6023							1	5/30/2023	1
30942302	4226 Hampton Way	TM 6023							1	6/6/2023	1
30942216	4257 Hampton Way	TM 6023							1	6/6/2023	1
55605042017	1228 Fruitwood Ave	TM 6344							1	4/21/2023	1
30942209	4280 Buckingham Ave	TM 6023							1	4/21/2023	1
30942206	4256 Buckingham Ave	TM 6023							1	4/20/2023	1
30942116	4207 Buckingham Ave	TM 6023							1	6/1/2023	1
30942119	3220 Frontera Ave	TM 6023							1	5/30/2023	1
30942213	4233 Hampton Way	TM 6023							1	5/30/2023	1
55605042014	1258 Fruitwood Ave	TM 6344							1	5/11/2023	1
30942305	4250 Hampton Way	TM 6023							1	6/6/2023	1
30942218	4273 Hampton Way	TM 6023							1	6/6/2023	1
30942106	4287 Buckingham Ave	TM 6023							1	4/21/2023	1
30942207	4264 Buckingham Ave	TM 6023							1	4/20/2023	1
30942113	4231 Buckingham Ave	TM 6023							1	5/11/2023	1
30942121	3240 Frontera Ave	TM 6023							1	5/25/2023	1
55605042020	1229 Plum Tree Ave	TM 6344							1	5/11/2023	1
30942215	4249 Hampton Way	TM 6023							1	6/6/2023	1
30942304	4242 Hampton Way	TM 6023							1	6/6/2023	1
30942110	4255 Buckingham Ave	TM 6023							1	4/20/2023	1
30942204	4240 Buckingham Ave	TM 6023							1	5/15/2023	1
30942115	4215 Buckingham Ave	TM 6023							1	6/1/2023	1
30942117	3200 Frontera Ave	TM 6023							1	6/1/2023	1
30942125	3280 Frontera Ave	TM 6023							1	5/30/2023	1
30942212	4225 Hampton Way	TM 6023							1	5/30/2023	1
30942301	4218 Hampton Way	TM 6023							1	6/5/2023	1
55605042022	1249 Plum Tree Ave	TM 6344							1	5/11/2023	1

55605042013	1268 Fruitwood Ave	TM 6344							1	5/11/2023	1
55605042019	1219 Plum Tree Ave	TM 6344							1	5/11/2023	1
55605042003	2368 N Russell Ave	TM 6344							1	4/21/2023	1
55605042016	1238 Fruitwood Ave	TM 6344							1	5/11/2023	1
55463410	1827 Las Rosas Ave	TM 6123									0
55605042023	1259 Plum Tree Ave	TM 6344							1	5/11/2023	1
55605042015	1248 Fruitwood Ave	TM 6344							1	5/11/2023	1
55463411	1807 Las Rosas Ave	TM 6123									0
55605042024	1269 Plum Tree Ave	TM 6344							1	5/11/2023	1
55464401	1654 San Marino Ave	TM 6123									0
55605042001	2308 N Russell Ave	TM 6344							1	4/21/2023	1
55605042018	1218 Fruitwood Ave	TM 6344							1	4/21/2023	1
31030016S05	4121 Flint AVE	TM 6208									0
55605042021	1239 Plum Tree Ave	TM 6344							1	5/11/2023	1
55464402	1674 San Marino Ave	TM 6123									0
55464403	1694 San Marino Ave	TM 6123									0
55464404	1724 San Marino Ave	TM 6123									0
55464405	1744 San Marino Ave	TM 6123									0
31030016S07	3512 San Marino Ave	TM 6208									0
30942507	3271 La Mirada Ave	TM 6023							1	4/21/2023	1
55943106S	1494 N Purdue Ave	TM 6284									0
30944206	3351 La Mirada Ave	TM 6023							1	5/15/2023	1
55943107S	1484 N Purdue Ave	TM 6284							1	12/20/2023	1
30944103	4423 Mecca Ave	TM 6023							1	6/5/2023	1
30944226	4446 Mecca Ave	TM 6023							1	6/2/2023	1
30943411	3350 La Mirada Ave	TM 6023							1	6/1/2023	1
30944231	4416 Mecca Ave	TM 6023							1	5/30/2023	1
30942414	3250 La Mirada Ave	TM 6023							1	4/20/2023	1
30944203	3321 La Mirada Ave	TM 6023							1	5/11/2023	1
30943408	4337 Sussex Ave	TM 6023							1	5/30/2023	1
30944228	4434 Mecca Ave	TM 6023							1	6/2/2023	1
30944106	4441 Mecca Ave	TM 6023							1	6/5/2023	1
30943412	3340 La Mirada Ave	TM 6023							1	6/1/2023	1
30944105	4435 Mecca Ave	TM 6023							1	6/5/2023	1
55610072	2002 N Perry Ln	TM 6328							1	5/22/2023	1
55610073	2008 N Perry Ln	TM 6328							1	5/22/2023	1
55610074	2014 N Perry Ln	TM 6328							1	5/22/2023	1
55610075	2020 N Perry Ln	TM 6328							1	5/22/2023	1
55610076	2026 N Perry Ln	TM 6328							1	5/22/2023	1
55943109S	1464 N Purdue Ave	TM 6284							1	3/9/2023	1
55943110S	1454 N Purdue Ave	TM 6284							1	3/8/2023	1
30944225	4452 Mecca Ave	TM 6023							1	6/2/2023	1
30942508	3281 La Mirada Ave	TM 6023							1	4/21/2023	1
30942418	3290 La Mirada Ave	TM 6023							1	4/20/2023	1
55943323S	1455 N Purdue Ave	TM 6284							1	11/3/2023	1
30944202	3311 La Mirada Ave	TM 6023							1	5/11/2023	1
55943324S	1465 N Purdue Ave	TM 6284							1	3/9/2023	1
30944233	3322 Amistad Ave	TM 6023							1	5/30/2023	1
30942506	3261 La Mirada Ave	TM 6023							1	4/21/2023	1
55605042096	1252 Summerset Ave	TM 6344							1	6/6/2023	1
30943415	3310 La Mirada Ave	TM 6023							1	5/11/2023	1
30944205	3341 La Mirada Ave	TM 6023							1	5/15/2023	1
30943409	4357 Sussex Ave	TM 6023							1	5/30/2023	1
55467014	4184 Hoblitt Ave	TM 6404									0
30944235	3302 Amistad Ave	TM 6023							1	5/30/2023	1
30944229	4428 Mecca Ave	TM 6023							1	5/30/2023	1
30942416	3260 La Mirada Ave	TM 6023							1	4/20/2023	1
30944201	3301 La Mirada Ave	TM 6023							1	4/20/2023	1
55467017	4154 Hoblitt Ave	TM 6404									0
30944230	4422 Mecca Ave	TM 6023							1	5/30/2023	1
55467018	4144 Hoblitt Ave	TM 6404									0
30944107	4447 Mecca Ave	TM 6023							1	6/5/2023	1
30942505	3251 La Mirada Ave	TM 6023							1	4/20/2023	1

55467020	4124 Hoblitt Ave	TM 6404									0
30943413	3330 La Mirada Ave	TM 6023							1	5/11/2023	1
30944207	3361 La Mirada Ave	TM 6023							1	6/1/2023	1
30943407	4317 Sussex Ave	TM 6023							1	5/30/2023	1
55467021	4114 Hoblitt Ave	TM 6404									0
30944102	4417 Mecca Ave	TM 6023							1	6/2/2023	1
55467023	4094 Hoblitt Ave	TM 6404									0
55467024	4084 Hoblitt Ave	TM 6404									0
30944227	4440 Mecca Ave	TM 6023							1	6/2/2023	1
30942509	3291 La Mirada Ave	TM 6023							1	4/20/2023	1
55467025	1385 Junipero Ave	TM 6404									0
30942417	3280 La Mirada Ave	TM 6023							1	4/20/2023	1
30944204	3331 La Mirada Ave	TM 6023							1	5/15/2023	1
30943410	3360 La Mirada Ave	TM 6023							1	6/1/2023	1
30944234	3312 Amistad Ave	TM 6023							1	5/30/2023	1
30944232	4410 Mecca Ave	TM 6023							1	5/30/2023	1
30944101	4411 Mecca Ave	TM 6023							1	5/30/2023	1
30944104	4429 Mecca Ave	TM 6023							1	6/5/2023	1
30944224	4458 Mecca Ave	TM 6023							1	6/2/2023	1
55942003S	1697 Teague Ave	TM 6154							1	2/9/2023	1
55941024S	1775 N Renn Ave	TM 6154							1	5/19/2023	1
55941022S	1795 N Renn Ave	TM 6154							1	9/22/2023	1
55942020S	1661 N Shirley Ave	TM 6154							1	7/10/2023	1
55943101S	1508 Teague Ave	TM 6284							1	3/20/2023	1
55609007	2131 N Rogers Ln	TM 6050							1	6/21/2023	1
55536235	2121 Descanso Ave	TM 6377							1	3/24/2023	1
55536242	2000 Descanso Ave	TM 6377							1	3/24/2023	1
55536246	2080 Descanso Ave	TM 6377							1	5/17/2023	1
55536247	2100 Descanso Ave	TM 6377							1	5/17/2023	1
55536248	2120 Descanso Ave	TM 6377							1	5/17/2023	1
55536249	2140 Descanso Ave	TM 6377							1	5/2/2023	1
55944032	2976 Trenton Ave	TM 6339							1	12/14/2023	1
55944033	2966 Trenton Ave	TM 6339							1	12/14/2023	1
55944034	2956 Trenton Ave	TM 6339							1	12/14/2023	1
55944035	2946 Trenton Ave	TM 6339							1	12/14/2023	1
55944036	2936 Trenton Ave	TM 6339							1	12/14/2023	1
55944037	2926 Trenton Ave	TM 6339							1	12/14/2023	1
55944038	2916 Trenton Ave	TM 6339							1	12/14/2023	1
55944043	2959 Teague Ave	TM 6339							1	12/14/2023	1
55944044	2969 Teague Ave	TM 6339							1	12/14/2023	1
55944045	2979 Teague Ave	TM 6339							1	12/14/2023	1
55944046	1607 N Megan Ave	TM 6339							1	4/27/2023	1
55944047	1617 N Megan Ave	TM 6339							1	4/27/2023	1
55944048	1627 N Megan Ave	TM 6339							1	4/27/2023	1
55944049	1637 N Megan Ave	TM 6339							1	4/27/2023	1
55944050	1647 N Megan Ave	TM 6339							1	4/27/2023	1
55855002	1687 N Twinberry Ave	TM 6389							1	12/14/2023	1
55855003	1677 N Twinberry Ave	TM 6389							1	10/12/2023	1
55855004	1667 N Twinberry Ave	TM 6389							1	12/14/2023	1
55855005	1657 N Twinberry Ave	TM 6389							1	12/14/2023	1
55854001	1647 N Twinberry Ave	TM 6389							1	10/12/2023	1
55854003	3242 Vermont Ave	TM 6389							1	5/4/2023	1
55854004	1669 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854005	1663 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854006	1657 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854007	1651 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854008	1645 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854009	1639 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854010	1633 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854011	1632 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854012	1638 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854013	1644 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854014	1650 N Blackwood Ave	TM 6389							1	12/14/2023	1

55854015	1656 N Blackwood Ave	TM 6389							1	12/14/2023	1
55854016	1662 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855019	1668 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855018	1674 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855017	1680 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855016	1686 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855015	1692 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855014	1698 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855020	1699 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855021	1693 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855022	1687 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855023	1681 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855024	1675 N Blackwood Ave	TM 6389							1	12/14/2023	1
55855006	1658 N Twinberry Ave	TM 6389							1	11/9/2023	1
55855007	1668 N Twinberry Ave	TM 6389							1	10/12/2023	1
55855008	1678 N Twinberry Ave	TM 6389							1	11/9/2023	1
55855009	1688 N Twinberry Ave	TM 6389							1	11/9/2023	1
55855010	1698 N Twinberry Ave	TM 6389							1	11/9/2023	1
55855011	3230 Loyola Ave	TM 6389							1	12/14/2023	1
55855012	3220 Loyola Ave	TM 6389							1	12/14/2023	1
55936306	1643 N Ryan Ave	TM 6109							1	11/9/2023	1
55939123	2694 Moody Ave	TM 6301							1	3/2/2023	1
55939124	2674 Moody Ave	TM 6301							1	8/17/2023	1
55939125	2654 Moody Ave	TM 6301							1	9/21/2023	1
55939126	1722 N Applegate Ave	TM 6301							1	8/29/2023	1
55939127	1732 N Applegate Ave	TM 6301							1	7/27/2023	1
55939128	1742 N Applegate Ave	TM 6301							1	8/17/2023	1
55939130	1731 N Hanson Ave	TM 6301							1	5/4/2023	1
55939131	1721 N Hanson Ave	TM 6301							1	8/17/2023	1
55939132	1711 N Hanson Ave	TM 6301							1	10/19/2023	1
55939133	1701 N Hanson Ave	TM 6301							1	10/19/2023	1
55939201	1700 N Hanson Ave	TM 6301							1	10/19/2023	1
55939202	1710 N Hanson Ave	TM 6301							1	10/19/2023	1
55939203	1720 N Hanson Ave	TM 6301							1	10/19/2023	1
55939204	1730 N Hanson Ave	TM 6301							1	10/19/2023	1
55939205	1740 N Hanson Ave	TM 6301							1	10/19/2023	1
55939206	1750 N Hanson Ave	TM 6301							1	10/5/2023	1
55939207	2611 Loyola Ave	TM 6301							1	7/27/2023	1
55939208	2621 Loyola Ave	TM 6301							1	7/27/2023	1
55939301	2641 Loyola Ave	TM 6301							1	5/12/2023	1
55939302	2661 Loyola Ave	TM 6301							1	4/27/2023	1
55939303	2681 Loyola Ave	TM 6301							1	4/27/2023	1
55939304	1753 N Applegate Ave	TM 6301							1	5/12/2023	1
55939305	1743 N Applegate Ave	TM 6301							1	3/2/2023	1
55939306	1733 N Applegate Ave	TM 6301							1	3/2/2023	1
55939309	1754 N Park Ave	TM 6301							1	3/2/2023	1
55942002S	1677 Teague Ave	TM 6154							1	1/23/2023	1
30902252142	3205 Lourdes Ave	TM 6161							1	3/2/2023	1
30902252141	3215 Lourdes Ave	TM 6161							1	3/2/2023	1
55943202S	1568 Teague Ave	TM 6284							1	3/20/2023	1
55943205S	1563 Richmond Ave	TM 6284							1	3/20/2023	1
55943210S	1519 N Stanford Ave	TM 6284							1	3/27/2023	1
55943104S	1523 Richmond Ave	TM 6284							1	3/23/2023	1
55939310	2731 Loyola Ave	TM 6301							1	3/30/2023	1
55463201	4187 Poe Ave	TM 6123							1	4/19/2023	1
55463202	4177 Poe Ave	TM 6123							1	4/19/2023	1
55463203	4167 Poe Ave	TM 6123							1	4/19/2023	1
55463204	4157 Poe Ave	TM 6123							1	4/19/2023	1
55463205	4147 Poe Ave	TM 6123							1	4/19/2023	1
55939129	1741 N Hanson Ave	TM 6301							1	5/4/2023	1
31030016S06	4111 Flint AVE	TM 6208							1	5/4/2023	1
31030016S08	3522 San Marino Ave	TM 6208							1	5/18/2023	1
31030016S31	3533 San Marino Ave	TM 6208							1	5/18/2023	1

31030016S10	3542 San Marino Ave	TM 6208							1	5/30/2023	1
31030016S11	3552 San Marino Ave	TM 6208							1	5/18/2023	1
31030016S30	3543 San Marino Ave	TM 6208							1	5/30/2023	1
31030016S09	3532 San Marino Ave	TM 6208							1	5/19/2023	1
31030016S32	3523 San Marino Ave	TM 6208							1	5/30/2023	1
30902252002	4755 Buckingham Ave	TM 6161							1	5/18/2023	1
30902252003	4745 Buckingham Ave	TM 6161							1	5/18/2023	1
30902252004	4735 Buckingham Ave	TM 6161							1	5/18/2023	1
30902252005	4725 Buckingham Ave	TM 6161							1	5/18/2023	1
30902252012	4734 Buckingham Ave	TM 6161							1	5/30/2023	1
30902252013	4744 Buckingham Ave	TM 6161							1	5/18/2023	1
30902252014	4754 Buckingham Ave	TM 6161							1	5/18/2023	1
55463301	4056 Poe Ave	TM 6123							1	5/17/2023	1
55463307	4136 Poe Ave	TM 6123							1	5/17/2023	1
55463308	4146 Poe Ave	TM 6123							1	5/17/2023	1
55463309	4156 Poe Ave	TM 6123							1	5/17/2023	1
31030016S22	3585 Las Rosas Ave	TM 6208							1	5/18/2023	1
31030016S18	4144 Lansing Ave	TM 6208							1	5/18/2023	1
31030016S20	4164 Lansing Ave	TM 6208							1	5/30/2023	1
31030016S23	3575 Las Rosas Ave	TM 6208							1	5/30/2023	1
31030016S24	3565 Las Rosas Ave	TM 6208							1	5/30/2023	1
31030016S25	4155 Lansing Ave	TM 6208							1	5/30/2023	1
31030016S26	4145 Lansing Ave	TM 6208							1	6/6/2023	1
31030016S27	4135 Lansing Ave	TM 6208							1	6/6/2023	1
31030016S17	4134 Lansing Ave	TM 6208							1	6/6/2023	1
31030016S21	4174 Lansing Ave	TM 6208							1	6/6/2023	1
31030016S19	4154 Lansing Ave	TM 6208							1	5/18/2023	1
31030016S12	3562 San Marino Ave	TM 6208							1	6/6/2023	1
31030016S13	3572 San Marino Ave	TM 6208							1	6/6/2023	1
31030016S15	3592 San Marino Ave	TM 6208							1	5/18/2023	1
31030016S28	3563 San Marino Ave	TM 6208							1	5/18/2023	1
31030016S29	3553 San Marino Ave	TM 6208							1	5/18/2023	1
30902252006	4715 Buckingham Ave	TM 6161							1	5/30/2023	1
30902252007	4705 Buckingham Ave	TM 6161							1	5/30/2023	1
30902252008	3202 Simental Ave	TM 6161							1	5/19/2023	1
30902252009	3212 Simental Ave	TM 6161							1	5/30/2023	1
30902252104	4602 Sussex Ave	TM 6161							1	6/6/2023	1
30902252105	4610 Sussex Ave	TM 6161							1	6/6/2023	1
30902252106	4618 Sussex Ave	TM 6161							1	6/6/2023	1
30902252107	4626 Sussex Ave	TM 6161							1	6/21/2023	1
30902252097	4651 Sussex Ave	TM 6161							1	6/21/2023	1
30902252098	4643 Sussex Ave	TM 6161							1	6/21/2023	1
30902252099	4635 Sussex Ave	TM 6161							1	6/6/2023	1
30902252108	4634 Sussex Ave	TM 6161							1	6/21/2023	1
30902252109	4642 Sussex Ave	TM 6161							1	6/6/2023	1
30902252110	4650 Sussex Ave	TM 6161							1	6/6/2023	1
30902252010	3222 Simental Ave	TM 6161							1	5/24/2023	1
30902252011	4724 Buckingham Ave	TM 6161							1	5/24/2023	1
30902252020	4727 Hampton Way	TM 6161							1	6/6/2023	1
30902252021	3232 Simental Ave	TM 6161							1	5/24/2023	1
6413010000	4011 Scott Ave	TM 6413							1	6/12/2023	1
6413030000	4002 Scott Ave								1	6/12/2023	1
6413040000	4012 Scott Ave	TM 6413							1	6/12/2023	1
6413050000	4022 Scott Ave	TM 6413							1	6/12/2023	1
6413060000	4032 Scott Ave	TM 6413							1	6/12/2023	1
6413120000	1650 La Canada Ave	TM 6413							1	6/12/2023	1
6413260000	1653 Hermosa Ave	TM 6413							1	6/12/2023	1
6413330000	4143 Keats Ave	TM 6413							1	6/12/2023	1
6413560000	4186 Twain Ave	TM 6413							1	6/12/2023	1
30902252017	4757 Hampton Way	TM 6161							1	6/12/2023	1
30902252019	4737 Hampton Way	TM 6161							1	6/12/2023	1
30902252026	4736 Hampton Way								1	6/12/2023	1
30902252027	4746 Hampton Way	TM 6161							1	6/21/2023	1

30902252028	4756 Hampton Way	TM 6161							1	6/21/2023	1
55465203	1458 Junipero Ave	TM 6304							1	6/14/2023	1
55465206	1428 Junipero Ave	TM 6304							1	6/14/2023	1
55467022	4104 Hoblitt Ave	TM 6404							1	6/14/2023	1
55467026	1375 Junipero Ave	TM 6404							1	6/14/2023	1
30902252023	3252 Simental Ave	TM 6161							1	6/29/2023	1
30902252024	3262 Simental Ave								1	6/29/2023	1
30902252025	4726 Hampton Way	TM 6161							1	6/29/2023	1
30902252034	4719 Bellaire Ave	TM 6161							1	6/29/2023	1
30902252035	3272 Simental Ave	TM 6161							1	6/29/2023	1
30902252036	3282 Simental Ave	TM 6161							1	6/29/2023	1
30902252093	4683 Sussex Ave	TM 6161							1	7/5/2023	1
30902252094	4675 Sussex Ave	TM 6161							1	6/29/2023	1
30902252095	4667 Sussex Ave	TM 6161							1	6/29/2023	1
30902252096	4659 Sussex Ave	TM 6161							1	6/29/2023	1
30902252111	4658 Sussex Ave	TM 6161							1	6/29/2023	1
30902252112	4666 Sussex Ave	TM 6161							1	6/29/2023	1
30902252113	4674 Sussex Ave	TM 6161							1	6/29/2023	1
30902252114	4682 Sussex Ave	TM 6161							1	6/29/2023	1
56017030	1237 N Cindy Ave	TM 6348							1	6/29/2023	1
30902252092	3308 Escalante Ave	TM 6161							1	7/12/2023	1
30902252091	3318 Escalante Ave	TM 6161							1	7/12/2023	1
30902252090	3328 Escalante Ave	TM 6161							1	7/12/2023	1
30902252089	3338 Escalante Ave	TM 6161							1	7/12/2023	1
30902252088	3348 Escalante Ave	TM 6161							1	7/12/2023	1
30902252068	4638 Bellaire Ave	TM 6161							1	7/12/2023	1
30902252069	4631 Joaquin Ave	TM 6161							1	7/12/2023	1
56017032	584 W Kenosha Ave	TM 6348							1	7/13/2023	1
30902252022	3242 Simental Ave	TM 6161							1	7/24/2023	1
6413110000	1670 La Canada Ave	TM 6413							1	7/25/2023	1
6413270000	1673 Hermosa Ave	TM 6413							1	7/25/2023	1
6413320000	4133 Keats Ave	TM 6413							1	7/25/2023	1
6413570000	4176 Twain Ave	TM 6413							1	7/25/2023	1
6413580000	4166 Twain Ave	TM 6413							1	7/25/2023	1
6413590000	4156 Twain Ave	TM 6413							1	7/25/2023	1
6413610000	4136 Twain Ave	TM 6413							1	7/25/2023	1
6413620000	4126 Twain Ave	TM 6413							1	7/25/2023	1
6413630000	4116 Twain Ave	TM 6413							1	7/25/2023	1
6413600000	4146 Twain Ave	TM 6413							1	7/25/2023	1
31030016S14	3582 San Marino Ave	TM 6208							1	8/2/2023	1
30902252070	4641 Joaquin Ave	TM 6161							1	8/10/2023	1
30902252071	4651 Joaquin Ave	TM 6161							1	8/10/2023	1
30902252081	4670 Joaquin Ave	TM 6161							1	8/10/2023	1
30902252082	4660 Joaquin Ave	TM 6161							1	8/10/2023	1
30902252083	4650 Joaquin Ave	TM 6161							1	8/10/2023	1
30902252084	4640 Joaquin Ave	TM 6161							1	8/10/2023	1
30902252031	4749 Bellaire Ave	TM 6161							1	8/22/2023	1
30902252033	4729 Bellaire Ave	TM 6161							1	8/22/2023	1
30902252040	4728 Bellaire Ave	TM 6161							1	8/22/2023	1
30902252041	4738 Bellaire Ave	TM 6161							1	8/22/2023	1
30902252042	4748 Bellaire Ave	TM 6161							1	8/22/2023	1
30902252037	3302 Simental Ave	TM 6161							1	8/22/2023	1
30902252038	3312 Simental Ave	TM 6161							1	8/22/2023	1
30902252039	4718 Bellaire Ave	TM 6161							1	8/22/2023	1
30902252048	4721 Joaquin Ave	TM 6161							1	8/22/2023	1
30902252072	4661 Joaquin Ave	TM 6161							1	8/25/2023	1
30946211	3339 Escobedo Ave	TM 6161							1	8/25/2023	1
30902252078	3349 Escobedo Ave	TM 6161							1	8/22/2023	1
30902252080	4680 Joaquin Ave	TM 6161							1	8/22/2023	1
30902252079	4690 Joaquin Ave	TM 6161							1	8/22/2023	1
30902252064	4678 Bellaire Ave	TM 6161							1	8/25/2023	1
30946102	4668 Bellaire Ave	TM 6161							1	8/25/2023	1
30902252067	4648 Bellaire Ave	TM 6161							1	8/25/2023	1

6413070000	4063 Keats Ave	TM 6413							1	8/31/2023	1
6413090000	1710 La Canada Ave	TM 6413							1	8/31/2023	1
6413290000	1713 Hermosa Ave	TM 6413							1	8/31/2023	1
6413300000	1733 Hermosa Ave	TM 6413							1	8/31/2023	1
6413280000	1693 Hermosa Ave	TM 6413							1	8/31/2023	1
30902252073	4671 Joaquin Ave	TM 6161							1	9/11/2023	1
30902252018	4747 Hampton Way	TM 6161							1	9/11/2023	1
6413080000	1730 La Canada Ave	TM 6413							1	9/6/2023	1
6413100000	1690 La Canada Ave	TM 6123							1	9/6/2023	1
30902252138	3245 Lourdes Ave	TM 6161							1	9/11/2023	1
6413020000	4001 Scott Ave	TM 6413							1	9/7/2023	1
6413130000	1651 La Canada Ave	TM 6413							1	9/8/2023	1
6413150000	1691 La Canada Ave	TM 6413							1	9/8/2023	1
6413170000	1731 La Canada Ave	TM 6413							1	9/8/2023	1
6413180000	4083 Keats Ave	TM 6413							1	9/8/2023	1
6413190000	4093 Keats Ave	TM 6413							1	9/8/2023	1
6413200000	4103 Keats Ave	TM 6413							1	9/8/2023	1
55943402S	1384 N Purdue Ave	TM 6284							1	9/22/2023	1
55467008	4183 Hoblitt Ave	TM 6404							1	9/18/2023	1
55467009	4193 Hoblitt Ave	TM 6404							1	9/18/2023	1
55467010	1407 Las Rosas Ave	TM 6404							1	9/18/2023	1
55467011	1417 Las Rosas Ave	TM 6404							1	9/18/2023	1
55467012	1427 Las Rosas Ave	TM 6404							1	9/18/2023	1
55467013	1437 Las Rosas Ave	TM 6404							1	9/18/2023	1
6413310000	4123 Keats Ave	TM 6413							1	9/18/2023	1
6413160000	1711 La Canada Ave	TM 6413							1	9/27/2023	1
6413220000	1712 Hermosa Ave	TM 6413							1	9/27/2023	1
6413230000	1692 Hermosa Ave	TM 6413							1	9/27/2023	1
6413250000	1652 Hermosa Ave	TM 6413							1	9/27/2023	1
55467039	4113 Hoblitt Ave	TM 6404							1	10/18/2023	1
6413140000	1671 La Canada Ave	TM 6413							1	10/18/2023	1
6413210000	1732 Hermosa Ave	TM 6413							1	10/18/2023	1
6413240000	1672 Hermosa Ave	TM 6413							1	10/18/2023	1
55943403S	1520 Enterprise Ave	TM 6284							1	11/3/2023	1
55464101	1801 Agua Dulce Ave	TM 6182							1	11/2/2023	1
55464102	1811 Agua Dulce Ave	TM 6182							1	11/2/2023	1
55463101	1831 Agua Dulce Ave	TM 6182							1	11/2/2023	1
55463102	1841 Agua Dulce Ave	TM 6182							1	11/2/2023	1
55463104	1871 Agua Dulce Ave	TM 6182							1	11/2/2023	1
55463105	1881 Agua Dulce Ave	TM 6182							1	11/2/2023	1
55467051	4102 Mitchell Ave	TM 6182							1	11/2/2023	1
30902252046	4741 Joaquin Ave	TM 6161							1	11/15/2023	1
30902252056	4750 Joaquin Ave	TM 6161							1	11/15/2023	1
55463209	4107 Poe Ave	TM 6123							1	11/14/2023	1
6413640000	4106 Twain Ave	TM 6413							1	11/14/2023	1
55467047	4142 Mitchell Ave	TM 6404							1	11/14/2023	1
55467037	4093 Hoblitt Ave	TM 6404							1	11/30/2023	1
30943216	4252 Bellaire Ave	TM 6023							1	12/6/2023	1
30943211	4212 Bellaire Ave	TM 6023							1	12/6/2023	1
30943218	4268 Bellaire Ave	TM 6023							1	12/6/2023	1
30943214	4236 Bellaire Ave	TM 6023							1	12/6/2023	1
30943212	4220 Bellaire Ave	TM 6023							1	12/6/2023	1
30943215	4244 Bellaire Ave	TM 6023							1	12/6/2023	1
30943220	4284 Bellaire Ave	TM 6023							1	12/6/2023	1
30943219	4276 Bellaire Ave	TM 6023							1	12/6/2023	1
30943213	4228 Bellaire Ave	TM 6023							1	12/6/2023	1
55463103	1851 Agua Dulce Ave	TM 6182							1	12/6/2023	1
30943217	4260 Bellaire Ave	TM 6023							1	12/6/2023	1
55467040	4123 Hoblitt Ave	TM 6404							1	12/13/2023	1
55467046	4152 Mitchell Ave	TM 6404							1	12/13/2023	1
30946203	3322 Simental Ave	TM 6161							1	12/20/2023	1
55467050	4112 Mitchell Ave	TM 6404							1	12/18/2023	1
56408024	1187 N Holly Ave	TM 6367							1	12/27/2023	1

56408018	1196 N Holly Ave	TM 6367							1	12/27/2023	1
5590110865	1754 Lester Ave	TM 6154									0
5560503803	2091 N Rogers Ln	TM 6050									0
57124404S	2669 La Mirada Ave	TM 6166							1	6/2/2023	1
55943302S	1542 Richmond Ave	TM 6284							1	4/18/2023	1
57124305S	4330 San Gabriel Ave	TM 6166							1	6/2/2023	1
57124216S	4371 San Gabriel Ave	TM 6166							1	6/2/2023	1
57124110S	2602 Highland Ave	TM 6166							1	3/30/2023	1
55943107S	1484 N Purdue Ave B	TM 6284		1						12/29/2023	1
56408024	1187 N Holly Ave B	TM 6367		1						12/27/2023	1
56408018	1196 N Holly Ave B	TM 6367		1						12/27/2023	1
49209615	148 Acacia Ave B	NO PROJECT		1						12/19/2023	1
49937314	2531 Bundy Ave			1						10/25/2023	1
43030251	514 W Pico Ave B	NO PROJECT		1						10/12/2023	1
55844025	1291 N Whitmore Ave B	TM 5472		1						9/19/2023	1
30946103	4658 Bellaire Ave	TM 6161		1						8/25/2023	1
41037201	109 N Cindy Ave B					1				8/14/2023	1
41031302	73 N Willow Ave	NO PROJECT				1				7/26/2023	1
49211214	261 Minnewawa Ave B					1				7/10/2023	1
55311205	2652 Fremont Ave					1				6/26/2023	1
56108111	957 N Citadel Ave B					1				5/31/2023	1
49119223	1514 Gibson Ave B	NO PROJECT				1				5/4/2023	1
49207202	120 Woodworth Ave B	NO PROJECT				1				4/4/2023	1
49106171	227 W Sierra Ave B					1				3/29/2023	1
49106171	227 W Sierra Ave C							1		3/29/2023	1
49106171	237 Sierra Ave B							1		3/29/2023	1
49106171	237 Sierra Ave C							1		3/29/2023	1
41053104	281 N Terry Ave B							1		2/24/2023	1
56010008	1783 N Bush Ave	TM 4912						1		2/14/2023	1
49137001	22 N Villa Ave B							1		2/7/2023	1
49137001	22 N Villa Ave C							1		2/7/2023	1
49137002	18 N Villa Ave B							1		2/7/2023	1
49137002	18 N Villa Ave C							1		2/7/2023	1
49113103	80 N Woodworth Ave B	NO PROJECT							1	2/1/2023	1
49118422	1743 Bullard Ave B	NO PROJECT							1	1/10/2023	1
49118416	1729 Bullard Ave B	NO PROJECT							1	1/10/2023	1
55943105S	1513 Richmond Ave B	TM 6284									0
55941020S	1744 Lester Ave B	TM 6154									0
49117107	1470 Fourth St B	NO PROJECT									0
49117122	1476 Fourth St B	NO PROJECT									0
55940012S	1735 Lester Ave	TM 6154									0
49821334	1113 Carey Ave	NO PROJECT									0
49906021	329 W Rialto Ave B	NO PROJECT									0
55933016	2017 Teague Ave	TM 5550									0
55940007S	1940 N Ezie Ave	TM 6154									0
55941018S	1762 Lester Ave	TM 6154									0
55941006S	1765 N Bundy Ave	TM 6154									0
55940008S	1919 N Ezie Ave	TM 6154									0
49212215	253 Minnewawa	PM2023-003									0
56314253	1491 Alluvial	MFRDR2023-001									0
											0
											0
											0
											0

Table A2

Annual Building Activity Report Summary - New Construction, Entitled, Permits and Completed Units

Project Identifier			Affordability by Household Incomes - Certificates of Occupancy								
			10							11	12
Current APN	**Street Address**	**Project Name**+	**Very Low- Income Deed Restricted**	**Very Low- Income Non Deed Restricted**	**Low- Income Deed Restricted**	**Low- Income Non Deed Restricted**	**Moderate- Income Deed Restricted**	**Moderate- Income Non Deed Restricted**	**Above Moderate- Income**	**Certificates of Occupancy or other forms of readiness (see instructions) Date Issued**	**# of Units issued Certificates of Occupancy or other forms of readiness**
			73	0	0	3	0	38	398		512
55503144	3700 Loma Vista Pkwy Bld 34	SPR 2018-011						6		12/27/2023	6
55503144	3700 Loma Vista Pkwy 3601	SPR 2018-011						6		11/21/2023	6
55503144	3700 Loma Vista Pkwy 3501	SPR 2018-011						9		12/19/2023	9
43060101	784 W Holland Ave	RHNA 2019-001	73					2		6/21/2023	75
55503144	3700 Loma Vista Pkwy	SPR 2018-011						3		11/21/2023	3
55534322	3072 De Wolf Ave								1	11/22/2023	1
55926019S	1808 N Carson Ave	TM 5122							1	4/28/2023	1
55926011S	1807 N Coventry Ave	TM 5122							1	4/28/2023	1
49207202	120 Woodworth Ave								1	1/3/2023	1
55851007	3076 Lester Ave	PM 2018-011							1	12/1/2023	1
49215215	356 Oxford Ave	PM 2022-003							1	7/11/2023	1
49215215	360 Oxford Ave	PM 2022-003							1	7/6/2023	1
49209820	156 Sunnyside Ave										0
5612601740	421 W Mahogany Ln	TM 6262							1	1/5/2023	1
5612601751	436 W Balsam Ln	TM 6262							1	1/19/2023	1
5612601059	563 N Citadel Ln	TM 6262							1	1/5/2023	1
56129044	472 W Balsam Ln	TM 6262							1	2/1/2023	1
56129043	468 W Balsam Ln	TM 6262							1	1/31/2023	1
56129042	464 W Balsam Ln	TM 6262							1	2/1/2023	1
56129041	460 W Balsam Ln	TM 6262							1	2/1/2023	1
5612601755	456 W Balsam Ln	TM 6262							1	1/19/2023	1
5612601051	557 N Terry Ln	TM 6262							1	2/22/2023	1
56129045	476 W Balsam Ln	TM 6262							1	2/1/2023	1
5612601754	452 W Balsam Ln	TM 6262							1	1/19/2023	1
5612601753	448 W Balsam Ln	TM 6262							1	1/9/2023	1
5612601752	440 W Balsam Ln	TM 6262							1	1/19/2023	1
56129064	561 N Terry Ln	TM 6262							1	2/22/2023	1
56129063	565 N Terry Ln	TM 6262							1	2/22/2023	1
56129062	569 N Terry Ln	TM 6262							1	2/22/2023	1
56129061	573 N Terry Ln	TM 6262							1	2/16/2023	1
56129060	574 N Terry Ln	TM 6262							1	3/22/2023	1
56129059	570 N Terry Ln	TM 6262							1	3/22/2023	1
56129058	566 N Terry Ln	TM 6262							1	3/22/2023	1
56129057	562 N Terry Ln	TM 6262							1	3/22/2023	1
56129056	558 N Terry Ln	TM 6262							1	3/22/2023	1
56129055	559 N Cindy Ln	TM 6262							1	4/17/2023	1
56129054	563 N Cindy Ln	TM 6262							1	4/17/2023	1
56129053	567 N Cindy Ln	TM 6262							1	4/17/2023	1
56128065	576 N Cindy Ln	TM 6262							1	4/27/2023	1
56129052	571 N Cindy Ln	TM 6262							1	4/17/2023	1
56129050	496 W Balsam Ln	TM 6262							1	3/31/2023	1
56129049	492 W Balsam Ln	TM 6262							1	3/31/2023	1
56129048	488 W Balsam Ln	TM 6262							1	3/31/2023	1
56128064	572 N Cindy Ln	TM 6262							1	4/27/2023	1
56129047	484 W Balsam Ln	TM 6262							1	3/31/2023	1
56129046	480 W Balsam Ln	TM 6262							1	3/31/2023	1
56129051	575 N Cindy Ln	TM 6262							1	4/17/2023	1
56128061	560 N Cindy Ln	TM 6262							1	4/27/2023	1
56128062	564 N Cindy Ln	TM 6262							1	4/27/2023	1

56128063	568 N Cindy Ln	TM 6262							1	4/27/2023	1
56128060	561 N Sylmar Ln	TM 6262							1	5/24/2023	1
56128057	573 N Sylmar Ln	TM 6262							1	5/24/2023	1
56128059	565 N Sylmar Ln	TM 6262							1	5/24/2023	1
56128056	577 N Sylmar Ln	TM 6262							1	5/24/2023	1
56128058	569 N Sylmar Ln	TM 6262							1	5/24/2023	1
56128020	516 W Balsam Ln	TM 6262							1	5/10/2023	1
56128019	512 W Balsam Ln	TM 6262							1	5/10/2023	1
56128018	508 W Balsam Ln	TM 6262							1	5/10/2023	1
56128017	504 W Balsam Ln	TM 6262							1	5/10/2023	1
56128016	500 W Balsam Ln	TM 6262							1	5/10/2023	1
55609012	607 Heirloom Ln	TM 6050							1	2/24/2023	1
56128024	532 W Balsam Ln	TM 6262							1	6/22/2023	1
56128025	536 W Balsam Ln	TM 6262							1	6/22/2023	1
56128055	578 N Sylmar Ln	TM 6262							1	6/13/2023	1
56128054	574 N Sylmar Ln	TM 6262							1	6/13/2023	1
56128053	570 N Sylmar Ln	TM 6262							1	6/13/2023	1
56128052	566 N Sylmar Ln	TM 6262							1	6/13/2023	1
56128051	562 N Sylmar Ln	TM 6262							1	6/13/2023	1
56128021	520 W Balsam Ln	TM 6262							1	6/22/2023	1
56128023	528 W Balsam Ln	TM 6262							1	6/22/2023	1
56128022	524 W Balsam Ln	TM 6262							1	6/22/2023	1
56128010	510 W Mahogany Ln	TM 6262							1	7/6/2023	1
56128009	514 W Mahogany Ln	TM 6262							1	7/6/2023	1
56128008	518 W Mahogany Ln	TM 6262							1	7/6/2023	1
55609050	545 Bloom Ln	TM 6050							1	2/10/2023	1
56128007	522 W Mahogany Ln	TM 6262							1	7/6/2023	1
556128006	526 W Mahogany Ln	TM 6262							1	7/6/2023	1
56127035	598 W Mahogany Ln	TM 6262							1	8/22/2023	1
56127034	602 W Mahogany Ln	TM 6262							1	8/22/2023	1
56127028	626 W Mahogany Ln	TM 6262							1	8/7/2023	1
56127033	606 W Mahogany Ln	TM 6262							1	8/22/2023	1
56127032	610 W Mahogany Ln	TM 6262							1	8/22/2023	1
56127031	614 W Mahogany Ln	TM 6262							1	8/22/2023	1
56127030	618 W Mahogany Ln	TM 6262							1	8/7/2023	1
56127027	630 W Mahogany Ln	TM 6262							1	8/7/2023	1
56127029	622 W Mahogany Ln	TM 6262							1	8/7/2023	1
56127026	634 W Mahogany Ln	TM 6262							1	8/7/2023	1
56127025	638 W Mahogany Ln	TM 6262							1	7/19/2023	1
56127024	642 W Mahogany Ln	TM 6262							1	7/19/2023	1
56127023	646 W Mahogany Ln	TM 6262							1	7/19/2023	1
56127022	652 W Mahogany Ln	TM 6262							1	7/19/2023	1
56127021	656 W Mahogany Ln	TM 6262							1	7/19/2023	1
5590517613	2773 Vermont Ave	TM 6301							1	1/3/2023	1
55609009	667 Heirloom Ln	TM 6050							1	2/24/2023	1
55609057	405 Bloom Ln	TM 6050							1	2/2/2023	1
56127006	568 N Adler Ln	TM 6262							1	8/31/2023	1
56127007	572 N Adler Ln	TM 6262							1	8/31/2023	1
56127008	576 N Adler Ln	TM 6262							1	8/31/2023	1
56127009	580 N Adler Ln	TM 6262							1	8/31/2023	1
56127010	584 N Adler Ln	TM 6262							1	8/31/2023	1
56127011	583 N Adler Ln	TM 6262							1	9/18/2023	1
56127012	579 N Adler Ln	TM 6262							1	9/18/2023	1
56127013	575 N Adler Ln	TM 6262							1	9/18/2023	1
56127014	571 N Adler Ln	TM 6262							1	9/18/2023	1
56127015	567 N Adler Ln	TM 6262							1	9/18/2023	1
56127036	590 W Mahogany Ln	TM 6262							1	9/14/2023	1
56127037	586 W Mahogany Ln	TM 6262							1	9/14/2023	1
56127038	582 W Mahogany Ln	TM 6262							1	9/14/2023	1
56127039	578 W Mahogany Ln	TM 6262							1	9/14/2023	1
56127040	574 W Mahogany Ln	TM 6262							1	9/14/2023	1
56127016	566 N Helm Ln	TM 6262							1	10/10/2023	1
56127017	570 N Helm Ln	TM 6262							1	10/10/2023	1
56127018	574 N Helm Ln	TM 6262							1	10/10/2023	1
56127019	578 N Helm Ln	TM 6262							1	10/10/2023	1
56127020	582 N Helm Ln	TM 6262							1	10/10/2023	1
55609054	465 Bloom Ln	TM 6050							1	2/3/2023	1
56127005	596 W Balsam Ln	TM 6262							1	10/16/2023	1

56127004	592 W Balsam Ln	TM 6262							1	10/30/2023	1
56127003	588 W Balsam Ln	TM 6262							1	10/24/2023	1
56127002	584 W Balsam Ln	TM 6262							1	10/16/2023	1
56127001	580 W Balsam Ln	TM 6262							1	10/16/2023	1
56128001	546 W Mahogany Ln	TM 6262							1	10/19/2023	1
56128002	542 W Mahogany Ln	TM 6262							1	10/19/2023	1
56128003	538 W Mahogany Ln	TM 6262							1	10/19/2023	1
56128005	530 W Mahogany Ln	TM 6262							1	10/19/2023	1
56128050	563 N Chapel Hill Ln	TM 6262							1	10/12/2023	1
56128049	567 N Chapel Hill Ln	TM 6262							1	10/12/2023	1
56128048	571 N Chapel Hill Ln	TM 6262							1	10/12/2023	1
56128047	575 N Chapel Hill Ln	TM 6262							1	10/12/2023	1
56128046	579 N Chapel Hill Ln	TM 6262							1	10/12/2023	1
56128026	540 W Balsam Ln	TM 6262							1	11/8/2023	1
56128027	544 W Balsam Ln	TM 6262							1	11/8/2023	1
56128028	548 W Balsam Ln	TM 6262							1	11/8/2023	1
56128029	552 W Balsam Ln	TM 6262							1	11/8/2023	1
56128030	556 W Balsam Ln	TM 6262							1	11/8/2023	1
56128040	565 N Helm Ln	TM 6262							1	11/7/2023	1
56128039	569 N Helm Ln	TM 6262							1	11/7/2023	1
56128038	573 N Helm Ln	TM 6262							1	11/7/2023	1
56128037	577 N Helm Ln	TM 6262							1	11/7/2023	1
56128036	581 N Helm Ln	TM 6262							1	11/7/2023	1
56128041	564 N Chapel Hill Ln	TM 6262							1	10/11/2023	1
56128042	568 N Chapel Hill Ln	TM 6262							1	10/11/2023	1
56128043	572 N Chapel Hill Ln	TM 6262							1	10/11/2023	1
56128044	576 N Chapel Hill Ln	TM 6262							1	10/11/2023	1
56128045	580 N Chapel Hill Ln	TM 6262							1	10/11/2023	1
56128031	560 W Balsam Ln	TM 6262							1	11/8/2023	1
56128032	564 W Balsam Ln	TM 6262							1	11/8/2023	1
56128033	568 W Balsam Ln	TM 6262							1	11/8/2023	1
56128034	572 W Balsam Ln	TM 6262							1	11/8/2023	1
56128035	576 W Balsam Ln	TM 6262							1	11/8/2023	1
56128070	554 W Mahogany Ln	TM 6262							1	11/7/2023	1
56128069	558 W Mahogany Ln	TM 6262							1	11/7/2023	1
56128068	562 W Mahogany Ln	TM 6262							1	11/7/2023	1
56128067	566 W Mahogany Ln	TM 6262							1	11/7/2023	1
56128066	570 W Mahogany Ln	TM 6262							1	11/7/2023	1
55609087	401 Vintage Ln	TM 6050							1	2/16/2023	1
5590504141	2939 Teague Ave	TM 6339							1	12/22/2023	1
5590517619	1745 N Park Ave	TM 6301							1	2/22/2023	1
5590517620	1735 N Park Ave	TM 6301							1	2/28/2023	1
5590517654	2741 Loyola Ave	TM 6301							1	11/14/2023	1
5590517655	2751 Loyola Ave	TM 6301							1	11/22/2023	1
5590517624	2704 Moody Ave	TM 6301							1	1/4/2023	1
5590504131	2997 Trenton Ave	TM 6339							1	5/8/2023	1
5590504115	1677 N Megan Ave	TM 6339							1	4/5/2023	1
5590504112	2965 Vermont Ave	TM 6339							1	3/10/2023	1
5590504113	2975 Vermont Ave	TM 6339							1	3/29/2023	1
5590504111	2955 Vermont Ave	TM 6339							1	3/10/2023	1
5590504114	1687 N Megan Ave	TM 6339							1	4/5/2023	1
5540402010	3075 Keats Ave	TM 6349							1	1/3/2023	1
5590504109	2935 Vermont Ave	TM 6339							1	8/18/2023	1
5590504108	2925 Vermont Ave	TM 6339							1	4/6/2023	1
5590504110	2945 Vermont Ave	TM 6339							1	4/6/2023	1
56052050S	984 Everglade Ave	TM 6263							1	1/18/2023	1
56052049S	976 Everglade Ave	TM 6263							1	1/18/2023	1
56052033S	985 Everglade Ave	TM 6263							1	2/2/2023	1
56052034S	977 Everglade Ave	TM 6263							1	2/3/2023	1
56052048S	968 Everglade Ave	TM 6263							1	1/25/2023	1
56052047S	960 Everglade Ave	TM 6263							1	2/3/2023	1
56052035S	969 Everglade Ave	TM 6263							1	2/16/2023	1
56052036S	961 Everglade Ave	TM 6263							1	2/10/2023	1
56052046S	952 Everglade Ave	TM 6263							1	2/17/2023	1

55612013	501 Farmhouse Ln	TM 6329							1	2/6/2023	1
55612012	513 Farmhouse Ln	TM 6329							1	2/6/2023	1
55612011	525 Farmhouse Ln	TM 6329							1	2/7/2023	1
55612010	537 Farmhouse Ln	TM 6329							1	2/7/2023	1
55612009	549 Farmhouse Ln	TM 6329							1	2/14/2023	1
55612008	561 Farmhouse Ln	TM 6329							1	2/14/2023	1
55612007	603 Farmhouse Ln	TM 6329							1	2/14/2023	1
55612006	615 Farmhouse Ln	TM 6329							1	2/22/2023	1
55612005	627 Farmhouse Ln	TM 6329							1	2/22/2023	1
55612004	639 Farmhouse Ln	TM 6329							1	2/22/2023	1
55612003	651 Farmhouse Ln	TM 6329							1	3/1/2023	1
55612002	663 Farmhouse Ln	TM 6329							1	3/8/2023	1
55942038S	1684 N Shirley Ave	TM 6154							1	1/3/2023	1
55609017	507 Heirloom Ln	TM 6050							1	3/15/2023	1
55609013	587 Heirloom Ln	TM 6050							1	3/1/2023	1
55609016	527 Heirloom Ln	TM 6050							1	3/10/2023	1
55609015	547 Heirloom Ln	TM 6050							1	3/13/2023	1
55609014	567 Heirloom Ln	TM 6050							1	3/9/2023	1
5590504107	2915 Vermont Ave	TM 6339							1	9/8/2023	1
5590504106	2905 Vermont Ave	TM 6339							1	9/8/2023	1
5590504105	1694 N Greenfield Ave	TM 6339							1	10/3/2023	1
5590504103	1674 N Greenfield Ave	TM 6339							1	10/10/2023	1
55609026	2120 N Perry Ln	TM 6050							1	8/18/2023	1
55609027	2110 N Perry Ln	TM 6050							1	8/24/2023	1
55609028	2100 N Perry Ln	TM 6050							1	9/6/2023	1
55609029	2090 N Perry Ln	TM 6050									0
55609030	2080 N Perry Ln	TM 6050							1	1/3/2024	1
55609025	2130 N Perry Ln	TM 6050							1	8/15/2023	1
55609024	2140 N Perry Ln	TM 6050							1	7/11/2023	1
55609023	2150 N Perry Ln	TM 6050							1	4/25/2023	1
55609022	407 Heirloom Ln	TM 6050							1	6/29/2023	1
55609021	427 Heirloom Ln	TM 6050							1	6/29/2023	1
55609020	447 Heirloom Ln	TM 6050							1	3/6/2023	1
55609019	467 Heirloom Ln	TM 6050							1	3/8/2023	1
55609018	487 Heirloom Ln	TM 6050							1	3/7/2023	1
55939119	1725 N Park Ave	TM 6301							1	2/28/2023	1
55939308	1744 N Park Ave	TM 6301							1	3/7/2023	1
55464302	1676 Las Rosas Ave	TM 6123							1	1/17/2023	1
56052042S	920 Everglade Ave	TM 6263							1	3/2/2023	1
56052044S	936 Everglade Ave	TM 6263							1	2/23/2023	1
56052040S	929 Everglade Ave	TM 6263							1	3/2/2023	1
56052032S	988 Serena Ave	TM 6263							1	4/13/2023	1
56052025S	932 Serena Ave	TM 6263							1	4/4/2023	1
56052029S	964 Serena Ave	TM 6263							1	4/13/2023	1
56052031S	980 Serena Ave	TM 6263							1	4/13/2023	1
56052028S	956 Serena Ave	TM 6263							1	4/12/2023	1
56052024S	924 Serena Ave	TM 6263							1	4/4/2023	1
56052026S	940 Serena Ave	TM 6263							1	3/28/2023	1
56052043s	928 Everglade Ave	TM 6263							1	3/2/2023	1
56052045S	944 Everglade Ave	TM 6263							1	2/2/2023	1
56052037S	953 Everglade Ave	TM 6263							1	2/16/2023	1
56052039S	937 Everglade Ave	TM 6263							1	3/16/2023	1
56052030S	972 Serena Ave	TM 6263							1	4/12/2023	1
56052027S	948 Serena Ave	TM 6263							1	4/12/2023	1
56052041S	921 Everglade Ave	TM 6263							1	3/7/2023	1
56052038S	945 Everglade Ave	TM 6263							1	2/23/2023	1
55940012S	1735 Lester Ave	TM 6154							1	2/24/2023	1
55940015S	1765 Lester Ave	TM 6154							1	3/7/2023	1
55942004S	1787 Teague Ave	TM 6154							1	1/13/2023	1
55942018S	1730 Trenton Ave	TM 6154							1	1/19/2023	1
55465718	4176 Dennis Ave	TM 6304							1	1/17/2023	1
56408019	1186 N Holly Ave	TM 6367							1	5/22/2023	1

56017029	1247 N Cindy Ave	TM 6348							1	1/31/2023	1
55465303	4085 Dennis Ave	TM 6304							1	8/3/2023	1
55465304	4095 Dennis Ave	TM 6304							1	4/24/2023	1
55465306	4115 Dennis Ave	TM 6304							1	5/8/2023	1
55465308	4135 Dennis Ave	TM 6304							1	4/14/2023	1
55465309	4145 Dennis Ave	TM 6304							1	1/20/2023	1
55465310	4155 Dennis Ave	TM 6304							1	3/30/2023	1
55465311	4165 Dennis Ave	TM 6304							1	3/9/2023	1
55465312	4175 Dennis Ave	TM 6304							1	1/20/2023	1
55465314	4195 Dennis Ave	TM 6304							1	1/23/2023	1
55938201	2613 Vermont Ave	TM 6209							1	2/28/2023	1
55941020S	1744 Lester Ave	TM 6154							1	3/6/2023	1
55941007S	1766 N Renn Ave	TM 6154								1/19/2023	0
56408020	1176 N Holly Ave	TM 6367								5/22/2023	0
56408025	1197 N Holly Ave	TM 6367								5/23/2023	0
55464502	4161 Scott Ave	TM 6123								1/27/2023	0
55464503	4151 Scott Ave	TM 6123								1/4/2023	0
55464504	4141 Scott Ave	TM 6123								4/19/2023	0
55464505	4131 Scott Ave	TM 6123								1/31/2023	0
55464506	4121 Scott Ave	TM 6123								1/25/2023	0
55464507	4111 Scott Ave	TM 6123								2/1/2023	0
55464508	4101 Scott Ave	TM 6123								1/26/2023	0
55464509	4091 Scott Ave	TM 6123								2/1/2023	0
55464510	4081 Scott Ave	TM 6123								2/1/2023	0
55536236	2101 Descanso Ave	TM 6377								3/8/2023	0
55536250	2160 Descanso Ave	TM 6377								3/2/2023	0
55536238	2061 Descanso Ave	TM 6377								3/2/2023	0
55536234	2141 Descanso Ave	TM 6377								3/2/2023	0
5582900601	1697 N Twinberry Ave	TM 6389								9/6/2023	0
55612033	2006 N Inverness Ln	TM 6329								1/9/2023	0
55612032	2012 N Inverness Ln	TM 6329								1/19/2023	0
55612031	2018 N Inverness Ln	TM 6329								1/13/2023	0
55612030	2024 N Inverness Ln	TM 6329								1/13/2023	0
31030016S37	3555 Las Rosas Ave	TM 6208								10/26/2023	0
31030016S38	3545 Las Rosas Ave	TM 6208								10/26/2023	0
31030016S39	3535 Las Rosas Ave	TM 6208								10/26/2023	0
31030016S40	3525 Las Rosas Ave	TM 6208								10/26/2023	0
31030016S41	3515 Las Rosas Ave	TM 6208								10/27/2023	0
31030016S43	3505 Las Rosas Ave	TM 6208								10/27/2023	0
56017028	1257 N Cindy Ave	TM 6348								2/21/2023	0
55612034	2005 N Inverness Ln	TM 6329								1/19/2023	0
55612035	2011 N Inverness Ln	TM 6329								1/23/2023	0
55612036	2017 N Inverness Ln	TM 6329								1/23/2023	0
55612037	2023 N Inverness Ln	TM 6329								1/23/2023	0
55464511	4071 Scott Ave	TM 6123								2/9/2023	0
55464512	4061 Scott Ave	TM 6123								2/9/2023	0
55464513	4051 Scott Ave	TM 6123								3/22/2023	0
55464514	4041 Scott Ave	TM 6123								2/9/2023	0
55464515	4031 Scott Ave	TM 6123								3/27/2023	0
55464516	4021 Scott Ave	TM 6123								5/10/2023	0
55609075	641 Vintage Ln	TM 6050								12/7/2023	0
55609074	661 Vintage Ln	TM 6050								12/5/2023	0
55609073	681 Vintage Ln	TM 6050								11/28/2023	0
55609072	682 Bloom Ln	TM 6050								11/6/2023	0
55609071	662 Bloom Ln	TM 6050								10/23/2023	0
55609070	642 Bloom Ln	TM 6050								10/19/2023	0
55536245	2060 Descanso Ave	TM 6377								3/1/2023	0
55536231	2067 Amanecer Ave	TM 6025								1/12/2023	0
55536202	2087 Amanecer Ave	TM 6025								1/24/2023	0
55536203	3801 Fairmont Ave	TM 6025								1/20/2023	0
55536204	3809 Fairmont Ave	TM 6025								1/24/2023	0

55536205	3817 Fairmont Ave	TM 6025								1/26/2023	0
55611034	500 Pioneer Ln	TM 6329								3/8/2023	0
55464201	1797 Las Rosas Ave	TM 6123								2/14/2023	0
55464202	1777 Las Rosas Ave	TM 6123								4/14/2023	0
55464203	1757 Las Rosas Ave	TM 6123								3/30/2023	0
55464204	1737 Las Rosas Ave	TM 6123								4/4/2023	0
55464205	1717 Las Rosas Ave	TM 6123								6/6/2023	0
55465401	1447 Las Rosas Ave	TM 6304								3/21/2023	0
55465402	1457 Las Rosas Ave	TM 6304								7/10/2023	0
55465403	1467 Las Rosas Ave	TM 6304								6/20/2023	0
55465404	1477 Las Rosas Ave	TM 6304								9/27/2023	0
55465405	1487 Las Rosas Ave	TM 6304								2/16/2023	0
55465406	1497 Las Rosas Ave	TM 6304								2/16/2023	0
55611037	536 Pioneer Ln	TM 6329								3/21/2023	0
55611036	524 Pioneer Ln	TM 6329								3/21/2023	0
55611035	512 Pioneer Ln	TM 6329								3/8/2023	0
55611038	548 Pioneer Ln	TM 6329								3/22/2023	0
55611039	560 Pioneer Ln	TM 6329								3/22/2023	0
55611040	602 Pioneer Ln	TM 6329								3/23/2023	0
55611041	614 Pioneer Ln	TM 6329								3/23/2023	0
55536237	2081 Descanso Ave	TM 6377								3/10/2023	0
55536240	2021 Descanso Ave	TM 6377								3/7/2023	0
55536239	2041 Descanso Ave	TM 6377								3/2/2023	0
5540402003	3026 Keats Ave	TM 6349								5/24/2023	0
55536241	2001 Descanso Ave	TM 6377								3/28/2023	0
55611042	626 Pioneer Ln	TM 6329								4/10/2023	0
55611043	638 Pioneer Ln	TM 6329								4/14/2023	0
55611044	650 Pioneer Ln	TM 6329								4/10/2023	0
55611045	662 Pioneer Ln	TM 6329								4/14/2023	0
5590210330	1522 Richmond Ave	TM 6284								6/28/2023	0
5590210305	1513 Richmond Ave	TM 6284								6/28/2023	0
5590210332	1562 Richmond Ave	TM 6284								7/12/2023	0
55611031	2058 N Ralph Ln	TM 6329								4/25/2023	0
55611032	2052 N Ralph Ln	TM 6329								5/2/2023	0
55611029	2065 N Ralph Ln	TM 6329								5/17/2023	0
55611028	2059 N Ralph Ln	TM 6329								5/16/2023	0
55611026	2047 N Ralph Ln	TM 6329								5/17/2023	0
55611033	2046 N Ralph Ln	TM 6329								5/2/2023	0
55611030	2064 N Ralph Ln	TM 6329								4/25/2023	0
5590210333	1528 N Stanford Ave	TM 6284								8/4/2023	0
55942037S	1694 N Shirley Ave	TM 6154								5/8/2023	0
55611027	2053 N Ralph Ln	TM 6329								5/16/2023	0
55536244	2040 Descanso Ave	TM 6377								5/15/2023	0
55536243	2020 Descanso Ave	TM 6377								5/15/2023	0
55536233	2161 Descanso Ave	TM 6377								4/13/2023	0
5590210322	1583 Richmond Ave	TM 6284								8/8/2023	0
55464306	4183 Keats Ave	TM 6123								4/24/2023	0
55464307	4173 Keats Ave	TM 6123								4/24/2023	0
55464308	4163 Keats Ave	TM 6123								5/2/2023	0
55611022	2058 N Hammel Ln	TM 6329								6/1/2023	0
55611023	2052 N Hammel Ln	TM 6329								6/1/2023	0
55611024	2046 N Hammel Ln	TM 6329								6/7/2023	0
55943209S	1529 N Stanford Ave	TM 6284								8/24/2023	0
55943211S	1509 N Stanford Ave	TM 6284								9/1/2023	0
55611018	2041 N Hammel Ln	TM 6329								7/17/2023	0
55611019	2047 N Hammel Ln	TM 6329								7/25/2023	0
55611020	2053 N Hammel Ln	TM 6329								7/18/2023	0
55611021	2059 N Hammel Ln	TM 6329								7/18/2023	0
55464309	1745 San Marino Ave	TM 6123								5/15/2023	0
55464310	1725 San Marino Ave	TM 6123								5/10/2023	0
55464311	1695 San Marino Ave	TM 6123								6/2/2023	0

55464312	1675 San Marino Ave	TM 6123								6/13/2023	0
55464313	1655 San Marino Ave	TM 6123								6/13/2023	0
55465205	1438 Junipero Ave	TM 6304								5/15/2023	0
55611025	2040 N Hammel Ln	TM 6329								6/7/2023	0
55461014S	3808 Portals Ave	TM 6254								11/17/2023	0
55461015S	3849 Portals Ave	TM 6254								11/22/2023	0
55943206S	1573 Richmond Ave	TM 6284								10/6/2023	0
55943208S	1593 Richmond Ave	TM 6284								10/26/2023	0
55465101	1598 Junipero Ave	TM 6304								11/14/2023	0
55465102	1578 Junipero Ave	TM 6304								11/20/2023	0
55465103	1550 Agua Dulce Ave	TM 6304								10/30/2023	0
55465104	1530 Agua Dulce Ave	TM 6304								11/2/2023	0
55465201	1478 Junipero Ave	TM 6304								10/10/2023	0
55465202	1468 Junipero Ave	TM 6304								10/6/2023	0
55465204	1448 Junipero Ave	TM 6304								10/6/2023	0
55465207	1418 Junipero Ave	TM 6304								5/26/2023	0
5560504166	2220 N Eddy Ave	TM 6292									0
55465407	4198 Beverly Ave	TM 6304							1	9/1/2023	1
5560504181	2283 N Argyle Ave	TM 6292									0
5560504172	2211 N Argyle Ave	TM 6292									0
55465408	4188 Beverly Ave	TM 6304							1	8/23/2023	1
5560504170	1076 Windmill Ave	TM 6292									0
5560504173	2219 N Argyle Ave	TM 6292									0
5560504179	2267 N Argyle Ave	TM 6292									0
5560504163	2280 N Eddy Ave	TM 6292									0
55465409	4178 Beverly Ave	TM 6304							1	11/29/2023	1
5560504167	2200 N Eddy Ave	TM 6292									0
55465410	4179 San Jose Ave	TM 6304							1	10/26/2023	1
55465411	4189 San Jose Ave	TM 6304							1	9/1/2023	1
5560504176	2243 N Argyle Ave	TM 6292									0
55465412	4199 San Jose Ave	TM 6304							1	9/20/2023	1
55605042050	1216 Windmill Ave	TM 6344									0
55465413	1567 Las Rosas Ave	TM 6304							1	9/26/2023	1
55605042045	2232 N Russell Ave	TM 6344									0
55605042058	2203 N Duke Ave	TM 6344									0
55605042062	2235 N Duke Ave	TM 6344									0
55465414	1577 Las Rosas Ave	TM 6304							1	9/12/2023	1
55465415	1587 Las Rosas Ave	TM 6304							1	9/14/2023	1
55605042052	1256 Windmill Ave	TM 6344									0
55605042056	1346 Windmill Ave	TM 6344									0
55943203S	1548 Teague Ave	TM 6284									0
55605042041	2264 N Russell Ave	TM 6344									0
55605042067	2275 N Duke Ave	TM 6344									0
55605042038	2288 N Russell Ave	TM 6344									0
55605042044	2240 N Russell Ave	TM 6344									0
55605042064	2251 N Duke Ave	TM 6344									0
55605042039	2280 N Russell Ave	TM 6344									0
55605042048	2208 N Russell Ave	TM 6344									0
55605042055	1326 Windmill Ave	TM 6344									0
55605042060	2219 N Duke Ave	TM 6344									0
55605041137	1052 Springtime Ave	TM 6292									0
55605041136	1046 Springtime Ave	TM 6292									0
5560504164	2260 N Eddy Ave	TM 6292									0
5560504175	2235 N Argyle Ave	TM 6292									0
5560504169	1066 Windmill Ave	TM 6292									0
5560504182	2291 N Argyle Ave	TM 6292									0
5560504168	1056 Windmill Ave	TM 6292									0
5560504165	2240 N Eddy Ave	TM 6292									0
5560504171	2203 N Argyle Ave	TM 6292									0
5560504174	2227 N Argyle Ave	TM 6292									0
5560504177	2251 N Argyle Ave	TM 6292									0

5560504180	2275 N Argyle Ave	TM 6292									0
5560504185	2375 N Argyle Ave	TM 6292									0
55605041169	1030 Fruitwood Ave	TM 6292									0
55605041175	1066 Fruitwood Ave	TM 6292									0
5560504191	1055 Fruitwood Ave	TM 6292									0
5560504197	1019 Fruitwood Ave	TM 6292									0
55605041104	2364 N Phillip Ave	TM 6292									0
55605041148	1016 Plum Tree Ave	TM 6292									0
5560504188	1073 Fruitwood Ave	TM 6292									0
5560504195	1031 Fruitwood Ave	TM 6292									0
55605041100	2396 N Phillip Ave	TM 6292									0
55605041164	1021 Plum Tree Ave	TM 6292									0
55605041172	1048 Fruitwood Ave	TM 6292									0
5560504189	1067 Fruitwood Ave	TM 6292									0
5560504196	1025 Fruitwood Ave	TM 6292									0
55605041165	1015 Plum Tree Ave	TM 6292									0
5560504184	2345 N Argyle Ave	TM 6292									0
5560504199	1007 Fruitwood Ave	TM 6292									0
55605041139	1053 Springtime Ave	TM 6292									0
30942203	4232 Buckingham Ave	TM 6023									0
55605041177	1078 Fruitwood Ave	TM 6292									0
5560504186	1085 Fruitwood Ave	TM 6292									0
5560504193	1043 Fruitwood Ave	TM 6292									0
49106171	227 W Sierra Ave										0
55605041102	2380 N Phillip Ave	TM 6292									0
55605041105	2356 N Phillip Ave	TM 6292									0
55605041147	1010 Plum Tree Ave	TM 6292									0
55605041167	1018 Fruitwood Ave	TM 6292									0
55605041173	1054 Fruitwood Ave	TM 6292									0
5560504192	1049 Fruitwood Ave	TM 6292									0
49106171	237 W Sierra Ave	PM 2022-002									0
55605041103	2372 N Phillip Ave	TM 6292									0
55605041149	1022 Plum Tree Ave	TM 6292									0
55605041168	1024 Fruitwood Ave	TM 6292									0
55605041176	1072 Fruitwood Ave	TM 6292									0
5560504187	1079 Fruitwood Ave	TM 6292									0
5560504194	1037 Fruitwood Ave	TM 6292									0
55605041101	2388 N Phillip Ave	TM 6292									0
55605041174	1060 Fruitwood Ave	TM 6292									0
5560504183	2315 N Argyle Ave	TM 6292									0
5560504190	1061 Fruitwood Ave	TM 6292									0
5560504178	2259 N Argyle Ave	TM 6292									0
5560504198	1013 Fruitwood Ave	TM 6292									0
55605041138	1059 Springtime Ave	TM 6292									0
55605041166	1009 Plum Tree Ave	TM 6292									0
55605041170	1036 Fruitwood Ave	TM 6292									0
57124106S	2682 Highland Ave	TM 6166							1	11/14/2023	1
57124310S	4280 San Gabriel Ave	TM 6166							1	1/2/2024	1
57124213S	4341 San Gabriel Ave	TM 6166									0
57124403S	2649 La Mirada Ave	TM 6166									0
57124109S	2622 Highland Ave	TM 6166							1	11/13/2023	1
55605042094	2233 N Russell Ave	TM 6344									0
57124203S	4241 San Gabriel Ave	TM 6166							1	11/20/2023	1
57124209S	4301 San Gabriel Ave	TM 6166							1	1/2/2024	1
57124306S	4320 San Gabriel Ave	TM 6166							1	2/9/2024	1
57124302S	4360 San Gabriel Ave	TM 6166									0
57124108S	2642 Highland Ave	TM 6166							1	11/13/2023	1
57124315S	4230 San Gabriel Ave	TM 6166							1	11/21/2023	1
57124204S	4251 San Gabriel Ave	TM 6166							1	11/20/2023	1
49137002	18 N Villa Ave										0
49137001	22 N Villa Ave										0

57124208S	4291 San Gabriel Ave	TM 6166									0
57124307S	4310 San Gabriel Ave	TM 6166							1	2/9/2024	1
57124104S	2722 Highland Ave	TM 6166							1	11/14/2023	1
57124311S	4270 San Gabriel Ave	TM 6166							1	12/19/2023	1
57124212S	4331 San Gabriel Ave	TM 6166							1	2/9/2024	1
57124303S	4350 San Gabriel Ave	TM 6166									0
											0
											0
											0
											0
											0
57124201S	4221 San Gabriel Ave	TM 6166							1	11/17/2023	1
57124312S	4260 San Gabriel Ave	TM 6166							1	12/21/2023	1
57124207S	4281 San Gabriel Ave	TM 6166							1	1/8/2024	1
57124313S	4250 San Gabriel Ave	TM 6166							1	12/15/2023	1
57124210S	4311 San Gabriel Ave	TM 6166							1	2/9/2024	1
55943306S	1508 N Stanford Ave	TM 6284									0
57124405S	2689 La Mirada Ave	TM 6166									0
57124105S	2702 Highland Ave	TM 6166							1	11/13/2023	1
57124316S	4220 San Gabriel Ave	TM 6166							1	11/21/2023	1
57124205S	4261 San Gabriel Ave	TM 6166							1	11/22/2023	1
57124308S	4300 San Gabriel Ave	TM 6166									0
57124214S	4351 San Gabriel Ave	TM 6166									0
57124301S	4370 San Gabriel Ave	TM 6166									0
57124401S	2609 La Mirada Ave	TM 6166									0
57124103S	2742 Highland Ave	TM 6166							1	11/20/2023	1
57124202S	4231 San Gabriel Ave	TM 6166							1	11/20/2023	1
57124215S	4361 San Gabriel Ave	TM 6166									0
57124304S	4340 San Gabriel Ave	TM 6166									0
57124107S	2662 Highland Ave	TM 6166							1	11/14/2023	1
57124314S	4240 San Gabriel Ave	TM 6166							1	11/21/2023	1
57124206S	4271 San Gabriel Ave	TM 6166							1	12/13/2023	1
57124309S	4290 San Gabriel Ave	TM 6166									0
57124211S	4321 San Gabriel Ave	TM 6166							1	2/14/2024	1
57124402S	2629 La Mirada Ave	TM 6166									0
55605042005	1217 Fruitwood Ave	TM 6344									0
55605042074	2258 N Duke Ave	TM 6344									0
55605042077	1319 Summerset Ave	TM 6344									0
55605042082	2220 N Duke Ave	TM 6344									0
55605042095	1234 Summerset Ave	TM 6344									0
55605042087	1305 Windmill Ave	TM 6344									0
55605042009	1257 Fruitwood Ave	TM 6344									0
55605042033	2273 N Russell Ave	TM 6344									0
55605042027	2274 N Elm Ave	TM 6344									0
55605042070	1318 Springtime Ave	TM 6344									0
55605042101	1328 Summerset Ave	TM 6344									0
55611001	2041 N Rogers Ln	TM 6329							1	1/10/2024	1
55611002	2045 N Rogers Ln	TM 6329							1	1/3/2024	1
55611003	2049 N Rogers Ln	TM 6329							1	1/22/2024	1
55611004	2053 N Rogers Ln	TM 6329							1	1/3/2024	1
55611005	2057 N Rogers Ln	TM 6329							1	1/22/2024	1
55611006	2056 N Rogers Ln	TM 6329							1	11/28/2023	1
55611007	2052 N Rogers Ln	TM 6329							1	11/28/2023	1
55611008	2048 N Rogers Ln	TM 6329							1	11/29/2023	1
55611009	2044 N Rogers Ln	TM 6329							1	11/29/2023	1
55611010	2043 N Inverness Ln	TM 6329							1	9/7/2023	1
55611011	2049 N Inverness Ln	TM 6329							1	9/7/2023	1
55611012	2055 N Inverness Ln	TM 6329							1	9/6/2023	1
55611013	2061 N Inverness Ln	TM 6329							1	9/6/2023	1
55611014	2060 N Inverness Ln	TM 6329							1	8/8/2023	1
55611015	2054 N Inverness Ln	TM 6329							1	8/9/2023	1

55611016	2048 N Inverness Ln	TM 6329							1	8/15/2023	1
55611017	2042 N Inverness Ln	TM 6329							1	8/16/2023	1
55611046	712 Pioneer Ln	TM 6329							1	12/27/2023	1
55612001	713 Farmhouse Ln	TM 6329							1	12/27/2023	1
55612038	2020 N Rogers Ln	TM 6329							1	10/2/2023	1
55612039	2016 N Rogers Ln	TM 6329							1	10/3/2023	1
55612040	2012 N Rogers Ln	TM 6329							1	10/3/2023	1
55612041	2008 N Rogers Ln	TM 6329							1	10/3/2023	1
55943201S	1578 Teague Ave	TM 6284									0
55612042	2009 N Rogers Ln	TM 6329							1	10/11/2023	1
55605042093	2225 N Russell Ave	TM 6344									0
55612043	2013 N Rogers Ln	TM 6329							1	10/11/2023	1
55612044	2017 N Rogers Ln	TM 6329							1	10/17/2023	1
55612045	2021 N Rogers Ln	TM 6329							1	10/16/2023	1
55612046	2025 N Rogers Ln	TM 6329							1	11/2/2023	1
55605042084	1329 Windmill Ave	TM 6344									0
55612047	2029 N Rogers Ln	TM 6329							1	11/6/2023	1
55605042012	1287 Fruitwood Ave	TM 6344									0
55605042034	2281 N Russell Ave	TM 6344									0
55605042026	2282 N Elm Ave	TM 6344									0
55605042069	1310 Springtime Ave	TM 6344									0
55605042100	1320 Summerset Ave	TM 6344									0
55605042085	1321 Windmill Ave	TM 6344									0
55605042088	1271 Windmill Ave	TM 6344									0
55605042008	1247 Fruitwood Ave	TM 6344									0
55611048	2033 N Rogers Ln	TM 6329							1	11/9/2023	1
55611047	2037 N Rogers Ln	TM 6329							1	11/9/2023	1
55605042031	2257 N Russell Ave	TM 6344									0
55605042078	1311 Summerset Ave	TM 6344									0
30942417	3270 La Mirada Ave	TM 6023									0
55605042090	1235 Windmill Ave	TM 6344									0
55605042025	2290 N Elm Ave	TM 6344									0
55605042072	2272 N Duke Ave	TM 6344									0
55605042080	2236 N Duke Ave	TM 6344									0
55605042089	1253 Windmill Ave	TM 6344									0
55605042006	1227 Fruitwood Ave	TM 6344									0
55605042036	2297 N Russell Ave	TM 6344									0
55605042028	2266 N Elm Ave	TM 6344									0
55605042079	1303 Summerset Ave	TM 6344									0
55605042099	1312 Summerset Ave	TM 6344									0
55605042091	2209 N Russell Ave	TM 6344									0
55605042010	1267 Fruitwood Ave	TM 6344									0
55605042076	1327 Summerset Ave	TM 6344									0
55605042097	1270 Summerset Ave	TM 6344									0
55605042004	1207 Fruitwood Ave	TM 6344									0
55605042035	2289 N Russell Ave	TM 6344									0
31030016S02	4151 Flint AVE	TM 6208							1	11/1/2023	1
55605042030	2250 N Elm Ave	TM 6344									0
55605042068	1302 Springtime Ave	TM 6344									0
55605042075	2250 N Duke Ave	TM 6344									0
31030016S33	4132 Flint Ave	TM 6208							1	10/30/2023	1
55605042083	2212 N Duke Ave	TM 6344									0
31030016S34	4142 Flint Ave	TM 6208							1	10/30/2023	1
55605042007	1237 Fruitwood Ave	TM 6344									0
55605042032	2265 N Russell Ave	TM 6344									0
55463401	4176 Poe Ave	TM 6123							1	8/15/2023	1
55605042029	2258 N Elm Ave	TM 6344									0
55605042071	1326 Springtime Ave	TM 6344									0
55605042092	2217 N Russell Ave	TM 6344									0
55605042011	1277 Fruitwood Ave	TM 6344									0
55605042073	2266 N Duke Ave	TM 6344									0

55463402	4186 Poe Ave	TM 6123							1	8/24/2023	1
55605042081	2228 N Duke Ave	TM 6344									0
55854002	3252 Vermont Ave	TM 6389									0
55605042098	1304 Summerset Ave	TM 6344									0
55605042086	1313 Windmill Ave	TM 6344									0
55605042046	2224 N Russell Ave	TM 6344									0
55605042042	2256 N Russell Ave	TM 6344									0
55605042053	1276 Windmill Ave	TM 6344									0
55605042061	2227 N Duke Ave	TM 6344									0
55605042037	2296 N Russell Ave	TM 6344									0
55605042051	1236 Windmill Ave	TM 6344									0
55605042057	1366 Windmill Ave	TM 6344									0
30943414	3320 La Mirada Ave	TM 6023									0
55605042065	2259 N Duke Ave	TM 6344									0
55605042063	2243 N Duke Ave	TM 6344									0
55463403	1977 Las Rosas Ave	TM 6123							1	8/22/2023	1
55605042040	2272 N Russell Ave	TM 6344									0
55463404	1957 Las Rosas Ave	TM 6123							1	8/10/2023	1
55463405	1937 Las Rosas Ave	TM 6123							1	8/2/2023	1
55463406	1917 Las Rosas Ave	TM 6123							1	8/17/2023	1
31030016S35	4152 Flint Ave	TM 6208							1	11/8/2023	1
55463407	1887 Las Rosas Ave	TM 6123							1	8/16/2023	1
31030016S36	4162 Flint Ave	TM 6208							1	10/27/2023	1
55463408	1867 Las Rosas Ave	TM 6123							1	7/27/2023	1
31030016S04	4131 Flint AVE	TM 6208							1	11/1/2023	1
55463409	1847 Las Rosas Ave	TM 6123							1	7/24/2023	1
55605042047	2216 N Russell Ave	TM 6344									0
55605042059	2211 N Duke Ave	TM 6344									0
55605042043	2248 N Russell Ave	TM 6344									0
55605042049	1206 Windmill Ave	TM 6344									0
30942210	4288 Buckingham Ave	TM 6023									0
55605042054	1306 Windmill Ave	TM 6344									0
30942109	4263 Buckingham Ave	TM 6023									0
30942205	4248 Buckingham Ave	TM 6023									0
30942114	4223 Buckingham Ave	TM 6023									0
55605042066	2267 N Duke Ave	TM 6344									0
55605041171	1042 Fruitwood Ave	TM 6292									0
30942118	3210 Frontera Ave	TM 6023									0
30942126	3290 Frontera Ave	TM 6023									0
30942211	4217 Hampton Way	TM 6023									0
30942306	4258 Hampton Way	TM 6023									0
30942107	4279 Buckingham Ave	TM 6023									0
30942208	4272 Buckingham Ave	TM 6023									0
30942112	4239 Buckingham Ave	TM 6023									0
30942201	4216 Buckingham Ave	TM 6023									0
30942120	3230 Frontera Ave	TM 6023									0
30942123	3260 Frontera Ave	TM 6023									0
30942303	4234 Hampton Way	TM 6023									0
30942214	4241 Hampton Way	TM 6023									0
30942217	4265 Hampton Way	TM 6023									0
55605042002	2338 N Russell Ave	TM 6344									0
30942108	4271 Buckingham Ave	TM 6023									0
30942111	4247 Buckingham Ave	TM 6023									0
30942202	4224 Buckingham Ave	TM 6023									0
30942122	3250 Frontera Ave	TM 6023									0
30942124	3270 Frontera Ave	TM 6023									0
30942302	4226 Hampton Way	TM 6023									0
30942216	4257 Hampton Way	TM 6023									0
55605042017	1228 Fruitwood Ave	TM 6344									0
30942209	4280 Buckingham Ave	TM 6023									0
30942206	4256 Buckingham Ave	TM 6023									0

30942116	4207 Buckingham Ave	TM 6023									0
30942119	3220 Frontera Ave	TM 6023									0
30942213	4233 Hampton Way	TM 6023									0
55605042014	1258 Fruitwood Ave	TM 6344									0
30942305	4250 Hampton Way	TM 6023									0
30942218	4273 Hampton Way	TM 6023									0
30942106	4287 Buckingham Ave	TM 6023									0
30942207	4264 Buckingham Ave	TM 6023									0
30942113	4231 Buckingham Ave	TM 6023									0
30942121	3240 Frontera Ave	TM 6023									0
55605042020	1229 Plum Tree Ave	TM 6344									0
30942215	4249 Hampton Way	TM 6023									0
30942304	4242 Hampton Way	TM 6023									0
30942110	4255 Buckingham Ave	TM 6023									0
30942204	4240 Buckingham Ave	TM 6023									0
30942115	4215 Buckingham Ave	TM 6023									0
30942117	3200 Frontera Ave	TM 6023									0
30942125	3280 Frontera Ave	TM 6023									0
30942212	4225 Hampton Way	TM 6023									0
30942301	4218 Hampton Way	TM 6023									0
55605042022	1249 Plum Tree Ave	TM 6344									0
55605042013	1268 Fruitwood Ave	TM 6344									0
55605042019	1219 Plum Tree Ave	TM 6344									0
55605042003	2368 N Russell Ave	TM 6344									0
55605042016	1238 Fruitwood Ave	TM 6344									0
55463410	1827 Las Rosas Ave	TM 6123							1	7/24/2023	1
55605042023	1259 Plum Tree Ave	TM 6344									0
55605042015	1248 Fruitwood Ave	TM 6344									0
55463411	1807 Las Rosas Ave	TM 6123							1	7/24/2023	1
55605042024	1269 Plum Tree Ave	TM 6344									0
55464401	1654 San Marino Ave	TM 6123							1	7/7/2023	1
55605042001	2308 N Russell Ave	TM 6344									0
55605042018	1218 Fruitwood Ave	TM 6344									0
31030016S05	4121 Flint AVE	TM 6208							1	11/1/2023	1
55605042021	1239 Plum Tree Ave	TM 6344									0
55464402	1674 San Marino Ave	TM 6123							1	7/11/2023	1
55464403	1694 San Marino Ave	TM 6123							1	7/12/2023	1
55464404	1724 San Marino Ave	TM 6123							1	7/27/2023	1
55464405	1744 San Marino Ave	TM 6123							1	7/25/2023	1
31030016S07	3512 San Marino Ave	TM 6208							1	12/12/2023	1
30942507	3271 La Mirada Ave	TM 6023									0
55943106S	1494 N Purdue Ave	TM 6284							1	10/19/2023	1
30944206	3351 La Mirada Ave	TM 6023									0
55943107S	1484 N Purdue Ave	TM 6284									0
30944103	4423 Mecca Ave	TM 6023									0
30944226	4446 Mecca Ave	TM 6023									0
30943411	3350 La Mirada Ave	TM 6023									0
30944231	4416 Mecca Ave	TM 6023									0
30942414	3250 La Mirada Ave	TM 6023									0
30944203	3321 La Mirada Ave	TM 6023									0
30943408	4337 Sussex Ave	TM 6023									0
30944228	4434 Mecca Ave	TM 6023									0
30944106	4441 Mecca Ave	TM 6023									0
30943412	3340 La Mirada Ave	TM 6023									0
30944105	4435 Mecca Ave	TM 6023									0
55610072	2002 N Perry Ln	TM 6328							1	1/16/2024	1
55610073	2008 N Perry Ln	TM 6328							1	1/16/2024	1
55610074	2014 N Perry Ln	TM 6328							1	2/6/2024	1
55610075	2020 N Perry Ln	TM 6328							1	2/6/2024	1
55610076	2026 N Perry Ln	TM 6328							1	2/8/2024	1
55943109S	1464 N Purdue Ave	TM 6284							1	10/2/2023	1

55943110S	1454 N Purdue Ave	TM 6284							1	10/19/2023	1
30944225	4452 Mecca Ave	TM 6023									0
30942508	3281 La Mirada Ave	TM 6023									0
30942418	3290 La Mirada Ave	TM 6023									0
55943323S	1455 N Purdue Ave	TM 6284									0
30944202	3311 La Mirada Ave	TM 6023									0
55943324S	1465 N Purdue Ave	TM 6284							1	10/2/2023	1
30944233	3322 Amistad Ave	TM 6023									0
30942506	3261 La Mirada Ave	TM 6023									0
55605042096	1252 Summerset Ave	TM 6344									0
30943415	3310 La Mirada Ave	TM 6023									0
30944205	3341 La Mirada Ave	TM 6023									0
30943409	4357 Sussex Ave	TM 6023									0
55467014	4184 Hoblitt Ave	TM 6404							1	11/29/2023	1
30944235	3302 Amistad Ave	TM 6023									0
30944229	4428 Mecca Ave	TM 6023									0
30942416	3260 La Mirada Ave	TM 6023									0
30944201	3301 La Mirada Ave	TM 6023									0
55467017	4154 Hoblitt Ave	TM 6404							1	12/8/2023	1
30944230	4422 Mecca Ave	TM 6023									0
55467018	4144 Hoblitt Ave	TM 6404							1	11/21/2023	1
30944107	4447 Mecca Ave	TM 6023									0
30942505	3251 La Mirada Ave	TM 6023									0
55467020	4124 Hoblitt Ave	TM 6404							1	12/13/2023	1
30943413	3330 La Mirada Ave	TM 6023									0
30944207	3361 La Mirada Ave	TM 6023									0
30943407	4317 Sussex Ave	TM 6023									0
55467021	4114 Hoblitt Ave	TM 6404							1	12/6/2023	1
30944102	4417 Mecca Ave	TM 6023									0
55467023	4094 Hoblitt Ave	TM 6404							1	12/6/2023	1
55467024	4084 Hoblitt Ave	TM 6404							1	12/5/2023	1
30944227	4440 Mecca Ave	TM 6023									0
30942509	3291 La Mirada Ave	TM 6023									0
55467025	1385 Junipero Ave	TM 6404							1	12/4/2023	1
30942417	3280 La Mirada Ave	TM 6023									0
30944204	3331 La Mirada Ave	TM 6023									0
30943410	3360 La Mirada Ave	TM 6023									0
30944234	3312 Amistad Ave	TM 6023									0
30944232	4410 Mecca Ave	TM 6023									0
30944101	4411 Mecca Ave	TM 6023									0
30944104	4429 Mecca Ave	TM 6023									0
30944224	4458 Mecca Ave	TM 6023									0
55942003S	1697 Teague Ave	TM 6154									0
55941024S	1775 N Renn Ave	TM 6154									0
55941022S	1795 N Renn Ave	TM 6154									0
55942020S	1661 N Shirley Ave	TM 6154							1	12/28/2023	1
55943101S	1508 Teague Ave	TM 6284									0
55609007	2131 N Rogers Ln	TM 6050									0
55536235	2121 Descanso Ave	TM 6377							1	7/18/2023	1
55536242	2000 Descanso Ave	TM 6377							1	7/17/2023	1
55536246	2080 Descanso Ave	TM 6377							1	10/11/2023	1
55536247	2100 Descanso Ave	TM 6377							1	10/12/2023	1
55536248	2120 Descanso Ave	TM 6377							1	10/24/2023	1
55536249	2140 Descanso Ave	TM 6377							1	12/13/2023	1
55944032	2976 Trenton Ave	TM 6339									0
55944033	2966 Trenton Ave	TM 6339									0
55944034	2956 Trenton Ave	TM 6339									0
55944035	2946 Trenton Ave	TM 6339									0
55944036	2936 Trenton Ave	TM 6339									0
55944037	2926 Trenton Ave	TM 6339									0
55944038	2916 Trenton Ave	TM 6339									0

55944043	2959 Teague Ave	TM 6339									0
55944044	2969 Teague Ave	TM 6339									0
55944045	2979 Teague Ave	TM 6339									0
55944046	1607 N Megan Ave	TM 6339							1	10/30/2023	1
55944047	1617 N Megan Ave	TM 6339							1	10/20/2023	1
55944048	1627 N Megan Ave	TM 6339							1	11/8/2023	1
55944049	1637 N Megan Ave	TM 6339							1	11/22/2023	1
55944050	1647 N Megan Ave	TM 6339							1	12/15/2023	1
55855002	1687 N Twinberry Ave	TM 6389									0
55855003	1677 N Twinberry Ave	TM 6389									0
55855004	1667 N Twinberry Ave	TM 6389									0
55855005	1657 N Twinberry Ave	TM 6389									0
55854001	1647 N Twinberry Ave	TM 6389									0
55854003	3242 Vermont Ave	TM 6389									0
55854004	1669 N Blackwood Ave	TM 6389									0
55854005	1663 N Blackwood Ave	TM 6389									0
55854006	1657 N Blackwood Ave	TM 6389									0
55854007	1651 N Blackwood Ave	TM 6389									0
55854008	1645 N Blackwood Ave	TM 6389									0
55854009	1639 N Blackwood Ave	TM 6389									0
55854010	1633 N Blackwood Ave	TM 6389									0
55854011	1632 N Blackwood Ave	TM 6389									0
55854012	1638 N Blackwood Ave	TM 6389									0
55854013	1644 N Blackwood Ave	TM 6389									0
55854014	1650 N Blackwood Ave	TM 6389									0
55854015	1656 N Blackwood Ave	TM 6389									0
55854016	1662 N Blackwood Ave	TM 6389									0
55855019	1668 N Blackwood Ave	TM 6389									0
55855018	1674 N Blackwood Ave	TM 6389									0
55855017	1680 N Blackwood Ave	TM 6389									0
55855016	1686 N Blackwood Ave	TM 6389									0
55855015	1692 N Blackwood Ave	TM 6389									0
55855014	1698 N Blackwood Ave	TM 6389									0
55855020	1699 N Blackwood Ave	TM 6389									0
55855021	1693 N Blackwood Ave	TM 6389									0
55855022	1687 N Blackwood Ave	TM 6389									0
55855023	1681 N Blackwood Ave	TM 6389									0
55855024	1675 N Blackwood Ave	TM 6389									0
55855006	1658 N Twinberry Ave	TM 6389									0
55855007	1668 N Twinberry Ave	TM 6389									0
55855008	1678 N Twinberry Ave	TM 6389									0
55855009	1688 N Twinberry Ave	TM 6389									0
55855010	1698 N Twinberry Ave	TM 6389									0
55855011	3230 Loyola Ave	TM 6389									0
55855012	3220 Loyola Ave	TM 6389									0
55936306	1643 N Ryan Ave	TM 6109									0
55939123	2694 Moody Ave	TM 6301							1	10/25/2023	1
55939124	2674 Moody Ave	TM 6301							1	2/5/2024	1
55939125	2654 Moody Ave	TM 6301									0
55939126	1722 N Applegate Ave	TM 6301									0
55939127	1732 N Applegate Ave	TM 6301							1	12/28/2023	1
55939128	1742 N Applegate Ave	TM 6301									0
55939130	1731 N Hanson Ave	TM 6301							1	11/8/2023	1
55939131	1721 N Hanson Ave	TM 6301									0
55939132	1711 N Hanson Ave	TM 6301									0
55939133	1701 N Hanson Ave	TM 6301									0
55939201	1700 N Hanson Ave	TM 6301									0
55939202	1710 N Hanson Ave	TM 6301									0
55939203	1720 N Hanson Ave	TM 6301									0
55939204	1730 N Hanson Ave	TM 6301									0
55939205	1740 N Hanson Ave	TM 6301									0

55939206	1750 N Hanson Ave	TM 6301									0
55939207	2611 Loyola Ave	TM 6301							1	1/26/2024	1
55939208	2621 Loyola Ave	TM 6301							1	12/21/2023	1
55939301	2641 Loyola Ave	TM 6301							1	12/12/2023	1
55939302	2661 Loyola Ave	TM 6301							1	12/28/2023	1
55939303	2681 Loyola Ave	TM 6301							1	11/14/2023	1
55939304	1753 N Applegate Ave	TM 6301							1	11/28/2023	1
55939305	1743 N Applegate Ave	TM 6301							1	10/17/2023	1
55939306	1733 N Applegate Ave	TM 6301							1	10/30/2023	1
55939309	1754 N Park Ave	TM 6301							1	12/28/2023	1
55942002S	1677 Teague Ave	TM 6154							1	9/6/2023	1
30902252142	3205 Lourdes Ave	TM 6161									0
30902252141	3215 Lourdes Ave	TM 6161									0
55943202S	1568 Teague Ave	TM 6284							1	12/6/2023	1
55943205S	1563 Richmond Ave	TM 6284							1	12/12/2023	1
55943210S	1519 N Stanford Ave	TM 6284							1	11/21/2023	1
55943104S	1523 Richmond Ave	TM 6284							1	10/30/2023	1
55939310	2731 Loyola Ave	TM 6301							1	10/17/2023	1
55463201	4187 Poe Ave	TM 6123							1	9/28/2023	1
55463202	4177 Poe Ave	TM 6123							1	10/17/2023	1
55463203	4167 Poe Ave	TM 6123							1	10/6/2023	1
55463204	4157 Poe Ave	TM 6123							1	10/17/2023	1
55463205	4147 Poe Ave	TM 6123							1	10/6/2023	1
55939129	1741 N Hanson Ave	TM 6301							1	11/8/2023	1
31030016S06	4111 Flint AVE	TM 6208							1	12/13/2023	1
31030016S08	3522 San Marino Ave	TM 6208							1	2/14/2024	1
31030016S31	3533 San Marino Ave	TM 6208							1	11/14/2023	1
31030016S10	3542 San Marino Ave	TM 6208									0
31030016S11	3552 San Marino Ave	TM 6208									0
31030016S30	3543 San Marino Ave	TM 6208									0
31030016S09	3532 San Marino Ave	TM 6208							1	11/7/2023	1
31030016S32	3523 San Marino Ave	TM 6208							1	11/29/2023	1
30902252002	4755 Buckingham Ave	TM 6161									0
30902252003	4745 Buckingham Ave	TM 6161									0
30902252004	4735 Buckingham Ave	TM 6161									0
30902252005	4725 Buckingham Ave	TM 6161									0
30902252012	4734 Buckingham Ave	TM 6161									0
30902252013	4744 Buckingham Ave	TM 6161									0
30902252014	4754 Buckingham Ave	TM 6161									0
55463301	4056 Poe Ave	TM 6123							1	10/27/2023	1
55463307	4136 Poe Ave	TM 6123							1	11/2/2023	1
55463308	4146 Poe Ave	TM 6123							1	11/8/2023	1
55463309	4156 Poe Ave	TM 6123							1	11/9/2023	1
31030016S22	3585 Las Rosas Ave	TM 6208							1	11/8/2023	1
31030016S18	4144 Lansing Ave	TM 6208									0
31030016S20	4164 Lansing Ave	TM 6208							1	11/8/2023	1
31030016S23	3575 Las Rosas Ave	TM 6208							1	12/12/2023	1
31030016S24	3565 Las Rosas Ave	TM 6208							1	11/10/2023	1
31030016S25	4155 Lansing Ave	TM 6208							1	12/12/2023	1
31030016S26	4145 Lansing Ave	TM 6208							1	11/21/2023	1
31030016S27	4135 Lansing Ave	TM 6208							1	11/21/2023	1
31030016S17	4134 Lansing Ave	TM 6208							1	1/19/2024	1
31030016S21	4174 Lansing Ave	TM 6208							1	11/9/2023	1
31030016S19	4154 Lansing Ave	TM 6208							1	11/17/2023	1
31030016S12	3562 San Marino Ave	TM 6208							1	11/21/2023	1
31030016S13	3572 San Marino Ave	TM 6208							1	1/17/2024	1
31030016S15	3592 San Marino Ave	TM 6208							1	11/27/2023	1
31030016S28	3563 San Marino Ave	TM 6208							1	1/31/2024	1
31030016S29	3553 San Marino Ave	TM 6208							1	1/31/2024	1
30902252006	4715 Buckingham Ave	TM 6161									0
30902252007	4705 Buckingham Ave	TM 6161									0

30902252008	3202 Simental Ave	TM 6161									0
30902252009	3212 Simental Ave	TM 6161									0
30902252104	4602 Sussex Ave	TM 6161									0
30902252105	4610 Sussex Ave	TM 6161									0
30902252106	4618 Sussex Ave	TM 6161									0
30902252107	4626 Sussex Ave	TM 6161									0
30902252097	4651 Sussex Ave	TM 6161									0
30902252098	4643 Sussex Ave	TM 6161									0
30902252099	4635 Sussex Ave	TM 6161									0
30902252108	4634 Sussex Ave	TM 6161									0
30902252109	4642 Sussex Ave	TM 6161									0
30902252110	4650 Sussex Ave	TM 6161									0
30902252010	3222 Simental Ave	TM 6161									0
30902252011	4724 Buckingham Ave	TM 6161									0
30902252020	4727 Hampton Way	TM 6161									0
30902252021	3232 Simental Ave	TM 6161									0
6413010000	4011 Scott Ave	TM 6413							1	2/6/2024	1
6413030000	4002 Scott Ave								1	2/6/2024	1
6413040000	4012 Scott Ave	TM 6413							1	2/6/2024	1
6413050000	4022 Scott Ave	TM 6413									0
6413060000	4032 Scott Ave	TM 6413									0
6413120000	1650 La Canada Ave	TM 6413									0
6413260000	1653 Hermosa Ave	TM 6413									0
6413330000	4143 Keats Ave	TM 6413									0
6413560000	4186 Twain Ave	TM 6413									0
30902252017	4757 Hampton Way	TM 6161									0
30902252019	4737 Hampton Way	TM 6161									0
30902252026	4736 Hampton Way										0
30902252027	4746 Hampton Way	TM 6161									0
30902252028	4756 Hampton Way	TM 6161									0
55465203	1458 Junipero Ave	TM 6304							1	11/9/2023	1
55465206	1428 Junipero Ave	TM 6304							1	11/20/2023	1
55467022	4104 Hoblitt Ave	TM 6404									0
55467026	1375 Junipero Ave	TM 6404							1	11/30/2023	1
30902252023	3252 Simental Ave	TM 6161									0
30902252024	3262 Simental Ave										0
30902252025	4726 Hampton Way	TM 6161									0
30902252034	4719 Bellaire Ave	TM 6161									0
30902252035	3272 Simental Ave	TM 6161									0
30902252036	3282 Simental Ave	TM 6161									0
30902252093	4683 Sussex Ave	TM 6161									0
30902252094	4675 Sussex Ave	TM 6161									0
30902252095	4667 Sussex Ave	TM 6161									0
30902252096	4659 Sussex Ave	TM 6161									0
30902252111	4658 Sussex Ave	TM 6161									0
30902252112	4666 Sussex Ave	TM 6161									0
30902252113	4674 Sussex Ave	TM 6161									0
30902252114	4682 Sussex Ave	TM 6161									0
56017030	1237 N Cindy Ave	TM 6348							1	11/17/2023	1
30902252092	3308 Escalante Ave	TM 6161									0
30902252091	3318 Escalante Ave	TM 6161									0
30902252090	3328 Escalante Ave	TM 6161									0
30902252089	3338 Escalante Ave	TM 6161									0
30902252088	3348 Escalante Ave	TM 6161									0
30902252068	4638 Bellaire Ave	TM 6161									0
30902252069	4631 Joaquin Ave	TM 6161									0
56017032	584 W Kenosha Ave	TM 6348							1	12/15/2023	1
30902252022	3242 Simental Ave	TM 6161									0
6413110000	1670 La Canada Ave	TM 6413									0
6413270000	1673 Hermosa Ave	TM 6413									0
6413320000	4133 Keats Ave	TM 6413									0

6413570000	4176 Twain Ave	TM 6413									0
6413580000	4166 Twain Ave	TM 6413									0
6413590000	4156 Twain Ave	TM 6413									0
6413610000	4136 Twain Ave	TM 6413									0
6413620000	4126 Twain Ave	TM 6413									0
6413630000	4116 Twain Ave	TM 6413									0
6413600000	4146 Twain Ave	TM 6413									0
31030016S14	3582 San Marino Ave	TM 6208									0
30902252070	4641 Joaquin Ave	TM 6161									0
30902252071	4651 Joaquin Ave	TM 6161									0
30902252081	4670 Joaquin Ave	TM 6161									0
30902252082	4660 Joaquin Ave	TM 6161									0
30902252083	4650 Joaquin Ave	TM 6161									0
30902252084	4640 Joaquin Ave	TM 6161									0
30902252031	4749 Bellaire Ave	TM 6161									0
30902252033	4729 Bellaire Ave	TM 6161									0
30902252040	4728 Bellaire Ave	TM 6161									0
30902252041	4738 Bellaire Ave	TM 6161									0
30902252042	4748 Bellaire Ave	TM 6161									0
30902252037	3302 Simental Ave	TM 6161									0
30902252038	3312 Simental Ave	TM 6161									0
30902252039	4718 Bellaire Ave	TM 6161									0
30902252048	4721 Joaquin Ave	TM 6161									0
30902252072	4661 Joaquin Ave	TM 6161									0
30946211	3339 Escobedo Ave	TM 6161									0
30902252078	3349 Escobedo Ave	TM 6161									0
30902252080	4680 Joaquin Ave	TM 6161									0
30902252079	4690 Joaquin Ave	TM 6161									0
30902252064	4678 Bellaire Ave	TM 6161									0
30946102	4668 Bellaire Ave	TM 6161									0
30902252067	4648 Bellaire Ave	TM 6161									0
6413070000	4063 Keats Ave	TM 6413									0
6413090000	1710 La Canada Ave	TM 6413									0
6413290000	1713 Hermosa Ave	TM 6413									0
6413300000	1733 Hermosa Ave	TM 6413									0
6413280000	1693 Hermosa Ave	TM 6413									0
30902252073	4671 Joaquin Ave	TM 6161									0
30902252018	4747 Hampton Way	TM 6161									0
6413080000	1730 La Canada Ave	TM 6413									0
6413100000	1690 La Canada Ave	TM 6123									0
30902252138	3245 Lourdes Ave	TM 6161									0
6413020000	4001 Scott Ave	TM 6413							1	2/6/2024	1
6413130000	1651 La Canada Ave	TM 6413									0
6413150000	1691 La Canada Ave	TM 6413									0
6413170000	1731 La Canada Ave	TM 6413									0
6413180000	4083 Keats Ave	TM 6413									0
6413190000	4093 Keats Ave	TM 6413									0
6413200000	4103 Keats Ave	TM 6413									0
55943402S	1384 N Purdue Ave	TM 6284									0
55467008	4183 Hoblitt Ave	TM 6404									0
55467009	4193 Hoblitt Ave	TM 6404									0
55467010	1407 Las Rosas Ave	TM 6404									0
55467011	1417 Las Rosas Ave	TM 6404									0
55467012	1427 Las Rosas Ave	TM 6404									0
55467013	1437 Las Rosas Ave	TM 6404									0
6413310000	4123 Keats Ave	TM 6413									0
6413160000	1711 La Canada Ave	TM 6413									0
6413220000	1712 Hermosa Ave	TM 6413									0
6413230000	1692 Hermosa Ave	TM 6413									0
6413250000	1652 Hermosa Ave	TM 6413									0
55467039	4113 Hoblitt Ave	TM 6404									0

6413140000	1671 La Canada Ave	TM 6413									0
6413210000	1732 Hermosa Ave	TM 6413									0
6413240000	1672 Hermosa Ave	TM 6413									0
55943403S	1520 Enterprise Ave	TM 6284									0
55464101	1801 Agua Dulce Ave	TM 6182									0
55464102	1811 Agua Dulce Ave	TM 6182									0
55463101	1831 Agua Dulce Ave	TM 6182									0
55463102	1841 Agua Dulce Ave	TM 6182									0
55463104	1871 Agua Dulce Ave	TM 6182									0
55463105	1881 Agua Dulce Ave	TM 6182									0
55467051	4102 Mitchell Ave	TM 6182									0
30902252046	4741 Joaquin Ave	TM 6161									0
30902252056	4750 Joaquin Ave	TM 6161									0
55463209	4107 Poe Ave	TM 6123									0
6413640000	4106 Twain Ave	TM 6413									0
55467047	4142 Mitchell Ave	TM 6404									0
55467037	4093 Hoblitt Ave	TM 6404									0
30943216	4252 Bellaire Ave	TM 6023									0
30943211	4212 Bellaire Ave	TM 6023									0
30943218	4268 Bellaire Ave	TM 6023									0
30943214	4236 Bellaire Ave	TM 6023									0
30943212	4220 Bellaire Ave	TM 6023									0
30943215	4244 Bellaire Ave	TM 6023									0
30943220	4284 Bellaire Ave	TM 6023									0
30943219	4276 Bellaire Ave	TM 6023									0
30943213	4228 Bellaire Ave	TM 6023									0
55463103	1851 Agua Dulce Ave	TM 6182									0
30943217	4260 Bellaire Ave	TM 6023									0
55467040	4123 Hoblitt Ave	TM 6404									0
55467046	4152 Mitchell Ave	TM 6404									0
30946203	3322 Simental Ave	TM 6161									0
55467050	4112 Mitchell Ave	TM 6404									0
56408024	1187 N Holly Ave	TM 6367									0
56408018	1196 N Holly Ave	TM 6367									0
5590110865	1754 Lester Ave	TM 6154							1	12/18/2023	1
5560503803	2091 N Rogers Ln	TM 6050							1	7/13/2023	1
57124404S	2669 La Mirada Ave	TM 6166									0
55943302S	1542 Richmond Ave	TM 6284									0
57124305S	4330 San Gabriel Ave	TM 6166									0
57124216S	4371 San Gabriel Ave	TM 6166									0
57124110S	2602 Highland Ave	TM 6166									0
55943107S	1484 N Purdue Ave B	TM 6284									0
56408024	1187 N Holly Ave B	TM 6367									0
56408018	1196 N Holly Ave B	TM 6367									0
49209615	148 Acacia Ave B	NO PROJECT									0
49937314	2531 Bundy Ave										0
43030251	514 W Pico Ave B	NO PROJECT									0
55844025	1291 N Whitmore Ave B	TM 5472									0
30946103	4658 Bellaire Ave	TM 6161									0
41037201	109 N Cindy Ave B										0
41031302	73 N Willow Ave	NO PROJECT									0
49211214	261 Minnewawa Ave B										0
55311205	2652 Fremont Ave					1				10/5/2023	1
56108111	957 N Citadel Ave B					1				11/9/2023	1
49119223	1514 Gibson Ave B	NO PROJECT									0
49207202	120 Woodworth Ave B	NO PROJECT				1				11/3/2023	1
49106171	227 W Sierra Ave B										0
49106171	227 W Sierra Ave C										0
49106171	237 Sierra Ave B										0
49106171	237 Sierra Ave C										0
41053104	281 N Terry Ave B										0

56010008	1783 N Bush Ave	TM 4912									0
49137001	22 N Villa Ave B										0
49137001	22 N Villa Ave C										0
49137002	18 N Villa Ave B										0
49137002	18 N Villa Ave C										0
49113103	80 N Woodworth Ave B	NO PROJECT									0
49118422	1743 Bullard Ave B	NO PROJECT									0
49118416	1729 Bullard Ave B	NO PROJECT									0
55943105S	1513 Richmond Ave B	TM 6284						1		6/21/2023	1
55941020S	1744 Lester Ave B	TM 6154						1		3/6/2023	1
49117107	1470 Fourth St B	NO PROJECT						1		8/11/2023	1
49117122	1476 Fourth St B	NO PROJECT						1		8/11/2023	1
55940012S	1735 Lester Ave	TM 6154						1		2/22/2023	1
49821334	1113 Carey Ave	NO PROJECT						1		3/10/2023	1
49906021	329 W Rialto Ave B	NO PROJECT						1		6/15/2023	1
55933016	2017 Teague Ave	TM 5550						1		3/6/2023	1
55940007S	1940 N Ezie Ave	TM 6154						1		7/13/2023	1
55941018S	1762 Lester Ave	TM 6154						1		7/13/2023	1
55941006S	1765 N Bundy Ave	TM 6154						1		7/13/2023	1
55940008S	1919 N Ezie Ave	TM 6154						1		7/13/2023	1
49212215	253 Minnewawa	PM2023-003									0
56314253	1491 Alluvial	MFRDR2023-001									0
											0
											0
											0
											0

Table A2

Annual Building Activity Report Summary - New Construction, Entitled, Permits and Completed Units

Project Identifier				Streamlining	Infill	Housing with Financial Assistance and/or Deed Restrictions		Housing without Financial Assistance or Deed Restrictions	Term of Affordability or Deed Restriction	Demolished/Destroyed Units			Density Bonus			
			13	14	15	16	17	18	19	20			21	22	23	24
Current APN	Street Address	Project Name+	How many of the units were Extremely Low Income?	Please select the streamlining provision the project was APPROVED pursuant to. (may select multiple)	Infill Units? Y/N+	Assistance Programs for Each Development (may select multiple - see instructions)	Deed Restriction Type (may select multiple - see instructions)	For units affordable without financial assistance or deed restrictions, explain how the locality determined the units were affordable (see instructions)	Term of Affordability or Deed Restriction (years) (if affordable in perpetuity enter 1000)+	Number of Demolished/Destroyed Units	Demolished or Destroyed Units	Demolished/Destroyed Units Owner or Renter	Total Density Bonus Applied to the Project (Percentage Increase in Total Allowable Units or Total Maximum Allowable Residential Gross Floor Area)	Number of Other Incentives, Concessions, Waivers, or Other Modifications Given to the Project (Excluding Parking Waivers or Parking Reductions)	List the incentives, concessions, waivers, and modifications (Excluding Parking Waivers or Parking Modifications)	Did the project receive a reduction or waiver of parking standards? (Y/N)
			0							1						
55503144	3700 Loma Vista Pkwy Bld 34	SPR 2018-011			N			Market rate rents affordable to mod								
55503144	3700 Loma Vista Pkwy 3601	SPR 2018-011			N			Market rate rents affordable to mod								
55503144	3700 Loma Vista Pkwy 3501	SPR 2018-011			N			Market rate rents affordable to mod								
43060101	784 W Holland Ave	RHNA 2019-001			Y			Deed restricted								
55503144	3700 Loma Vista Pkwy	SPR 2018-011			N			Market rate rents affordable to mod								
55534322	3072 De Wolf Ave				Y											
55926019S	1808 N Carson Ave	TM 5122			N											
55926011S	1807 N Coventry Ave	TM 5122			N											
49207202	120 Woodworth Ave				Y											
55851007	3076 Lester Ave	PM 2018-011			N											
49215215	356 Oxford Ave	PM 2022-003			N											
49215215	360 Oxford Ave	PM 2022-003			N											
49209820	156 Sunnyside Ave				Y					1	Demolished	O				
5612601740	421 W Mahogany Ln	TM 6262			N											
5612601751	436 W Balsam Ln	TM 6262			N											
5612601059	563 N Citadel Ln	TM 6262			N											
56129044	472 W Balsam Ln	TM 6262			N											
56129043	468 W Balsam Ln	TM 6262			N											
56129042	464 W Balsam Ln	TM 6262			N											
56129041	460 W Balsam Ln	TM 6262			N											
5612601755	456 W Balsam Ln	TM 6262			N											
5612601051	557 N Terry Ln	TM 6262			N											
56129045	476 W Balsam Ln	TM 6262			N											
5612601754	452 W Balsam Ln	TM 6262			N											
5612601753	448 W Balsam Ln	TM 6262			N											
5612601752	440 W Balsam Ln	TM 6262			N											
56129064	561 N Terry Ln	TM 6262			N											
56129063	565 N Terry Ln	TM 6262			N											
56129062	569 N Terry Ln	TM 6262			N											
56129061	573 N Terry Ln	TM 6262			N											
56129060	574 N Terry Ln	TM 6262			N											
56129059	570 N Terry Ln	TM 6262			N											
56129058	566 N Terry Ln	TM 6262			N											
56129057	562 N Terry Ln	TM 6262			N											
56129056	558 N Terry Ln	TM 6262			N											
56129055	559 N Cindy Ln	TM 6262			N											
56129054	563 N Cindy Ln	TM 6262			N											
56129053	567 N Cindy Ln	TM 6262			N											
56128065	576 N Cindy Ln	TM 6262			N											
56129052	571 N Cindy Ln	TM 6262			N											
56129050	496 W Balsam Ln	TM 6262			N											
56129049	492 W Balsam Ln	TM 6262			N											
56129048	488 W Balsam Ln	TM 6262			N											
56128064	572 N Cindy Ln	TM 6262			N											
56129047	484 W Balsam Ln	TM 6262			N											
56129046	480 W Balsam Ln	TM 6262			N											
56129051	575 N Cindy Ln	TM 6262			N											
56128061	560 N Cindy Ln	TM 6262			N											
56128062	564 N Cindy Ln	TM 6262			N											
56128063	568 N Cindy Ln	TM 6262			N											
56128060	561 N Sylmar Ln	TM 6262			N											
56128057	573 N Sylmar Ln	TM 6262			N											
56128059	565 N Sylmar Ln	TM 6262			N											
56128056	577 N Sylmar Ln	TM 6262			N											
56128058	569 N Sylmar Ln	TM 6262			N											
56128020	516 W Balsam Ln	TM 6262			N											
56128019	512 W Balsam Ln	TM 6262			N											
56128018	508 W Balsam Ln	TM 6262			N											
56128017	504 W Balsam Ln	TM 6262			N											
56128016	500 W Balsam Ln	TM 6262			N											
55609012	607 Heirloom Ln	TM 6050			N											
56128024	532 W Balsam Ln	TM 6262			N											
56128025	536 W Balsam Ln	TM 6262			N											
56128055	578 N Sylmar Ln	TM 6262			N											
56128054	574 N Sylmar Ln	TM 6262			N											
56128053	570 N Sylmar Ln	TM 6262			N											
56128052	566 N Sylmar Ln	TM 6262			N											
56128051	562 N Sylmar Ln	TM 6262			N											
56128021	520 W Balsam Ln	TM 6262			N											
56128023	528 W Balsam Ln	TM 6262			N											
56128022	524 W Balsam Ln	TM 6262			N											
56128010	510 W Mahogany Ln	TM 6262			N											
56128009	514 W Mahogany Ln	TM 6262			N											
56128008	518 W Mahogany Ln	TM 6262			N											
55609050	545 Bloom Ln	TM 6050			N											
56128007	522 W Mahogany Ln	TM 6262			N											
556128006	526 W Mahogany Ln	TM 6262			N											
56127035	598 W Mahogany Ln	TM 6262			N											
56127034	602 W Mahogany Ln	TM 6262			N											
56127028	626 W Mahogany Ln	TM 6262			N											
56127033	606 W Mahogany Ln	TM 6262			N											
56127032	610 W Mahogany Ln	TM 6262			N											
56127031	614 W Mahogany Ln	TM 6262			N											

56127030	618 W Mahogany Ln	TM 6262			N											
56127027	630 W Mahogany Ln	TM 6262			N											
56127029	622 W Mahogany Ln	TM 6262			N											
56127026	634 W Mahogany Ln	TM 6262			N											
56127025	638 W Mahogany Ln	TM 6262			N											
56127024	642 W Mahogany Ln	TM 6262			N											
56127023	646 W Mahogany Ln	TM 6262			N											
56127022	652 W Mahogany Ln	TM 6262			N											
56127021	656 W Mahogany Ln	TM 6262			N											
5590517613	2773 Vermont Ave	TM 6301			N											
55609009	667 Heirloom Ln	TM 6050			N											
55609057	405 Bloom Ln	TM 6050			N											
56127006	568 N Adler Ln	TM 6262			N											
56127007	572 N Adler Ln	TM 6262			N											
56127008	576 N Adler Ln	TM 6262			N											
56127009	580 N Adler Ln	TM 6262			N											
56127010	584 N Adler Ln	TM 6262			N											
56127011	583 N Adler Ln	TM 6262			N											
56127012	579 N Adler Ln	TM 6262			N											
56127013	575 N Adler Ln	TM 6262			N											
56127014	571 N Adler Ln	TM 6262			N											
56127015	567 N Adler Ln	TM 6262			N											
56127036	590 W Mahogany Ln	TM 6262			N											
56127037	586 W Mahogany Ln	TM 6262			N											
56127038	582 W Mahogany Ln	TM 6262			N											
56127039	578 W Mahogany Ln	TM 6262			N											
56127040	574 W Mahogany Ln	TM 6262			N											
56127016	566 N Helm Ln	TM 6262			N											
56127017	570 N Helm Ln	TM 6262			N											
56127018	574 N Helm Ln	TM 6262			N											
56127019	578 N Helm Ln	TM 6262			N											
56127020	582 N Helm Ln	TM 6262			N											
55609054	465 Bloom Ln	TM 6050			N											
56127005	596 W Balsam Ln	TM 6262			N											
56127004	592 W Balsam Ln	TM 6262			N											
56127003	588 W Balsam Ln	TM 6262			N											
56127002	584 W Balsam Ln	TM 6262			N											
56127001	580 W Balsam Ln	TM 6262			N											
56128001	546 W Mahogany Ln	TM 6262			N											
56128002	542 W Mahogany Ln	TM 6262			N											
56128003	538 W Mahogany Ln	TM 6262			N											
56128005	530 W Mahogany Ln	TM 6262			N											
56128050	563 N Chapel Hill Ln	TM 6262			N											
56128049	567 N Chapel Hill Ln	TM 6262			N											
56128048	571 N Chapel Hill Ln	TM 6262			N											
56128047	575 N Chapel Hill Ln	TM 6262			N											
56128046	579 N Chapel Hill Ln	TM 6262			N											
56128026	540 W Balsam Ln	TM 6262			N											
56128027	544 W Balsam Ln	TM 6262			N											
56128028	548 W Balsam Ln	TM 6262			N											
56128029	552 W Balsam Ln	TM 6262			N											
56128030	556 W Balsam Ln	TM 6262			N											
56128040	565 N Helm Ln	TM 6262			N											
56128039	569 N Helm Ln	TM 6262			N											
56128038	573 N Helm Ln	TM 6262			N											
56128037	577 N Helm Ln	TM 6262			N											
56128036	581 N Helm Ln	TM 6262			N											
56128041	564 N Chapel Hill Ln	TM 6262			N											
56128042	568 N Chapel Hill Ln	TM 6262			N											
56128043	572 N Chapel Hill Ln	TM 6262			N											
56128044	576 N Chapel Hill Ln	TM 6262			N											
56128045	580 N Chapel Hill Ln	TM 6262			N											
56128031	560 W Balsam Ln	TM 6262			N											
56128032	564 W Balsam Ln	TM 6262			N											
56128033	568 W Balsam Ln	TM 6262			N											
56128034	572 W Balsam Ln	TM 6262			N											
56128035	576 W Balsam Ln	TM 6262			N											
56128070	554 W Mahogany Ln	TM 6262			N											
56128069	558 W Mahogany Ln	TM 6262			N											
56128068	562 W Mahogany Ln	TM 6262			N											
56128067	566 W Mahogany Ln	TM 6262			N											
56128066	570 W Mahogany Ln	TM 6262			N											
55609087	401 Vintage Ln	TM 6050			N											
5590504141	2939 Teague Ave	TM 6339			N											
5590517619	1745 N Park Ave	TM 6301			N											
5590517620	1735 N Park Ave	TM 6301			N											
5590517654	2741 Loyola Ave	TM 6301			N											
5590517655	2751 Loyola Ave	TM 6301			N											
5590517624	2704 Moody Ave	TM 6301			N											
5590504131	2997 Trenton Ave	TM 6339			N											
5590504115	1677 N Megan Ave	TM 6339			N											
5590504112	2965 Vermont Ave	TM 6339			N											
5590504113	2975 Vermont Ave	TM 6339			N											
5590504111	2955 Vermont Ave	TM 6339			N											
5590504114	1687 N Megan Ave	TM 6339			N											
5540402010	3075 Keats Ave	TM 6349			N											
5590504109	2935 Vermont Ave	TM 6339			N											
5590504108	2925 Vermont Ave	TM 6339			N											
5590504110	2945 Vermont Ave	TM 6339			N											
56052050S	984 Everglade Ave	TM 6263			N											
56052049S	976 Everglade Ave	TM 6263			N											
56052033S	985 Everglade Ave	TM 6263			N											
56052034S	977 Everglade Ave	TM 6263			N											
56052048S	968 Everglade Ave	TM 6263			N											
56052047S	960 Everglade Ave	TM 6263			N											
56052035S	969 Everglade Ave	TM 6263			N											
56052036S	961 Everglade Ave	TM 6263			N											
56052046S	952 Everglade Ave	TM 6263			N											
55612013	501 Farmhouse Ln	TM 6329			N											
55612012	513 Farmhouse Ln	TM 6329			N											
55612011	525 Farmhouse Ln	TM 6329			N											
55612010	537 Farmhouse Ln	TM 6329			N											
55612009	549 Farmhouse Ln	TM 6329			N											
55612008	561 Farmhouse Ln	TM 6329			N											

55612007	603 Farmhouse Ln	TM 6329			N											
55612006	615 Farmhouse Ln	TM 6329			N											
55612005	627 Farmhouse Ln	TM 6329			N											
55612004	639 Farmhouse Ln	TM 6329			N											
55612003	651 Farmhouse Ln	TM 6329			N											
55612002	663 Farmhouse Ln	TM 6329			N											
55942038S	1684 N Shirley Ave	TM 6154			N											
55609017	507 Heirloom Ln	TM 6050			N											
55609013	587 Heirloom Ln	TM 6050			N											
55609016	527 Heirloom Ln	TM 6050			N											
55609015	547 Heirloom Ln	TM 6050			N											
55609014	567 Heirloom Ln	TM 6050			N											
5590504107	2915 Vermont Ave	TM 6339			N											
5590504106	2905 Vermont Ave	TM 6339			N											
5590504105	1694 N Greenfield Ave	TM 6339			N											
5590504103	1674 N Greenfield Ave	TM 6339			N											
55609026	2120 N Perry Ln	TM 6050			N											
55609027	2110 N Perry Ln	TM 6050			N											
55609028	2100 N Perry Ln	TM 6050			N											
55609029	2090 N Perry Ln	TM 6050			N											
55609030	2080 N Perry Ln	TM 6050			N											
55609025	2130 N Perry Ln	TM 6050			N											
55609024	2140 N Perry Ln	TM 6050			N											
55609023	2150 N Perry Ln	TM 6050			N											
55609022	407 Heirloom Ln	TM 6050			N											
55609021	427 Heirloom Ln	TM 6050			N											
55609020	447 Heirloom Ln	TM 6050			N											
55609019	467 Heirloom Ln	TM 6050			N											
55609018	487 Heirloom Ln	TM 6050			N											
55939119	1725 N Park Ave	TM 6301			N											
55939308	1744 N Park Ave	TM 6301			N											
55464302	1676 Las Rosas Ave	TM 6123			N											
56052042S	920 Everglade Ave	TM 6263			N											
56052044S	936 Everglade Ave	TM 6263			N											
56052040S	929 Everglade Ave	TM 6263			N											
56052032S	988 Serena Ave	TM 6263			N											
56052025S	932 Serena Ave	TM 6263			N											
56052029S	964 Serena Ave	TM 6263			N											
56052031S	980 Serena Ave	TM 6263			N											
56052028S	956 Serena Ave	TM 6263			N											
56052024S	924 Serena Ave	TM 6263			N											
56052026S	940 Serena Ave	TM 6263			N											
56052043s	928 Everglade Ave	TM 6263			N											
56052045S	944 Everglade Ave	TM 6263			N											
56052037S	953 Everglade Ave	TM 6263			N											
56052039S	937 Everglade Ave	TM 6263			N											
56052030S	972 Serena Ave	TM 6263			N											
56052027S	948 Serena Ave	TM 6263			N											
56052041S	921 Everglade Ave	TM 6263			N											
56052038S	945 Everglade Ave	TM 6263			N											
55940012S	1735 Lester Ave	TM 6154			N											
55940015S	1765 Lester Ave	TM 6154			N											
55942004S	1787 Teague Ave	TM 6154			N											
55942018S	1730 Trenton Ave	TM 6154			N											
55465718	4176 Dennis Ave	TM 6304			N											
56408019	1186 N Holly Ave	TM 6367			N											
56017029	1247 N Cindy Ave	TM 6348			N											
55465303	4085 Dennis Ave	TM 6304			N											
55465304	4095 Dennis Ave	TM 6304			N											
55465306	4115 Dennis Ave	TM 6304			N											
55465308	4135 Dennis Ave	TM 6304			N											
55465309	4145 Dennis Ave	TM 6304			N											
55465310	4155 Dennis Ave	TM 6304			N											
55465311	4165 Dennis Ave	TM 6304			N											
55465312	4175 Dennis Ave	TM 6304			N											
55465314	4195 Dennis Ave	TM 6304			N											
55938201	2613 Vermont Ave	TM 6209			N											
55941020S	1744 Lester Ave	TM 6154			N											
55941007S	1766 N Renn Ave	TM 6154			N											
56408020	1176 N Holly Ave	TM 6367			N											
56408025	1197 N Holly Ave	TM 6367			N											
55464502	4161 Scott Ave	TM 6123			N											
55464503	4151 Scott Ave	TM 6123			N											
55464504	4141 Scott Ave	TM 6123			N											
55464505	4131 Scott Ave	TM 6123			N											
55464506	4121 Scott Ave	TM 6123			N											
55464507	4111 Scott Ave	TM 6123			N											
55464508	4101 Scott Ave	TM 6123			N											
55464509	4091 Scott Ave	TM 6123			N											
55464510	4081 Scott Ave	TM 6123			N											
55536236	2101 Descanso Ave	TM 6377			N											
55536250	2160 Descanso Ave	TM 6377			N											
55536238	2061 Descanso Ave	TM 6377			N											
55536234	2141 Descanso Ave	TM 6377			N											
5582900601	1697 N Twinberry Ave	TM 6389			N											
55612033	2006 N Inverness Ln	TM 6329			N											
55612032	2012 N Inverness Ln	TM 6329			N											
55612031	2018 N Inverness Ln	TM 6329			N											
55612030	2024 N Inverness Ln	TM 6329			N											
31030016S37	3555 Las Rosas Ave	TM 6208			N											
31030016S38	3545 Las Rosas Ave	TM 6208			N											
31030016S39	3535 Las Rosas Ave	TM 6208			N											
31030016S40	3525 Las Rosas Ave	TM 6208			N											
31030016S41	3515 Las Rosas Ave	TM 6208			N											
31030016S43	3505 Las Rosas Ave	TM 6208			N											
56017028	1257 N Cindy Ave	TM 6348			N											
55612034	2005 N Inverness Ln	TM 6329			N											
55612035	2011 N Inverness Ln	TM 6329			N											
55612036	2017 N Inverness Ln	TM 6329			N											
55612037	2023 N Inverness Ln	TM 6329			N											
55464511	4071 Scott Ave	TM 6123			N											
55464512	4061 Scott Ave	TM 6123			N											
55464513	4051 Scott Ave	TM 6123			N											
55464514	4041 Scott Ave	TM 6123			N											

55464515	4031 Scott Ave	TM 6123			N											
55464516	4021 Scott Ave	TM 6123			N											
55609075	641 Vintage Ln	TM 6050			N											
55609074	661 Vintage Ln	TM 6050			N											
55609073	681 Vintage Ln	TM 6050			N											
55609072	682 Bloom Ln	TM 6050			N											
55609071	662 Bloom Ln	TM 6050			N											
55609070	642 Bloom Ln	TM 6050			N											
55536245	2060 Descanso Ave	TM 6377			N											
55536231	2067 Amanecer Ave	TM 6025			N											
55536202	2087 Amanecer Ave	TM 6025			N											
55536203	3801 Fairmont Ave	TM 6025			N											
55536204	3809 Fairmont Ave	TM 6025			N											
55536205	3817 Fairmont Ave	TM 6025			N											
55611034	500 Pioneer Ln	TM 6329			N											
55464201	1797 Las Rosas Ave	TM 6123			N											
55464202	1777 Las Rosas Ave	TM 6123			N											
55464203	1757 Las Rosas Ave	TM 6123			N											
55464204	1737 Las Rosas Ave	TM 6123			N											
55464205	1717 Las Rosas Ave	TM 6123			N											
55465401	1447 Las Rosas Ave	TM 6304			N											
55465402	1457 Las Rosas Ave	TM 6304			N											
55465403	1467 Las Rosas Ave	TM 6304			N											
55465404	1477 Las Rosas Ave	TM 6304			N											
55465405	1487 Las Rosas Ave	TM 6304			N											
55465406	1497 Las Rosas Ave	TM 6304			N											
55611037	536 Pioneer Ln	TM 6329			N											
55611036	524 Pioneer Ln	TM 6329			N											
55611035	512 Pioneer Ln	TM 6329			N											
55611038	548 Pioneer Ln	TM 6329			N											
55611039	560 Pioneer Ln	TM 6329			N											
55611040	602 Pioneer Ln	TM 6329			N											
55611041	614 Pioneer Ln	TM 6329			N											
55536237	2081 Descanso Ave	TM 6377			N											
55536240	2021 Descanso Ave	TM 6377			N											
55536239	2041 Descanso Ave	TM 6377			N											
5540402003	3026 Keats Ave	TM 6349			N											
55536241	2001 Descanso Ave	TM 6377			N											
55611042	626 Pioneer Ln	TM 6329			N											
55611043	638 Pioneer Ln	TM 6329			N											
55611044	650 Pioneer Ln	TM 6329			N											
55611045	662 Pioneer Ln	TM 6329			N											
5590210330	1522 Richmond Ave	TM 6284			N											
5590210305	1513 Richmond Ave	TM 6284			N											
5590210332	1562 Richmond Ave	TM 6284			N											
55611031	2058 N Ralph Ln	TM 6329			N											
55611032	2052 N Ralph Ln	TM 6329			N											
55611029	2065 N Ralph Ln	TM 6329			N											
55611028	2059 N Ralph Ln	TM 6329			N											
55611026	2047 N Ralph Ln	TM 6329			N											
55611033	2046 N Ralph Ln	TM 6329			N											
55611030	2064 N Ralph Ln	TM 6329			N											
5590210333	1528 N Stanford Ave	TM 6284			N											
55942037S	1694 N Shirley Ave	TM 6154			N											
55611027	2053 N Ralph Ln	TM 6329			N											
55536244	2040 Descanso Ave	TM 6377			N											
55536243	2020 Descanso Ave	TM 6377			N											
55536233	2161 Descanso Ave	TM 6377			N											
5590210322	1583 Richmond Ave	TM 6284			N											
55464306	4183 Keats Ave	TM 6123			N											
55464307	4173 Keats Ave	TM 6123			N											
55464308	4163 Keats Ave	TM 6123			N											
55611022	2058 N Hammel Ln	TM 6329			N											
55611023	2052 N Hammel Ln	TM 6329			N											
55611024	2046 N Hammel Ln	TM 6329			N											
55943209S	1529 N Stanford Ave	TM 6284			N											
55943211S	1509 N Stanford Ave	TM 6284			N											
55611018	2041 N Hammel Ln	TM 6329			N											
55611019	2047 N Hammel Ln	TM 6329			N											
55611020	2053 N Hammel Ln	TM 6329			N											
55611021	2059 N Hammel Ln	TM 6329			N											
55464309	1745 San Marino Ave	TM 6123			N											
55464310	1725 San Marino Ave	TM 6123			N											
55464311	1695 San Marino Ave	TM 6123			N											
55464312	1675 San Marino Ave	TM 6123			N											
55464313	1655 San Marino Ave	TM 6123			N											
55465205	1438 Junipero Ave	TM 6304			N											
55611025	2040 N Hammel Ln	TM 6329			N											
55461014S	3808 Portals Ave	TM 6254			N											
55461015S	3849 Portals Ave	TM 6254			N											
55943206S	1573 Richmond Ave	TM 6284			N											
55943208S	1593 Richmond Ave	TM 6284			N											
55465101	1598 Junipero Ave	TM 6304			N											
55465102	1578 Junipero Ave	TM 6304			N											
55465103	1550 Agua Dulce Ave	TM 6304			N											
55465104	1530 Agua Dulce Ave	TM 6304			N											
55465201	1478 Junipero Ave	TM 6304			N											
55465202	1468 Junipero Ave	TM 6304			N											
55465204	1448 Junipero Ave	TM 6304			N											
55465207	1418 Junipero Ave	TM 6304			N											
5560504166	2220 N Eddy Ave	TM 6292			N											
55465407	4198 Beverly Ave	TM 6304			N											
5560504181	2283 N Argyle Ave	TM 6292			N											
5560504172	2211 N Argyle Ave	TM 6292			N											
55465408	4188 Beverly Ave	TM 6304			N											
5560504170	1076 Windmill Ave	TM 6292			N											
5560504173	2219 N Argyle Ave	TM 6292			N											
5560504179	2267 N Argyle Ave	TM 6292			N											
5560504163	2280 N Eddy Ave	TM 6292			N											
55465409	4178 Beverly Ave	TM 6304			N											
5560504167	2200 N Eddy Ave	TM 6292			N											
55465410	4179 San Jose Ave	TM 6304			N											
55465411	4189 San Jose Ave	TM 6304			N											
5560504176	2243 N Argyle Ave	TM 6292			N											

55465412	4199 San Jose Ave	TM 6304			N											
55605042050	1216 Windmill Ave	TM 6344			N											
55465413	1567 Las Rosas Ave	TM 6304			N											
55605042045	2232 N Russell Ave	TM 6344			N											
55605042058	2203 N Duke Ave	TM 6344			N											
55605042062	2235 N Duke Ave	TM 6344			N											
55465414	1577 Las Rosas Ave	TM 6304			N											
55465415	1587 Las Rosas Ave	TM 6304			N											
55605042052	1256 Windmill Ave	TM 6344			N											
55605042056	1346 Windmill Ave	TM 6344			N											
55943203S	1548 Teague Ave	TM 6284			N											
55605042041	2264 N Russell Ave	TM 6344			N											
55605042067	2275 N Duke Ave	TM 6344			N											
55605042038	2288 N Russell Ave	TM 6344			N											
55605042044	2240 N Russell Ave	TM 6344			N											
55605042064	2251 N Duke Ave	TM 6344			N											
55605042039	2280 N Russell Ave	TM 6344			N											
55605042048	2208 N Russell Ave	TM 6344			N											
55605042055	1326 Windmill Ave	TM 6344			N											
55605042060	2219 N Duke Ave	TM 6344			N											
55605041137	1052 Springtime Ave	TM 6292			N											
55605041136	1046 Springtime Ave	TM 6292			N											
5560504164	2260 N Eddy Ave	TM 6292			N											
5560504175	2235 N Argyle Ave	TM 6292			N											
5560504169	1066 Windmill Ave	TM 6292			N											
5560504182	2291 N Argyle Ave	TM 6292			N											
5560504168	1056 Windmill Ave	TM 6292			N											
5560504165	2240 N Eddy Ave	TM 6292			N											
5560504171	2203 N Argyle Ave	TM 6292			N											
5560504174	2227 N Argyle Ave	TM 6292			N											
5560504177	2251 N Argyle Ave	TM 6292			N											
5560504180	2275 N Argyle Ave	TM 6292			N											
5560504185	2375 N Argyle Ave	TM 6292			N											
55605041169	1030 Fruitwood Ave	TM 6292			N											
55605041175	1066 Fruitwood Ave	TM 6292			N											
5560504191	1055 Fruitwood Ave	TM 6292			N											
5560504197	1019 Fruitwood Ave	TM 6292			N											
55605041104	2364 N Phillip Ave	TM 6292			N											
55605041148	1016 Plum Tree Ave	TM 6292			N											
5560504188	1073 Fruitwood Ave	TM 6292			N											
5560504195	1031 Fruitwood Ave	TM 6292			N											
55605041100	2396 N Phillip Ave	TM 6292			N											
55605041164	1021 Plum Tree Ave	TM 6292			N											
55605041172	1048 Fruitwood Ave	TM 6292			N											
5560504189	1067 Fruitwood Ave	TM 6292			N											
5560504196	1025 Fruitwood Ave	TM 6292			N											
55605041165	1015 Plum Tree Ave	TM 6292			N											
5560504184	2345 N Argyle Ave	TM 6292			N											
5560504199	1007 Fruitwood Ave	TM 6292			N											
55605041139	1053 Springtime Ave	TM 6292			N											
30942203	4232 Buckingham Ave	TM 6023			N											
55605041177	1078 Fruitwood Ave	TM 6292			N											
5560504186	1085 Fruitwood Ave	TM 6292			N											
5560504193	1043 Fruitwood Ave	TM 6292			N											
49106171	227 W Sierra Ave				Y											
55605041102	2380 N Phillip Ave	TM 6292			N											
55605041105	2356 N Phillip Ave	TM 6292			N											
55605041147	1010 Plum Tree Ave	TM 6292			N											
55605041167	1018 Fruitwood Ave	TM 6292			N											
55605041173	1054 Fruitwood Ave	TM 6292			N											
5560504192	1049 Fruitwood Ave	TM 6292			N											
49106171	237 W Sierra Ave	PM 2022-002			N											
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55605041168	1024 Fruitwood Ave	TM 6292			N											
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5560504187	1079 Fruitwood Ave	TM 6292			N											
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5560504183	2315 N Argyle Ave	TM 6292			N											
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55605041166	1009 Plum Tree Ave	TM 6292			N											
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57124310S	4280 San Gabriel Ave	TM 6166			N											
57124213S	4341 San Gabriel Ave	TM 6166			N											
57124403S	2649 La Mirada Ave	TM 6166			N											
57124109S	2622 Highland Ave	TM 6166			N											
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57124306S	4320 San Gabriel Ave	TM 6166			N											
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57124315S	4230 San Gabriel Ave	TM 6166			N											
57124204S	4251 San Gabriel Ave	TM 6166			N											
49137002	18 N Villa Ave				Y											
49137001	22 N Villa Ave				Y											
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57124307S	4310 San Gabriel Ave	TM 6166			N											
57124104S	2722 Highland Ave	TM 6166			N											
57124311S	4270 San Gabriel Ave	TM 6166			N											
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57124312S	4260 San Gabriel Ave	TM 6166			N											
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55612001	713 Farmhouse Ln	TM 6329			N											
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55612041	2008 N Rogers Ln	TM 6329			N											
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55612042	2009 N Rogers Ln	TM 6329			N											
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55612043	2013 N Rogers Ln	TM 6329			N											
55612044	2017 N Rogers Ln	TM 6329			N											
55612045	2021 N Rogers Ln	TM 6329			N											
55612046	2025 N Rogers Ln	TM 6329			N											
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55612047	2029 N Rogers Ln	TM 6329			N											
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55605042026	2282 N Elm Ave	TM 6344			N											
55605042069	1310 Springtime Ave	TM 6344			N											
55605042100	1320 Summerset Ave	TM 6344			N											
55605042085	1321 Windmill Ave	TM 6344			N											
55605042088	1271 Windmill Ave	TM 6344			N											
55605042008	1247 Fruitwood Ave	TM 6344			N											
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55605042078	1311 Summerset Ave	TM 6344			N											
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55605042090	1235 Windmill Ave	TM 6344			N											
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55605042072	2272 N Duke Ave	TM 6344			N											
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55605042006	1227 Fruitwood Ave	TM 6344			N											
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55605042010	1267 Fruitwood Ave	TM 6344			N											
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55605042075	2250 N Duke Ave	TM 6344			N											
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31030016S34	4142 Flint Ave	TM 6208			N											
55605042007	1237 Fruitwood Ave	TM 6344			N											
55605042032	2265 N Russell Ave	TM 6344			N											

55463401	4176 Poe Ave	TM 6123			N											
55605042029	2258 N Elm Ave	TM 6344			N											
55605042071	1326 Springtime Ave	TM 6344			N											
55605042092	2217 N Russell Ave	TM 6344			N											
55605042011	1277 Fruitwood Ave	TM 6344			N											
55605042073	2266 N Duke Ave	TM 6344			N											
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55605042043	2248 N Russell Ave	TM 6344			N											
55605042049	1206 Windmill Ave	TM 6344			N											
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30942114	4223 Buckingham Ave	TM 6023			N											
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30942118	3210 Frontera Ave	TM 6023			N											
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30942211	4217 Hampton Way	TM 6023			N											
30942306	4258 Hampton Way	TM 6023			N											
30942107	4279 Buckingham Ave	TM 6023			N											
30942208	4272 Buckingham Ave	TM 6023			N											
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30942201	4216 Buckingham Ave	TM 6023			N											
30942120	3230 Frontera Ave	TM 6023			N											
30942123	3260 Frontera Ave	TM 6023			N											
30942303	4234 Hampton Way	TM 6023			N											
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30942111	4247 Buckingham Ave	TM 6023			N											
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30942122	3250 Frontera Ave	TM 6023			N											
30942124	3270 Frontera Ave	TM 6023			N											
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30942116	4207 Buckingham Ave	TM 6023			N											
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30942213	4233 Hampton Way	TM 6023			N											
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30942305	4250 Hampton Way	TM 6023			N											
30942218	4273 Hampton Way	TM 6023			N											
30942106	4287 Buckingham Ave	TM 6023			N											
30942207	4264 Buckingham Ave	TM 6023			N											
30942113	4231 Buckingham Ave	TM 6023			N											
30942121	3240 Frontera Ave	TM 6023			N											
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30942304	4242 Hampton Way	TM 6023			N											
30942110	4255 Buckingham Ave	TM 6023			N											
30942204	4240 Buckingham Ave	TM 6023			N											
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30942117	3200 Frontera Ave	TM 6023			N											
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55605042022	1249 Plum Tree Ave	TM 6344			N											
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55605042003	2368 N Russell Ave	TM 6344			N											
55605042016	1238 Fruitwood Ave	TM 6344			N											
55463410	1827 Las Rosas Ave	TM 6123			N											
55605042023	1259 Plum Tree Ave	TM 6344			N											
55605042015	1248 Fruitwood Ave	TM 6344			N											
55463411	1807 Las Rosas Ave	TM 6123			N											
55605042024	1269 Plum Tree Ave	TM 6344			N											
55464401	1654 San Marino Ave	TM 6123			N											
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55605042018	1218 Fruitwood Ave	TM 6344			N											
31030016S05	4121 Flint AVE	TM 6208			N											
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55464402	1674 San Marino Ave	TM 6123			N											
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55464404	1724 San Marino Ave	TM 6123			N											
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31030016S07	3512 San Marino Ave	TM 6208			N											
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55943106S	1494 N Purdue Ave	TM 6284			N											
30944206	3351 La Mirada Ave	TM 6023			N											
55943107S	1484 N Purdue Ave	TM 6284			N											
30944103	4423 Mecca Ave	TM 6023			N											
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30944203	3321 La Mirada Ave	TM 6023			N											
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30944228	4434 Mecca Ave	TM 6023			N											
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30944105	4435 Mecca Ave	TM 6023			N											
55610072	2002 N Perry Ln	TM 6328			N											
55610073	2008 N Perry Ln	TM 6328			N											
55610074	2014 N Perry Ln	TM 6328			N											
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30944225	4452 Mecca Ave	TM 6023			N											
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55943323S	1455 N Purdue Ave	TM 6284			N											
30944202	3311 La Mirada Ave	TM 6023			N											
55943324S	1465 N Purdue Ave	TM 6284			N											
30944233	3322 Amistad Ave	TM 6023			N											
30942506	3261 La Mirada Ave	TM 6023			N											
55605042096	1252 Summerset Ave	TM 6344			N											
30943415	3310 La Mirada Ave	TM 6023			N											
30944205	3341 La Mirada Ave	TM 6023			N											
30943409	4357 Sussex Ave	TM 6023			N											
55467014	4184 Hoblitt Ave	TM 6404			N											
30944235	3302 Amistad Ave	TM 6023			N											
30944229	4428 Mecca Ave	TM 6023			N											
30942416	3260 La Mirada Ave	TM 6023			N											
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30944230	4422 Mecca Ave	TM 6023			N											
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30942505	3251 La Mirada Ave	TM 6023			N											
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30943407	4317 Sussex Ave	TM 6023			N											
55467021	4114 Hoblitt Ave	TM 6404			N											
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55467023	4094 Hoblitt Ave	TM 6404			N											
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30944227	4440 Mecca Ave	TM 6023			N											
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55467025	1385 Junipero Ave	TM 6404			N											
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30944204	3331 La Mirada Ave	TM 6023			N											
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30944234	3312 Amistad Ave	TM 6023			N											
30944232	4410 Mecca Ave	TM 6023			N											
30944101	4411 Mecca Ave	TM 6023			N											
30944104	4429 Mecca Ave	TM 6023			N											
30944224	4458 Mecca Ave	TM 6023			N											
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55942020S	1661 N Shirley Ave	TM 6154			N											
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55609007	2131 N Rogers Ln	TM 6050			N											
55536235	2121 Descanso Ave	TM 6377			N											
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55944050	1647 N Megan Ave	TM 6339			N											
55855002	1687 N Twinberry Ave	TM 6389			N											
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55854003	3242 Vermont Ave	TM 6389			N											
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55854008	1645 N Blackwood Ave	TM 6389			N											

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55854013	1644 N Blackwood Ave	TM 6389			N											
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55854016	1662 N Blackwood Ave	TM 6389			N											
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55855017	1680 N Blackwood Ave	TM 6389			N											
55855016	1686 N Blackwood Ave	TM 6389			N											
55855015	1692 N Blackwood Ave	TM 6389			N											
55855014	1698 N Blackwood Ave	TM 6389			N											
55855020	1699 N Blackwood Ave	TM 6389			N											
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55855022	1687 N Blackwood Ave	TM 6389			N											
55855023	1681 N Blackwood Ave	TM 6389			N											
55855024	1675 N Blackwood Ave	TM 6389			N											
55855006	1658 N Twinberry Ave	TM 6389			N											
55855007	1668 N Twinberry Ave	TM 6389			N											
55855008	1678 N Twinberry Ave	TM 6389			N											
55855009	1688 N Twinberry Ave	TM 6389			N											
55855010	1698 N Twinberry Ave	TM 6389			N											
55855011	3230 Loyola Ave	TM 6389			N											
55855012	3220 Loyola Ave	TM 6389			N											
55936306	1643 N Ryan Ave	TM 6109			N											
55939123	2694 Moody Ave	TM 6301			N											
55939124	2674 Moody Ave	TM 6301			N											
55939125	2654 Moody Ave	TM 6301			N											
55939126	1722 N Applegate Ave	TM 6301			N											
55939127	1732 N Applegate Ave	TM 6301			N											
55939128	1742 N Applegate Ave	TM 6301			N											
55939130	1731 N Hanson Ave	TM 6301			N											
55939131	1721 N Hanson Ave	TM 6301			N											
55939132	1711 N Hanson Ave	TM 6301			N											
55939133	1701 N Hanson Ave	TM 6301			N											
55939201	1700 N Hanson Ave	TM 6301			N											
55939202	1710 N Hanson Ave	TM 6301			N											
55939203	1720 N Hanson Ave	TM 6301			N											
55939204	1730 N Hanson Ave	TM 6301			N											
55939205	1740 N Hanson Ave	TM 6301			N											
55939206	1750 N Hanson Ave	TM 6301			N											
55939207	2611 Loyola Ave	TM 6301			N											
55939208	2621 Loyola Ave	TM 6301			N											
55939301	2641 Loyola Ave	TM 6301			N											
55939302	2661 Loyola Ave	TM 6301			N											
55939303	2681 Loyola Ave	TM 6301			N											
55939304	1753 N Applegate Ave	TM 6301			N											
55939305	1743 N Applegate Ave	TM 6301			N											
55939306	1733 N Applegate Ave	TM 6301			N											
55939309	1754 N Park Ave	TM 6301			N											
55942002S	1677 Teague Ave	TM 6154			N											
30902252142	3205 Lourdes Ave	TM 6161			N											
30902252141	3215 Lourdes Ave	TM 6161			N											
55943202S	1568 Teague Ave	TM 6284			N											
55943205S	1563 Richmond Ave	TM 6284			N											
55943210S	1519 N Stanford Ave	TM 6284			N											
55943104S	1523 Richmond Ave	TM 6284			N											
55939310	2731 Loyola Ave	TM 6301			N											
55463201	4187 Poe Ave	TM 6123			N											
55463202	4177 Poe Ave	TM 6123			N											
55463203	4167 Poe Ave	TM 6123			N											
55463204	4157 Poe Ave	TM 6123			N											
55463205	4147 Poe Ave	TM 6123			N											
55939129	1741 N Hanson Ave	TM 6301			N											
31030016S06	4111 Flint AVE	TM 6208			N											
31030016S08	3522 San Marino Ave	TM 6208			N											
31030016S31	3533 San Marino Ave	TM 6208			N											
31030016S10	3542 San Marino Ave	TM 6208			N											
31030016S11	3552 San Marino Ave	TM 6208			N											
31030016S30	3543 San Marino Ave	TM 6208			N											
31030016S09	3532 San Marino Ave	TM 6208			N											
31030016S32	3523 San Marino Ave	TM 6208			N											
30902252002	4755 Buckingham Ave	TM 6161			N											
30902252003	4745 Buckingham Ave	TM 6161			N											
30902252004	4735 Buckingham Ave	TM 6161			N											
30902252005	4725 Buckingham Ave	TM 6161			N											
30902252012	4734 Buckingham Ave	TM 6161			N											
30902252013	4744 Buckingham Ave	TM 6161			N											
30902252014	4754 Buckingham Ave	TM 6161			N											
55463301	4056 Poe Ave	TM 6123			N											
55463307	4136 Poe Ave	TM 6123			N											
55463308	4146 Poe Ave	TM 6123			N											
55463309	4156 Poe Ave	TM 6123			N											
31030016S22	3585 Las Rosas Ave	TM 6208			N											
31030016S18	4144 Lansing Ave	TM 6208			N											
31030016S20	4164 Lansing Ave	TM 6208			N											
31030016S23	3575 Las Rosas Ave	TM 6208			N											
31030016S24	3565 Las Rosas Ave	TM 6208			N											
31030016S25	4155 Lansing Ave	TM 6208			N											
31030016S26	4145 Lansing Ave	TM 6208			N											
31030016S27	4135 Lansing Ave	TM 6208			N											
31030016S17	4134 Lansing Ave	TM 6208			N											
31030016S21	4174 Lansing Ave	TM 6208			N											
31030016S19	4154 Lansing Ave	TM 6208			N											
31030016S12	3562 San Marino Ave	TM 6208			N											
31030016S13	3572 San Marino Ave	TM 6208			N											
31030016S15	3592 San Marino Ave	TM 6208			N											
31030016S28	3563 San Marino Ave	TM 6208			N											
31030016S29	3553 San Marino Ave	TM 6208			N											
30902252006	4715 Buckingham Ave	TM 6161			N											
30902252007	4705 Buckingham Ave	TM 6161			N											
30902252008	3202 Simental Ave	TM 6161			N											

30902252009	3212 Simental Ave	TM 6161			N											
30902252104	4602 Sussex Ave	TM 6161			N											
30902252105	4610 Sussex Ave	TM 6161			N											
30902252106	4618 Sussex Ave	TM 6161			N											
30902252107	4626 Sussex Ave	TM 6161			N											
30902252097	4651 Sussex Ave	TM 6161			N											
30902252098	4643 Sussex Ave	TM 6161			N											
30902252099	4635 Sussex Ave	TM 6161			N											
30902252108	4634 Sussex Ave	TM 6161			N											
30902252109	4642 Sussex Ave	TM 6161			N											
30902252110	4650 Sussex Ave	TM 6161			N											
30902252010	3222 Simental Ave	TM 6161			N											
30902252011	4724 Buckingham Ave	TM 6161			N											
30902252020	4727 Hampton Way	TM 6161			N											
30902252021	3232 Simental Ave	TM 6161			N											
6413010000	4011 Scott Ave	TM 6413			N											
6413030000	4002 Scott Ave				N											
6413040000	4012 Scott Ave	TM 6413			N											
6413050000	4022 Scott Ave	TM 6413			N											
6413060000	4032 Scott Ave	TM 6413			N											
6413120000	1650 La Canada Ave	TM 6413			N											
6413260000	1653 Hermosa Ave	TM 6413			N											
6413330000	4143 Keats Ave	TM 6413			N											
6413560000	4186 Twain Ave	TM 6413			N											
30902252017	4757 Hampton Way	TM 6161			N											
30902252019	4737 Hampton Way	TM 6161			N											
30902252026	4736 Hampton Way				N											
30902252027	4746 Hampton Way	TM 6161			N											
30902252028	4756 Hampton Way	TM 6161			N											
55465203	1458 Junipero Ave	TM 6304			N											
55465206	1428 Junipero Ave	TM 6304			N											
55467022	4104 Hoblitt Ave	TM 6404			N											
55467026	1375 Junipero Ave	TM 6404			N											
30902252023	3252 Simental Ave	TM 6161			N											
30902252024	3262 Simental Ave				N											
30902252025	4726 Hampton Way	TM 6161			N											
30902252034	4719 Bellaire Ave	TM 6161			N											
30902252035	3272 Simental Ave	TM 6161			N											
30902252036	3282 Simental Ave	TM 6161			N											
30902252093	4683 Sussex Ave	TM 6161			N											
30902252094	4675 Sussex Ave	TM 6161			N											
30902252095	4667 Sussex Ave	TM 6161			N											
30902252096	4659 Sussex Ave	TM 6161			N											
30902252111	4658 Sussex Ave	TM 6161			N											
30902252112	4666 Sussex Ave	TM 6161			N											
30902252113	4674 Sussex Ave	TM 6161			N											
30902252114	4682 Sussex Ave	TM 6161			N											
56017030	1237 N Cindy Ave	TM 6348			N											
30902252092	3308 Escalante Ave	TM 6161			N											
30902252091	3318 Escalante Ave	TM 6161			N											
30902252090	3328 Escalante Ave	TM 6161			N											
30902252089	3338 Escalante Ave	TM 6161			N											
30902252088	3348 Escalante Ave	TM 6161			N											
30902252068	4638 Bellaire Ave	TM 6161			N											
30902252069	4631 Joaquin Ave	TM 6161			N											
56017032	584 W Kenosha Ave	TM 6348			N											
30902252022	3242 Simental Ave	TM 6161			N											
6413110000	1670 La Canada Ave	TM 6413			N											
6413270000	1673 Hermosa Ave	TM 6413			N											
6413320000	4133 Keats Ave	TM 6413			N											
6413570000	4176 Twain Ave	TM 6413			N											
6413580000	4166 Twain Ave	TM 6413			N											
6413590000	4156 Twain Ave	TM 6413			N											
6413610000	4136 Twain Ave	TM 6413			N											
6413620000	4126 Twain Ave	TM 6413			N											
6413630000	4116 Twain Ave	TM 6413			N											
6413600000	4146 Twain Ave	TM 6413			N											
31030016S14	3582 San Marino Ave	TM 6208			N											
30902252070	4641 Joaquin Ave	TM 6161			N											
30902252071	4651 Joaquin Ave	TM 6161			N											
30902252081	4670 Joaquin Ave	TM 6161			N											
30902252082	4660 Joaquin Ave	TM 6161			N											
30902252083	4650 Joaquin Ave	TM 6161			N											
30902252084	4640 Joaquin Ave	TM 6161			N											
30902252031	4749 Bellaire Ave	TM 6161			N											
30902252033	4729 Bellaire Ave	TM 6161			N											
30902252040	4728 Bellaire Ave	TM 6161			N											
30902252041	4738 Bellaire Ave	TM 6161			N											
30902252042	4748 Bellaire Ave	TM 6161			N											
30902252037	3302 Simental Ave	TM 6161			N											
30902252038	3312 Simental Ave	TM 6161			N											
30902252039	4718 Bellaire Ave	TM 6161			N											
30902252048	4721 Joaquin Ave	TM 6161			N											
30902252072	4661 Joaquin Ave	TM 6161			N											
30946211	3339 Escobedo Ave	TM 6161			N											
30902252078	3349 Escobedo Ave	TM 6161			N											
30902252080	4680 Joaquin Ave	TM 6161			N											
30902252079	4690 Joaquin Ave	TM 6161			N											
30902252064	4678 Bellaire Ave	TM 6161			N											
30946102	4668 Bellaire Ave	TM 6161			N											
30902252067	4648 Bellaire Ave	TM 6161			N											
6413070000	4063 Keats Ave	TM 6413			N											
6413090000	1710 La Canada Ave	TM 6413			N											
6413290000	1713 Hermosa Ave	TM 6413			N											
6413300000	1733 Hermosa Ave	TM 6413			N											
6413280000	1693 Hermosa Ave	TM 6413			N											
30902252073	4671 Joaquin Ave	TM 6161			N											
30902252018	4747 Hampton Way	TM 6161			N											
6413080000	1730 La Canada Ave	TM 6413			N											
6413100000	1690 La Canada Ave	TM 6123			N											
30902252138	3245 Lourdes Ave	TM 6161			N											
6413020000	4001 Scott Ave	TM 6413			N											
6413130000	1651 La Canada Ave	TM 6413			N											
6413150000	1691 La Canada Ave	TM 6413			N											

6413170000	1731 La Canada Ave	TM 6413			N											
6413180000	4083 Keats Ave	TM 6413			N											
6413190000	4093 Keats Ave	TM 6413			N											
6413200000	4103 Keats Ave	TM 6413			N											
55943402S	1384 N Purdue Ave	TM 6284			N											
55467008	4183 Hoblitt Ave	TM 6404			N											
55467009	4193 Hoblitt Ave	TM 6404			N											
55467010	1407 Las Rosas Ave	TM 6404			N											
55467011	1417 Las Rosas Ave	TM 6404			N											
55467012	1427 Las Rosas Ave	TM 6404			N											
55467013	1437 Las Rosas Ave	TM 6404			N											
6413310000	4123 Keats Ave	TM 6413			N											
6413160000	1711 La Canada Ave	TM 6413			N											
6413220000	1712 Hermosa Ave	TM 6413			N											
6413230000	1692 Hermosa Ave	TM 6413			N											
6413250000	1652 Hermosa Ave	TM 6413			N											
55467039	4113 Hoblitt Ave	TM 6404			N											
6413140000	1671 La Canada Ave	TM 6413			N											
6413210000	1732 Hermosa Ave	TM 6413			N											
6413240000	1672 Hermosa Ave	TM 6413			N											
55943403S	1520 Enterprise Ave	TM 6284			N											
55464101	1801 Agua Dulce Ave	TM 6182			N											
55464102	1811 Agua Dulce Ave	TM 6182			N											
55463101	1831 Agua Dulce Ave	TM 6182			N											
55463102	1841 Agua Dulce Ave	TM 6182			N											
55463104	1871 Agua Dulce Ave	TM 6182			N											
55463105	1881 Agua Dulce Ave	TM 6182			N											
55467051	4102 Mitchell Ave	TM 6182			N											
30902252046	4741 Joaquin Ave	TM 6161			N											
30902252056	4750 Joaquin Ave	TM 6161			N											
55463209	4107 Poe Ave	TM 6123			N											
6413640000	4106 Twain Ave	TM 6413			N											
55467047	4142 Mitchell Ave	TM 6404			N											
55467037	4093 Hoblitt Ave	TM 6404			N											
30943216	4252 Bellaire Ave	TM 6023			N											
30943211	4212 Bellaire Ave	TM 6023			N											
30943218	4268 Bellaire Ave	TM 6023			N											
30943214	4236 Bellaire Ave	TM 6023			N											
30943212	4220 Bellaire Ave	TM 6023			N											
30943215	4244 Bellaire Ave	TM 6023			N											
30943220	4284 Bellaire Ave	TM 6023			N											
30943219	4276 Bellaire Ave	TM 6023			N											
30943213	4228 Bellaire Ave	TM 6023			N											
55463103	1851 Agua Dulce Ave	TM 6182			N											
30943217	4260 Bellaire Ave	TM 6023			N											
55467040	4123 Hoblitt Ave	TM 6404			N											
55467046	4152 Mitchell Ave	TM 6404			N											
30946203	3322 Simental Ave	TM 6161			N											
55467050	4112 Mitchell Ave	TM 6404			N											
56408024	1187 N Holly Ave	TM 6367			N											
56408018	1196 N Holly Ave	TM 6367			N											
5590110865	1754 Lester Ave	TM 6154			N											
5560503803	2091 N Rogers Ln	TM 6050			N											
57124404S	2669 La Mirada Ave	TM 6166			N											
55943302S	1542 Richmond Ave	TM 6284			N											
57124305S	4330 San Gabriel Ave	TM 6166			N											
57124216S	4371 San Gabriel Ave	TM 6166			N											
57124110S	2602 Highland Ave	TM 6166			N											
55943107S	1484 N Purdue Ave B	TM 6284	0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
56408024	1187 N Holly Ave B	TM 6367	0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
56408018	1196 N Holly Ave B	TM 6367	0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49209615	148 Acacia Ave B	NO PROJECT	0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49937314	2531 Bundy Ave		0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
43030251	514 W Pico Ave B	NO PROJECT	0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
55844025	1291 N Whitmore Ave B	TM 5472	0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
30946103	4658 Bellaire Ave	TM 6161	0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
41037201	109 N Cindy Ave B		0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
41031302	73 N Willow Ave	NO PROJECT	0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49211214	261 Minnewawa Ave B		0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
55311205	2652 Fremont Ave				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
56108111	957 N Citadel Ave B				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49119223	1514 Gibson Ave B	NO PROJECT			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49207202	120 Woodworth Ave B	NO PROJECT			Y											
49106171	227 W Sierra Ave B		0		Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49106171	227 W Sierra Ave C				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49106171	237 Sierra Ave B				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49106171	237 Sierra Ave C				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
41053104	281 N Terry Ave B				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
56010008	1783 N Bush Ave	TM 4912			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49137001	22 N Villa Ave B				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49137001	22 N Villa Ave C				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49137002	18 N Villa Ave B				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49137002	18 N Villa Ave C				Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49113103	80 N Woodworth Ave B	NO PROJECT			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49118422	1743 Bullard Ave B	NO PROJECT			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49118416	1729 Bullard Ave B	NO PROJECT			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								

55943105S	1513 Richmond Ave B	TM 6284			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
55941020S	1744 Lester Ave B	TM 6154			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49117107	1470 Fourth St B	NO PROJECT			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49117122	1476 Fourth St B	NO PROJECT			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
55940012S	1735 Lester Ave	TM 6154			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49821334	1113 Carey Ave	NO PROJECT			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49906021	329 W Rialto Ave B	NO PROJECT			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
55933016	2017 Teague Ave	TM 5550			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
55940007S	1940 N Ezie Ave	TM 6154			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
55941018S	1762 Lester Ave	TM 6154			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
55941006S	1765 N Bundy Ave	TM 6154			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
55940008S	1919 N Ezie Ave	TM 6154			Y			ADUs: 30% VL, 30% L, 30% M, 10% AM								
49212215	253 Minnewawa	PM2023-003			Y											
56314253	1491 Alluvial	MFRDR2023-001			Y			Market rate multifamily assumed to be affordable to moderate								

AGENDA ITEM NO. 7.

Jurisdiction	Clovis	
Reporting Year	2023	(Jan. 1 - Dec. 31)
Planning Period	5th Cycle	12/31/2015 - 12/31/2023

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This table is auto-populated once you enter your jurisdiction name and current year data. Past year information comes from previous APRs.

Please contact HCD if your data is different than the material supplied here

Table B
Regional Housing Needs Allocation Progress
Permitted Units Issued by Affordability

		1		2									3	4
Income Level		**RHNA Allocation by Income Level**		**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total Units to Date (all years)**	**Total Remaining RHNA by Income Level**
Very Low	Deed Restricted	2,321	-	-	-	-	-	-	-	-	-	-	15	2,306
	Non-Deed Restricted		-	-	-	-	-	-	-	-	7	8		
Low	Deed Restricted	1,145	-	-	5	20	2	60	-	73	-	-	175	970
	Non-Deed Restricted		-	-	-	-	-	-	-	-	7	8		
Moderate	Deed Restricted	1,018	-	-	-	-	-	-	-	-	-	-	3,551	-
	Non-Deed Restricted		-	456	395	480	411	507	479	432	382	9		
Above Moderate		1,844	-	1,296	689	542	694	526	645	424	458	666	5,940	-
Total RHNA		6,328												
Total Units			-	1,752	1,089	1,042	1,107	1,093	1,124	929	854	691	9,681	3,276

Progress toward extremely low-income housing need, as determined pursuant to Government Code 65583(a)(1).

	5											6	7
	Extremely low-Income Need		**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total Units to Date**	**Total Units Remaining**
Extremely Low-Income Units*	1,161		-	-	-	-	-	-	-	-	-	-	1,161

*Extremely low-income houisng need determined pursuant to Government Code 65583(a)(1). Value in Section 5 is default value, assumed to be half of the very low-income RHNA. May be overwritten.

Please Note: Table B does not currently contain data from Table F or Table F2 for prior years. You may login to the APR system to see Table B that contains this data.
Note: units serving extremely low-income households are included in the very low-income RHNA progress and must be reported as very low-income units in section 7 of Table A2. They must also be reported in the extremely low-income category (section 13) in Table A2 to be counted as progress toward meeting the extremely low-income housing need determined pursuant to Government Code 65583(a)(1).
Please note: For the last year of the 5th cycle, Table B will only include units that were permitted during the portion of the year that was in the 5th cycle. For the first year of the 6th cycle, Table B will only include units that were permitted since the start of the planning period. Projection Period units are in a separate column.
Please note: The APR form can only display data for one planning period. To view progress for a different planning period, you may login to HCD's online APR system, or contact HCD staff at apr@hcd.ca.gov.

Jurisdiction	Clovis	
Reporting Year	2023	(Jan. 1 - Dec. 31)
Planning Period	5th Cycle	12/31/2015 - 12/31/2023

ANNUAL ELEMENT PROGRESS REPORT
Housing Element Implementation

Note: "+" indicates an optional field

Cells in grey contain auto-calculation formulas

Table C
Sites Identified or Rezoned to Accommodate Shortfall Housing Need and No Net-Loss Law

Project Identifier				Date of Rezone	RHNA Shortfall by Household Income Category				Rezone Type	Sites Description							
1				2	3				4	5	6	7	8		9	10	11
APN	**Street Address**	**Project Name+**	**Local Jurisdiction Tracking ID+**	**Date of Rezone**	**Very Low-Income**	**Low-Income**	**Moderate-Income**	**Above Moderate-Income**	**Rezone Type**	**Parcel Size (Acres)**	**General Plan Designation**	**Zoning**	**Minimum Density Allowed**	**Maximum Density Allowed**	**Realistic Capacity**	**Vacant/Nonvacant**	**Description of Existing Uses**
Summary Row: Start Data Entry Below																	

ANNUAL ELEMENT PROGRESS REPORT
Housing Element Implementation

Jurisdiction	Clovis	
Reporting Year	2023	(Jan. 1 - Dec. 31)

Table D

Program Implementation Status pursuant to GC Section 65583

Housing Programs Progress Report
Describe progress of all programs including local efforts to remove governmental constraints to the maintenance, improvement, and development of housing as identified in the housing element.

1	2	3	4
Name of Program	**Objective**	**Timeframe in H.E**	**Status of Program Implementation**

Program 1: Regional Collaboration on Housing Opportunities	*Continue to participate in the Countywide Housing Element Technical Committee to collaborate on housing program implementation and regional issue. *The Countywide Housing Element Technical Committee will meet at least biannually. *The Committee will meet annually with HCD to discuss funding opportunities and challenges in implementation of programs, and seek technical assistance. *The Committee will meet periodically with Fair Housing of Central California to discuss fair housing issues. *The Committee will advocate on behalf of the Fresno region for more grant funding. *Continue to seek partnerships with other jurisdictions in the region and other agencies (such as the Housing Authority), housing developers, community stakeholders, and agricultural employers/employees to explore viable options for increasing the availability of farmworker housing. *Develop a directory of services and resources for lower-income households. *Make the directory available on City/County websites and at City/County offices.	Ongoing	City Staff normally meets twice annually with all 16 participating jurisdictions to work towards the goals and objectives outlined in the housing element by sharing best practices, exploring opportunities for further collaboration, and making the best use of limited resources. These meetings did not occur in 2023 as the COG and local jurisdictions turned their attention towards establishing the RHNA methodology and updating their housing elements for the sixth cycle. The City posts available affordable housing resources on the City website, and also posts affordable housing resources as they become available on the City's social media accounts. City staff collaborated with the Fair Housing Council of Central California to provide funding opportunities and programmatic updates as part of an annual Fair Housing Fair. City Staff continues to meet regularly with staff from other agencies, including the Housing Authority (dba Fresno Housing), and other housing developers to increase the availability of affordable housing. City staff has developed a directory of affordable and subsidized housing in Clovis, and has made it available via various media.
Program 2: Review Annexation Standards in Memorandum of Understanding	The County of Fresno and the cities within the County shall work together to review and revise, as deemed appropriate by all parties, the standards for annexation contained in the Memorandum of Understanding between the County and the cities.	Completed	COMPLETED IN 2018. On June 4, 2018, City Council Res. 18-76 was adopted approving an amendment to the Tax Sharing Agreement to permit annexation of land for purpose of RHNA. The County Board of Supervisors approved the amendment.

Program 3: Provision of Adequate Sites	*Maintain and annually update the inventory of residential land resources. *Provide the inventory on the City website and make copies available upon request. *Monitor development and other changes in the inventory to ensure the City has remaining capacity consistent with its share of the regional housing need. *Actively participate in the development of the next RHNA Plan to better ensure that the allocations are reflective of the regional and local land use goals and policies.	Ongoing	The City monitors development relative to the sites inventory and continues to maintain adequate sites to meet the Fifth Cycle Regional Housing Needs Allocation. The Planning Division maintains an inventory of affordable housing sites within its GIS. The City has also participated in the Fresno COG RHNA subcommitte to provide input on the Sixth Cycle Regional Housing Needs Plan and allocation methodology.
Program 4: Rezoning for RHNA	*Provide adequate zoning on at least 221 acres of land by December 31, 2016 to cover the unaccommodated need from the Fourth Cycle RHNA of 4,425 lower-income units. *If annexation of the "prezoned" sites is not completed within three years of adoption of the Housing Element, the City will conduct an analysis to determine if adequate capacity exists on the remaining sites in the inventory to meet the Fifth Cycle RHNA. *If the City cannot identify adequate capacity, the City will rezone sites within four years of adoption of the Housing Element to meet the RHNA. The rezoned sites will meet the criteria for lower-income housing described above.	Completed on December 31, 2016 and April 2019	PROGRAM COMPLETED. The City took several actions to meet the Fourth and Fifth Cycle RHNA obligations. In 2018, the City created a new RHN Overlay zone that allows affordable housing at 35-43 units per acre and applied it to over 130 acres to accommodate the Fourth Cycle unaccommodated need. The City added additional RHN Overlay sites to further expand capacity for lower-income housing. The City marketed the RHN Overlay program and it resulted in Butterfly Gardens, a 75-unit affordable housing project that completed construction in 2022. The City also annexed the prezoned sites that were counted toward the Fifth Cycle RHNA. Specifically, the City annexed Site PA-3 (20.9 acres of HDR - 418 unit capacity) on April 10, 2016, and annexed Site PA-1 (13.3 acres MU-V - 266 unit capacity) and PA-2 (18 acres of HDR - 360 unit capacity) on January 28, 2019.
Program 5: Monitoring of Residential Capacity (No Net Loss)	*Develop and implement a formal evaluation procedure pursuant to Government Code Section 65863 by 2016. *Monitor and report through the HCD annual report process.	2016/Annual	The Planning Division maintains an inventory of affordable housing sites within its Geographical Information System. The identification of housing inventory sites has been added to the application forms for all types of development activity, triggering the need to conduct the no-net-loss analysis for applicable projects. The Planning Division has procedures to conduct the no-net-loss analysis when development other than what is shown in the housing sites inventory is proposed and/or approved. The procedures are posted on the City's Affordable Housing website.

Program 6: Water and Wastewater Service	*Continue to monitor water and wastewater capacity and make improvements, as appropriate and feasible, to better serve existing development and strive to accommodate the RHNA. *Establish procedures by the end of 2016 for granting priority water and sewer service to developments with lower-income units in compliance with California Government Code Section 65589.7.	2016/Ongoing	The water and wastewater service master plans respond directly to the land use plan established by the General Plan and apply appropriate design safety factors to ensure that adequate capacity is provided to all land uses. These service plans provide flexibility, especially in infill areas, that will accommodate affordable housing units where needed throughout the city. The water, wastewater, and recycled water masterplans were adopted in July 2018. These plans work in concert with each other to enhance available supply and provide full service to the plan area as systematic growth occurs. The City Council adopted policy language on March 18, 2019 to provide priority water and sewer service for lower-income housing in compliance with Government code Section 65589.7.
Program 7: Affordable Housing Incentives	*Continue to seek partnerships and regularl	Ongoing	City staff met with affordalbe housing developers seveal times throughout the 2023 yar to discuss funding opportunities and constraints at the local, state, and federal level. The following projects were prioritized during the 2023 calendar year: 1) During the 2023 calendar year, staff published a Request for Proposals to award $1.4M in Permanent Local Housing Allocation Program funds (2019-2021 funds). Project selection occured in 2023 with City Council approval pending in early 2024. 2) City staff also submitted a joint application with IDLS Inc. for $1,000,000 in REAP 2.0 Program funds for the development of senior housing. Awards will be announced in 2024. 3) The City continues to pursue additional state and federal financing to increase the supply of safe, decent, affordable housing in Clovis for lower income households. City staff applied for $5,000,000 in State of California CalHOME Program funds for First Time Homebuyer Assistance and Owner Occupied Housing Rehabilitation Program funds.

Program 8: Farmworker Housing	*Continue to support and encourage other agencies and housing developers, such as the Fresno Housing Authority and Self-Help Enterprises, in the application of funds for farmworker housing, including State HCD and USDA Rural Development loans and grants and other funding sources that may become available. *Continue to offer incentives such as gap financing, density bonus, streamlined processing to facilitate the development of farmworker housing. *Annually monitor the status of farmworker housing as part of the City's annual report to HCD on Housing Element progress and evaluate if City efforts are effective in facilitating the provision of farmworker housing. If appropriate, make necessary changes to enhance opportunities and incentives for farmworker housing development.	Ongoing	There were no applications for farmworker housing in 2023. However, the City makes available on the City of Clovis website information about potential gap financing, density bonus, and streamlined processing.
Program 9: Preserving Assisted Housing	*Monitor the status of any HUD receipt/approval of Notices of Intent and Plans of Action filed by property owners to convert to market rate units. *Identify non-profit organizations as potential purchasers/ managers of at-risk housing units. *Explore funding sources available to purchase affordability covenants on at-risk projects, transfer ownership of at-risk projects to public or non-profit agencies, purchase existing buildings to replace at-risk units, or construct replacement units. *Ensure the tenants are properly noticed and informed of their rights and eligibility to obtain special Section 8 vouchers reserved for tenants of converted HUD properties.	Ongoing	In 2023, City staff continued to monitor the affordability periods for all subsidized lower income housing in Clovis, to ensure proper noticing is performed, and to assist in identifying organizations that could purchase any expiring units to continue their affordability. In October 2021 the City of Clovis received informal notice that an apartment project that was financed with 4% bonds was intending to increase rents as it had fulfilled its affordability obligations to the state bond program. In June 2022, the City received a six-month notice of expiration of affordability for the project. Tenants received the same notice, which included an incorrect/typo date of increase in rents (set for 1/1/2023). The City provided informational assistance to affected tenants who called the City for assistance. The City also met with affordable housing developers and the Fresno Housing Authority to address the continued affordability assistance needed for the impacted families. Unfortunately, no developer was able to participate in taking ownership of the project, and the rents reverted to market rate on January 1, 2023. The City continues to work with the local housing authority to identify any additional resources that can be made available to the affected tenants.

Program 10: Encourage and Facilitate Accessory Units (Second Units)	*By 2018, consider fee reductions for second units. *By 2019, implement a public education program advertising the opportunity for second units through the City website and at the planning counter.	2018 and 2019	PROGRAM COMPLETED. Clovis has a Cottage Home Program to encourage infill residential development of 500-square foot accessory dwelling units that have alley access and has funded the cost of preparing and approving three sets of building plans which can be used for free by anyone participating in the program. In addition, school fees are exempted for the cottage homes and there is no requirement for separate utilities for the secondary unit. The City is advertising the Cottage Home Program on the City website, social media, and direct mail with much success. The City has prepared a public information handout for individuals interested in ADUs describing the applicable criteria (definitions, size, height, setbacks, services, fees, etc.) for each type of ADU recognized under State housing law. The handout references the most recent standards and criteria adopted by State housing law as well as complementary city standards, where applicable. ADUs do not require an entitlement or entitlement process fees, development impact fees, or separate utility connections. **In 2023, the City issued permits for a total of 28 ADUs.**
Program 11: Zoning Code Amendments	*Amend Zoning Code to address State law requirements within one year of Housing Element adoption. *Review residential parking standards for studio and one-bedroom multifamily units and take action by 2017 to modify the requirements based on the findings of the review. *Annually review the effectiveness and appropriateness of the Zoning Code and process any necessary amendments to remove or mitigate potential constraints to the development of housing.	2017/2017/Annually	COMPLETED IN 2018. The City Council approved Ordinance Amendment 2018-01 on July 16, 2018 and subsequently adopted the amendments to the Development Code on August 6, 2018. The ordinance amendment addressed all the requirements of this program including updates to address farmworker/employee housing, reasonable accommodation, definition of family, single room occupancy units, and removing guest parking requirements for multifamily housing. Urgency Ordinance 19-21 was adopted by the City Council on December 1, 2019 to incorporate changes in State law brought about by the Housing Crisis Act of 2019. Urgency Ordinance 19-21 was extended for one year on December 7, 2020 to allow the City's municipal code to continue to be in conformance with State Housing Laws. (The language in the Urgency Ordinance, together with any additional changes brought about by new State housing laws, was permanently adopted through a traditional ordinance amendment process on October 18, 2021 by OA2021-003). In 2022, City staff initiated a review and amendment to the multi-family objective standards with the intent of reducing barriers to multifamily housing. On September 18, 2023, the City Council approved amendments to the Development Code to increase maximum density and building height standards for high-density multi-family projects in the R-3 zoning district.
Program 12: Lot Consolidation and Lot Splits	*Assist interested developers/property owners in identifying opportunities for lot consolidation or lot splitting. *Process requests for lot consolidation and lot splitting concurrent with other development reviews. *Encourage the use of master plans/specific plans to provide a cohesive development strategy for large lots.	Ongoing	This is ongoing. Planning staff uses the Clovis Development Code and the Subdivision Map Act in making recommendations to the development community on opportunities to further develop parcels/lots to the maximum density allowed for best and maximum use of properties within the city. In 2020, the Development Code was amended to establish a ministerial process to subdivide parcels that qualify for development pursuant to the Regional Housing Needs (RHN) Overlay District. In 2023, Planning staff created informational flyers and checklists for the promotion of SB9 lot splits. This information is promoted on the Planning Division webpage. City Housing staff works with potential developers on identifying opportunity sites that may require lot consolidations or divisions. This is done in conjunction with Planning staff as described.

Program 13: Monitoring of Planning and Development Fees	*Continue to monitor the various fees charged by the City to ensure they do not unduly constrain housing development. *As appropriate, consider incentives such as deferred or reduced fees to facilitate affordable housing development.	Ongoing	In 2019, the City Council adopted the Affordable Housing Development Impact Fee Reduction Program with an initial funding of $1,000,000, and subsequently an additional $300,000. In 2020, a $1,000,000 funding request through the program from the Fresno Housing Authority was approved for construction of a 60-unit affordable housing complex (Solvita Commons). Building permits were issued in 2020 and construction completed in 2021. In Spring 2021, $300,000 was approved for the construction of a 75-unit supportive housing project, Butterfly Gardens, being developed by UpHoldings. The project completed construction in 2022. On May 7, 2021, Clovis City Council approved a rate adjustment to the Development Impact Fee (DIF) program which included phased-in adjustment of rate increases in the DIF program to help reduce constraints to development. In 2022, the City initiated a process to work with stakeholders to review the existing development impact program. In 2023, the City engaged a consulting firm to evaluate the existing fee program's structure and methodologies and to identify potential alternative strategies. The City continues to work with stakeholders to define and implement alternative strategies. Findings of compliance under AB 602 have been made for fee program and an AB 602 compliance web page has been added to the City's website to provide a centralized location where information required under AB 602 can be easily found.
Program 14: Housing Rehabilitation Program	*Continue to apply for CalHOME funds to maintain the housing rehabilitation program. *Promote Home Rehabilitation Program on City website, at public counters, and to income-eligible households identified through the Code Enforcement program.	Ongoing	The City continues to apply for CalHome and CDBG funds to support the housing rehabilitation program. Staff provided 36 home repair grants in the 2020-2021 fiscal year, 16 home repair grants in the 2021-2022 fiscal year, and 7 home repair grants in the 2022-2023 fiscal year, expending approximately $345,210 in CDBG funds for the program over the three years. The City has programmed $222,881 in CDBG funds in the 2023-2024 fiscal year, and plans to expend all of the funds to provide for 20 home repair grants. A total of 6 home repair projects have been completed and 14 are underway (7 of these will also be awarded CalHome Loan funds). In 2020, HCD released a CalHome Program NOFA, and the City submitted an application for $5M, , which was awarded to the City in 2021. The funds are being used for an owner-occupied rehabilitation loan program, mobile home replacement loan program, and a first-time homebuyer program focusing on acquisition/rehab loan program all for low-income households. Program set-up was completed in Spring 2022, and application intake started in Summer 2022. In the 2023 calendar year, City staff completed rehabilitation of 6 homes utilizing 2020 CalHome Loan Program funds (4 of these were also awarded CDBG Grant funds to complete project financing). An additional 11 home repair projects are currently underway with the utilization of 2020 CalHome funds (6 of these will also be awarded CDBG grant funds). These funds are set to expire in 2024 pending completion of the remaining units identified above. In 2023, City staff applied for $5M in State of California CalHome Program funds for First Time Homebuyer Assistance and Owner Occupied Housing Rehabilitation Program funds. City staff continues to promote the housing rehabilitation program on the City's website, at public counters, and to low- and moderate-income households identified through code enforcement and is seeking additional grant funding.

Program 15: Code Enforcement	*Continue to use code enforcement and substandard abatement processes to bring substandard housing units and residential properties into compliance with city codes. *Refer income-eligible households to City of Clovis housing rehabilitation programs for assistance in making the code corrections. *Conduct a housing conditions survey by 2020 to assess the extent of housing rehabilitation needs, as resources are available.	Ongoing/2020	Clovis formed a Code Enforcement Team which uses Staff from the Building Department, Affordable Housing Department, City Manager's Office, Police Department, Fire Department, Public Utilities, and Legal Counsel to work together to bring substandard housing units and residential properties into compliance with City Code. The Code Enforcement Team brings substandard housing units and residential properties into compliance with City codes, and makes referrals to City housing rehabilitation programs. The City completed a housing conditions survey towards the end of 2019, with a final report produced in the Spring of 2020.
Program 16: Homebuyer Assistance Program	Continue to pursue CDBG, HOME, and other funding opportunities annually to maintain the first time homebuyer assistance program.	Annually	In 2019, the City of Clovis received notification that their application to CA HCD for a FTHB HOME Program had been approved for an award of $1,000,000. The contract was received from HCD in 2020, and was fully executed. Due to the rapid increase in home prices and the very low purchase price limit issued by HUD for the program, the program was postponded pending approval of a higher purchase price limit. Furthermore, HCD placed a "pause" on the FTHB Program as of July 2022 and has not opened the progarm again as of January 2024. The City continues to prioritize funding targeted for first time home purchase affordability, and has funded 3 FTHB loans for low-income buyers in the 2022-2023 program year with available funding.
Program 17: First-Time Homebuyer Resources	*Prepare promotional materials by 2016 and promote available homebuyer resources on City website and public counters. *Annually review funding resources available at the state and federal levels and pursue as appropriate to provide homebuyer assistance.	2016 and annually	City staff continues to seek additional fundings from State and Federal resources to provide homebuyer assistance. Because the demand for Clovis' First Time Homebuyer funds far exceeds the amount of funding available, City staff also refer potential homebuyers to the California Housing Finance Agency's Homebuyer Program, the Federal Home Loan Bank of San Francisco's, and the Golden State Housing Authority's FTHB programs on a regular basis. Information for all three programs is available on the City of Clovis' affordable housing website. Promotional materials for the program are also made available to the public at Clovis City Hall at the times the program is accepting applications for the FTHB program (as available funding permits).

Program 18: Energy Conservation	*Consider incentives to promote green building techniques and features in 2017, and as appropriate adopt incentives by 2018. *Continue to promote HERO program by providing a link on the City website and making brochures available at City counters. *Continue to promote and support Pacific Gas and Electric Company programs that provide energy efficiency rebates for qualifying energy-efficient upgrades by providing a link on the City website and making brochures available at City counters. *Continue to incorporate conservation measures in housing rehabilitation programs. *Expedite review and approval of alternative energy devices (e.g., solar panels).	2017/2018, and ongoing (see Objective)	The City supports and promotes the HERO program and PG&E programs that support energy conservation. City staff provide information about these programs to Clovis residents on a regular basis, including referrals to the Fresno Economic Opportunities Commission's Weatherization Program for low-income clients needing energy efficiency repairs. City staff print and give or mail potential recipients the applications. Staff also make referrals to Fresno EOC's and Grid Alternative's solar panel program for low-income homeowners. Information regarding all of these programs are also available on the City of Clovis' website. The City has adopted expedited, streamlined permitting processes for electric vehicle charging stations (2017) and roof top solar energy systems (2015) (Chapter 8.14 and 8.18 of the Clovis Municipal Code).
Program 19: Housing Choice Vouchers	*Prepare promotional materials by 2016 and provide information on the HCV program on City website and at public counters. *Refer interested households to the Fresno Housing Authority and encourage landlords to register their properties with the Housing Authority for accepting HCVs. *Work with the Housing Authority to disseminate information on incentives for participating in the HCV program throughout city neighborhoods with varying income levels to promote housing opportunities for all city residents.	2016 and ongoing	The City promotes the HCV program on the City website (https://cityofclovis.com/affordable-housing/fresno-county-housing-choice-voucher/) and at the counter. City Staff provide referrals to property owners for HCVP and works regionally to increase funding to all affordable housing agency partners. In 2020, the City partnered with the Fresno Housing Authority on a 60-unit multifamily housing project to increase the supply of affordable housing in Clovis. In addition, in 2021, the Fresno Housing Authority committed 73 project-based vouchers to a 75-unit permanent supportive housing project in Clovis (Butterfly Gardens), completed in 2022.

Program 20: Fair Housing	*Conduct Fair Housing Assessment as required by HUD on a regular basis (every five years). *Work collaboratively with other jurisdictions in the region to provide education to lenders, real estate professionals, and the community at large. *Provide information and written materials on fair housing rights, available services, and responsible agencies in English and Spanish. Distribute materials at libraries, community facilities, City offices and public counters, and on the City website by 2016. *Refer fair housing complaints to HUD, DEFH, Fair Housing Council of Central California, and other housing agencies, as appropriate.	Ongoing	On November 4, 2019, Clovis City Council adopted an updated Analysis of Impediments to Fair Housing Choice. The City works collaboratively with other jurisdictions on fair housing issues through the Countywide Housing Element Technical Committee. The City has posted fair housing information on the City's website, and continues to distribute information and written materials on fair housing rights. The materials are also available at the public counter. Fair Housing printed materials are available in both English and Spanish. Fair Housing complaints are referred by City staff to the Fair Housing Council of Central California. In October 2023, City staff participated with the Fair Housing Council of Central California as a panelist at their annual Fair Housing Conference.

Jurisdiction	Clovis	
Reporting Period	2023	(Jan. 1 - Dec. 31)
Planning Period	5th Cycle	12/31/2015 - 12/31/2023

ANNUAL ELEMENT PROGRESS REPORT

Housing Element Implementation

(CCR Title 25 §6202)

Note: "+" indicates an optional field

Cells in grey contain auto-calculation formulas

Table E

Commercial Development Bonus Approved pursuant to GC Section 65915.7

Project Identifier				Units Constructed as Part of Agreement				Description of Commercial Development Bonus	Commercial Development Bonus Date Approved
1				2				3	4
APN	Street Address	Project Name+	Local Jurisdiction Tracking ID+	Very Low Income	Low Income	Moderate Income	Above Moderate Income	Description of Commercial Development Bonus	Commercial Development Bonus Date Approved
Summary Row: Start Data Entry Below									

Jurisdiction	Clovis	
Reporting Period	2023	(Jan. 1 - Dec. 31)
Planning Period	5th Cycle	12/31/2015 - 12/31/2023

ANNUAL ELEMENT PROGRESS REPORT
Housing Element Implementation

Note: "+" indicates an optional field

Cells in grey contain auto-calculation formulas

Table F
Units Rehabilitated, Preserved and Acquired for Alternative Adequate Sites pursuant to Government Code section 65583.1(c)

Please note this table is optional: The jurisdiction can use this table to report units that have been substantially rehabilitated, converted from non-affordable to affordable by acquisition, and preserved, including mobilehome park preservation, consistent with the standards set forth in Government Code section 65583.1, subdivision (c). Please note, motel, hotel, hostel rooms or other structures that are converted from non-residential to residential units pursuant to Government Code section 65583.1(c)(1)(D) are considered net-new housing units and must be reported in Table A2 and not reported in Table F.

Activity Type	**Units that Do Not Count Towards RHNA+** Listed for Informational Purposes Only				**Units that Count Towards RHNA +** Note - Because the statutory requirements severely limit what can be counted, please contact HCD at apr@hcd.ca.gov and we will unlock the form which enable you to populate these fields.				**The description should adequately document how each unit complies with subsection (c) of Government Code Section 65583.1+. For detailed reporting requirements, see the chcklist here:**
	Extremely Low-Income+	**Very Low-Income+**	**Low-Income+**	**TOTAL UNITS+**	**Extremely Low-Income+**	**Very Low-Income+**	**Low-Income+**	**TOTAL UNITS+**	https://www.hcd.ca.gov/community-development/docs/adequate-sites-checklist.pdf
Rehabilitation Activity									
Preservation of Units At-Risk									
Acquisition of Units									
Mobilehome Park Preservation									
Total Units by Income									

Jurisdiction	Clovis	
Reporting Period	2023	(Jan. 1 - Dec. 31)
Planning Period	5th Cycle	12/31/2015 - 12/31/2023

ANNUAL ELEMENT PROGRESS REPORT
Housing Element Implementation

Note: "+" indicates an optional field

Cells in grey contain auto-calculation formulas

Table F2
Above Moderate Income Units Converted to Moderate Income Pursuant to Government Code section 65400.2

For up to 25 percent of a jurisdiction's moderate-income regional housing need allocation, the planning agency may include the number of units in an existing multifamily building that were converted to deed-restricted rental housing for moderate-income households by the imposition of affordability covenants and restrictions for the unit. Before adding information to this table, please ensure housing developments meet the requirements described in Government Code 65400.2(b).

Project Identifier					Unit Types		Affordability by Household Incomes After Conversion							Units credited toward Moderate Income RHNA		Notes
1					2	3	4							5		6
Prior APN+	**Current APN**	**Street Address**	**Project Name+**	**Local Jurisdiction Tracking ID**	**Unit Category** (2 to 4,5+)	**Tenure** **R=Renter**	**Very Low-Income Deed Restricted**	**Very Low-Income Non Deed Restricted**	**Low- Income Deed Restricted**	**Low- Income Non Deed Restricted**	**Moderate-Income Deed Restricted**	**Moderate-Income Non Deed Restricted**	**Above Moderate-Income**	**Total Moderate Income Units Converted from Above Moderate**	**Date Converted**	**Notes**
Summary Row: Start Data Entry Below							0	0	0	0	0	0	0	0		

AGENDA ITEM NO. 7.

Jurisdiction	Clovis	
Reporting Period	2023	(Jan. 1 - Dec. 31)
Planning Period	5th Cycle	12/31/2015 - 12/31/2023

NOTE: This table must only be filled out if the housing element sites inventory contains a site which is or was owned by the reporting jurisdiction, and has been sold, leased, or otherwise disposed of during the reporting year.

Note: "+" indicates an optional field

Cells in grey contain auto-calculation formulas

ANNUAL ELEMENT PROGRESS REPORT
Housing Element Implementation

Table G
Locally Owned Lands Included in the Housing Element Sites Inventory that have been sold, leased, or otherwise disposed of

Project Identifier						
1				2	3	4
APN	Street Address	Project Name+	Local Jurisdiction Tracking ID+	Realistic Capacity Identified in the Housing Element	Entity to whom the site transferred	Intended Use for Site
Summary Row: Start Data Entry Below						

Jurisdiction	Clovis	
Reporting Period	2023	(Jan. 1 - Dec. 31)

NOTE: This table must contain an invenory of ALL surplus/excess lands the reporting jurisdiction owns

Note: "+" indicates an optional field
Cells in grey contain auto-calculation formulas

ANNUAL ELEMENT PROGRESS REPORT
Housing Element Implementation

For Fresno County jurisdictions, please format the APN's as follows:999-999-99XX

Table H
Locally Owned Surplus Sites

Parcel Identifier				Designation	Size	Notes
1	2	3	4	5	6	7
APN	**Street Address/Intersection**	**Existing Use**	**Number of Units**	**Surplus Designation**	**Parcel Size (in acres)**	**Notes**
Summary Row: Start Data Entry Below						

AGENDA ITEM NO. 7.

Jurisdiction	Clovis	
Reporting Period	2023	(Jan. 1 - Dec. 31)
Planning Period	5th Cycle	12/31/2015 - 12/31/2023

NOTE: STUDENT HOUSING WITH DENSITY BONUS ONLY. This table only needs to be completed if there were student housing projects WITH a density bonus approved pursuant to Government Code65915(b)(1)(F)

ANNUAL ELEMENT PROGRESS REPORT

Housing Element Implementation

Note: "+" indicates an optional field

Cells in grey contain auto-calculation formulas

Table J

Student housing development for lower income students for which was granted a density bonus pursuant to subparagraph (F) of paragraph (1) of subdivision (b) of Section 65915

Project Identifier				Project Type	Date	Units (Beds/Student Capacity) Approved							Units (Beds/Student Capacity) Granted Density Bonus	Notes
1				2	3	4							5	6
APN	Street Address	Project Name^{+}	Local Jurisdiction Tracking ID^{+}	Unit Category (SH - Student Housing)	Date	Very Low- Income Deed Restricted	Very Low- Income Non Deed Restricted	Low- Income Deed Restricted	Low- Income Non Deed Restricted	Moderate- Income Deed Restricted	Moderate- Income Non Deed Restricted	Above Moderate- Income	Total Additional Beds Created Due to Density Bonus	Notes
Summary Row: Start Data Entry Below														

Jurisdiction	Clovis	
Reporting Period	2023	(Jan. 1 - Dec. 31)
Planning Period	5th Cycle	12/31/2015 - 12/31/2023

ANNUAL ELEMENT PROGRESS REPORT

Table K

Tenent Preference Policy

Local governments are required to inform HCD about any local tenant preference ordinance the local government maintains when the jurisdiction submits their annual progress report on housing approvals and production, per Government Code 7061 (SB 649, 2022, Cortese). Effective January 1, 2023, local governments adopting a tenant preference are required to create a webpage on their internet website containing authorizing local ordinance and supporting materials, no more than 90 days after the ordinance becomes

Does the Jurisdiction have a local tenant preference policy?	No
If the jurisdiction has a local tenant preference policy, provide a link to the jurisdiction's webpage on their internet website containing authorizing local ordinance and supporting materials.	
Notes	

Jurisdiction	Clovis	
Reporting Year	2023	(Jan. 1 - Dec. 31)

ANNUAL ELEMENT PROGRESS REPORT
Local Early Action Planning (LEAP) Reporting
(CCR Title 25 §6202)

Please update the status of the proposed uses listed in the entity's application for funding and the corresponding impact on housing within the region or jurisdiction, as applicable, categorized based on the eligible uses specified in Sectio 50515.02 or 50515.03, as applicable.

Total Award Amount $ 500,000.00 *Total award amount is auto-populated based on amounts entered in rows 15-26.*

Task	$ Amount Awarded	$ Cumulative Reimbursement Requested	Task Status	Other Funding	Notes
Sixth Cycle Housing Element Update	$235,000.00	$206,129.00	In Progress	None	City staff and the City's consultant have submitted two drafts of the Sixth Cycle Housing Element to HCD for its review. Staff and City's consultant are in the processing of responding to HCD's comments on the second draft.
Affordable Housing Development Project/ Strategy	$70,000.00	$35,000.00	In Progress	None	The City has executed a contract with Innovative Development and Living Solutions (IDLS) to develop strageties for encouraging and accelerating affordable housing projects. IDLS has completed the first half of the scope of work, focusing on identifying housing needs and performing an assessment of possible afffordable housing sites in the community. IDLS is working on the second phase of work, which includes performing feasibility analysis for 2 affordable housing sites.
Mixed Use District Designations	$7,500.00	$7,500.00	In Progress	None	The City is in the process of amending its general plan and development code to add student and faculty housing in the mixed use business campus general plan designation and related zone district(s). Neighborhood meetings have conducted with public hearings targeted to occur sometime in the spring of this year.
General Plan Consistency Rezoning Program	$12,500.00	$0.00	In Progress	None	The City is the process of identifying properties with existing residential general plan designations where the existing zoning is inconsistent and does not support the development at the density range specified by the general plan.
VMT Implementation Guidelines	$175,000.00	$183,392.00	Completed	None	In October of 2022, the City adopted a supplemental environmental impact report (EIR) and VMT implemenation guidelines. City also performed follow-up work to identify additional mitigation strategies that can be applied when VMT related impacts are not less-than-signficant.

Summary of entitlements, building permits, and certificates of occupancy (auto-populated from Table A2)

Completed Entitlement Issued by Affordability Summary		
Income Level		**Current Year**
Very Low	Deed Restricted	0
	Non-Deed Restricted	0
Low	Deed Restricted	0
	Non-Deed Restricted	0
Moderate	Deed Restricted	0
	Non-Deed Restricted	12
Above Moderate		4
Total Units		**16**

Building Permits Issued by Affordability Summary		
Income Level		**Current Year**
Very Low	Deed Restricted	0
	Non-Deed Restricted	8
Low	Deed Restricted	0
	Non-Deed Restricted	8
Moderate	Deed Restricted	0
	Non-Deed Restricted	9
Above Moderate		666
Total Units		**691**

Certificate of Occupancy Issued by Affordability Summary		
Income Level		**Current Year**
Very Low	Deed Restricted	73
	Non-Deed Restricted	0
Low	Deed Restricted	0
	Non-Deed Restricted	3
Moderate	Deed Restricted	0
	Non-Deed Restricted	38
Above Moderate		398
Total Units		**512**

Clovis APR: Assumptions on Affordability

Market Rate Multifamily

Table 1 shows the income limits and affordable monthly rents for moderate-income households in Clovis based on the 2023 Area Median Income (AMI) for Fresno County. Affordable rents are assumed to be 30 percent of monthly income. One- and two-person moderate-income households can generally occupy a one-bedroom unit, three-person households can generally occupy a two-bedroom unit, and four-person households can generally occupy a three-bedroom unit.

Table 1 Affordable Rents for Moderate-income Households (120% AMI), Fresno County (2023)

	Household Size (Number of Persons)			
	1	*2*	*3*	*4*
Income Level	$70,400	$80,450	$90,500	$100,550
Max. Monthly Gross Rent	$2,053	$2,346	$2,651	$2,932

Source: CA Department of Housing and Community Development (HCD), 2023

City staff researched rental listings and found that even luxury multi-family rental units are being rented at rates generally affordable to moderate-income households earning 120 percent AMI. Based on this research, staff assigned all market rate multi-family units to the moderate-income RHNA.

Accessory Dwelling Units

Accessory dwelling units (ADUs) are small, often detached living quarters built on the same property as existing homes that are most often used as rental housing. ADUs tend to be smaller and therefore rented at lower prices. In past APRs, staff assigned ADUs to the moderate income RHNA; however, the 2023 APR reflects new assumptions that are based on recent ADU surveys conducted across the state. The Association of Bay Area Governments (ABAG) conducted an analysis of ADU affordability and concluded that in most jurisdictions in the Bay Area, the following affordability assumptions are generally applicable to ADUs:

- 30% Very low-income
- 30% Low-income
- 30% Moderate-income
- 10% Above moderate-income

The table below shows how City staff applied these affordability assumptions to the 28 ADUS that were issued building permits in 2023.

Table 2: Affordability Assumptions for ADUs

Income Level	**Percentages**	**Issued Building Permits**
Very Low Income (0-50% AMI)	30%	8
Low Income (51-80% AMI)	30%	8
Moderate Income (81-120% AMI)	30%	9
Above Moderate Income (120+ AMI)	10%	3
TOTAL	100%	**28**

Attachment 3

Single Family Homes

Building permits for single family homes in 2023 were assigned to the above moderate income RHNA. In previous APRs, a portion of single family homes had been assigned to the moderate income RHNA based on past market trends. However, staff determined that recent sale prices of new single family homes are generally only affordable to above moderate income households given recent increases in sale prices and increased interest rates.

Table 2 Ability to Pay for Housing Based on HCD Income Limits, Fresno County (2023)

Number of Persons	*1*	*2*	*3*	*4*	*5*	*6*
Extremely Low-Income Households at 30% of Median Family Income						
Income Level	$17,350	$19,800	$24,860	$30,000	$35,140	$40,280
Max. Monthly Gross Rent [1]	$434	$495	$622	$750	$879	$1,007
Max. Purchase Price [2]	$53,373	$60,910	$76,475	$92,287	$108,099	$123,911
Very Low-Income Households at 50% of Median Family Income						
Income Level	$28,900	$33,000	$37,150	$41,250	$44,550	$47,850
Max. Monthly Gross Rent [1]	$723	$825	$929	$1,031	$1,114	$1,196
Max. Purchase Price [2]	$88,903	$101,516	$114,282	$126,895	$137,047	$147,198
Low-Income Households at 80% of Median Family Income						
Income Level	$46,200	$52,800	$59,400	$65,950	$71,250	$76,550
Max. Monthly Gross Rent [1]	$1,155	$1,320	$1,485	$1,649	$1,781	$1,914
Max. Purchase Price [2]	$142,122	$162,426	$182,729	$202,878	$219,182	$235,486
Moderate-Income Households at 120% of Median Family Income						
Income Level	$70,400	$80,450	$90,500	$100,550	$108,600	$116,650
Max. Monthly Gross Rent [1]	$2,053	$2,346	$2,640	$2,933	$3,168	$3,402
Max. Purchase Price [2]	$252,662	$288,731	$324,800	$360,869	$389,760	$418,651

Notes: Incomes based on HCD State Income Limits for 2022; FY 2023 AMI: $83,800.

[1] Assumes that 30 percent of income is available for either: monthly rent, including utilities; or mortgage payment, taxes, mortgage insurance, and homeowners insurance

[2] Assumes 95 percent loan at 7% interest (i.e., 5 percent down payment) and 30-year term; assumes taxes, mortgage insurance, and homeowners' insurance account for 21 percent of total monthly payments

Source: CA Department of Housing and Community Development (HCD), 2023 and Ascent, 2024.

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO:	Mayor and City Council
FROM:	Administration
DATE:	March 18, 2024
SUBJECT:	Consider Approval – Change of Council Meeting Schedule. **Staff:** John Holt, City Manager **Recommendation:** Approve
ATTACHMENTS:	None.

CONFLICT OF INTEREST

Councilmembers should consider recusal if a campaign contribution exceeding $250 has been received from the project proponent (developer, applicant, agent, and/or participants) within the preceding 12 months (Government Code 84308).

RECOMMENDATION

For the City Council to approve the cancellation of the regular Council meeting scheduled for Monday, April 1, 2024.

EXECUTIVE SUMMARY

There is a need to change the schedule of meetings for the City Council in April. Staff is recommending that City Council approve the cancellation for the meeting of Monday, April 1, 2024.

BACKGROUND

Staff was also able to consolidate the agenda items to the second and third Council meetings in April. Therefore, staff is recommending Council consider canceling the meeting of April 1, 2024, due to the limited number of items on the agenda. Given adequate notice, staff will be able to amend the timing of actions coming forward so that operations will not be affected by the cancellations.

FISCAL IMPACT

None.

REASON FOR RECOMMENDATION

Pursuant to the Clovis Municipal Code, the City Council meets in regular session on the first, second, and third Monday of each month, except when those Mondays occur on a recognized City holiday. The City Council needs to confirm any change to the schedule of meetings in order to properly notice the public of the City Council's schedule of meetings.

ACTIONS FOLLOWING APPROVAL

A revised schedule of meetings will be published in conformance with law.

Prepared by: Rebecca Simonian, Executive Assistant

Reviewed by: City Manager JH